



D1.4: Establishment of VALERECO LLs and LL boards (version 1)

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List of abbreviations

Living Lab(s)	LL(s)
Ecosystem Services	EC
Living Lab board(s)	LL board(s)
European Union	EU
Work Package	WP
Work Package Leader	WPL
Grant Agreement	GA
Consortium Agreement	CA
Project Officer	PO
Project Coordinator	PCO
Reporting Period	RP
Living Lab Reporting	LLR
Research and innovation	R&I
Communication and Dissemination	C&D
Description of Actions	DoA
Project Steering Group	PSG
Life cycle assessment	LCA
Common Agricultural Policy	CAP
Digital Legume Information Hub	DLIH
Decision Support System	DSS
Key Performance Indicators	KPI

1. Introduction

VALERECO target is to promote adoption and understanding the value of legume crops towards transition to sustainable, productive, climate-neutral, environment-friendly, and resilient farming systems. The project aims to quantify and enhance the environmental and economic value of ES provided by 4 minor or underutilized and 8 major legume crops. It seeks to encourage diversification of farming practices throughout the EU and Associated Countries, which can contribute to healthier and sustainable diets and climate change resilience. The identification will be achieved through: (1) a thorough analysis on the ecosystem-services legacy and (2) the investigation of gateways for penetration of legumes and their associated ES to the new CAP.

The valorization will be implemented through the establishment of nine Living Labs (LLs) to conduct: (1) behavioural design strategies to promote the adoption of legumes in production and consumption, (2) on-station participatory trials to assess the performance of major and minor-underutilised legume crops in diversified farming systems, (3) to demonstrate and co-create technical economically and environmentally assessed solutions for legumes inclusion in cropping systems. The dissemination will be realized through: (1) the development of a Digital Legume Information Hub (DLIH) to upscale and maximize the uptake of VALERECO's results, (2) the development of a Decision Support System (DSS) to support the decision-making of farmers and advisors for legumes adoption, and (3) the generation of capacity building material made available to the public through an E-learning Platform.

The overall objective of VALERECO is to promote adoption and understanding the value of legume crops towards transition to sustainable, productive, climate-neutral, environment-friendly, and resilient farming systems. The project aims to quantify and enhance the environmental and economic value of ES provided by these crops. It seeks to encourage diversification of farming practices throughout the EU and Associated Countries, which can contribute to healthier and sustainable diets and climate change resilience.

1.1 Task 1.4: Establishment of the Living Labs

This Task will develop the framework of the VALERECO LLs by providing the guidelines (D1.4, D1.5 and D1.6) for establishing and monitoring across the 9 LLs including the on-station participatory trials and demo sites, and the setup of the LL boards. In this context, 9 LL boards will be established, consisting of 10 members representing the several types of stakeholders (VALERECO partners, farmers, advisors, researchers, consumers, and policymakers) animated by a facilitator. This framework will also provide concrete suggestions about the external stakeholder types and proportions to invite to the DLIH (WP5), engagement methods and tools (engagement tools, communication channels, key timelines, and ethical issues). Special emphasis has been placed upon the development of this template (D1.4, D1.5 and D1.6) for clarifying the roles and responsibilities of VALERECO partners and LL members and reporting the R&I and demonstration activities across all the LLs (GA on page 79).

The Task 1.4 is led by AUA (Prof. Ilias Travlos) and UNIFI, SSSA, UNIFI, UC, IFVCNS, DELPHY, WR, INTIA are participating in that. The Deliverable D1.4 "Establishment of Valereco LLs and LL boards (version 1)" is due in Month 3 of the project (i.e. 31 August 2024). The procedure for drafting, reviewing, delivering, and submitting D1.4 will follow the steps outlined in D7.1 "Project Management Handbook."

VALERECO is committed to achieve and deliver the following **target numbers and Key Performance Indicators (KPI) related to the ES of legumes, LLs, and LL boards:**

Table 1. Expected results of VALERECO and Key Performance Indicators with their associated target values

KPI – Target value	
Develop a knowledge base on the ecosystem services provided by legumes	
Knowledge database on the ecosystem services associated with legume crops	At least 18 ES identified (2 per LL)
	>10 beneficial effects of legumes inclusion in cropping systems
	>18 gateways for penetration of ecosystem services to the new CAP (3 per country with LLs, x6 countries)
	>20 linked projects
Establishment of Living Labs to co-create and demonstrate economically and environmentally feasible solutions for legumes incorporation into cropping systems	
Technical assessments of legume-inclusive cropping systems	90 stakeholders engaged in the co-creation activities of the LLs (10 per LL)
	900 stakeholders reached in the demo activities of the LLs (100 per LL)
	9 technical assessments for inclusive cropping systems (1 per LL)
Cost – benefit analysis	Identification and quantification of >3 variants related to legume crops investment costs (e.g., seed, on-field agricultural practices)
	>3 variants for beneficial effects (e.g., reduced N fertilization, soil water retention and organic matter content, yield) expressed in monetary terms
Life Cycle Assessments	9 LCA analyses (1 per LL)
Promotion of diversified legume-derived ecosystem services across the value chain	
Behavioural Design Framework	900 surveys with farmers & consumers (100 per LL)
	12 nudges & 24 scenarios
	600 participants
	4 behavioural design strategies & empirical assessment with 1,200 farmers across the member countries
Experimentation of innovative uses of legumes for promoting biodiversity driven ES in diversified farming systems	
Agroecological crop management strategies	4 minor or underutilised & 8 major legume crops tested
	>3 eco-physiological indicators, >10 bio-metric indicators and >2 indicators quantified for measuring yield data
	>8 agroecological strategies assessed
N2 impact maximisation strategic levers	> 5 factors identified, studied, and quantified addressing legumes N transfer
	> 9 soil biodiversity indicators assessed (at least 1 per LL)
Assessment of weed community regulating effect of legume crops and associated biodiversity	>9 legume-based systems assessed for weed suppression (1 per LL)
	Identification and quantification of >10 nature conservation-oriented variants testing different legume types and management options (>5 legume species x 2 environmental conditions)

Climate change adaptation capability review	>5 field trials to identify drought resilient legume species
	>8 key traits identified for genetic improvement of legumes
Develop a digital legume information hub to upscale and uptake of VALERECO's results	
Decision Support System	1 DSS tool recommending legumes management strategies
Digital Legume Information Hub	1 VALERECO Platform (DLIH) providing information and data for >10 topics for crop diversification based on legumes
E-Learning Training Platform	1 e-learning platform with >10 modules for 5 types of actors
Policy recommendations at EU, national and regional level	8 policy briefs (1 EU level; 6 national/regional (participating countries in LLs; 1 Associated countries)

Table 2. Dissemination and communication activities (KPI)

Scientific Publications	10 publications in peer-review open-access journals
	>15 publications in scientific conferences
Technical Publications	>10 technical publications/ articles
	>10 blog contributions
	>3 inventories/guides
Policy Contribution	8 policy briefs (set of recommendations)
	>2 (online) policy recommendation workshops
	>50 workshop participants
	>5 position papers validated through scientific publications
Capacity Building	>9 capacity building training sessions
	>9 knowledge transfer workshops
	>100 training attendees
	>350 workshop participants
	>3 joint events with relevant EU projects and initiatives
Ecosystem Building	>3 booths in exhibitions and fairs
	>8 Community outreach presentations
	Organisation of >10 joint activities/data sharing with EU/national projects/initiatives

1.1.1 Connection with other Work Packages

Task 1.4 belongs to WP1 “A knowledge base on the ecosystem services provided by legumes”. WP1 will be the framework to establish VALERECO’s LLs, explain knowledge background of ecosystem services and other benefits provided by legumes and what its role and place in agroecosystems is, identify gateways for penetration of legumes ES to the new CAP and facilitate synergies with other projects and networks.

In detail, WP1 and Task 1.4 will feed other WPs:

WP1 → WP2 & WP3 & WP4 & WP5 & WP6

- Guidelines for establishing and monitoring across the 9 LLs including the on-station participatory trials and demo sites
- Set up of 9 LL boards, consisting of 10 members representing the several types of stakeholders (VALERECO partners, farmers, advisors, researchers, consumers, and policymakers) animated by a facilitator.
- Suggestions about the external stakeholder types and proportions to invite to the DLIH (WP5)
- Engagement methods and tools engagement tools, communication channels, key timelines, and ethical issues)
- Development of a template for clarifying the roles and responsibilities of VALERECO partners and LL members and reporting the R&I and demonstration activities across all the LLs

WP1 → WP2

- The knowledge base on ecosystem services provided by legumes will support the identification of producer and consumer perceptions in relation to decisions to promote legumes
- Optimizing the design of behavioral strategies to promote the adoption of legumes in production and consumption.

