Deliverable 1.3: Project Management Plan v2

20 March 2025

ECOLOOP

Deliverable details

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0.2	28.02.2025	José Antonio Rodriguez(FERT) David Speh (BIOM) Blaz Germsek (KIS)	Peer review of the document	Draft	PU
1.0	20.03.2025	Sheila Sánchez (ETRA)	Final version of the document	Final	PU

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Keywords

Gantt chart, Work breakdown, Schedule, Task, Deliverables, Project Management.

Executive Summary

Long-term research and development projects, carried out by contractors distributed all around Europe, require a clear definition of the scope of the project and internal coordination mechanisms.

This project management plan defines how the ECOLOOP project will be executed, monitored and controlled, providing a summarized framework of the project and its purpose. The management plans represent the foundations for executing the project, including (i) project work plan together with pert chart and Gantt chart; (ii) work breakdown structure (WBS) detailing tasks, schedule, responsible partners and related deliverables; and (iii) required project efforts in person-months per work package and per task.

Moreover, the project management plan describes the roles of different actors in the project management structure, the meeting schedules and template agendas for meetings and gives guidelines for performing the day-to-day project management activities, including (i) instructions and templates for technical reporting on activity and WP level; (ii) instructions and templates for administrative reports; and (iii) templates and naming/numbering conventions for technical and administrative files and documents.

The purpose of this document is, therefore, to provide the guidelines, information and recommendations needed in order to facilitate the cooperation and exchange of information among partners in an efficient and agile way.

This deliverable refers to the second version of the deliverable 1.1. *"Project Management Plan v1 (PMP)".* D1.3. *Project Management Plan v2,* reflects some key information such as the amendment submission for the inclusion of Foreko as a new affiliate entity of Fibenol and other relevant changes such as SETUP and FERTINAGRO budget transfer or WP3 *"Efficient production of renewable energy in agriculture and forestry sectors"* extension.

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Copyright statement

Acknowledgement

This project has used a standard methodology already developed in OPENTUNITY project, Deliverable 1 (PMP) (Grant Agreement number: 101096333), ODEON project, Deliverable 1 (DMP) (Grant Agreement number: 101136128), STREAM project, Deliverable 1 (DMP) (Grant Agreement number: 101075654), and R2D2 project, Deliverable 1 (PMP) (Grant Agreement number: 101075714), following EU recommendations. Ad hoc modifications were added to comply with the Grant Agreement conditions for ECOLOOP (Grant Agreement number: 101118127).

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1 Introduction

1.1 Purpose of the document

This document establishes the foundation for the project management processes providing a clear route to successful project implementation. It covers everything from a basic description of the scope of the project any party involved in the project should be aware of, to the most detailed description of how the project will be executed, monitored and controlled. This facilitates a clear visualization of project management timelines.

The project management plan contains all the relevant information to facilitate the execution and control of the different tasks of the project and it may, therefore, be considered key for the overall success of ECOLOOP. In addition, it will ensure that the consortium meets all the requirements related to the contract with the European Commission (EC), checking that the tasks start and finish according to the project work plan and that the project deliverables are submitted in due time.

Considering that D1.3. PMP v2, is the updated version of D1.1. PMP v1, the consortium aimed to include in this document all the modifications of the project due to an amendment signed in November 2024, where the inclusion of Foreko as a new project partner is presented. Also, some other minor changes such as internal PMs and budget transfers in the case of SETUP and FERTINAGRO are included in this version of the PMP. Finally, the extension of WP3 *"Efficient production of renewable energy in agriculture and forestry sectors"* is reflected in this document.

1.2 Scope of the document

Deliverable 1.3 is the second version of the PMP document produced by the ECOLOOP consortium. It is produced within the Coordination work package (WP1) in order to outline a clear picture of the structure of the project, the work plan and the overall management approach ensuring tasks are completed on time, resources are allocated appropriately, and to help measure project performance.

The document will serve the team leaders within each organization, researchers and administrative personnel. It aims to provide a clear vision of what the project's objectives are and when the project's objectives are to be achieved, by showing the list of work packages/tasks, timing, deadlines, responsible partners and resources required for the project execution.

As any other document in the project, but with particular interest to D1.3, this deliverable should not contradict the project contract – and, in particular, the provisions made at the DoA with regard to the project schedule and efforts allocated.

The document will be updated at the end of each reporting period (M18 and M36), and the current version already introduces adjustments to the work plan for the current reporting period.

As already mentioned, this is the second version of the PMP, which contains the most up to date information from the project and shows up all the relevant changes made since the production and submission of the first version of the deliverable (D1.1) in M3 (31/12/2023)

1.3 Structure of the document

The document includes a first section with a basic summary of the project´s key facts and expected results. The following sections are specific tools to facilitate the execution and control of the project including the project work plan together with PERT chart and Gantt chart, work breakdown structure (WBS) detailing tasks, schedule, responsible partners and related deliverables, and required project efforts in person-months per work package and per task. The Project Management procedures –i.e. reporting, quality and risk management, communication and dissemination guidelines, etc. – are also part of this deliverable.

Finally, a section summarizing an amendment signed in April 2024 is also included.

2 Project Summary

2.1 ECOLOOP KEY FACTS

Topic: HORIZON-CL5-2022-D3-02-07 Renewable energy incorporation in agriculture and forestry.

Type of Action: HORIZON Innovation Action.

Project start: 1 October 2023.

Duration: 48 months from (Article 3 GA). From 01/10/2023 to 30/09/2027.

Project Coordinator: ETRA INVESTIGACIÓN y DESARROLLO S.A.

Consortium: 15 organizations from 4 countries.

2.2 ECOLOOP IN SHORT

ECOLOOP project develops and demonstrates a set of solutions to optimize the combination of different energy distributed sources (biogas, biomass, Agri-PV, geothermal), meeting the local needs for electricity, heating, cooling, transport and waste and land management in rural areas, fostering regional development and creating benefits for farmers and foresters. The project solutions focus on promoting the reduction of carbon footprint in rural areas by means of higher penetration of distributed renewable energy sources, self-consumption, and optimal agricultural/forest waste management, while creating positive effects in biodiversity and soil health and reducing the risk of groundwater contamination. Following this approach, ECOLOOP objectives are:

- To optimize the production of biogas from agriculture and forestry wastes in situ.
- To combine in an efficient and sustainable way different distributed renewable energy sources (biogas, biomass, Agri-PV, geothermal), meeting the local needs for electricity, heating, cooling, transport and waste and land management in rural areas.
- To develop innovative renewable-based agricultural protocols and advance bioproducts to increase sustainability and circularity while creating positive effects on biodiversity and soil health and groundwater pollution.
- To foster regional development in rural areas.

ECOLOOP project will move towards a circular economy in rural areas, focusing on agriculture and forestry sectors, contributing to job creation, gender equality, biodiversity and climate resilience and adaptation.

All the benefits provided by ECOLOOP solutions will be demonstrated in 4 pilot sites in Spain, Estonia, Bulgaria and Slovenia, involving different forest and agriculture natural conditions (climate, soils), size and types of crops trees, management techniques, degree of mechanization, geographic location and socio-economic factors, and considering the interaction of different types of energy sources.

2.3 ECOLOOP CONSORTIUM

ECOLOOP consortium comprises 15 partners from 4 different countries. It is composed of a balanced team of complementary organisations including industrial partners, universities, public institutions and end users. The list of all ECOLOOP partners is shown in Table *1*, together with their main role in the project.

As shown in the table, the beneficiary Foreko, which started being part of the consortium since May 2024, is an affiliated entity of the partner Fibenol. Given Foreko's expertise in sustainable forest management, Fibenol has identified a critical need to involve Foreko as an affiliated partner in the ECOLOOP consortium, in order to add significant value, leveraging its forestry and wood residue knowledge to achieve the project's goals and disseminate and exploit results from the Estonian pilot and the project at large.

Table 1. List of ECOLOOP partners.

No	Participant organization name	Country	Short Name	Main Role in ECOLOOP
1	ETRA Investigación y Desarrollo S.A.	Spain	ETRA	Coordinator.
2	Ingeniería y Desarrollos Renovables S.L.	Spain	INDEREN	Spanish pilot site leader. Leader of the combination of different energy sources solution.
3	Genia Bioenergy S.L.	Spain	GENIA	Leader of WP3 and active in the Spanish pilot site.
4	Universitat Politècnica de Valencia	Spain	UPV	LL implementation leaders. Participants of the Spanish pilot site.
5	Inovacijsko-razvojni institut Univerze v Ljubljani	Slovenia	IRI UL	Business Models definition and socioeconomic impact leaders. Participants in the Slovenian pilot site.
6	Kolektor Setup, Storitve Energetskega Upravljanja, D.O.O.	Slovenia	SETUP	Slovenian pilot site and WP2 leader.
7	Eesti Maaulikool	Estonia	EULS	Leader of carbon sequestration tool. Estonian pilot site leader.
8	Fibenol OU	Estonia	FIBENOL	Estonia Pilot partner developing of unique Sunburst pre-treatment Woody biomass into materials.

8.1	Foreko OÜ	Estonia	FOREKO	Fibenol affiliated partner focus on the design and demonstration of the carbon sequestration tool, dissemination and exploitation activities
9	Albena AD	Bulgaria	ALBENA	Leader of the Bulgarian pilot site.
10	Fertinagro Biotech SL	Spain	FERTINAGRO	Bioproducts production from digestate in the Spanish pilot site.
11	Asociación Valenciana de Agricultores	Spain	AVA-ASAJA	Financial instruments definition. Participants of Spanish pilot site.
12	Trakiyski Universitet	Bulgaria	TRU	Research partner in the Bulgarian pilot site. Policy recommendations definition.
13	Biomasa Druzba Za Trgovino Servis in Montazo Kotlov Na Biomaso DOO	Slovenia	BIOMASA	Developers of biomass modular solution. Participants of Slovenian pilot.
14	Kmetijski Institut Slovenije-Agricultural Institute of Slovenia	Slovenia	KIS	Research partner in the Slovenian pilot site.

2.4 MANAGEMENT STRUCTURE

The project management structure is based in a shallow management hierarchy with transparency in the information flow in order to facilitate a team of empowered and motivated individuals to respond to the needs of new product development and large demonstrations. The goal will be to define a management structure and a set of principles and procedures which, whilst being as flexible, agile and cost-efficient as possible, leave as little room as possible for subjective interpretation.

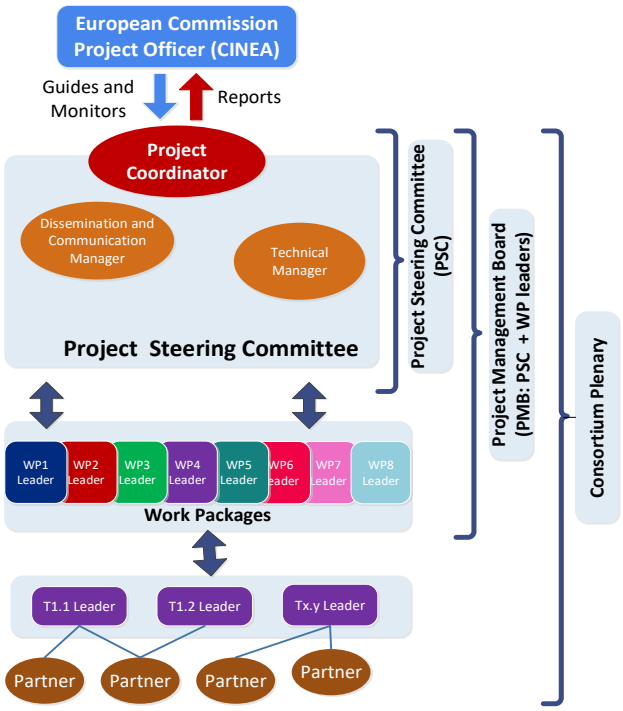

Figure 1. ECOLOOP Management Structure

The work to be done within ECOLOOP is structured into a set of WPs (led by WP leaders) which are at the same time divided into a set of tasks, led by Task Leaders (TL) as shown in Figure 1. The **Project Coordinator (PC)** takes responsibility for overall project management. This includes interactions with the EC on contract-related issues as well as chairing regular management meetings, set of administrative and financial tasks -representing the project in the contract negotiation, and in relation to the Commission's Project Officer, representing the consortium in workshops and official meetings, collecting administrative reports from partners and forwarding periodical reports to the Project Officer, preparing and updating the consortium agreement between the participants, administering project resources and project spending, managing the overall ethical and gender issues, etc. The PC is supported in monitoring the project's performance, managing the technical audits, supervising the preparation of the final deliverables by the **Project Steering Committee (PSC)**. Reasons for any deviations from the project plan will be identified and the necessary corrective actions will be agreed by the PSC. Roles comprised by the PSC are the **Technical Manager (TM)**, who supports the PC in technical matters, e.g. strategic decisions regarding technical designs and implementations; the **Dissemination and Communication Manager (DCOM)** who will be responsible for all dissemination activities and direct interaction with end-users and mass media, the DCOM will lead the definition of the project website structure and functionalities, being part of the project website the project repository, i.e. a collaboration working space for the exchange, sharing and storage of project documentation (deliverables, white papers, agendas, minutes, reports, etc.). **WP leaders (WPL)** are responsible of activities and objectives specified in the project plan, as well as for carrying out the respective deliverables on time, and ensuring no delays in the accomplishment of the tasks. WPLs will coordinate the activities within the WPs and will work in close cooperation with the SPLs. Together with the PSC the WPLs form the **Project Management Board (PMB)** which will convene twice a month to discuss the progress of the individual WPs. Within each work package the **Task leaders (TL)** will be the direct responsible for the day-to-day work needed to carry out the tasks related to their specific activity. Their coordination work is not subject to any additional administrative or reporting burden; instead, they will act as team leaders of all the individuals from the different partners involved in a specific task. Major changes in the project plan, such as reallocation of

resources, may be done within the limits of agreements, by the decision of the PMB as put forward by the Project Coordinator.

Last but not least, all the partners are represented in the **Consortium Plenary (CP).** The CP is the key liaison between the project and partner organisations. In the CP meetings the Project Coordinator will present the project's status and plans for the next period. Representatives of the partner organisations will be able to voice their opinions and ask for more elaborated information on the progress and plans. The CP meetings shall take place twice a year and, when possible, in conjunction with the scientific and technical dissemination activities of the project.

Table 2. Project Management Board.

Project Management Board			
Project Coordinator	Antonio Marqués (ETRA)	WP3 leader	Ana Fernández (GENIA)
Deputy Project coordinator (WP1 leader)	Sheila Sánchez (ETRA)	WP4Leader	Diego García (ETRA)
Technical Manager	Tomi Medved (IRI UL)	WP5 leader	Jernej Zupančič (IRI UL)
DCOM (WP8 Leader)	Raquel Castán (ETRA)	WP6 Leader	Reimo Lutter (EULS)
WP2 Leader	Klemen Peter Kosovinc (SETUP)	WP7 Leader	Víctor J. Añón (INDEREN)

3 ECOLOOP Workplan

ECOLOOP work plan is divided into 8 Work Packages (WPs). **WP1 (M1-M48, ETRA),** led by ETRA as project coordinator with IRI UL support as technical Coordinator, guaranteeing a correct project progress. In the **WP2 "Project foundations and living labs implementation" (M1-M18, SETUP)** all partners of the project (end users, researchers, technical providers, etc.) will participate in a collaborative and iterative way in the definition of the use cases, requirements and KPIs, that will be the basis for the rest of the project activities. Then, the three technical WPs, which design and develop the project results are in **WP3 "Innovative technologies and processes to promote efficient production of renewable energy in agriculture and forestry sectors" (M7-M36, GENIA)[1], WP4 "Decision support tool for farmers and foresters" (M7-M30, ETRA) and WP5 "Innovative business models, financial instruments and policy recommendations to foster rural development and circular economy" (M7-M30, IRI UL).** Then, in **WP6: "Deployment and demonstration activities" (M13-M48, EULS),** all the project results will be integrated and demonstrated in the project pilot sites and Living labs. **WP7 "Project impact evaluation and replication strategy" (M31-M48 – INDEREN)** will focus on impact assessment and the definition of the replication strategies. In **WP8 "Dissemination, communication and exploitation activities" (M1-M48, ETRA)** the consortium will setup and coordinate a robust **communication, dissemination and exploitation** strategies guaranteeing outcomes promotion and exploitation among relevant stakeholders, engaging them also for policy making purposes.

[1] WP3 *"Innovative technologies and process to promote efficient production of renewable energy in agriculture and forestry sectors"* has been extended 6 months (from M30 to M36) due to the DANA, which severely affects the main Spanish pilot areas: Beniparrel, where the biogas plant was planned to be built, and Poliñá de Júcar, where the crop fields for the biofertilizer testing are located. This delay is clearly force majeure, and it can be accepted as a deviation/delay without the need of an amendment since it is fully justified, and the Project Officer was informed well in advance.

3.1 ECOLOOP PERT

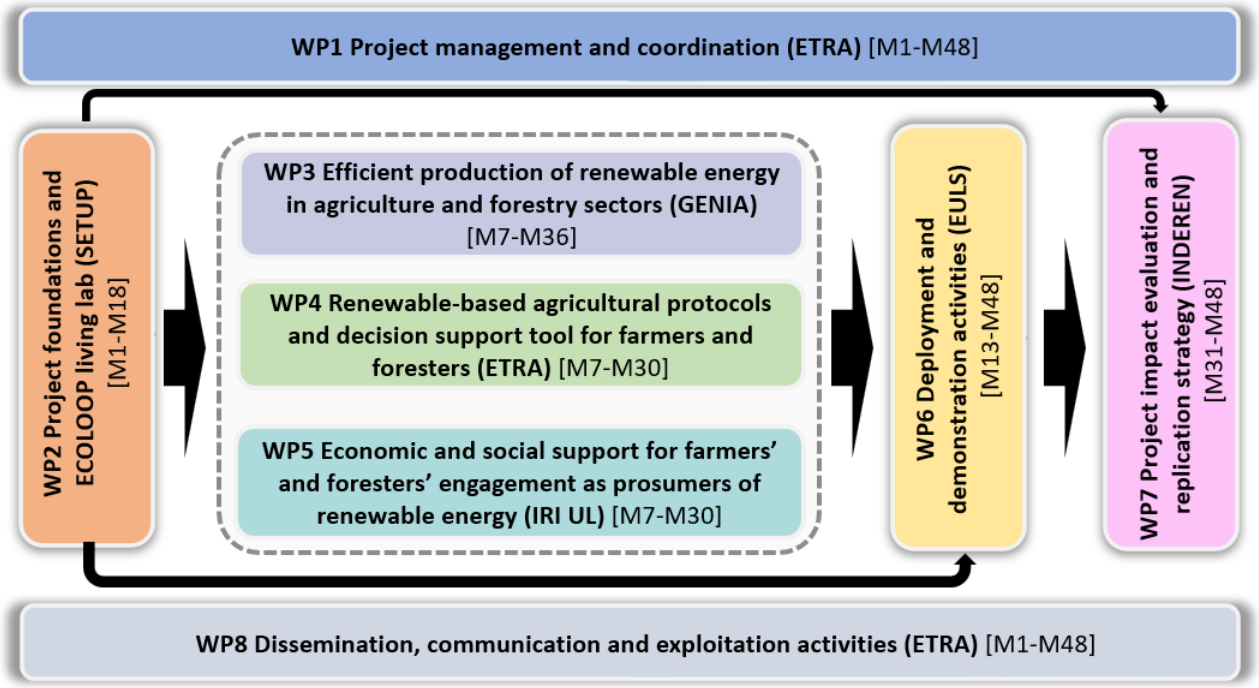

Figure 2. ECOLOOP PERT.

3.2 ECOLOOP GANTT

Table 3. ECOLOOP GANTT

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48
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3.3 WORK BREAKDOWN STRUCTURE (WBS)

3.3.1 ECOLOOP Tasks Breakdown

Table 4. ECOLOOP tasks, schedule, involved partners and deliverable.

WP	Task	Start	End	Leader	Involved partners	Related deliverable
1	1.1 Administrative and financial management	01/10/2023	30/09/2027	ETRA	ALL	D1.3 - Project Management Plan v1 [M3] D1.3 – Project Management Plan v2 [M18] D1.3 – Project Management Plan v3 [M30]
1	1.2 Technical and risk management and Quality assurance	01/10/2023	30/09/2027	IRI UL	ALL	D1.3 - Project Management Plan v1 [M3] D1.2 - Data Management Plan [M6] D1.3 – Project Management Plan v2 [M18] D1.4 – Project Management Plan v3 [M30]
1	1.3 Data management plan and RRI	01/10/2023	30/09/2027	ETRA	ALL	D1.2 - Data Management Plan [M6]
2	2.1 Pilot site analysis and co-creation of project scenarios and use-cases	01/10/2023	30/09/2024	SETUP	ETRA, INDEREN, GENIA, UPV, IRI UL, EULS, ALB, FERT, AVA, TRU, BIOM, KIS	D2.1 - Pilot site analysis and use cases, requirements and KPIs definition [M12]

2	2.2 Definition and consolidation of project requirements	01/10/2023	30/09/2024	ETRA	INDEREN, GENIA, UPV, IRI UL, SETUP, EULS, ALB, FERT, AVA, TRU, BIOM, KIS	D2.1 - Pilot site analysis and use cases, requirements and KPIs definition [M12]
2	2.3 KPI identification and monitoring preparation	01/10/2023	30/09/2024	INDEREN	ETRA, GENIA, UPV, IRI UL, SETUP, EULS, ALB, FERT, AVA, TRU, BIOM, KIS	D2.1 - Pilot site analysis and use cases, requirements and KPIs definition [M12]
2	2.4 Implementation of ECOLOOP-SOIL Living Lab for experimentation	01/10/2023	31/03/2025	UPV	ETRA, INDEREN, GENIA, IRI UL, SETUP, EULS, ALB, FERT, AVA, TRU, BIOM, KIS	D2.2 ECOLOOP SOIL Living Laboratory Description [M18]
3	3.1 Innovative and efficient biogas production and conversion	01/04/2024	31/09/2026	GENIA	ETRA, INDEREN, UPV, IRI UL, SETUP, EULS, ALB, BIOM, KIS	D3.1 -Efficient combination of renewable energy in agriculture and forestry sectors [M36][2]
3	3.2 Flexibility management to increase the profitability of slow pyrolysis	01/04/2024	31/03/2026	BIOM	GENIA, ETRA, INDEREN, UPV, IRI UL, SETUP, EULS	D3.1 -Efficient combination of renewable energy in agriculture and forestry sectors [M36]
3	3.3 Optimal combination of different renewable energy	01/04/2024	31/09/2026	INDEREN	ETRA, GENIA, UPV, IRI UL, EULS, ALB, BIOM, KIS	D3.1 -Efficient combination of renewable energy in agriculture and forestry sectors [M36]

[2] The 6-month extension for WP3 therefore implies also an extension for the submission dates of the associated deliverables. As shown in both the GANTT and the table above, the D3.1 delivery date is changed from M24 to M36, while the D3.2 delivery date is changed from M30 to M36. However, a first draft of both deliverables will be produced and submitted to the Project Officer in M24 (D3.1) and M30 (D3.2) as indicated in the first phase of the project. These changes are already confirmed with the Project Officer who was informed well in advance.

	sources to address the needs of agricultural or forest processes					
3	3.4 Bioproducts from agroforestry waste to create positive effects in soil biodiversity and health (Biofertilizers and biostimulants)	01/04/2024	31/09/2026	FERT	INDEREN, GENIA, UPV, IRI UL, EULS, ALB, BIOM, KIS	D3.2 – Bioproducts from agroforestry waste to create positive effects in soil biodiversity [M36]
4	4.1 Big data analytics (IoT ecosystem)	01/04/2024	31/03/2026	ETRA	INDEREN, GENIA, UPV, IRI UL, SETUP, EULS, FERT	D4.1 - AI and big data analytics (IoT ecosystem) [M24]
4	4.2 Carbon sequestration tool calculation	01/04/2024	31/03/2026	EULS	ETRA, INDEREN, GENIA, UPV, IRI UL, SETUP, FIBE, BIOM, KIS	D4.2 - Carbon sequestration tool calculator and the renewable-based agricultural protocols [M24]
4	4.3 Renewable-based agricultural protocols to increase sustainability and circularity	01/04/2024	31/03/2026	UPV	ETRA, INDEREN, GENIA, IRI UL, SETUP, EULS, ALB, KIS	D4.2 - Carbon sequestration tool calculator and the renewable-based agricultural protocols [M24]
4	4.4 Decision support tool for farmers and foresters	01/04/2024	31/03/2026	ETRA	INDEREN, GENIA, UPV, IRI UL, SETUP, EULS, AVA, BIOM, KIS	D4.3 - Decision support tool for farmers and forester's final version [M30]
5	5.1 Innovate business models for a circular and sustainable bioeconomy in rural areas	01/04/2024	31/03/2026	IRI UL	ETRA, INDEREN, GENIA, SETUP, EULS, ALB, FERT, AVA, TRU, BIOM, KIS	D5.1 – Business models and financial and social instruments [M24]

5	5.2 Definition of the financial and social instruments for farmers and foresters to promote rural development	01/04/2024	31/03/2026	AVA	ETRA, UL, EULS, ALB, TRU, BIOM, KIS	D5.1 – Business models and financial and social instruments [M24]
5	5.3 Guidance on policy development to optimise the contribution of agroforestry to support sustainable rural development	01/04/2024	31/03/2026	TRU	ETRA, IRI UL, EULS, ALB, AVA, BIOM, KIS	D5.2 - Support for the creation of renewable energy communities in rural areas [M30]
5	5.4 Support for the creation of renewable energy communities in rural areas	01/04/2024	31/03/2026	IRI UL	ETRA, EULS, ALB, AVA, TRU, BIOM, KIS	D5.2 - Support for the creation of renewable energy communities in rural areas [M30]
6	6.1 Overall coordination of Pilot Sites and living lab activities	01/10/2024	31/03/2025	EULS	ETRA, INDEREN, GENIA, UPV, IRI UL, SETUP, FIBE, ALB, FERT, AVA, TRU, BIOM, KIS	D6. 1 – Pilot sites integration and demonstration planning [M18]
6	6.2 Spanish Pilot	01/04/2025	30/09/2027	INDEREN	ETRA, GENIA, UPV, FERT, AVA	D6. 2 – Demonstration activities results [M48]
6	6.3 Estonian Pilot	01/04/2025	30/09/2027	EULS	ETRA, FIBE	D6. 2 – Demonstration activities results [M48]
6	6.4 Slovenian Pilot	01/04/2025	30/09/2027	SETUP	ETRA, UL, BIOM, KIS	D6. 2 – Demonstration activities results [M48]
6	6.5 Bulgarian Pilot	01/04/2025	30/09/2027	ALB	ETRA, TRU	D6. 2 – Demonstration activities results [M48]