WP1 → WP3

- On-station assessment of the impact of agroecological practices based on cropping system diversification on the delivery of the key legume ES (identified in WP1) under field experimental conditions.
- The preferences and needs of key stakeholders involved in the LLs will be included in the experimental protocols and co-evaluation of results.

WP1 → WP4

- The economic, environmental, and technical assessment of ES will be based on the knowledge background (WP1) and stakeholder needs.

WP1 → WP5

- Decision-making with regards to biodiversity and environmentally friendly legume cultivation, primarily aimed at farmers
- Communication of legume benefits
- Making the ES of legumes tangible for key stakeholders along the value chain and deriving policy recommendations to make better use of these benefits

WP1 → WP6

- Foster the development of the project's ecosystem
- Engagement of stakeholders along the value chain through appropriate demonstrations, dissemination and communication activities, synergies, and exploitation plans.

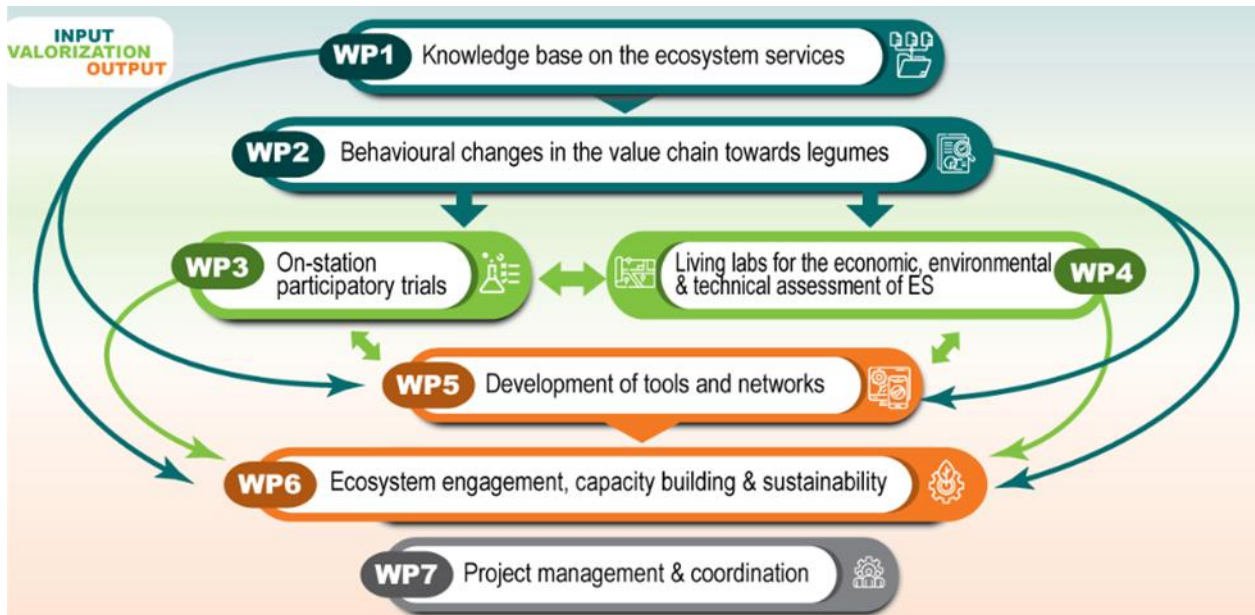


Figure 1. Work Packages inter-connection (PERT chart)

2. Establishment of LLs and evaluation of ES provided by legumes

The first action of VALERECO will be the valorization of ES through the establishment of 9 LLs in 6 countries by: (1) identifying potential stakeholders to take part in the LL boards (details in the Valorization in LLs subsection), (2) providing a common methodology to be followed in the LLs for the implementation and monitoring of activities (D1.4, D1.5 and D1.6), and (3) establishing on-station participatory trials to assess and demonstrate the legumes ES. Ecosystems contribute essential services to the economy and society. These include the provision of food, filtration of air and water, pollination, climate regulation, protection against extreme weather events such as heat waves and flooding, and many more.

VALERECO will explore the benefits of ES from the incorporation of legume crops into cropping systems, which can promote a range of ecosystem services that facilitate sustainable farming practices, support biodiversity, and contribute to mitigating climate change. Legumes play a vital role in stabilizing yields, providing beneficial ecosystem services, enhancing biodiversity, improving soil health indicators, promoting human and animal nutrition, pest control, pollination, and more. Our approach is that legume crops will contribute to the ES.

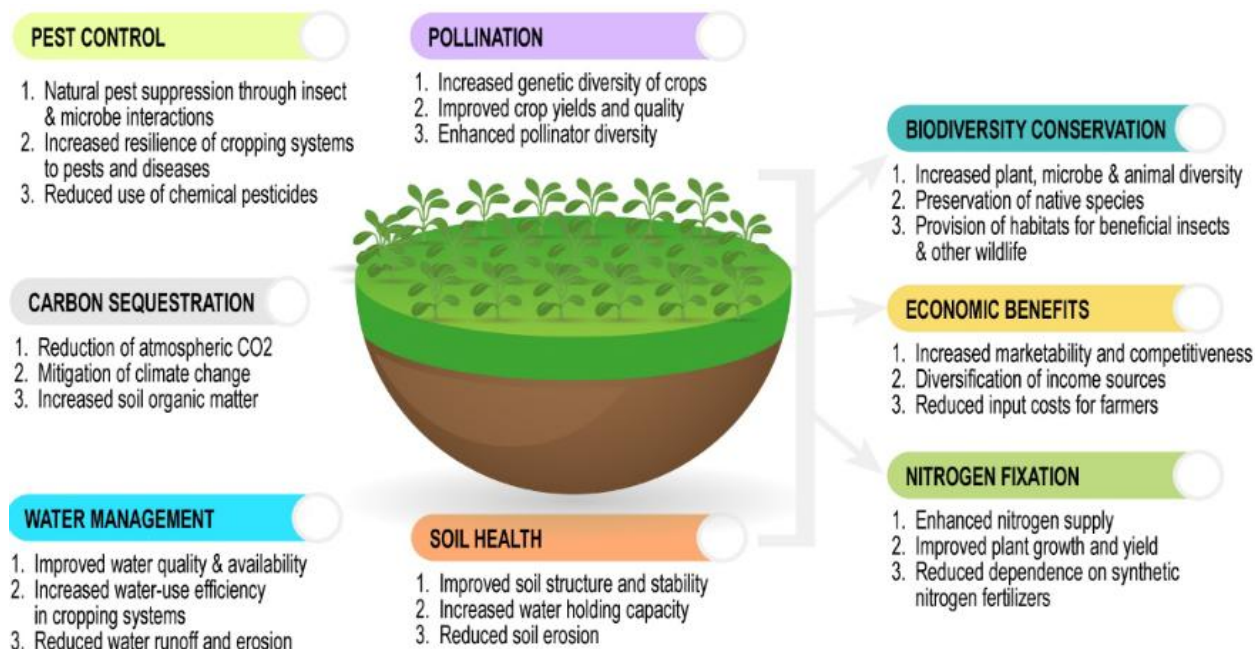


Figure 2. Ecosystem services provided by legume crops

2.1 Stakeholders

VALERECO relies heavily on stakeholders' knowledge, as individual farmers and their associations from all participating countries will be involved by sharing knowledge, co-creating LLs and socio-economic analyses, and providing feedback. Several stakeholder groups will benefit from Valereco outcomes including farmers, advisory organizations, policymakers, industry members, education, and food value chain partners interested in sustainable production.

To ensure the sustainability and adoption of the proposed frameworks in the medium to long term (post-project), stakeholders' network will consist of members representing the several types of stakeholders (VALERECO partners, farmers, advisors, researchers, consumers, and policymakers) animated by a facilitator and linked projects and networks. This will facilitate access to up-to-date knowledge, tools, and techniques applicable to specific conditions and needs.

2.2 Engagement methods and tools

2.2.1 Procedure

VALERECO's first activity will be to identify the most promising actors and stakeholders at the regional, national and EU levels inviting them to define the research priorities of the project, to co-create knowledge and the experimental protocols, and to interact intensively with them towards the adoption to identify ES.

The second action point will be the official approach of the stakeholders and other projects to exchange data/protocols/knowledge and co-design capacities, transferring practical knowledge to the large-scale LLs of Valereco. The aim will be to exchange knowledge, implement synergies where possible and deliver added value communication, dissemination, and exploitation activities towards all stakeholders, including EU policymakers and scientific communities.

2.2.2 Outreach & methods

The Valereco will ensure a good representation of stakeholders across different EU countries, farming systems and crops. The proposed proportion of stakeholders participating in the VALERECO should be gender balanced (approx. 50% female), mostly young, and could be the indicative percentages below:

- 40% farmers (i.e., *farmers are persons who own and/or manage a farm, and they could be conventional, organic, biodynamic, agroecological, regenerative farmers etc.*)
- 10% agricultural advisors (i.e., *agricultural advisors provide technical leadership in design, development, planning, and implementation for agriculture and food sectors*)
- 10% consumers (i.e., *consumers could be all citizens independently from their identity, work, or class status, who consume products, buy, and use up goods and services*)
- 20% researchers (i.e., *researchers are individual scientists or research groups from universities, research institutes or technological centers which offer knowledge about ES and/or conducting research on agroecology and its principles*)
- 10% policymakers & industry actors (i.e., *policy makers are public authorities and individuals from different policy areas who can foster new politics, regulations or means to empower the sector, industry actors could be individuals and/or companies in the agri-food sector, such as from the crop protection sector, market, food processing, machinery etc.*)
- 10% other projects, networks & initiatives

2.2.2.1 Local and regional level

The VALERECO LLs will go through a co-creation framework of systematic and intensive activities to ensure a participatory and multi-actor approach from different stakeholders throughout the value chain. The VALERECO partners' experience in demonstration will be used to promote peer-to-peer learning and informal knowledge exchange among stakeholders to respond to specific needs and precise demand. Involved farmers of the LLs will share their experiences with other practitioners through different field events. Each LL will organize at least 2 field demonstration events to show the results of VALERECO in practice. These events will be adapted to each LL's culture.

The outreach at local and regional level will be realized through:

- The establishment of the LLs and the close collaboration with the farmers
- The LL boards and the co-creation activities (annual virtual meetings & co-assessment workshops)
- Cross-visits
- Demonstration activities in the field (e.g., open field days)
- Sharing the dissemination material
- Participation in local events (e.g., agricultural fair)

2.2.2.2 National Level

At the national level, it is crucial that successful knowledge transfer workshops are conducted. In this knowledge transfer workshop, multiple actors from several stakeholder groups should be invited to assess the progress of the Valereco project, evaluate and give feedback concerning the DLIH (Digital Legume Information Hub). The outreach methods applied at national scale are the same as for the local and regional scale.

However, it is important to mention that there is a specific barrier that we ought to overcome regarding the involvement of farmers, actors, and other stakeholders (GA, page 136).

2.2.2.3 EU Level

At EU level, the DLIH will upscale the impacts of legumes on ES and agrobiodiversity through the DSS also providing nature- conservational assessment of the legume agroecosystem under various conditions, policy recommendations, capacity building material (WP5,6) that strengthens crop diversification and longer rotation cycles.

Successful agroecological initiatives across the EU will be monitored and approached to participate in the DLIH and presented as case studies to highlight the potential for transition to a larger scale. Potential individual participants in the DLIH will be approached through various dissemination and communication activities, as well as co-creation activities, as described below:

- Cooperation meetings with other (Horizon) projects, described in Task 1.5
- Meetings with representatives from international initiatives and organizations
- Implementation of VALERECO webinars
- Participation of VALERECO partners in international conferences, congresses, and seminars
- Parliamentary session will be organized at the end of the project VALERECO

2.2.3 Engagement tools

VALERECO will develop a clear plan for how to approach, invite and engage external stakeholders. This plan is based on five (5) axes:

DLIH: VALERECO will increase visibility and impact of the project's results through the development of the DLIH, engaging with stakeholders, including crop producers and livestock farmers, processors, distributors, and retailers. VALERECO will guarantee the uptake of legume-based cropping systems through VALERECO's DSS that will support decision-making and attract farmers and advisors to embrace hands-on solutions. VALERECO will provide policy recommendations and scale up through close cooperation with national and international projects, networks, and organizations to ensure that the capacity building material reaches a wide audience.

Social media and publications: (i) continuous posting on VALERECO social media (LinkedIn, X, Facebook, YouTube); (ii) scientific publications; (iii) technical articles; (iv) articles in farmers' journals

Living Labs: (i) demo farm events (e.g., field days); (ii) co-creation activities with the LL boards, where external stakeholders will be invited to participate in the knowledge transfer workshops in each LL; (iii) close collaboration with farmers which can serve as multiplier at local scale

Collaborations: In collaboration with Task 1.5, three (3) cooperation meetings will be held with other EU funded projects: (1) at the beginning of M3, (2) on M18 and (3) on M36. These meetings will: (1) provide further elements for the scanning of ecosystem services provided by legume crops to be mapped within Tasks 1.1, 1.2, (2) enhance cross-project collaboration, promoting mutual evaluation of project activities and outcomes, and (3) join efforts on communication activities and dissemination of results among similar projects.

National/international events: (i) Participation of VALERECO partners to national/international events (such as agricultural fairs and exhibitions) by utilizing farmers' most trusted dissemination channels will serve as multipliers at the regional, national and EU levels; (ii) Participation of VALERECO Partners in conferences, congresses seminars etc. could be an effective way to attract researchers, industry actors, policymakers and agricultural advisors (iii) Knowledge transfer workshops in the VALERECO project.

2.3 Communication channels

Several communication channels will be used to deliver the message to the stakeholders and approach them to participate in the DLIH and the rest of the activities in the VALERECO project. Communication activities and tools will be implemented, throughout the life of the project and beyond, making results accessible to internal and external stakeholders, as well as to the media and public. Communication activities will be customized for different countries, regions, and subgroups of the population, making use of the skills and resources of partner organizations.

Specifically, the communication tools and channels are:

- DLIH
- E - newsletters
- Social media
- Videos
- Website

It is important to highlight the key messages for each stakeholder group to convince them to participate in the VALERECO activities.

Table 3. Target groups and key messages

Target	Key benefits/message
Farmers & Agricultural advisers	Exploit the advantages of legume crop rotation. Gain the knowledge to start benefiting from crop diversification and consumer interest in your production.
AgriFood Industry	Benefit from the legume value chain, getting direct input for actor demand. Stay up to date on the latest evolutions in the market, supported by research.
Scientific and Research Organizations	Capitalise on the knowledge produced within the project to promote the growth of sustainable farming systems. Drive research and guide producers and consumers towards climate resilient practices and habits.
Policy makers & regulators	Redesign policies and governance frameworks to support the adoption of leguminous crop rotation, helping farmers and consumers shift towards protein sufficiency.
General Public	Support the transition to plant protein, with in-depth information to upgrade your diet with nutrient-dense alternative sources. Influence food systems to adopt pro-environment impactful practices.

Table 4. Table 3: Critical risks and risk mitigation measures associated with WP1 and Task 1.4

Risk No. (from GA)	Description	Proposed Mitigation Measures
5	Low interest and feedback from stakeholders to participate in VALERECO ecosystem	Apart from already established stakeholder networks in each region, LLs will leverage additional connections and synergies across agricultural networks, to ensure that a low level of participation will be avoided. Initial involvement of a larger group of stakeholders than needed by means of personal contacts and related project consortium members. Targeted identification of potential participants and their specific interests and contact details, careful planning of the activities in line with availabilities of potential participants, ensuring that issues to be covered are topical and are of interest to them.
8	Delays in the delivery of Deliverables	Deliverables have been evenly shared among the partners. Reallocation of resources when critical deliverables are expected to be delayed is foreseen
10	Difficulty to create consensus among all partners	Regular meetings with the partners, WP leaders and coordinators. Project Management Handbook. If the need arises, the routine of the calls will be intensified.

2.5 Ethical issues

Gender dimension

Gender issues are strongly associated with the future shape of climate-neutral and sustainable agriculture globally. The EU policies and the CAP strategic plans aim to improve the gender balance and the participation of women in farming, an intention that is encompassed in the VALERECO project's methodologies to increase the female participation in decision-making processes related to agriculture in Europe. The gender issues will be a key concern of the whole consortium, tightly embedded in the research agenda and the dissemination activities of the project. VALERECO gender balance during the project will be annually reviewed by the coordinator (AUA) and a Gender Equality Plan will be developed. The project management guidelines will include specific gender-related issues that will be based on global women rights.

- Boost participatory approach to the research loop: Any survey data for the development of a knowledge base (WP1) will be collected from proportionate rates of female and male heads of farms.
- Integrate societal and behavioural aspects: Gender aspects will be considered in socio-economic and behavioural research in WP2 by analysing factors intersecting with gender that affect legumes adoption and generate biases.
- Tailor-made dissemination: Ensure the inclusion of females in agriculture through the surveys (WP2), Living Labs (WP1, 4) and the dissemination activities of the project (WP6). Gender Dimension & Inclusiveness Report.

- Ensure internal gender equality: The participation of women in governance and scientific bodies in VALERECO will promote the equal balance of genders. The ratio of female/male researchers will be also considered.

Compliance with ethical principles and relevant legislations

Involvement of stakeholders and the linked feedback and participatory processes are very important within this proposal. This includes several aspects where ethical and gender issues must be checked (e.g. the selection of stakeholders, their consent for participation in the workshops, data privacy and protection). In line with the ethics self-assessment, actions will be executed for involvement of humans and for the protection of personal data.