7	7.1 Environmental footprint and biodiversity impact assessment	01/04/2026	30/09/2027	INDEREN	ETRA, GENIA, UPV, IRI UL, SETUP, EULS, FIBE, ALB, FERT, AVA, TRU, BIOM, KIS	D7. 1 – Methodologies and impact assessment plan [M36] D7. 2 – Environmental footprint and biodiversity, social and economic impact assessment results [M48]
7	7.2 Socioeconomic impact assessment following a circular bioeconomy approach	01/04/2026	30/09/2027	IRI UL	ETRA, INDEREN, GENIA, UPV, SETUP, EULS, FIBE, ALB, FERT, AVA, TRU, BIOM, KIS	D7. 1 – Methodologies and impact assessment plan [M36] D7. 2 – Environmental footprint and biodiversity, social and economic impact assessment results[M48]
7	7.3 Replication and scaling-up guidelines and lessons learnt description	01/04/2026	30/09/2027	TRU	ETRA, INDEREN, GENIA, UPV, IRI UL, SETUP, EULS, FIBE, ALB, FERT, AVA, BIOM, KIS	D7.3 - Replication and scaling-up guidelines and policy recommendations [M48]
8	8.1 Dissemination and communication activities	01/10/2023	30/09/2027	ETRA	INDEREN, GENIA, UPV, IRI UL, SETUP, EULS, FIBE, ALB, FERT, AVA, TRU, BIOM, KIS	D8.1 - Dissemination, Exploitation and Communication Plan (DECP) [M6] D8.2- Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V1 [M18] D8.3 - Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V2 [M30] D8.4 - Dissemination, Communication, end-users' engagement activities,

						synergies with other projects and exploitation activities V3 [M48]
8	8.2 Exploitation plans and IPR activities	01/10/2023	30/09/2027	ETRA	INDEREN, GENIA, UPV, IRI UL, SETUP, EULS, FIBE, ALB, FERT, AVA, TRU, BIOM, KIS	D8.1 - Dissemination, Exploitation and Communication Plan (DECP) [M6] D8.2- Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V1 [M18] D8.3- Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V2 [M30] D8.4 - Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V3 [M48]
8	8.3 Farmers and foresters' engagement activities	01/10/2023	30/09/2027	AVA	ETRA, INDEREN, GENIA, IRI UL, EULS, FIBE, ALB, FERT, TRU, KIS	D8.1 - Dissemination, Exploitation and Communication Plan (DECP) [M6] D8.2- Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V1 [M18] D8.3 - Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V2 [M30]

						D8.4 - Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V3 [M48]
8	8.4 Collaboration with other initiatives and projects	01/10/2023	30/09/2027	ETRA	INDEREN, GENIA, UPV, IRI UL, SETUP, EULS, FIBE, ALB, FERT, AVA, TRU, BIOM, KIS	D8.1 - Dissemination, Exploitation and Communication Plan (DECP) [M6] D8.2- Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V1 [M18] D8.3 - Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V2 [M30] D8.4 - Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V3 [M48]

3.3.2 Project effort in Person-months

3.3.2.1 Extended PM Breakdown (per task)

In Table 5 the PM Breakdown for Foreko has been included. Fibenol has transferred 2PMs to Foreko in task 4.2, to support in the design and development of the Carbon sequestration tool, and 4 PMs in task 6.3 to assist them in testing and demonstrating this same tool in the Estonian pilot. Finally, 1PM is transferred to Foreko in WP1 for administration activities, and 1PM in WP8 for dissemination and exploitation purposes.

It's worth mentioning that some minor changes were made for SETUP, which transfers 14 PMs from T4.2, T4.3 and T4.4, where they find, they cannot significantly contribute, to T3.2, T4.1 and T6.4, where additional PMs would be highly beneficial. Also, FERTINAGRO has transferred 5PMs from WP2 (personnel budget) to their equipment budget. This is traduced in a reduction of 259,000€ in the personnel costs and an increase of 51,000€ in the budget allocated for equipment. Finally, TRAKIA had no associated PMs and no planned expenditure for personnel costs in WP3 and WP4. However, they are actively involved in both, either directly with the task leaders or by supporting the pilot site in Albena. Thus, 6 PMs from WP2, where their involvement is lower than expected, have been transferred to WP3, 4 and 6. All these changes were not reflected in the amendment, but were communicated and confirmed with the PO.

Table 5. ECOLOOP Effort per task and partner.

		Lead	ETRA	INDEREN	GENIA	UPV	IRI UL	SETUP	EULS	FIBENOL	FOREKO	ALBENA	FERT	AVA	TRU	BIOMASA	KIS	TOTAL
WP 1	**Project management and coordination**	**ETRA**	**35**	**5**	**5**	**5**	**10**	**5**	**5**	**4**	**1**	**5**	**5**	**5**	**5**	**5**	**5**	**105**
1.1	Administrative and financial management	ETRA	22	3	3	3	3	3	3	2	1	3	3	3	3	3	3	**61**
1.2	Technical management and Quality assurance	IRI UL	8	1	1	1	6	1	1	1		1	1	1	1	1	1	**26**
1.3	Ethics monitoring and data management	ETRA	5	1	1	1	1	1	1	1		1	1	1	1	1	1	**18**
WP 2	**Project foundations and living labs implementation**	**SETUP**	**26**	**16**	**10**	**14**	**10**	**21**	**10**	**-**	**-**	**10**	**3**	**8**	**2**	**8**	**8**	**152**
2.1	Pilot site analysis and definition of project scenarios and use-cases	SETUP	4	4	4	2	4	10	4			4	0,5	2	0,5	2	2	**44,5**
2.2	Definition and consolidation of project requirements	ETRA	12	2	2	2	2	4	2			2	0,5	2	0,5	2	2	**36,5**

2.3	KPI identification and monitoring preparation	INDEREN	5	8	2	2	2	4	2			2	0,5	2	0,5	2	2	**35,5**
2.4	Implementation of ECOLOOP leaving lab	UPV	5	2	2	8	2	3	2			2	1,5	2	0,5	2	2	**35,5**
WP 3	**Efficient production of renewable energy in agriculture and forestry sectors**	**GENIA**	**14**	**29**	**40**	**15**	**11**	**13**	**17**	**-**	**-**	**7**	**20**	**-**	**2**	**24**	**14**	**204**
3.1	Innovative and efficient biomass production and conversion	GENIA	6	5	15	3	2	4	6			4			1	6	4	**55**
3.2	Flexibility management to increase the profitability of slow pyrolysis	BIO	2	5	9	2	3	9	5							10		**45**
3.3	Optimal combination of different renewable energy technologies to address the needs of agricultural or forest processes	INDEREN	6	15	10	2	4		3			2				4	4	**50**
3.4	Bioproducts from agroforestry waste to create positive effects in soil biodiversity and health (Biofertilizers and biostimulants)	FERTINAGRO		4	6	8	2		3			1	20		1	4	6	**54**
WP 4	**Renewable-based agricultural protocols and decision support tool for farmers and foresters**	**ETRA**	**50**	**16**	**22**	**19**	**11**	**16**	**32**	**-**	**2**	**2**	**2**	**5**	**2**	**7**	**9**	**193**
4.1	AI and big data analytics (IoT ecosystem)	ETRA	20	2	4	2	3	12	2				2					**47**
4.2	Carbon sequestration tool calculation	EULS	5	2	6	3	3	0	25		2				1	2	2	**50**
4.3	Renewable-based agricultural protocols to increase sustainability and circularity	UPV	5	10	8	12	2	4	3			2			1		2	**48**
4.4	Decision support tool for farmers and foresters	ETRA	20	2	4	2	3	0	2					5		5	5	**48**
WP 5	**Economic and social support for farmers' and foresters' engagement as prosumers of renewable energy**	**IRI UL**	**15**	**3**	**3**	**-**	**26**	**1**	**9**	**-**	**-**	**9**	**3**	**29**	**19**	**8**	**19**	**144**

5.1	Innovate business models for a circular and sustainable bioeconomy in rural areas	IRI UL	5	3	3		12	1	3			3	3	3	3	3	2	**44**
5.2	Definition of the financial and social instruments for farmers and foresters to promote rural development	AVA	4				2		2			2		10	3	2	7	**32**
5.3	Guidance on policy development to optimise the contribution of agroforestry to support sustainable rural development	TRU	3				5		2			2		8	10	2	5	**37**
5.4	Support for the creation of energy communities in rural areas	IRI UL	3				7		2			2		8	3	1	5	**31**
WP 6	**Deployment and demonstration activities**	**EULS**	**28**	**23**	**18**	**13**	**8**	**30**	**35**	**14**	**4**	**37**	**9**	**7**	**16**	**13**	**7**	**260**
6.1	Overall coordination of Pilot Sites	EULS	3	3	3	5	3	3	5	1		2	2	2	2	2	1	**37**
6.2	Spanish Pilot	INDEREN	10	20	15	8							7	5				**65**
6.3	Estonian Pilot	EULS	5						30	13	4							**52**
6.4	Slovenian Pilot	SETUP	5				5	27								11	6	**54**
6.5	Bulgarian Pilot	ALBENA	5									35			14			**52**
WP 7	**Project impact evaluation and replication strategy**	**INDEREN**	**15**	**23**	**9**	**9**	**13**	**9**	**9**	**3**	**-**	**8**	**6**	**6**	**16**	**6**	**9**	**141**
7.1	Environmental footprint and biodiversity impact assessment	INDEREN	3	10	3	3	3	3	3	1		2	2	2	3	2	3	**43**
7.2	Socioeconomic impact assessment following a circular bioeconomy approach	IRI UL	5	3	3	3	7	3	3	1		2	2	2	3	2	3	**42**
7.3	Replication and scaling-up guidelines and lessons learnt description	TRU	7	10	3	3	3	3	3	1		4	2	2	10	2	3	**56**

WP 8	**Dissemination, communication and exploitation activities**	**ETRA**	**30**	**7**	**7**	**5**	**7**	**5**	**7**	**3**	**1**	**6**	**6**	**11**	**7**	**5**	**7**	**114**
8.1	Dissemination and communication activities	ETRA	12	2	2	2	2	2	2	0,75	0,25	2	2	2	2	2	2	**37**
8.2	Exploitation plans and IPR activities	ETRA	8	2	2	2	2	2	2	0,75	0,25	2	2	2	2	2	2	**33**
8.3	Farmers and foresters' engagement activities	AVA	4	2	2		2		2	0,75	0,25	1	1	6	2		2	**25**
8.4	Collaboration with other initiatives and projects	ETRA	6	1	1	1	1	1	1	0,75	0,25	1	1	1	1	1	1	**19**
		TOTAL	**213,0**	**122,0**	**114,0**	**80,0**	**96,0**	**100,0**	**124,0**	**24,0**	**8**	**84,0**	**54,0**	**71,0**	**69,0**	**76,0**	**78,0**	**1.313,0**

3.3.2.2 Summarised PM Breakdown (per Work Package)

Table 6. ECOLOOP PM breakdown per WP

Partner	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	TOTAL
ETRA	35	26	14	50	15	28	15	30	**213**
INDEREN	5	16	29	16	3	23	23	7	**122**
GENIA	5	10	40	22	3	18	9	7	**114**
UPV	5	14	15	19	0	13	9	5	**80**
IRI UL	10	10	11	11	26	8	13	7	**96**
KOL	5	21	13	16	1	30	9	5	**100**
EULS	5	10	17	32	9	35	9	7	**124**
FIBE	4	0	0	0	0	14	3	3	**24**
FOREKO	1	0	0	2	0	4	0	1	**8**
ALB	5	10	7	2	9	37	8	6	**84**
FERT	5	3	20	2	3	9	6	6	**54**
AVA	5	8	0	5	29	7	6	11	**71**
TRU	5	2	2	2	19	16	16	7	**69**
BIOM	5	8	24	7	8	13	6	5	**76**
KIS	5	8	14	9	19	7	9	7	**78**
TOTAL PM	**105**	**152**	**204**	**193**	**144**	**260**	**141**	**114**	**1313**

4 Communication guidelines

Communication will normally take place via e-mail or telephone. This section contains a set of best practices to be followed to make the e-mail communication process easier.

4.1 ELECTRONIC COMMUNICATION

Electronic mail is used extensively by partners to communicate with each other. It will be used preferably through the mailing list created by the Project Coordinator (PC).