The work will be in line with the relevant EU legislation, where of the main are:

- EU Directive 95/46/EC (and its revision) of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data;
- EU Regulation No 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data;
- Electronic communications EU Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications);
- EU Directive 2006/24/EC of 15 March 2006 on the retention of data generated or processed in connection with the provision of publicly available electronic communications services or of public communications networks.

The consortium will not discriminate against persons of any race, religion, or gender. The partners are fully aware of the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers and will pay specific attention to equal opportunities and gender balance in the project team. Gender balance will also be respected in the selection of stakeholders.

The consortium will not discriminate against persons of any race, religion, or gender. The partners are fully aware of the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers and will pay specific attention to equal opportunities and gender balance in the project team. Gender balance will also be respected in the selection of stakeholders. Personal data - The Data Management Plan will provide detailed information on the procedures that will be implemented for data collection, storage, protection, retention and destruction and confirmation that they comply with national and EU legislation. More specifically, details on the type of data collected, the retention period, and whether it will be destroyed at the end of the project will be provided. A special effort will be made to collect as little restricted and personal data as possible. The personal data involved will be the identification, profession and the opinions and answers given by the participants. All data will be handled only by qualified researchers under strict confidentiality agreements, who will ensure that data access, data protection and privacy standards are in compliance with national and EU regulations. All the users included in the different trials will sign an informed consent in which they will be duly

informed about how their personal data will be treated. Should any sensitive data be obtained during the project, the project will see to it that it be made anonymous and rigorously protected for the duration of the action and destroyed at the Conclusion.

Data used in the project will be subject of a paper analysing the potential conflict with respect to privacy. When processing personal data, the consortium will comply with the GDPR principles. This means that at the outset, when the data cannot be anonymized fully, in the development of the project, Article 5(1) of the GDPR, enshrining the principles of personal data protection, will be considered. Before the beginning of an activity raising an ethical issue, the beneficiary will confirm that any ethics committee opinion required under national law has been obtained and is kept on file.

The Consortium confirms that compliance with ethical principles and applicable international, EU and national law in the implementation of research activities not originally envisaged (or not described in detail) in the DoA will be ensured. The Consortium also confirms that any ethical concerns raised by those activities will be handled following rigorously the recommendations provided in the European Commission Ethics Self-Assessment Guidelines.

2.6 Maintenance

The longevity of the VALERECO will be realized through:

- VALERECO Platform (DLIH) that will be a ‘One-Stop-Shop’ for legumes ecosystem services containing training and capacity building material, technical solutions for legumes adoption, knowledge database on ES, policy recommendations, incorporating the developed DSS as an independent web tab. This Platform will be VALERECO’s long-term legacy, leading to the reduction of N fertilizers and herbicides alongside the transition to sustainable, safe, productive, climate-neutral, and resilient farming systems, and the restoration of ecosystem services.
- VALERECO aims to scale up its outcomes and have a strong long-term impact at EU, national and regional level by: (i) supporting the EU initiatives and the national authorities for the significant reduction of fertilizers and herbicides and the increase of adoption rates of legume crops, (ii) encompassing agroecological principles that aim to bring resilience to agri-food value chains worldwide, and (iii) assisting the sustainability of agri-food production systems through the development of sustainable frameworks and networks. EU hosts a range of environmental, cultural, and economic situations, that will be integrated by setting up LLs spread across Europe. Furthermore, the successful design and implementation of EU and national adapted policies should have a global impact as it will be revealed in the global competitiveness report.

3. VALERECO LLs

3.1 Introduction

VALERECO brings together eleven (11) countries ranging from the Atlantic area to Nordic and Continental areas through Mediterranean areas to ensure a balanced representation of different production systems (Figure 4). VALERECO will identify the ES related to legumes-based diversified cropping systems and evaluate their potential in 9 LLs across EU through the economic, environmental, and technical assessments of 3D diversification strategies in on-station participatory trials.



Figure 4 VALERECO's partners geographical distribution (LL-Living Lab)

The core of VALERECO is the establishment of 9 LLs across the EU to develop a legume-crops ecosystem of multiple actors who will be future adopters and designers of legume-based diversified cropping systems. The VALERECO LLs is a hybrid (physical and digital) legume-based space that links various stakeholders across the agri-food value chain. The VALERECO LLs are multi-actor open-innovation spaces that will:

- Understand the ES provided by legume crops & the barriers to crop diversification and crop rotation
- Identify ES of legume crops that need to be valorised, identify key entry points of legume crops into the new CAP and build on synergies with other relevant projects
- Investigate the perception of downstream actors across the agri-food value chain on the ES of legume crops and explore the market competitiveness of legumes

- Deploy behavioural design strategies to provide nudges for non-monetary interventions towards legumes adoption in healthier and more sustainable diets and frameworks for legumes adoption and consumption
- Provide indicators for the agroecological practices based on 3D diversification strategies in legume-based cropping systems in on-station participatory trials & evaluate the N fixation, weed pressure suppression and climate change adaptability of legume varieties of major and minor/underutilised legumes
- Provide indicators for the economic and environmental benefits of legumes ES in diversified cropping systems
- Demonstrate and disseminate the agroecological performance of legume crops and the technical feasibility of their inclusion into diversified cropping systems to highlight the ES provided by leguminous crops

Table 5: VALERECO Living Labs

Country	Indicative Crops	Code number
SSSA (Italy)	Chickpea	IT_LL01
UNIFI (Italy)	Chickpea, Sulla, Pea, Clover	IT_LL02
UNIPI (Italy)	Chickpea, Vetch	IT_LL03
AUA (Greece)	Sulla, Lentil	GR_LL04
WR (Netherlands)	Red and white clover, Lucerne	NL_LL05
DELPHY (Netherlands)	Faba bean, Lupin	NL_LL06
INTIA (Spain)	Faba bean, Pea, Chickpea	ES_LL07
UC (Portugal)	Chickpea	PT_LL08
IFVCNS (Serbia)	Chickpea , Soybean	RS_LL09

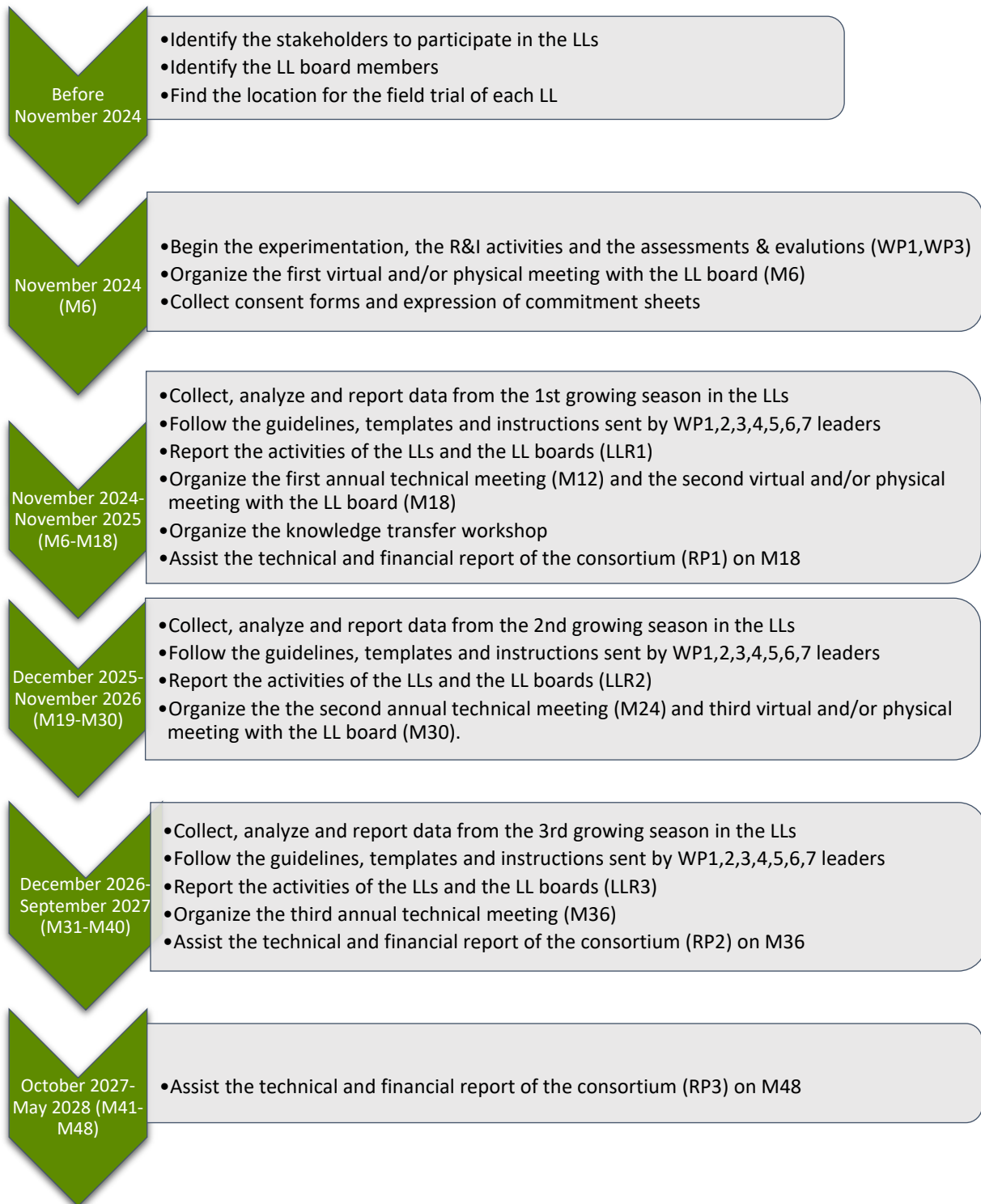
LLs will act as umbrella because they will allow:

- The evaluation, quantification, and provision of the ecosystem services
- Upscaling, further compliance with needs and goals and thus valorization
- Multi-actor participatory approach with feedback from the stakeholders, demonstration activities and further enhancement of the multiple roles of legumes and adoption of their cultivation and use.

These will create sustainable impact and wider recognition of the essence for legumes ES and become the orchestrators among different stakeholder groups (farmers, advisors, industry, consumers, researchers, policymakers). The impacts of legume ES and their agroecological performance will be rigorously quantified and evaluated in on-station participatory trials, exploring the weed suppression and climate change adaptation capability of legumes also through UAVs. Multiple stakeholders will be engaged in co-creation activities and demonstration events in VALERECO's LLs to valorize the proof-of-concept of legumes-based diversified farming systems.

3.2 Guidelines for the establishment of LLs

At the beginning of the project, LLs will be established by VALERECO partners and local farmers, aimed to set up LL boards and demo sites. Below you will find brief guidelines in steps for establishing the LLs.



The experimentation in the LLs will provide evidence-based proof of the performance of legumes and their ecosystem services. Each partner should carefully select appropriate fields for the successful establishment of the field trials for each LL. Cross visits of the consortium partners will be organized at the same time as the project meetings (to save costs) and will include demo events of the LLs to promote the exchange of experiences between the countries.

3.3 Experimental design

3.3.1 Establishment of the on-station trials

All 9 LLs will include field trials (Italy 3, Netherlands 2, Greece 1, Portugal 1, Spain 1, Serbia 1). There should be one trial per LL, lasting for 3 years beginning in M6 (November 2024) or earlier, and it could be implemented on-station or on-farm based on the LL needs. It is necessary to repeat the trial exactly in the same field during the 3 years. The LLs will include 2 demonstration activities per LL for two growing seasons (growing season 2025-2026 and 2026-2027 of the project), based on the set of treatments in the LL trial. In order to compare the suggested crop rotations, a monoculture of non-legume crops or rotation without legumes is also necessary. For the assessment of potentially drought-resistant varieties (Task 3.5), LLs should include at least 2 genotypes (varieties) of at least one legume. UAV flights will be done once per year by AUA, DELPHY, IFVCNS, INTIA, SSSA and UC with protocol decided in common by the involved partners. Based on the GA, the priorities of each LL and the present preconditions-guidelines, each partner should suggest the several treatments discuss and finalize them with the coordinator (Ilias Travlos) and the WP3 leader (Daniele Antichi).

3.3.2 Preconditions regarding the experimental layout of the on-station trials

Each trial should include two factors: factor 1: four to seven (4-7) crop rotation regimes and/or monoculture schemes (control system) and b) Factor 2: three to five (3-5) crop/weed management practices (or drought stress levels). The crop rotations-monocultures (Factor 1) should include at least some of the schemes described for each partner in Table 1 (l. 123 of GA) in a way to allow the spatial and temporal replication and the cultivation of legumes every year. A monoculture of non-legume crops (e.g., wheat, maize) or rotation without legumes is also required. Each main treatment plot should cover an area of at least 225 m². For the assessment of potentially drought-resistant varieties (Task 3.5), LLs should include at least 2 genotypes (varieties) of at least one legume. Where feasible, the inclusion of some common treatments with other LLs (for pairing reasons) is also welcome. Factor 2 should consist of three to five (3-5) treatments such as: A: sole crop with mechanical weeding, B: sole crop without extra weeding, C: intercropping without weeding, D: cover crops without extra weeding in the following cash crop, E: cover crops with additional weed management in the following cash crop. Intercropping should include a legume along with the cereal (which is grown under monoculture in block 3 (factor 1). Cover crops can be used either as green manure (incorporation into the soil) or mulch (left on the soil surface). For the case of UNIFI trials, a special focus on drought resistance evaluation will be given and the treatments can be adapted accordingly. Each combination of Factor 1 with Factor 2 should have three replications. Consequently, the total number of subplots will be at minimum $4 \times 3 \times 3 = 36$ and at maximum $7 \times 5 \times 3 = 105$. Each subplot should cover an area of at least 15 m² resulting in a total area of 540-1575 m² or 0.054-0.1575 ha.

3.3.3 Measurements

Measurements in each trial (in each sub-plot of every main plot) will include the following:

- a) ≥ 10 biometric indicators (such as crop density, crop canopy cover, plant height, number of leaves, leaf area, number of side shoots/tillers, dry weight of aboveground plant part, N content, height of the bottommost reproductive branch, soil visual cover, dry weight of root system, length of growth stages)
- b) yield and yield parameters (grain and biomass yield, harvest index, weight of 1,000 grains, number of grains per pod, number of pods per unit area)
- c) ≥ 3 eco-physiological indicators (such as relative chlorophyll content by means of Dualex, photosynthetic activity, NDVI and SPAD)
- d) ≥ 3 qualitative aspects of crop production (such as protein yield, oil and starch yield, specific weight, wet gluten, and forage quality indicators like ethereal extract, NDF, ADF, ADL)
- e) ≥ 1 biodiversity indicator (diversity of soil microbiota, mycorrhizal inoculum potential, microbial community assessments (e.g. earthworms), soil biological quality index, insect/spider/mite diversity)
- f) Weed frequency, density, soil visual cover, weed biomass
- g) Soil parameters (like soil texture, organic carbon, total N, available P, pH, exchangeable K, organic matter, bulk density)
- h) N-fixation parameters by means of nodulation measurements ^{15}N natural abundance technique or acetylene reduction assay

Also, some drought tolerance related traits (like relative water content and other defined by UNIFI), pest-disease and pest infestation and pollination can be also assessed. From all the above, biometric indicators (a), eco-physiological indicators (c) and weed related characteristics will be measured three times per growing season (beginning, middle, before harvest) and for the rest parameters one measurement is enough (e.g. at harvest for yield parameters or after a disease infestation for a relevant estimation). For the case of UNIFI trials, a special focus on drought resistance evaluation will be given and the measurements can be adapted accordingly.

3.4 Guidelines for monitoring the LLs

The pilot site monitoring of LLs will be conducted both in situ regarding the agronomic, agroecological performance of legumes and LCA assessments (incl. societal, economic, environmental) by VALERECO partners and virtually through annual meetings of the LL boards.

The LL manager (VALERECO partners) will be responsible for collecting all required info and data and monitoring the LLs. Also, LL boards will i) monitor the governance and activities of the LLs, ii) co-assess the potential of legumes and their ES and iii) external stakeholder types and proportions to invite to the DLIH (WP5), promote interactions between all relevant stakeholders by ongoing communication and annual meetings (see Annex 1 and 2).

3.5 Maintenance

The LLs will continue throughout the project duration to create the framework for valorization of legumes and their ecosystem services and to enable evidence-based business modelling and policy making. The co-creation activities in VALERECO go beyond implementation in the field and create the conditions for the long-term recognition of legumes and their ecosystem services.

VALERECO partners will work closely with the local and regional stakeholders to keep the LLs alive, when the field trials will be completed, after the end of the project. This will be facilitated through future funding from other national or European projects and/or future commitments for open field days and data collection.

More information will be provided in the updated versions of D1.4, after the collection of feedback from the annual virtual meetings of the LL boards.

3.6 Roles and responsibilities

The partners and the LL boards will be responsible to carry-out the same co-creation activities per Living Lab, namely the interviews and questionnaires, the virtual meetings, and the workshops. All of them are described in Task 2.1. In addition, VALERECO partners are responsible for the Research and Innovation activities conducted in WP1, WP2, WP3, WP4, WP5 and WP6.