Based on the list of project participants available at the project repository, and considering the project structure, the following mailing lists have been elaborated:

- ECOLOOP Consortium Plenary (CP) where the administrative, financial and coordination contact list, containing all administrative and technical contacts for all partners is found:
  - all@ecoloop-project.eu
- Partner(s) mailing list, with all personnel involved in each company:
  - etra@ecoloop-project.eu;
  - inderen@ecoloop-project.eu;
  - genia@ecoloop-project.eu;
  - upv@ecoloop-project.eu.
  - ul@ecoloop-project.eu;
  - setup@ecoloop-project.eu;
  - euls@ecoloop-project.eu;
  - fibenol@ecoloop-project.eu;
  - albena@ecoloop-project.eu;
  - ferti@ecoloop-project.eu;
  - ava@ecoloop-project.eu;
  - trakia@ecoloop-project.eu;
  - biomasa@ecoloop-project.eu;
  - kis@ecoloop-project.eu;

The mailing lists can be updated as needed at any time. The e-mail subject will start with the name of the project and the WP related. For example: *[ECOLOOP][WP2]* -. This will be very helpful for easily identifying and classifying the messages.

If required, the consortium will use Ms Teams (https://www.microsoft.com/es-es/microsoft-teams/log-in) teleconference services for ad-hoc meetings as an alternative to face to face meetings – see section 5.3. All of them provide several modes of communication regardless of the

application used, e.g., chat, voice, message board, data conferencing and file transfer. It can be used in a multiple-user mode so groups can hold online conferences.

4.1.1 Guidelines for Effective Electronic Communication

To reduce the information exchange effort, project information will be exchanged by use of electronic communications. The intention of the guidelines below is to make efficient use of electronic communications in the project, to:

- Ensure that all partners get the information they need in a timely manner,
- Avoid e-mail spamming and information overload,
- Minimize travel costs.

Note: to allow some flexibility, however, only the rules in bold are mandatory.

General rules:

- **Only relevant information (strictly related to the ECOLOOP project) is sent to the appropriate project participants, using the relevant mailing list.**
- Each mail will have a specific subject (field "Subject"), with the following elements:
  - **The project acronym (ECOLOOP).**
  - **The WP-number, preceded with a hyphen "-"**,
  - The subject,
- When using the mailing list created by the project, the mandatory pieces of information will be included automatically by the mailing list server.
- **Each mail must contain one topic only**. The topic must be clearly expressed in the subject field.
  - If it is not practical to separate multiple topics, then the different topics in the e-mail must be separated by clear heading. In this case, if the mail is long (more than can be seen on a screen) then it should start with a list of topics contained at the beginning.
- **Communication of relevance to a particular group (such as comments and votes) will be given as group replies,** to give all group members the opportunity to receive a clear view of every partner's opinion, to speed up and harmonize the agreement process.
- The e-mails will be answered within two days maximum after the reception of the original mail. If no answer can be provided in time, a simple acknowledgment of reception will be enough.
- Deadline for definitive reply. In the case of no response to a message within fifteen (15) calendar days, the message will be considered as read, and response will be considered as positive.
- E-mail messages sent in response to a message should quote the relevant parts of the initial message, in such a way that the receiver can easily and clearly understand what the initial message was about (what issues were raised) and what the added comments are.
- **Documents of project-wide relevance are stored in the project repository**. They are not generally and necessarily distributed by e-mail to the whole project membership. Project participants are notified by e-mail and invited to consult the documents on the website.

4.2 DOCUMENT EXCHANGE FORMAT

All the text documents exchanged within the project must observe the following rules:

- Format *.docx/doc (Word or equivalent) or *pdf.
- Track of changes activated (in case of Word file).
- After the final document has passed the peer review, the project coordinator submitting the document to the EC will generate the PDF file, properly secured.
- Attachments should not be sent to mailing lists but rather placed on the project repository. Then, the person who has uploaded the document will notify it via e-mail to the appropriate mailing list, announcing the location where the document can be retrieved.
- A logical structure of the repository has been organized to facilitate the retrieval of all the documents. All the partners will continue using this structure and create new directories in the same logical way whenever it is needed.
- The presentations will use the *.pptx/ppt format (or equivalent) according to a template available at the Web site.
- All the documents to be forwarded outside the Consortium, including the presentations and the final deliverables, will use only PDF format (exceptions may be made regarding papers for conferences if the organizers require them in another format).
- The biannual reports have specific templates.
- The deliverables, interim milestone brief reports and documents must follow the format and styles indicated in the template available in the corresponding section of ECOLOOP repository.
- These templates can evolve according to the project's needs.

4.3 DOCUMENT NUMBERING AND NAMING CONVENTION

The deliverables are classified according to the following types:

- R Document, report.
- DEM Demonstrator, pilot, prototype.
- DMP Data Management Plan.

With respect to the confidentiality of deliverables and other documents, including presentations, the following two levels of security are considered:

- PU Public.
- SEN Sensitive, limited under the conditions of the Grant Agreement

In order to facilitate common browsing and storage in different platforms and OS's, no spaces nor dots or special characters will be used in the document names, and instead, the underscore character "_" will be used.

For the same reason, only lower-case characters will be used – except for the project acronym.

All these documents will be named and numbered according to the following rules, in order to facilitate quick identification and indexing:

<dateYYYYMMDD>-<orgshortname>-ECOLOOP- d<dnum>-<docshortname>-<security>_v<ver>.pdf

All the documents' names start with the delivery date of the document, followed by the acronym of the organisation responsible for the document and the word "ECOLOOP", in order to facilitate the identification with other projects documents, and to raise the awareness of the project within a number of people that will download the documents from the public website.

Versions 0_X will indicate that the document is still a draft not approved by the internal reviewers. The official document to be sent to the EC will be numbered as v1_0. Further revisions or new issues of a deliverable will make use of the following format: v1_X, vY_X.

For example, deliverable D1.3 Project Management Plan, being ETRA the responsible organisation, security level confidential usage, to be delivered for example on 30th December 2023, would be named in the following way:

20231231-etra-ECOLOOP- d1_1-Project Management Plan- pu_v1_0.docx

In order to facilitate the work and localisation of the documents, all the documents will be posted in the repository as soon as possible.

4.4 DOCUMENT REPOSITORY

A document repository has been set up in order to facilitate the exchange of information. **The tool selected has been SharePoint.** The platform is built on an open-source core with open APIs and open standards support for easy integration and extension and long-term flexibility.

The repository will be hosted on the same server used for the web-tools used by the consortium and the project website. ECOLOOP will use SharePoint to maintain current and historical versions of files such as source code and documentation.

The repositories can be accessed via web. The connection URL is:

- https://www.microsoft.com/es-es/microsoft-365/sharepoint/collaboration?rtc=1.

The project-based URL is:

- https://etrafic.sharepoint.com/sites/ECOLOOP/SitePages/ProjectHome.aspx .

Each partner in the consortium has been invited through a link to be a member so they can access and modify the repository. The current structure includes a folder per WP, where all the information produced by the consortium or relevant to the project can be uploaded. Moreover, a specific folder to hold any information relevant to meetings (venues and minutes) has been created, jointly with a folder to keep a copy of the contract related documents – e.g., Consortium Agreement.

The structure can and will be updated as the project evolves in order to organize the information in the most efficient way for the partners.

At the implementation phase, git service will be set up to share common source code.

4.5 NOTIFICATION PROCEDURE

4.5.1 General procedure for document signatures

As a general procedure any notification sent to the project coordinator should be in two signed copies according to the following procedure:

- The person signing the document should be accordingly empowered to do it.
- Always sign the document by the authorised person: administrative and/or technical representative, according to the nature of the notification.
- In case he/she is not available, find an alternate authorised person empowered to sign the document. In that case, additionally send to the project coordinator two copies of a letter explaining the person is authorised and the empowerment by which he/she is authorised.
- Send a copy in advance.
- Paper copies should follow by express courier and a notification by e-mail to the project coordinator the day it was sent.
- In case any problem arises, the project coordinator should be contacted to solve the eventual situation.

4.5.2 Bank account: notification of changes

In the event of a partner's bank account changes, the project coordinator should be notified within 2 weeks in advance of any payment.

4.6 PARTICIPANT CONTACTS

4.6.1 Organisations

Table 7. Partners Contact List.

Part. Nr.	Organisation	Address	Short Name	Country
1	ETRA Investigación y Desarrollo S.A.	C/ TRES FORQUES 147 – 46014- VALENCIA, ES	ETRA	ES
2	Ingeniería y Desarrollos Renovables S.L.	CALLE ARTAL DE FOCES NUM 117, 46290, ALCASSER VALENCIA, ES	INDEREN	ES
3	Genia Bioenergy S.L.	AVENIDA RONDA DE NAZARET 9 BAJA, 46024, VALENCIA, ES	GENIA	ES
4	Universitat Politècnica de València	CAMINO DE VERA SN EDIFICIO 3A, 46022, VALENCIA, ES	UPV	ES
5	Inovacijsko-razvojni institut Univerze v Ljubljani	KONGRESNI TRG 12, 1000, LJUBLJANA, SI	IRI UL	SI

6	Kolektor Setup, Storitve Energetskega Upravljanja, D.O.O.	ROVŠNIKOVA ULICA 7, 1210, LJUBLJANA, SI	SETUP	SI
7	Eesti Maaulikool	KREUTZWALDI 1, 51014, TARTU, EE	EULS	EE
8	Fibenol OU	MOISA TN 4, 13522, TALLINN, EE	FIBENOL	EE
8.1	Foreko OÜ	MÕISA TN4, 13522 TALLIN, EE	FOREKO	EE
9	Albena AD	KK ALBENA ADMINISTRATIVNA SGRADA 201, 9630, S OBRISCHISHTE OBLAST DOBRICH, BG	ALBENA	BG
10	Fertinagro Biotech SL	CALLE BERLIN POLIGONO LA PAZ 185, 44195, TERUEL, ES	FERTINAGRO	ES
11	Asociación Valenciana de Agricultores	CALLE GUILLEM DE CASTRO 79, 46008, VALENCIA, ES	AVA-ASAJA	ES
12	Trakiyski Universitet	STUDENTS CAMPUS RECTORAT, 6000, STARA ZAGORA, BG	TRU	BG
13	Biomasa Druzba Za Trgovino Servis in Montazo Kotlov Na Biomaso DOO	KRNICA 52, 3334, LUCE, SI	BIOMASA	SI
14	Kmetijski Institut Slovenije-Agricultural Institute of Slovenia	HACQUETOVA ULICA 17, 1000, LJUBLJANA, SI	KIS	SI

4.6.2 Project Coordinator Details

Table 8. Coordinator details.

ECOLOOP Coordinator Contact Details	
ECOLOOP Coordinator	Antonio Marqués
Organisation	ETRA I+D
Postal address	Tres Forques, 147 46014 Valencia (Spain)
Telephone	+34 96 313 40 82
Fax	+34 96 350 32 34
e-mail	amarques.etraid@grupoetra.com

5 Meetings

In order to coordinate and manage the various activities of the ECOLOOP project, a 2-days meeting will be held on a regular time basis, at least 2 times/year. This meeting will allocate time for the CP and PMB meetings. The PC will set up and update (each year) a calendar of meetings –that may include dedicated WP meetings. Further project meetings may be planned whenever urgent issues need to be resolved.

The project intends to run virtual electronic meetings whenever feasible and appropriate using information and communication technologies available as described in section 4.1. Face to face meetings will be organised by the project partners in rotation. The following subsections clarify, who will make invitations, how meeting decisions are to be taken, and how meetings are to be recorded. When specific decisions must be taken in the short term, extraordinary meetings may be held by audio-conferencing, including management aspects, that may have as a consequence the request of an amendment to the Grant Agreement; in this case, the voting shall be held via e-mail.

In terms of attendance, and for all ECOLOOP PMB meetings, the presence of the Technical Manager (TM) and WP Leaders (or any representatives of their respective companies), is required.

In relation to the CP meetings all partners must attend.

5.1 MEETING REQUESTS

The corresponding chair will invite for meetings: the WP leader for a WP workshop or meeting (and even Work Package and Task leader if required), the responsible for each innovation/UC (Use Case), and the PC for a PMB meeting and a CP meeting.

The host of the meeting will provide logistics and accommodation information to the participants. In the case of meetings in a dedicated location in Brussels, the PC will organise the meeting.

The following tables summarize the main issues about the preparation and organization of meetings:

5.1.1 Convening meetings

Table 9. Convening meetings.

	Ordinary meeting	**Extraordinary meeting**
Consortium Plenary	At least twice a year	At any time upon written request of the PMB or 1/3 of the Members of the CP.
Project Management Board	In the same dates of the CP.	At any time upon written request of any Member of the PMB
Other meetings		At any time upon written request of partner who chair the meeting

5.1.2 Notice of a meeting

Table 10. Notice of a meeting.

	Ordinary meeting	Extraordinary meeting
Consortium Plenary	45 calendar days	15 calendar days (10 calendar days in case of meetings by teleconference or another telecommunication means)
Project Management Board	14 calendar days	7 calendar days
Other meetings	14 calendar days	7 calendar days.