In detail, the roles and responsibilities in the LLs are presented in the Table below.

Table 6. Roles and responsibilities of the Living Lab

Role	Responsibilities
Living Lab manager	<ul style="list-style-type: none"> • Be the main contact person for the LL in the communications with the Task leader, the Work Package leader, the Project coordinator, and the Project Officer • Represent the LL in Project Steering Group (PSG), other Consortium Bodies (e.g., General Assembly), project meetings etc. • Organize the workload for the LL with the responsible persons and experts • Keep on file all original documentations, consent forms, recordings, audio-visual material, authorizations, certifications, meeting minutes etc. up to five (5) years after the end of the project • Report, send and submit all deliverables, data, results, outcomes, reports, and documents related to the LL, when indicated and/or requested (e.g., data for the LCA at the end of each growing season for the main crop) • Responsible for conducting the agronomic assessments, socioeconomic and environmental (LCA) assessments and drone annotations and digital tools assessments. • Draft and report periodically the results and outcomes of the previous assessments and evaluations • Be responsible to ensure that Open Science and FAIR principles are followed in all activities in the LL • Ensure and verify that all ethical, gender equality, security, privacy, data protection etc. regulations and issues are respected <p>Identify scientific, operational, administrative, and financial risks in the LL and propose risk mitigation measures. Contact the Task leader, the</p>

	<p>WP leader, and the Project Coordinator early to facilitate the risk response</p> <ul style="list-style-type: none"> • Collect and/or write-prepare the Practice abstracts and Best Practices for the LL. Deliver them to the Task Leader and the WP leader • Report the progress in all Living Lab Reporting (LLR) periods (<i>details in Section 3.7</i>) • Be responsible to carry out the translations of interviews and questionnaires • Collect signed consent forms from the respondents and interviewees, and follow the guidelines sent by WP2 leader on how to conduct the questionnaires and interviews • Respect all ethical, gender dimension, privacy, security regulations and issues • Be responsible for the Research and Innovation activities in the on-station trials of the LL, as described in WP3 and the documents that Task leaders and WP3 leader will circulate • Collect, monitor, retain, analyze, and report the data, results, outcomes, impacts of the Research and Innovation activities • Communication and Dissemination activities conducted in the LL, related to WP6
<p>Drone user(s) and digital expert(s)</p>	<ul style="list-style-type: none"> • Be responsible for the Research and Innovation activities (i.e., drones use) in the field trials of the LL, as described in WP3 and the documents that Task leaders and WP3 leader will circulate • Collect, monitor, retain, analyze, and report the data, results, outcomes, impacts of the Research and Innovation activities & Communication and Dissemination activities conducted in the LL, related to WP3 • A protocol for UAV flights will be established to provide the framework for the measurements that will be conducted by partners (AUA, DELPHY, IFVCNS, INTIA, SSSA, UC) in the context of T3.2-T3.3. • Arrange any ethical and security issues regarding drones use and flights and/or liaise with the drone service company for that. • Keep on file any authorization and certification regarding approvals and other issues. Liaise with the LL manager to follow the instructions sent by WP3 leader
<p>Moderator of the LL</p>	<ul style="list-style-type: none"> • Organize the physical and virtual meetings of the LL and the LL board and take notes • Report the meeting minutes to the LL manager • Keep the minutes on file up to five (5) years after the end of the project • Responsible to write the drafts and final versions of every document, report, deliverable and send them to the LL manager • Responsible to organize and implement the six (6) virtual and/or physical meetings of the LL board • Responsible to continuously check, monitor and keep on file any ethical, gender equality, consent form, data protection, security, privacy, non-disclosure etc. regulations and issues, respecting and following the consortium, institutional, national, European, and international rules and templates

The VALERECO partners that are responsible for LL establishment and monitoring have the following responsibilities:

- Liaise with the LL manager to monitor and ensure the timely, effective, and proper use of resources and budget dedicated to the LL.
- Report to the Task leaders, Work Package leaders and Project Coordinator all required deliverable and reports.
- Identify early any potential risks and propose risk mitigation measures to the Task Leader, Work Package Leader and Project Coordinator.
- Report all activities in the Reporting Periods (RP).

3.7 Reporting

The reporting of Research and Innovation (R&I) and communication and dissemination (C&D) activities will be done systematically across all Living Labs. Specifically, the main contact person for each LL (or simply LL manager) will report every twelve (12) months to the Task leader (AUA) the activities that were completed in the LL. The LL manager should use the template in (Annex 1) of this document. The Task Leader should remind all LLs one month before the LLR.

- **LLR1:** M12 (May 2025)
- **LLR2:** M22 (March 2026)
- **LLR3:** M32 (January 2027)

The main contact persons per LL (LL managers) are presented in the Table below.

Table 7. Valereco Living Lab managers

Living Lab	Name	Email
IT_LL01	Anna Camilla Moonen	Camilla.Moonen@santannapisa.it
IT_LL02	Federico Martinelli	federico.martinelli@unifi.it
IT_LL03	Lorenzo Gabriele Tramacere	lorenzo.tramacere@unipi.it
GR_LL04	Nikos Antonopoulos	n.antonopoulos@aua.gr
NL_LL05	Klaas van Rozen	klaas.vanrozen@wur.nl
NL_LL06	Jan Kiers	j.kiers@delphy.nl
ES_LL07	Christina Virto Garayoa	cvirto@intiasa.es
PT_LL08	Rui Oliveira	rsoliveira@uc.pt
RS_LL09	Marjana Vasiljevic	makavasiljevicmaja@gmail.com

4. Living Lab Boards

4.1 Introduction

What is the Living Lab board?

The management of the LL will be implemented by LL boards that will meet virtually and/or physically twice a year to assess the R&I and C&D activities of the LL, as well as the evaluation of legumes and their ES tested in the LL. The LL boards will consist of the VALERECO partners, farmers, advisors,

researchers, policymakers, industry, and consumers. The aim is to orchestrate a dialogue in multi-actor activities between all relevant stakeholders and to monitor the management and activities of the LLs.

4.2 Objectives

Each LL is responsible to organize the following co-creation activities:

- **Three (3) Virtual and/or physical meetings of LL boards (M6, M18, M30):** will serve a double purpose to (i) co-create the LLs and to (ii) monitor and assess LLs’ output to design any adjustments for the next year’s activities, and on the LLs.
- **Knowledge transfer workshops (at least one per LL).** The purpose is to synthesize an interdisciplinary linkage of different fields of expertise to understand biases and perspectives, analyze theories and concepts, and develop tools and techniques to successfully transfer knowledge about ecosystem services provided by legume crops to actors and stakeholders.
- **Three (3) technical meetings (M12, M24, M36)** will be conducted per LL.

4.3 Roles and responsibilities

The roles and responsibilities of the LL board members are presented in the Table below.

Table 8. Roles and responsibilities of the Living Lab board members

Role	Responsibilities
LL board members	<ul style="list-style-type: none"> • Be part of a team consisting of VALERECO partners, farmers, advisors, consumers, researchers, industry, and policymakers to monitor, update and assess the LL for at least 42 months, beginning from October 2024 • Participate in the co-creation activities • Monitor and assess the LLs’ output and adjust next year’s activities in six (6) Virtual and/or physical meetings of LL boards (M6, M12, M18, M24, M30, M36) • Co-assess the ES of legumes tested in the LLs, including feedback on the digital solutions, in Knowledge-transfer Workshops • Report annually (M12, M22, M32) the work and progress of the LL to the Task leader (AUA) • LL board members are expected to contribute to the organization and participate in yearly virtual and/or physical meetings gathering the participants from all LL boards in the VALERECO ecosystem, the stakeholders, and the linked projects and networks
LL board facilitator	<ul style="list-style-type: none"> • Responsible to organize, host, moderate, implement and report the virtual and/or physical meetings of the LL board • Report to the LL manager the progress made in the co-creation activities of the LL board. If the LL board facilitator is the same person as the LL manager, then he/she can report directly to the main contact person for the organization. If he/she is still the same person, then the main contact person for the beneficiary should report directly to the Task Leader, the Work Package leader, and the Project Coordinator. • Responsible to write the draft and final versions of the outcomes of the co-creation activities in the LL

	<ul style="list-style-type: none">• Responsible to transcribe any recordings of the virtual meetings in the co-creation activities of the LL board• Responsible to keep all documents, authorizations, files, consent forms, meeting minutes, audio-visual material up to five (5) years after the end of the project
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Annex 1: Template for roles and responsibilities of Living Lab board members

The following Annex 1 will be uploaded as a separate file in VALERECO MS SharePoint, where partners will be able to translate it into the local language and spread it to the Living Lab board members. **The document must be signed by all LL board members for each LL and kept on file (in English language) by the LL board facilitator up to 5 years after the end of the project.**

Any updates on the document, the roles and responsibilities during the lifespan of the project must be clearly depicted in a history version table which is included in the template.