5.1.3 Agenda definition

Table 11. Agenda definition for a meeting.

	Ordinary meeting	Extraordinary meeting
Consortium Plenary	21 calendar days. Partners may add items to the agenda until 14 calendar days before the meeting	10 calendar days for an extraordinary meeting. Partners may add items to the agenda until 7 calendar days before the meeting
Consortium Plenary	7 calendar days. Partners may add items to the agenda until 2 calendar days before the meeting	3 calendar days. Partners may add items to the agenda until 2 calendar days before the meeting
Other meetings	7 calendar days. Partners may add items to the agenda until 2 calendar days before the meeting	3 calendar days or at the same time of the meeting notice. Partners may add items to the agenda until 2 calendar days before the meeting

5.2 MEETINGS SCHEDULE

Considering the project Work Plan and the budget constraints for meeting purposes, a preliminary schedule for the meetings during the entire lifetime of the project has been created. As stated in section 5, this plan will be updated on a yearly basis.

For practical reasons, the following schedule only identifies the most convenient month to host each meeting, the exact dates and venue will be decided by the PMB considering the availability of partners, rooms and progress of activities.

Table 12. Meetings Schedule.

Year	Meeting	Month	
2023	CP1 (KO-VALENCIA (ES))	oct-23	M1
2024	CP2 (GA-LJUBLJANA (SI))	apr-24	M7
	CP3 (GA-VALENCIA (ES))	oct-24	M12
2025	CP4 (GA-LJUBLJANA (SI))	apr-25	M19
	CP5	oct-25	M24
2026	CP6	mar-26	M30
	CP7	oct-27	M36
2027	CP8	mar-27	M42
	CP9	oct-27	M48

5.3 VIRTUAL MEETINGS

The Project Coordinator has established a Microsoft teams service for the management of virtual meetings. If necessary, other tools – such as Skype, Webex or phone calls – can also be used.

The virtual meetings will be used for the monitoring of the project progress – i.e., biweekly meetings – or specific work sessions – i.e., webinars. Some basic recommendations to be followed when organising/participating in the virtual meeting can be found hereafter:

- Virtual meetings will be limited in duration. It is recommended to avoid long meetings – no longer than 1 hour.
- All partners are requested to connect to the virtual meeting service 5 minutes in advance, to solve any potential technical problems.
- All microphones must be muted when the partner is not actively participating in the discussion.
- Any partner joining or leaving the meeting is requested to announce it, preferably through the chat tool.
- Even if the service enables the sharing of a screen, it is recommended to circulate in advance – i.e., upload to the project repository – all the material to be used during the meeting.

5.4 MEETING MINUTES

The following rules will apply to minutes:

Recording: Minutes must be recorded for every official project meeting. A rapporteur is appointed at the start of the meeting. Meeting minutes will be taken in turn in the following manner:

- **CP and PMB meeting minutes** are recorded by the chairperson of the meeting, supported by at least one designed member of a Consortium partner.

- **Other meeting minutes** are recorded by the member organisation hosting the meeting.

A copy of the minutes will be archived in the project repository.

Consolidation / Approval: As a general procedure, the draft meeting minutes will be circulated to all Members by the chairperson within 10 calendar days of the meeting.

The minutes shall be considered as accepted if, within 15 calendar days from sending, no Member has sent an objection in writing to the chairperson.

Circulation / Distribution: The chairperson will circulate the final version of the minutes all the partners that were call to the meeting and to the PC.

Content: The minutes must at least contain:

- The meeting attendance list;
- The approved meeting agenda, including date and venue;
- Decisions taken, including motivations as far as possible;
- An action list containing each action´s short description, a responsible and a time schedule (if an action was given to a person not attending the meeting, a person for contacting that person needs to be given);
- A list of agreed upcoming events;
- If appropriate, a list of related documents (appendixes).

6 Reporting Procedure

6.1 DELIVERABLE, DOCUMENTS

Any deliverable or document, including presentations, must follow the rules herein specified.

The ultimate responsibility for the quality of deliverables resides with the peer review team that must check the quality of all deliverables (not including the periodic progress reports), before the final submission to the EC.

ETRA, as Project Coordinator, will review the progress reports containing resource reporting information, as the last stage before submission to the EC.

Deliverables will normally fall within the work to be done in the work packages, and as such, a work package leader or activity leader will be assigned the production and editing of a particular deliverable.

Once the project coordinator has submitted the deliverable to the project officer, he/she will upload simultaneously the PDF version in the restricted web server. Once the document is approved by the EC, in the case of a public deliverable, the document will be made available in the public web site.

At least the project coordinator will keep an additional copy for backup and security reasons.

The deliverables will be submitted electronically to the Project Officer.

Each partner responsible of a deliverable should send (or upload in the repository) a preliminary version of the deliverable to the coordinator 1 month in advance of due date.

The coordinator will forward it to the peer reviewers, who will review the document and send comments within one week. The deliverable responsible partners will modify the document accordingly and send it to the project coordinator at least 5 working days before the delivery date. The document shall contain all the logos and it will be formatted according to this project management plan recommendations.

The peer review team (Table 13) will review the deliverable. In case they encounter the document does not fulfil the requirements for such document, they will notify the deliverable responsible partners within one week after the request. Whether the deliverable responsible partner fails to deliver the document, or the document does not fulfil the objectives, the PMB will take the required actions accordingly to the provisions of the Consortium Agreement and Contract. In case the deliverable fulfils the required objectives, the project coordinator will send it to the Commission.

Table 13. Deliverables' Peer Reviewers

Code	Deliverable name	WP	Leader	Type	Dissemination	Date	Peer Reviewers
D1.1	Project management plan v1	1	ETRA	R	Pu	M3	FERT, BIOM, KIS
D1.2	Data Management Plan	1	ETRA	DMP	Pu	M6	EULS, ALB, TRU
D1.3	Project management plan v2	1	ETRA	R	Pu	M18	FERT, BIOM, KIS
D1.4	Project management plan v3	1	ETRA	R	Pu	M30	UPV, ALB
D2.1	Pilot site analysis and use cases, requirements and KPIs definition	2	SETUP	R	Pu	M12	UL, INDEREN, GENIA
D2.2	ECOLOOP SOIL Living laboratory description	2	UPV	R	Pu	M18	FIBE, INDEREN, GENIA
D3.1	Efficient combination of renewable energy in agriculture and forestry sectors_v1 (draft)	3	GENIA	R	Pu	M24	UPV, FIBE, EULS
D3.1	Efficient combination of renewable energy in agriculture and forestry sectors_v2 (final)	3	GENIA	R	Pu	M36	UPV, FIBE, EULS
D3.2	Bioproducts from agroforestry waste to create positive effects in soil biodiversity_v1(draft)	3	FERT	R	Pu	M30	INDEREN, GENIA, TRU
D3.2	Bioproducts from agroforestry waste to create positive effects in soil biodiversity_v2(final)	3	FERT	R	Pu	M36	INDEREN, GENIA, TRU
D4.1	AI and big data analytics (IoT ecosystem)	4	ETRA	R	Pu	M24	INDEREN, SETUP, IRI UL
D4.2	Carbon sequestration tool calculator and the renewable-based agricultural protocols	4	EULS	R	Pu	M24	GENIA, KIS, FOREKO
D4.3	Decision support tool final version	4	ETRA	R	Pu	M30	IRI UL, SETUP, EULS
D5.1	Business models and financial and social instruments	5	IRI UL	R	Pu	M24	ALB, BIOM, AVA

D5.2	Support for the creation of renewable energy communities in rural areas	5	IRI UL	R	Pu	M30	FOREKO, FIBE, FERT
D6.1	Pilot sites integration and demonstration planning	6	EULS	R	Pu	M18	TRU, UPV, UL
D6.2	Demonstration activities results	6	EULS	DEM	Pu	M48	IRI UL, SETUP, FERT
D7.1	Methodologies and impact assessment plan	7	INDEREN	R	Pu	M36	GENIA, UPV, AVA
D7.2	Environmental footprint and biodiversity, social and economic impact assessment results	7	INDEREN	R	Pu	M48	KIS, ALB, EULS
D7.3	Replication and scaling-up guidelines and policy recommendations	7	TRU	R	Pu	M48	FOREKO, TRU, GENIA
D8.1	Dissemination, Exploitation and Communication Plan	8	ETRA	R	Pu	M6	UPV, SETUP, AVA
D8.2	Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V1	8	ETRA	R	Pu	M18	AVA, FIBE, BIOM
D8.3	Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V2	8	ETRA	R	Pu	M30	AVA, FIBE, BIOM
D8.4	Dissemination, Communication, end-users' engagement activities, synergies with other projects and exploitation activities V3	8	ETRA	R	Pu	M48	AVA, FIBE, BIOM

A deliverable template (initially referring to all deliverables except if explicitly mentioned) is available in the project repository. This template is to be used for all technical deliverables. It may also be used for non-technical reports and other project documents. The first two pages will contain information that

are necessary for the identification of the document including its status, editor(s) and contributors, the companies they belong to, version history and date. For official deliverables, the title page must contain the name of the deliverable as defined in the DoA annexed to the Contract (GA).

For public deliverables, these initial pages will be substituted for public release versions, avoiding project terminology and, whenever possible, making use of pictures/ graphic design for a more attractive appearance.

For **all deliverables**, the following mention and disclaimer must be included:

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under the Grant agreement N° 101118127.

Additionally, all documents, must include the Copyright Statement:

6.2 PRESENTATION, POSTERS AND GRAPHICAL MATERIAL

Any presentations of contents obtained from the project may make use of the corporative presentation template available at the repository.

In addition to the available template, the consortium has prepared several alternative materials to help disseminate and present the project results in a coherent and effective way:

- A general presentation has been compiled to provide a quick look to the project objectives and contents. This set of slides will be updated periodically with the new results as the project advances.
- A flash animation/video will be available for presentation purposes. The animation is embedded in the web site and provides an artistic vision of the project approach.
- Two different poster templates are available in A3 format to present the project at conferences and poster sessions.
- A newsletter template is also available for dissemination. The consortium will produce a minimum of six newsletters (two per reporting period).
- A brochure template has been prepared to promote and enhance the visibility of the project.

Finally, the project will make use of other means, as video reports, to support the dissemination of the tests in the pilot sites. Free tools as YouTube will be employed to make those reports available

to the broad public. The general rules applying to the reporting procedures in ECOLOOP, should also be observed when preparing video material.

6.3 BIANNUAL REPORT

Every six months the coordinator will ask the partners to complete a simple form to gather the (possibly estimated) basic information on the resources spent per partner and the work performed.

The Biannual Report shall be available no later than 4 weeks after the end of the period. The project coordinator will analyse the reports, taking the requested actions in case of need.

6.4 PROJECT PERIODIC REPORT

In order to provide timely project reporting to the Commission, efficient and accurate financial data, the periodic cost statements will be aggregated by each partner in the Project Periodic Report, making use of the Participant portal and the continues reporting tool provided by the EC.

The Project Periodic Report (PPR) has to be consistent with the biannual reports provided both at technical and administrative levels.

ETRA, as project coordinator, will check the data of the PPR and the data from the biannual reports. If any difference arises, the partner should correct them within two weeks from notification.

ETRA will submit the Progress Periodic Report to the EC once the information from all partners is retrieved. If a partner cannot meet the deadline established by the EC – i.e., 60 days after the end of the reporting period – the Coordinator will submit the PPR with the available information in order not to jeopardise the work of the rest of the consortium.

7 Quality Management

The main goal of project management is to provide a focused, lean but effective framework to support the partnership in achieving the scientific and technical objectives of the project. Efficient decision-making processes and swift responsiveness to changing circumstances are required. This is what the theory says, but it is not so easy to achieve since experience shows that outstanding –and very often too complex- quality management plans fail simply because they are very difficult to apply in practise.

In the following section, it is described how ECOLOOP will put into operation -from a very pragmatic perspective-, all these principles, but taking into consideration the specific strengths and constraints of the ECOLOOP consortium.

The goal has been to define a management structure and a set of principles and procedures which, whilst being as flexible, agile and cost-efficient as possible, leave as little room as possible to subjective interpretation.

7.1 CONFLICT RESOLUTION

All partners of the ECOLOOP Consortium share the perception that in order to ensure smooth project implementation, formal and pragmatic decision-making mechanisms must be in place to resolve potential disputes. Decisions regarding a technical issue of major importance, affecting the input, work content or the final outcome are expected to be made by the PSC led by the Project Coordinator and the Technical Manager. In general, all major technical issues and related decisions are announced to all partners, even if the issue is not directly connected to their participation. Decision making for important matters within the frame of the Grant Agreement and the Consortium Agreement, especially when such decisions may affect the agreements reached in these two contracts, will be addressed by the PSC. Decision making in the administrative domain is the responsibility of the PC with the support of the PSC. Individual financial issues are primarily the responsibility of the partner itself. In accordance with the CA provisions for decision making, the main principles are: (i) All partners have the same voting rights independently of their economic and technical contribution, and (ii) Decisions to be taken in the PSC (min. quorum 3/4 of the members) will be taken upon 3/4 of the votes.

Identification of any conflicts lies in the responsibility of each project participant. Any signs of disagreement between project participants should be solved amicably between those partners involved. If not resolved at that level, and only if it is strictly necessary, conflict resolution process must be enforced. Then Project participants will escalate the issue to higher management levels until it is resolved (to TL or WPL), and consensus to solve the problem will be sought at each level. Eventually, if still not resolved, the PSC will take care of the issue applying the same rules as in the decision-making process.

7.2 QUALITY ASSURANCE

As a part of this Project Management Plan, the project will apply an internal reviewing procedure to guarantee the quality of its results. Each WP leader will be responsible for the quality of the results – especially deliverables - of his WP, which will be subject to a peer review by at least two experts, one of whom will be another WP leader – the one which will take as input the results of the WP being

reviewed. Furthermore, Backup WP leaders have been nominated in order to ensure quality process enforcement and reduce risks during project implementation.

Each partner responsible for a deliverable will provide (or upload in the repository) the proposed table of contents at least 60 days before the submission date. A preliminary full version of the deliverable will be sent to the WPLs as well as to the peer reviewers allocated in the table at least four weeks in advance of the due date. The Project Coordinator and the Technical Coordinator will be also informed. It needs to be noted, that early draft versions of the deliverable should be periodically circulated in order to confirm that the work progresses as expected, and progress update will be reported during the monthly PSC meetings.

Peer reviewers will review the document and send comments within one week using the track changes mode in the draft version of the document. In case they encounter that the document does not fulfil the requirements for such document, they will notify accordingly the deliverable responsible partners within one week after the request.

The new version of the document will be again available for the deliverable responsible partner who will modify the document accordingly. Upon confirming with the peer reviewers that their comments have been effectively addressed, the final version will be sent to the PC at least one week before the delivery date.

In the case that the deliverable fulfils the required objectives, the PC will submit it to the EC.

Whether the deliverable responsible partner fails to deliver the document, or the document does not fulfil the objectives, the PSC will take the required actions according to the provisions of the consortium agreement and contract.

The peer review reports, the PMB meetings and the biannual meetings described in section 6.3 are the main tools in ECOLOOP to monitor the progress and quality of the project.

8 Risk Management

The consortium's experience in managing complex international projects in conjunction with its technological competence in communication and networking permits to identify the following main areas of possible risks:

- **Technical**: lack of competence to overcome unexpected difficulties.
- **Financial**: deterioration of the economic situation of a partner, which imposes a stop or an unacceptable reduction of all its activities.
- **Key resources availability**: abandon of the participation in the project of resources with key roles.

Various combinations of these three main negative factors could also happen with the effect to increase their impact.

The level of technical risk is intrinsically reduced by the composition of the ECOLOOP Consortium, thanks to the participation of a well-assorted set of primary Industries and Research Centres, with a demonstrable consolidated experience as leaders in the technological areas in which each of them contributes to the project.

In case of financial problems or lack of resources availability, the corrective measures will include distributing to the remaining partners the activity not fulfilled or subcontracting them to a third party (via amendment), or a combination of the two. The corrective measures will be chosen after an evaluation of their impact and relevance on the project. Furthermore, to minimise the potential impact of these unlikely situations, each WP leader will have a backup leader in case the initial WP leader becomes unavailable.

For the ECOLOOP project, a risk is defined as an event that may or may not occur in the future, which could potentially have an adverse effect on a team's progress and success. A risk has a severity of impact and a probability of occurrence – formal definition can be found in next section.

8.1 DEFINITIONS

Risk

Risk is a measure of the inability to achieve overall project objectives within defined cost, schedule, and technical (performance and quality) constraints and has two components:

- The probability of failing to achieve a particular outcome and
- The consequences (impact) of failing to achieve that outcome.

For ECOLOOP, risk is a measure of the difference between actual performance of a process and the known best practice for performing that process.

Risk can also be the potential that a given threat will exploit vulnerabilities of an asset or group of assets to cause loss of, or damage to, the assets. It is ordinarily measured by a combination of effect and likelihood of occurrence.

Risk Event

Risk events are those events within ECOLOOP that, if they occur, they could result in problems in the development of the expected outputs of the project. Risk events should be defined in a way that the risk and causes are understandable and can be accurately assessed in terms of likelihood/probability and consequence to establish the level of risk.

Type of Risk

A **Technical Risk** is the risk associated with the evolution of the research results and the prototypes development of ECOLOOP affecting the level of performance necessary to meet the requirements of the DoA.

A **Financial Risk** is associated with the ability of the project to achieve its cost objectives as determined in the DoA. Two risk areas bearing on cost are:

- The risk that the cost estimates and objectives are not accurate and reasonable and
- the risk that project execution will not meet the cost objectives as a result of a failure to mitigate technical risks.

Schedule Risks are those associated with the adequacy of the time estimated and allocated for the development, production, and fielding of the system. Two risk areas bearing on schedule risk are:

- The risk that the schedule estimates and objectives are not realistic and reasonable and
- the risk that program execution will fall short of the schedule objectives as a result of failure to mitigate technical risks.

Risk Ratings

This is the value that is given to a risk event (or the overall project) based on the analysis of the likelihood/probability and impact of the event. For ECOLOOP, risk ratings of *Low*, *Moderate*, or *High* are assigned based on the following criteria:

- **Low Risk**: Has little or no potential for increase in cost, disruption of schedule, or degradation of performance. Actions within the scope of the planned project and normal management attention should result in controlling acceptable risk.
- **Moderate Risk**: May cause some increase in cost, disruption of schedule, or degradation of performance and/or quality. Special action and management attention may be required to control acceptable risk.
- **High Risk**: Likely to cause significant increase in cost, disruption of schedule, or degradation of performance and/or quality. Significant additional action and high priority management attention will be required to control acceptable risk. This type of risk may be subject to a report to the Commission.

Contingency Plan

Once identified and assessed, it is essential to trace risks, both in their status (Risk Monitoring) and with respect to necessary activities. A contingency plan should cover the registration and reaction to the change of environmental conditions to avoid risk events.

8.2 RISK MANAGEMENT ORGANISATION AND RESPONSIBILITIES

The ECOLOOP Project Coordinator (**PC**) is the overall risk manager and responsible for:

- Briefing the consortium on the status of ECOLOOP risks during CP meetings.
- Tracking efforts to reduce high risk to acceptable levels.
- Facilitating consortium-level risk assessments during PMB meetings.

- Combining risk briefings, reports, and documents as delivered by the WP leaders and required for project reviews by the Commission.

The **PMB**, and in particular the TM, assists the PC with:

- Maintaining this section of the Project Management Plan - Risk Management – updated (as a supporting process) for ECOLOOP.
- Provision and maintenance of the risk information form.

The **Work Package Leaders** are responsible for the risk assessment within their work packages:

- Risk identification.
- Risk analysis.
- Risk handling.
- Risk information to the PC (in case of moderate or high risk).
- Risk monitoring.
- Briefing the respective Work Package members on the status of risks.
- Tracking efforts to reduce low and moderate risk to acceptable levels.
- Preparing risk briefings, reports, and documents required for project reviews during PSC meetings.

8.3 RISK MANAGEMENT PROCESS

This section describes the ECOLOOP risk management process and provides an overview of the ECOLOOP risk management approach. This section shows, in general terms, the overall risk management process, that will be followed in ECOLOOP. Each of the risk management functions shown in this section are discussed in the following paragraphs, along with specific procedures for executing them.

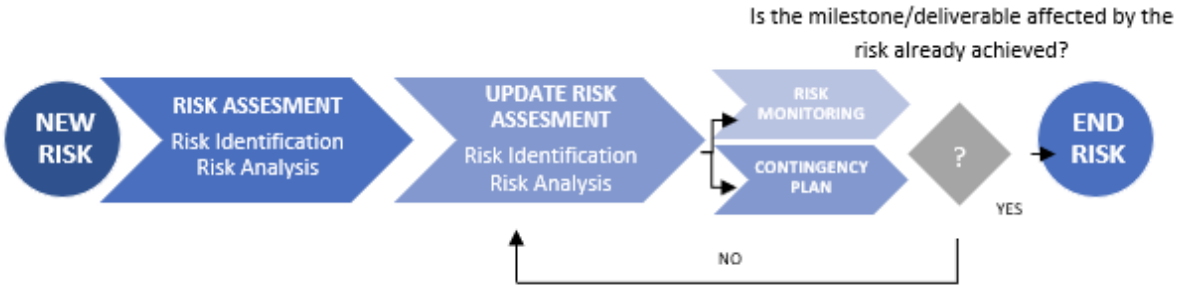


Figure 3. Risk Management Process.

8.3.1 Risk Assessment

Risk assessment includes the identification of critical risk events/processes, which could have an adverse impact on the project, and the analysis of these events/processes to determine the likelihood of occurrence/process variance and consequences.

Risk assessment is an iterative process. Each risk assessment is a combination of risks identified/analysed in the previous phase and the identification/analysis of risks on current milestones/deliverables according to the DoA.

8.3.1.1 Risk Identification Process and Procedure

Risk identification is the first step in the assessment process. The basic process involves searching through the entire ECOLOOP project plan to determine those critical events that would prevent the project from achieving its objectives.

All identified risks will be documented in the Risk Table – see section 8.4 -, with a statement of the risk and a description of the conditions or situations causing concern and the context of the risk.

Risks will be identified by all individuals in the ECOLOOP project, *particularly by the Work Package Leaders*.

The basic procedure of identifying risks consists of the following steps:

1. Understand the requirements and the overall project quality and performance goals. Examine the operational (functional and environmental) conditions under which the values must be achieved by referring to or relating to the DoA.
2. Identify the processes and activities (tasks) that are needed to produce the results.
3. Evaluate each activity/task against sources/areas of risk.

8.3.1.2 Risk Indicators

Following indicators are helpful for identifying risks:

- Lack of stability, clarity, or understanding of requirements: Requirements drive the research and the design of the prototypes. Changing or poorly stated requirements guarantees the introduction of performance, cost, and schedule problems.
- Failure to use best practices virtually ensures that the project will experience some risk. The further the deviation from best practices, the higher the risk.
- Insufficient or inadequate resources: People, funds, schedule, and tools are necessary ingredients for successfully implementing a process. If any are inadequate, to include the qualifications of the people, there is risk.
- Test Failure may indicate corrective action is necessary. Some corrective actions may not fit available resources, or the schedule, and (for other reasons as well) may contain risk.
- Negative trends or forecasts are cause for concern (risk) and may require specific actions to turn around.
- Communication is a critical success factor for ECOLOOP. Failure to provide (push) available information actively as well as to demand (pull) required information actively will both introduce considerable risk.

8.3.1.3 Risk Analysis Process and Procedure

Risk analysis is an evaluation of the identified risk events to determine possible outcomes, critical process variance from known best practices, the likelihood of those events occurring, and the consequences (impact) of the outcomes. Once this information has been determined, the risk event

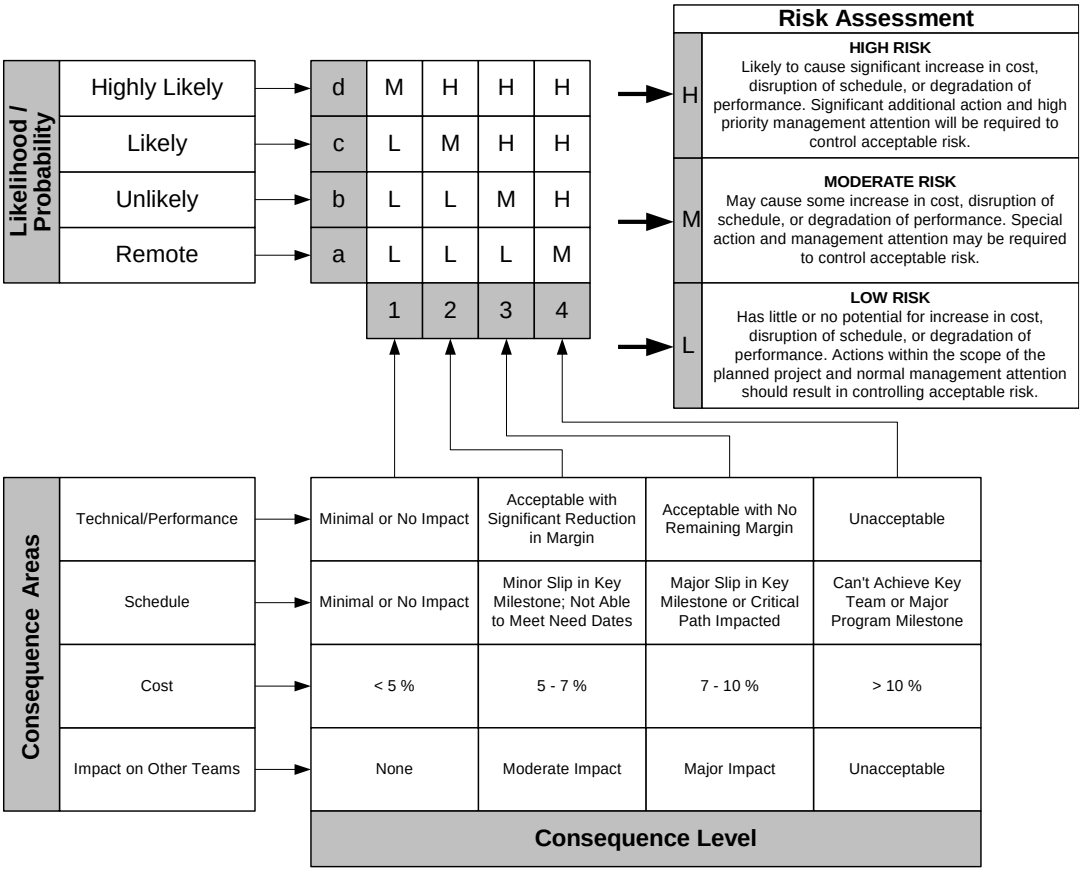
may be rated against the project's criteria and an overall assessment of low, moderate, or high may be assigned.