Start of Annex 1

ROLES AND RESPONSIBILITIES OF LIVING LAB BOARD MEMBERS

Version history table

Version	Date	Author(s)	Notes
v0	XX/XX/2024		

Living Lab

Country	Indicative Crops	Code number	
SSSA (Italy)	Chickpea	IT_LL01	<input type="checkbox"/>
UNIFI (Italy)	Chickpea, Sulla, Pea Clover	IT_LL02	<input type="checkbox"/>
UNIPI (Italy)	Chickpea, Vetch	IT_LL03	<input type="checkbox"/>
AUA (Greece)	Sulla, Lentil	GR_LL04	<input type="checkbox"/>
WR (Netherlands)	Red and white clover, Lucerne	NL_LL05	<input type="checkbox"/>
DELPHY (Netherlands)	Faba bean, Lupin	NL_LL06	<input type="checkbox"/>
INTIA (Spain)	Faba bean, Pea, Chickpea	ES_LL07	<input type="checkbox"/>
UC (Portugal)	Chickpea	PT_LL08	<input type="checkbox"/>
IFVCNS (Serbia)	Chickpea, Soybean	RS_LL09	<input type="checkbox"/>

Participants in the Living Lab board

Participant	Name	E-mail	Signature
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VALERECO partner			
Farmer			
Farmer			
Advisor			
Advisor			
Researcher			
Researcher			
Consumer			
Policymaker			
Industry actor			

Roles and responsibilities of Living Lab board members

Roles and responsibilities	Name
Facilitator	

End of Annex 1

Annex 2: Consent form for Living Lab board members

The following Annex 2 will be uploaded as a separate file in VALERECO MS SharePoint, where partners will be able to translate it into the local language and spread it to the Living Lab board members. **The document must be signed by all LL board members for each LL and kept on file (in English language) by the LL board facilitator up to 5 years after the end of the project.**

Any updates on the document and data protection regulations during the lifespan of the project must be clearly depicted in a history version table which is included in the template.

Start of Annex 2

CONSENT FORM FOR LIVING LAB BOARD MEMBERS

Version history table

Version	Date	Author(s)	Notes
v0	XX/XX/2024		

Living Lab

Country	Indicative Crops	Code number	
SSSA (Italy)	Chickpea	IT_LL01	<input type="checkbox"/>
UNIFI (Italy)	Chickpea, Sulla, Pea, Clover	IT_LL02	<input type="checkbox"/>
UNIPI (Italy)	Chickpea, Vetch	IT_LL03	<input type="checkbox"/>
AUA (Greece)	Sulla, Lentil	GR_LL04	<input type="checkbox"/>
WR (Netherlands)	Red and white clover, Lucerne	NL_LL05	<input type="checkbox"/>
DELPHY (Netherlands)	Faba bean, Lupin	NL_LL06	<input type="checkbox"/>
INTIA (Spain)	Faba bean, Pea, Chickpea	ES_LL07	<input type="checkbox"/>
UC (Portugal)	Chickpea	PT_LL08	<input type="checkbox"/>
IFVCNS (Serbia)	Chickpea, Soybean	RS_LL09	<input type="checkbox"/>

Introduction

What is VALERECO?

VALERECO is a 4-year Horizon Europe-funded project that will develop an EU-wide legume ecosystem that promotes the valorization of the ecosystem services provided by legumes, increases knowledge about the benefits of legumes and explores synergies with other crops.

What are VALERECO Living Labs?

The VALERECO LLs are open innovation ecosystems designed to achieve the valorization of legumes and their EC in collaboration with stakeholders by: (1) developing behavioural design strategies to promote the adoption of legumes in production and consumption, (2) conducting participatory field trials to evaluate the performance of major and minor-underutilised legume crops in diversified farming systems, (3) demonstrating and co-developing technical, economic and environmental solutions for the inclusion of legumes in cropping systems. VALERECO LLs will run over three growing seasons to achieve a sustainable impact and link the different stakeholders (farmers, advisors, industry, consumers, researchers, policy makers).

What are VALERECO Living Lab boards?

The LL Boards are short teams of 10 people (VALERECO partners, farmers, advisors, researchers, policy makers, industry and consumers) who orchestrate the dialogue between all relevant stakeholders in multi-stakeholder activities and monitor the governance and activities of the LLs by meeting virtually on an annual basis and co- assessing legumes and their ecosystem services tested in the LLs.

Rules and important information

What are your responsibilities as Living Lab board member?

- Be part of a team consisting of VALERECO partners, farmers, advisors, consumers, researchers, industry actors and policymakers to monitor, update and assess the LL for at least 42 months beginning from October 2024 or November 2024
- Participate in the co-creation activities and the annual gathering of all VALERECO LL boards

How long will the activities last and where will they take place?

Specific details about activity length, focus and location would be provided from the LL manager and/or the LL board facilitator at the time of invitation to take part in a meeting or a research activity.

How will the information be used?

Information will be used for project and research purposes only. It will be analyzed together with other information collected through other activities which focus on the VALERECO project objectives. Project findings will be published in the form of reports to the European Commission, on topics discussed, articles in scientific journals, papers and presentations at technical or scientific events, and to project partner teams participating in VALERECO. Additionally, VALERECO will disseminate research results (which do not contain any personal data of Living Lab board members) to actors that the LL manager and/or LL board facilitator finds relevant in their country or region.

Pseudonymity and confidentiality

We will ask for your name and contact details, which we will only use for our own project records, and so that we can contact you to share project outputs if you so wish. At any time, you have the right to ask for your contact details to be deleted from our records.

The information you give us will be treated as confidential and will be pseudonymized so that it cannot be linked to you personally. We will not disclose any details that could be used to identify you. If quotes are used in any output these will be anonymized, unless else is agreed with LL manager of my LL.

Liability

The VALERECO project and project partners accept no liability for stakeholders participating in the research activity.

No obligation to take part

Taking part in this study is entirely voluntary and you can withdraw at any time. During any activity you are free not to answer questions without any explanation. You will be asked to provide consent prior to joining the LL to show that you understand your rights as a participant and that you are committed to take part in the LL. This consent form will be sent to you by your LL manager and/or LL board facilitator if you accept to participate.

General Data Protection Regulation

All information is treated in accordance with applicable regulations, and particularly the General Data Protection Regulation n°2016/679.

Contact

For more information, please contact the LL board facilitator, [INSERT NAME, EMAIL]

Consent form and expression of commitment

For individual participants in the Living Lab boards in the VALERECO project (GA: 101135472), funded by the European Union’s Horizon Europe research and innovation programme.

	Please tick box
I confirm that I have read, or had read to me, and understand the information sheet for the above study (see below). I have had the opportunity to ask questions, and these have been answered fully and explicitly.	<input type="checkbox"/>
I understand that my participation is voluntary, and I am free to withdraw at any time, without providing any reason and without my legal rights being affected. I understand the existence of the right to request from the controller access to and rectification or erasure of personal data or restriction of processing concerning the data subject or to object to processing as well as the right to data portability.	<input type="checkbox"/>
I understand that the project is carried out by a consortium of 15 partner organizations coordinated by AUA, and contracted by the European Commission, under Grant Agreement 101135472.	<input type="checkbox"/>
Unless other is agreed with the Facilitator of my Living Lab board, data will be anonymized at the earliest possible time, and it will not be possible to identify who said what in any publications/outputs.	<input type="checkbox"/>
I understand that this form relates to all the activities to which I am contributing within the VALERECO project.	<input type="checkbox"/>
I agree to take part in the VALERECO project.	<input type="checkbox"/>
I agree to being committed to the Living Lab and as a Living Lab board member for a minimum period of 42 months	<input type="checkbox"/>
I agree to being contacted by project partners in relation to this study after my participation in a Living Lab board has ended.	<input type="checkbox"/>

Annex 3: Consent form and expression of commitment to participate in the VALERECO Living Labs and the Digital Legume Information Hub (DLIH).

The following Annex 4 will be uploaded as a separate file in VALERECO SharePoint and MS Teams, where partners will be able to translate it into the local language and send it to potential members of the Living Labs and VALERECO DLIH. **The document must be signed by the respondent for each LL and kept on file (in English language) by the LL manager up to 5 years after the end of the project.** Any updates on the document and data protection regulations during the lifespan of the project must be clearly depicted in a history version table which is included in the template.

Dear LL manager, please translate to local language (if you find it necessary) and insert the following consent form into the e-mail with the invitation to the stakeholders to join your Living Lab and the VALERECO DLIH.

Start of Annex 3

Consent form and expression of commitment to participate in the VALERECO Living Labs and the Digital Legume Information Hub (DLIH).

For individual participants in the Living Lab boards in the Valorization Legumes Related Ecosystem Services – VALERECO project (GA: 101135472), funded by the European Union’s Horizon Europe research and innovation programme.