The basic procedure for analysing risk comprises the following steps:

1. Gather all identified risks.
2. Assignment of likelihood/probability and consequences to each risk event to establish a risk rating.
3. Prioritization of each risk event is related to other risk events.
4. Quantitative analysis.

For each risk identified during the risk identification process an assignment using likelihood/probability- and impact-assessments will be performed. A risk assessment matrix is used for ECOLOOP, to provide a quantitative approach for this process.

Table 14. Risk Assessment Matrix.



The following items provide some more details on the most important issues of the risk assessment matrix:

- **Likelihood/Probability**: For each risk area identified, the likelihood/probability of the risk must be determined. There are four levels (a-d) in the ECOLOOP risk assessment process, with the corresponding criteria of Remote, Unlikely, Likely and Highly Likely. If there is zero likelihood of an event, there is no risk per our definition.
- **Consequence/Impact:** For each risk area identified, the following question must be answered: Given the event occurs, what is the magnitude of the consequence? There are four levels of consequence (1-4) for this project. Further, there are four areas that we will

evaluate when determining consequence: technical performance, schedule, cost, and impact on other teams (work packages). At least one of the four consequence areas needs to apply for there to be a risk; if there are no adverse consequences in any of the areas, there are no risks at all.

- **Technical Performance**: this category refers to content and includes all requirements that are not included in the other three metrics of the consequence table.
- **Schedule**: this category refers to impacts in the overall time framework of the project. It is important to avoid excluding a consequence level from consideration just because it does not affect the work plan of a specific team/work package – i.e. try to have the whole ECOLOOP consortium in mind.
- **Cost**: since costs vary significantly within ECOLOOP, the percentage criteria shown in the matrix may not strictly apply at the lower levels of the work breakdown structure. Therefore, the work package leaders may set the percentage criteria that best reflect their situation but have to report any deviation from the matrix to the PC.
- **Impact on Other Teams (work packages)**: both the consequence of a risk and the mitigation actions associated with reducing the risk may impact another team. This may involve additional coordination or management attention (resources) and may therefore increase the level of risk.

8.3.1.4 Evaluation of Risks

During Risk Analysis it is possible that identified scenarios of occurring risk events cause impact to several impact areas. In this case a consequence combination is present, and the worst case of the risk assessment (high risk, moderate risk, low risk) is applicable and influences the required actions as described in the matrix. Of course, all identified consequence areas to a risk event must be recorded and the consequence area caused the final assessment must be clearly identified.

8.3.1.5 Quantitative Analysis

After completion of the risk analysis the quantitative analysis takes place and assigns a rating to each risk (low, medium, high). This finally yields an overview on the risk status over the entire course of the project and is part of the risk table in section 8.4.

8.3.2 Risk Monitoring

8.3.2.1 Risk Monitoring Process

Risk monitoring systematically tracks and evaluates the performance of risk-handling actions. It is part of the management board function and responsibility and will not become a separate discipline. Essentially, it compares predicted results of planned actions with the results actually achieved to determine the status and the need for any change in risk-handling actions.

To ensure that significant risks are effectively monitored, risk-handling actions will be reflected in risk table and analysed at each CP meeting. Identifying these risk-handling actions and events in the context of the work breakdown structure establishes a linkage between them and specific work packages, making it easier to determine the impact of actions on cost, schedule, and performance.

8.3.2.2 Risk Monitoring Procedure

Each member of the consortium is responsible for monitoring and reporting the effectiveness of the handling actions for the risks assigned.

Risks rated as **High** will be reported to the PC, who will handle and track them until the risk is considered Medium or Low and recommended for "Close Out".

Risks rated as **Moderate** will be reported to Work Package Leaders, who will also track them until the risk is considered Low and recommended for "Close Out". However, the risk will be handled within the work package under the responsibility of the work package leader.

Risks rated as **Low** are tracked within the work package and monitored continuously to ensure they stay low.

The risk management process is continuous. Information obtained from the monitoring process is fed back for reassessment and evaluations of handling actions to improve the process itself in co-operation with the risk manager and the quality manager.

8.3.3 Contingency Plan

8.3.3.1 Risk Handling Process

After the project's risks have been identified and assessed, the approach to handle each significant risk must be developed. There are essentially four techniques or options for handling risks:

- Avoidance (application of tasks in order to avoid the risky event).
- Control (watch the environmental conditions for influences on an already assessed risk).
- Transfer (application of tasks to set a risk to a lower level).
- Assumption (basing a decision for handling plans on the assumption the risk event happens).

For all identified risks, the various handling techniques should be evaluated in terms of feasibility, expected effectiveness, cost and schedule implications, the effect on the system's technical quality/performance and the most suitable technique selected.

The results of the evaluation and selection will be included and documented in the risk table. This documentation will include:

- What must be done,
- the level of effort and materials required,
- the estimated cost to implement the plan,
- a proposed schedule showing the proposed start date,
- the time phasing of significant risk reduction activities,
- the completion date,
- their relationship to significant Project activities/milestones,
- recommended metrics for tracking the action,
- a list of all assumptions,
- the person responsible for implementing and tracking the selected option (usually the responsible work package leader).

The respective work package leader or (in case of high risk) the PC is responsible for evaluating the risk handling options that are best fitted to the project's circumstances. Once approved, these are included in the work packages or project's strategy or management plans, as appropriate.

For each selected handling option, the responsible project team member will develop specific tasks that, when implemented, will handle the risk. The task descriptions should explain what has to be done, the level of effort, and identify necessary resources. The team member should also provide a proposed schedule to accomplish the actions including the start date, the time phasing of significant risk reduction activities, the completion date, their relationship to significant Project activities/milestones and a cost estimate. The description of the handling options should list all assumptions used in the development of the handling tasks.

8.4 RISK TABLE

The main tool to keep track of the different identified risks is the Risk Table. It contains all the fields to correctly assess, monitor and mitigate a risk.

The table is structured considering the WPs in ECOLOOP in order to create a direct connection – by default – between the risks and the responsible of its control. It could be the case that the risk manager – or WP leader – is not the same as the risk responsible – partner that should provide an action plan and mitigate the problem.

The risk table provides an easy way to quantify the severity of the problem. It implements the risk assessment matrix described above and a global risk indicator that considers the assessment of the four consequence areas.

In this way, the partner identifying a risk, only must indicate the probability of the risk (HL=Highly Likely=4; L=Likely=3; U=Unlikely=2; R=Remote=1) and the impact in each of the consequence areas (1 Minimum, 4 Maximum). The table can translate the assessment into the three categories (high risk, moderate risk, low risk) and calculate the global indicator as an average of the different areas (0 Minimum, 4 Maximum).

As explained before, a low global indicator may still imply a high risk, since the worst case should be always considered. A high risk in a single area will imply a low global indicator; however, it requires the maximum priority and attention. The global indicator serves to prioritize and order risks with the same qualification but affecting more than one area. The risk table will be available at the project repository and will be update with the whole consortium inputs during the project lifetime.

The whole updated risk table is available at the project repository and is presented here in ANNEX 1. ECOLOOP Risks Matrix.

9 Dissemination

The following sections provide the basic procedures and information regarding Dissemination in ECOLOOP. The complete analysis of the dissemination plans will be covered at D8.1 Dissemination, Exploitation and Communication Plan (DECP).

9.1 PUBLICATION PROCEDURE

In order to coordinate the participation of partners in dissemination activities and conferences (both in Europe and outside Europe) and properly notify the Commission of any event, the following criteria apply for the consideration for such activities:

- It is essential that adequate time for considering the publication or participation in an event is given. Therefore, the notification may be circulated as soon as possible and no less than **30 days in advance** of the event. The notification may be submitted to the coordinator making use of the spreadsheet available at the repository. It is advised to upload relevant Call for Papers (CFPs) asap in the repository \WP8\CFP in a Year-Month-Day Event format (where the first part indicates the deadline for papers submission).
- The application may include, if possible, a copy of the conference program together with a rationale describing the conference and explaining the proposed role of ECOLOOP – i.e. networking, presentation of results, poster session, etc.
- Any partner in the consortium can publish its own results without previous permission, it only needs to notify the dissemination manager and fulfil the EC requirements hereafter identified. It is however preferred that common publications arise because of cooperation among the partners.
- Unless the Commission requests otherwise, any notice or publication by the contractors about the project, including at a conference or seminar, must specify that the project has received research funding from the European Union's Horizon Europe Research and Innovation Programme and may display the European Commission. When displayed in association with a logo, the European emblem should be given appropriate prominence (contract article 17.2). A pre-print or an abstract of the paper should be sent to the coordinator with the application.
- Any notice or publication by the partners, in whatever form and on or by whatever medium, must specify that it reflects only the author's view, and that the Community is not liable for any use that may be made of the information contained therein (contract article 29.5).
- If a result is shared by several partners, the publication needs the approval of all the partners involved. The notification submitted to the PC will have to be circulated to all the partners involved. If there is no response, approval is granted.
- Participants may provide to the coordinator, a copy of the concise written report produced for the project within two weeks of the event.
- The attendee may provide, where possible, a copy of the Conference proceedings or a suitable extract to the coordinator.

- The provisions of the Contract and the Consortium Agreement should be considered in dissemination of results of the project.
- A quote like the following one should be included in any dissemination document produced by a partner:
- The authors would like to thank for their support the partners of the European Commission co-funded HE project ECOLOOP (101118127).
- The cost and frequency of the conference attendance should always be minimised and kept in proportion to the size and resources of the Project.
- Conferences out of the EU territory require previous approval of the EC.

9.2 PROJECT PUBLICATIONS AND COMMUNICATIONS

All project publications and communications (scientific/technical or not) regardless of their consideration of "dissemination" or "communication" must include the following mention and disclaimer:

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under the Grant agreement N° 101118127.

Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them

All sorts of external communication are encouraged to promote the ECOLOOP project and its results. The dissemination strategy of ECOLOOP is streamlined through a Dissemination Master Plan. The person leading the ECOLOOP Dissemination and Communication activities (WP8) is:

Dissemination and Communication Manager (DCOM): Raquel Castán (ETRA).

Provisions are made to provide coordination, consistency and quality of publications for the benefit of the project's reputation. A second purpose is to give visibility within the project to any public relation activities of the partners.

Any evidence of a dissemination activity must be stored on the project repository (i.e., "Full Paper" version and presentation material) and uploaded in the Participant Portal.

In general, the dissemination activities, including but not restricted to publications and presentations, shall be governed by Article 17 of the Grant Agreement. The CA defines also the dissemination rules in section 8.4. Specifically, partners will be responsible for including the EU emblem, acknowledgement of EU funding, and disclaimers.

9.2.1 Press Releases and other media contacts.

All partners can send out press releases on their own markets.

Press releases should be done to cover all major milestones of the project. As DCOM, ETRA will coordinate the press releases for the milestones. Partners willing to issue their own press releases must contact first with the DCOM in order to cross-check if something is already available on the subject.

For all other public project related communication, the use the ECOLOOP logo and design is mandatory. When it comes to IPR, all publication must follow the Grant Agreement and the Consortium Agreement.

9.2.2 Image rights and quality.

Attention must be given to image quality and usage rights in all publication activities. The general recommendation for the image quality is shown in the following table. In the case of picture rights, the origin of the picture as well as the creator must be mentioned. During the project, the author is always responsible for obtaining appropriate image rights, whether for printing publications or web-based publications. The general recommendations are:

Table 15. Image rights and quality.

Quality	Images for publications, 300 dpi (Size 100 x 150mm) Images for web, 160 dpi (Size 60 x 60mm)
Rights	© Institution/Company or author, origin

A specific colour palette will be provided as part of D8.1.

9.3 OPEN ACCESS TO ECOLOOP SCIENTIFIC PUBLICATIONS

Open access can be defined as online access to research outputs provided free of charge to the end-user.

Open access to scientific publications: The beneficiaries must ensure open access to peer-reviewed scientific publications relating to their results. In particular, they must ensure that:

- at the latest at the time of publication, a machine-readable electronic copy of the published version or the final peer-reviewed manuscript accepted for publication, is deposited in a trusted repository for scientific publications.
- - immediate open access is provided to the deposited publication via the repository, under the latest available version of the Creative Commons Attribution International Public Licence (CC BY) or a licence with equivalent rights; for monographs and other long-text formats, the licence may exclude commercial uses and derivative works (e.g. CC BY-NC, CC BY-ND) and
- - information is given via the repository about any research output or any other tools and instruments needed to validate the conclusions of the scientific publication.