	Please tick box
I confirm that I have read, or had read to me, and understand the information sheet for the above study (see below). I have had the opportunity to ask questions, and these have been answered fully and explicitly.	<input type="checkbox"/>
I understand that my participation is voluntary, and I am free to withdraw at any time, without providing any reason and without my legal rights being affected. I understand the existence of the right to request from the controller access to and rectification or erasure of personal data or restriction of processing concerning the data subject or to object to processing as well as the right to data portability.	<input type="checkbox"/>
I understand that the project is carried out by a consortium of 15 partner organizations coordinated by AUA, and contracted by the European Commission, under Grant Agreement 101135472.	<input type="checkbox"/>
Unless other is agreed with the Living Lab manager, data will be pseudonymized at the earliest possible time and it will not be possible to identify who said what in any publications/outputs.	<input type="checkbox"/>
I understand that this form relates to all the activities to which I am contributing within the VALERECO project.	<input type="checkbox"/>
I agree to take part in the VALERECO project.	<input type="checkbox"/>
I agree to being committed to the Living Lab and the VALERECO Digital Legume Information Hub (DLIH) as external stakeholder for a period that lasts until May 2028.	<input type="checkbox"/>
I agree to being contacted by project partners in relation to this study after my participation in the Living Lab has ended.	<input type="checkbox"/>
I agree for the information I provide to be recorded (e.g., audio, visual, notes) and transcribed. The recordings will be kept on file until a few months after the end of the project and then deleted. Transcripts or interview summaries/extracts will be kept for up to five years after the end of the project for accounting reasons and then deleted.	<input type="checkbox"/>

I agree that photos and videos taken during VALERECO related activities (e.g., co-creation activities, demo farm events, meetings) can be shared on social media.	<input type="checkbox"/>
[Add name of organization of Living Lab] will use your personal data for the purposes of the research undertaken in the VALERECO project. Our legal basis for processing your data is informed consent, as provided in art 6/1/a of the GDPR.	
We are the Data Controller over your personal data. We will not share your personal data beyond the project team, unless required by law and shall only retain it according to good scientific practice for as long as is necessary to fulfil the research undertaken on the project, to deliver project outcomes, and to fulfil the requirements of the funder. Please see our Privacy Notice at [web address of organization] for further information or contact the Ethic Mentor on [vagelismallios@yahoo.gr] ^{4*} .	

<i>Name of participant in the LL and the DLIH</i>	<i>Signature</i>	<i>Date</i>
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<i>Name of LL manager</i>	<i>Signature</i>	<i>Date</i>
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[Insert Living Lab manager Name] / [Email address]

Contact details:

[Name of organization]

[Address]

End of Annex 3

⁴ If there is no privacy notice on the partner’s website, and if a partner does not have an Ethic Mentor, substitute the sentence with the following: “For further information please contact the consortium’s Ethic Mentor Mr. Evagelos Mallios vagelismallios@yahoo.gr”

Annex 4: Template for periodic Living Lab Reporting (LLR)

The following Annex 4 will be uploaded as a separate file in VALERECO MS SharePoint, where partners and specifically the LL managers will be able to download it, fill it and sent it to the Task leader. Any updates on the document and data protection regulations during the lifespan of the project must be clearly depicted in a history version table which is included in the template.

With **red**, you will find the instructions.

Start of Annex 4

LIVING LAB REPORTING (LLR) SHEET

Version history table

Version	Date	Author(s)	Notes
v0	XX/XX/2023		

Living Lab

Tick the box of your Living Lab

Country	Indicative Crops	Code number	
SSSA (Italy)	Chickpea	IT_LL01	<input type="checkbox"/>
UNIFI (Italy)	Chickpea, Sulla, Pea Clover	IT_LL02	<input type="checkbox"/>
UNIPI (Italy)	Chickpea, Vetch	IT_LL03	<input type="checkbox"/>
AUA (Greece)	Sulla, Lentil	GR_LL04	<input type="checkbox"/>
WR (Netherlands)	Red and white clover, Lucerne	NL_LL05	<input type="checkbox"/>
DELPHY (Netherlands)	Faba bean, Lupin	NL_LL06	<input type="checkbox"/>
INTIA (Spain)	Faba bean, Pea, Chickpea	ES_LL07	<input type="checkbox"/>
UC (Portugal)	Chickpea	PT_LL08	<input type="checkbox"/>
IFVCNS (Serbia)	Chickpea, Soybean	RS_LL09	<input type="checkbox"/>

Living Lab Reporting Period	<input type="checkbox"/> LLR1: M12 (May 2025) <input type="checkbox"/> LLR2: M22 (March 2026) <input type="checkbox"/> LLR3: M32 (January 2027) <i>Tick the box of the LLR</i>
Annual virtual and/or physical meetings of the LL boards	<p><i>Please make a summary of the annual virtual meeting with the LL board. Add (1) the participants, (2) date and time of the meeting, (3) agenda, (4) key messages, (5) decisions taken, (6) adjusted plan for the LLs for the following year, (7) assessment of progress so far etc.</i></p> <p><i>If you didn't organize a meeting during the reported LLR, please copy and paste "Not applicable for this LLR."</i></p> <p>XXX</p>
Knowledge transfer workshop	<p><i>Please make a summary of the knowledge transfer workshops with the LL board. Add (1) the participants, (2) date and time of the workshop, (3) agenda, (4) key messages, (5) decisions taken, (6) report on the performance of legume crops and their EC, (7) assessment of progress so far etc.</i></p> <p><i>If you didn't organize a workshop during the reported LLR, please copy and paste "Not applicable for this LLR."</i></p> <p>XXX</p>
Communication activities of the LL	<p><i>Please add (1) the communication activity name, (2) a short description, (3) who was the target audience (e.g., farmers, research communities, civil society etc.), (4) how many people you reached, (5) what was the communication channel (e.g., agricultural exhibition, social media, print materials, radio etc.), (6) what was the outcome.</i></p> <p><i>If you didn't conduct any communication activity during the reported LLR, please copy and paste "Not applicable for this LLR."</i></p> <p>XXX</p>
Dissemination activities of the LL	<p><i>Please add (1) the dissemination activity name, (2) a short description, (3) the type of the dissemination activity (e.g., conferences, meetings, clustering activities etc.), (4) who was the target audience (e.g., farmers, research communities, civil society etc.), (5) how many people you reached, (6) why you did that with a reference to a specific project output.</i></p> <p><i>If you didn't conduct any dissemination activity during the reported LLR, please copy and paste "Not applicable for this LLR."</i></p> <p>XXX</p>
Demonstration activities of the LL	<p><i>Please add (1) the demonstration activity name, (2) a short description, (3) the type of the dissemination activity (e.g., open field day, drone mapping etc.), (4) who was the target audience (e.g., farmers, research communities, civil society etc.), (5) how many people you reached</i></p> <p><i>If you didn't conduct any demonstration activity during the reported LLR, please copy and paste "Not applicable for this LLR."</i></p> <p>XXX</p>

Publications	<p><i>Please add (1) the publication title, (2) a short description, (3) the type of publication (e.g., scientific publication, technical article, article in farmers’ journal etc.), (4) the publisher, (5) the date (6) how many people you approximately reached.</i></p> <p><i>If you didn’t publish anything during the reported LLR, please copy and paste “Not applicable for this LLR.”</i></p> <p>XXX</p>
Participations in regional/national events	<p><i>Please add (1) the title of the event, (2) a short description, (3) the type of the event (e.g., conference, local civil society meeting, agricultural fair etc.), (4) who was the target audience, (5) the date (6) how many people you approximately reached</i></p> <p><i>If you didn’t participate in any event during the reported LLR, please copy and paste “Not applicable for this LLR.”</i></p> <p>XXX</p>
Cross-visits	<p><i>Please add (1) person who did the cross-visit, (2) the connected Living Labs, (3) a short description.</i></p> <p><i>If you didn’t conduct any cross-visit during the reported LLR, please copy and paste “Not applicable for this LLR.”</i></p> <p>XXX</p>
Ethical and Data Protection	
Risks and proposed responses	<p><i>Please add (1) the identified risk, (2) proposed mitigation measures, (3) who is involved and who is the risk owner.</i></p> <p><i>If you didn’t identify any risks during the reported LLR, please copy and paste “Not applicable for this LLR.”</i></p> <p>XXX</p>
Social media	<p><i>Please add (1) how many posts you did on VALERECO’s social media regarding your LL, (2) how many posts you did on your social media regarding your LL, (3) how many approximately reacted to the posts.</i></p> <p><i>If you didn’t post anything on social media during the reported LLR, please copy and paste “Not applicable for this LLR.”</i></p> <p>XXX</p>
Other	XXX

End of Annex 4

END OF DOCUMENT