Beneficiaries (or authors) must retain sufficient intellectual property rights to comply with the open access requirements.

Metadata of deposited publications must be open under a Creative Common Public Domain Dedication (CC 0) or equivalent, in line with the FAIR principles (in particular machine-actionable) and provide information at least about the following: publication (author(s), title, date of publication, publication venue); Horizon Europe or Euratom funding; grant project name, acronym and number; licensing terms; persistent identifiers for the publication, the authors involved in the action and, if

possible, for their organisations and the grant. Where applicable, the metadata must include persistent identifiers for any research output, or any other tools and instruments needed to validate the conclusions of the publication.

Only publication fees in full open access venues for peer-reviewed scientific publications are eligible for reimbursement.

9.4 ECOLOOP WEB SITE

9.4.1 Web site public area

It includes a description of the Project according to the public information of the DoA.

The proposed sections are the following ones:

- Project. This section is the home page and contains a general and brief description of the project including three subsections:
  - Project objectives.
  - Consortium.
  - Work plan.
- News. This section will allow the publication of existing news directly related to ECOLOOP objectives and technologies.
- Events. This section will contain all the events internal and external to the project that will keep a tight relation with ECOLOOP, including the project workshops. Before a workshop takes place, the section will contain the workshop agenda, the registration form and the logistics information. After the workshop, the agenda will contain links to each one of the presentations made. There will be one section per workshop.
- Downloads. This section will make available all ECOLOOP public documents. It will present four sections:
  - ECOLOOP brochure. The electronic version of the brochure will be available in the website in pdf format.
  - ECOLOOP presentation. A very brief presentation on ECOLOOP context, objectives, concept and contact details, in pdf format will be available for quick dissemination of the project.
  - Public deliverables. All the project public deliverables will be published in this section duly secured.
  - Technical papers. All the technical papers published by the ECOLOOP consortium, in the context of the project, will be published in this section.
- Related Links. Links of interest for the project.
- User group. This section will allow the creation of ECOLOOP User Group. The members of the user group will be invited via e-mail to the project workshops and will also receive the electronic project newsletters. The section will include the electronic form to become a member of the user group.
- Contact ECOLOOP. Coordinator brief profile and contact details.

10 Amendment

The consortium requested an amendment of the Grant Agreement for ECOLOOP. This amendment was approved in November 2024. The motivation for the modifications can be found hereafter.

- To include FOREKO as an affiliated entity of the partner FIBENOL.

Foreko Forestry Group, the largest private landowner in Estonia, is dedicated to managing a sustainable forest portfolio, contributing significantly to the green transition through forest cultivation, and the sustainable use of wood and wood residues. Foreko manages over 70,000 hectares of forestland across Estonia and Latvia through its six forestry companies, leveraging its extensive experience in sustainable forest management.

The Foreko group, with a total of 125 employees, has a large demonstrable operational capacity and R&D project experience. Many of their company leaders and middle managers hold a master's degree, and two employees are currently pursuing doctoral studies. Foreko also has close cooperation through a long-term collaboration agreement with the Estonian University of Life Sciences, partners in ECOLOOP project, with whom they have established long-term experimental areas on the lands of the Foreko group.

Foreko's main role in the project will be to collaborate with Fibenol in the design, development and demonstration of the Carbon sequestration tool and in the dissemination and exploitation of the results from the Estonian pilot and the project at large. Researchers from Foreko will participate in research, testing, and dissemination activities, complementing Fibenol's efforts within the ECOLOOP project. The established cooperation between the teams at both institutional and personal levels is expected to enhance the project's quality and efficiency.

11 Acronyms

Table 16. Acronym

Acronym List	
CA	Consortium Agreement
CFP	Call for Papers
CP	Consortium Plenary
DCOM	Dissemination and Communication Manager
DMP	Data Management Plan
DoA	Description of Action
EC	European Commission
FAIR	Findable, Accessible, Interoperable and re-usable
LL	Living Lab
OA	Open Access
PO	Project Officer
PC	Project Coordinator
PMB	Project Management Board
PMP	Project Management Plan
PPR	Project Periodic Report
PSC	Project Steering Committee
PV	Photovoltaics
TM	Technical Manager
WBS	Work Breakdown Structure
WP	Work Package

ANNEX 1. ECOLOOP Risks Matrix

	Nº Risk	Risk manager	Risk description	Type of Risk	Risk responsible	Probability	Consequence/Impact 1=Minimum-4=Maximum				Risk Assessment	Global Risk Indicator 0=Minimum 4=Maximum	Contingency Plan
							Tech. Performance	Schedule	Cost	Impact on other teams			
WP1 Project management and coordination	WP1-1	ETRA	Underestimation or resources not well balanced for the design and development of the project products.	Schedule	ETRA	2	2	2	1	1	LOW	0,75	Regular monitoring of the work and reallocation of resources when needed will take place in every stage of the project.
	WP1-2	ETRA	Underestimation of the task's duration	Schedule	ETRA	2	2	3	1	2	MODERATE	1	Steering of the project will be frequent. Milestones and deliverables have been placed for control. Should delay occurs, WPL will encourage a review of task procedure and ask partners to place extra effort
	WP1-3	ETRA	Measures for reaching Gender Balance at all levels of personnel are insufficient	Schedule	ETRA	3	1	1	1	2	MODERATE	0,9375	The project partners work to promote equal opportunities between men and women in the implementation of the project at all levels of personnel assigned to the action.

	WP1-4	ETRA	A partner leaves the consortium, for example, because of deterioration of its economic situation.	Schedule	ETRA	2	1	1	1	1	LOW	0,5	The corrective measures would be distribution to the remaining partners of the activity not fulfilled or to subcontract to a 3rd party, or a combination of the two.
	WP1-5	ETRA	Disagreement or lack of communication among partners	Schedule	ETRA	2	2	2	1	1	LOW	0,75	There will be continuous communication between all partners. PC is the responsible for solving conflicts during the project.
WP2 Project foundations and ECOLOOP living lab	WP2-1	SETUP	Delayed and/or incomplete inputs	Schedule	SETUP	1	1	4	1	3	MODERATE	0,5625	Continuous monitoring of the collection of the contributions and content in order to ensure the receival of valuable information on time
	WP2-2	SETUP	Misalignment in understanding UC, KPIs, UC revision documents	Technical	SETUP	1	1	1	1	3	LOW	0,375	Task leaders to prepare templates for partners to ensure uniform collection. Task leaders to continuously monitor the fulfilment of the documents.
	WP2-3	SETUP	Undefined innovation level for UCs	Technical	SETUP	2	3	1	1	2	MODERATE	0,875	To perform extensive discussions with partners to challenge the level of innovation of each proposed UC. If UC is not innovative, partners will assess its need.
	WP2-4	UPV	The digestate does not arrive in time to carry out the field experiments.	Schedule	GENIA	3	2	2	1	2	MODERATE	1,3125	Search for other digestates with a similar composition to carry out field trials.

	WP2-5	UPV	Not enough stakeholders to start up the Living Lab.	Technical	UPV	2	2	2	1	2	LOW	0,875	Contact other entities that have Living Labs and can provide us with stakeholders.
	WP2-6	UPV	Location not able to start field trials.	Technical	UPV	1	2	1	1	3	LOW	0,4375	Renting plots of land to private entities in the agricultural sector.
	WP2-7	UPV	Lack of cooperation among stakeholders.	Technical	UPV	1	2	1	1	2	LOW	0,375	Create interesting initiatives that encourage collaboration among the different stakeholders.
	WP2-8	UPV	Failure to meet the objectives proposed for the Soil Living Lab.	Technical	UPV	2	2	1	1	2	LOW	0,75	Seek answers that justify why the described objectives have not been achieved.
WP3 Efficient production of renewable energy in agriculture and forestry sectors	WP3-1	GENIA	Lack of standards and interoperability problems among the different systems.	Technical	UL	1	2	1	2	2	LOW	0,4375	A thorough analysis of existing standards and the selection of the most appropriate will be conducted.

	WP3-2	GENIA	DANA: external climate factors that directly affect to the Spanish pilot site area, biogas plant implementation and crops	Technical	GENIA	4	3	3	1	3	HIGH	2,5	Identify affected areas and prioritize the rehabilitation of severely damaged crops. Obtain products (fruits and vegetables) from other fields or from 3rd parties. Identify a new place for building the biogas plant. Continuous communication with local government. Evaluate other potential locations with a lower risk of being affected by weather phenomena like DANA.
	WP3-3	GENIA	Low technical perfomance of the biogas plant	Technical	GENIA	2	3	3	2	3	MODERATE	1,375	Quality engineering; cross-validation of the calculations
	WP3-4	GENIA	Deviations in digestate production, not sufficient dilution, excessive water consumption	Technical	FERT	1	3	3	1	2	LOW	0,5625	Excessive validation of digestate calculation; make sure that the liquid fraction is sufficient both for dilution and fertilizer production
	WP3-5	GENIA	Insufficient equipment and facilities to perform all use cases	Financial	GENIA/INDEREN	2	3	2	1	2	MODERATE	1	Find the best available technical solution in terms of price/quality; efficient budget management
	WP3-6	GENIA	Lack of the required substrates during the operation	Technical	AVA/GENIA	3	3	4	1	3	HIGH	2,0625	Launch the plant on time, calculate correctly the dates so that the required substrates are available at the required moment

	WP3-7	GENIA	Weather related damage and some market price fluctuations	Financial	GENIA/ INDEREN	2	3	3	3	2	MODERATE	1,375	Efficient budget management, avoid floodable areas
WP4 Renewable-based agricultural protocols and decision support tool for farmers and foresters	WP4-1	ETRA	If pilot site has online sensors and non-Internet connection is present for retrieving data from sensors	Technical	ETRA	2	4	1	2	4	HIGH	1,375	Empiric data submission via EXCELS, CSV, JSON format files, into KER4 tool
	WP4-2	ETRA	Sensoring malfunction or non-getting sensor data from it	Technical	ETRA	2	2	1	1	2	LOW	0,75	Notification and alert via KER4 to farmers for checking into the determinate sensor malfunction or offline
	WP4-3	ETRA	Loss of data due to unforseen reasons	Technical	ETRA	1	2	1	1	2	LOW	0,375	Periodic backups of data hosted in an external service of ETRA's cloud. If needed, data can be restored to the latest recovery point object
	WP4-4	ETRA	Delays in necessary sensor equipment for forwarding data from pilot sites to KER4	Technical	ETRA	2	3	1	1	3	MODERATE	1	Empiric data submission via EXCELS, CSV, JSON format files, into KER4 tool, while the necessary equipment for each pilot site is installed

	WP4-5	EULS	Security vulnerabilities, such as improper handling of user input and configuration errors, could expose the system to SQL injection, Cross-Site Scripting (XSS), and data leaks, which could lead to unauthorized data access, data corruption, or service disruption.	Technical	EULS	1	4	2	1	4	MODERATE	0,6875	Implement input validation and sanitization procedures to prevent malicious data processing. Regularly update and audit the application and its environment for security vulnerabilities. In case of a security breach, immediately revoke access, assess the extent of the breach, and apply patches.
WP5 Economic and social support for farmer's and foresters' engagement as prosumers of renewable energy	WP5-1	IRI UL	Legislation, financing of RES and legal status of Energy Communities varies in individual countries	Technical	IRI, AVA,TRU	2	2	2	1	1	LOW	0,75	The first part of the tasks in WP5 will perform in depth, regional, country and EU level analysis of the legislation in regard to RES sector, requirements for RES installation. All level of financing options will be investigated. Regarding the new RES installation legislation, required documentation process will be in depth analysed per technology and unit sizes.

	WP5-2	IRI UL	Difficulty in obtaining adequate stakeholder input from diverse agriculture and forestry sectors across different EU regions	Technical	TRU	2	2	2	1	2	LOW	0,875	Implement a more extensive stakeholder engagement strategy. Envolve all consortium partners to ensure representation from diverse geographic regions and sectors. Develop a standardised consultation methodology to ensure all key issues are systematically addressed even with limited engagement.
	WP5-3	IRI UL	The significant differences in existing national regulatory frameworks for RES in agriculture and forestry sectors across EU member states may make it difficult to develop coherent, broadly applicable policy recommendations.	Technical	TRU	2	2	2	2	2	LOW	1	Create a comprehensive mapping of existing policy frameworks at national levels early in the analysis process. Develop a tiered approach to policy recommendations with core universal principles applicable EU-wide, supplemented by country-specific adaptations where necessary.
WP6 Deployment and demonstration activities	WP6-1	EULS	Biogas containment losses in the installation chain	Technical	GENIA	2	2	1	2	1	LOW	0,75	A complete sensoring systems is expected to be deployed to monitor al parameter in the different parts of the chain. Additionally, the digital control tools will send automated signals in case of an unmatched parameter.

	WP6-2	EULS	Low technical performance of the Biogas plant	Technical	GENIA	2	1	1	2	1	LOW	0,625	The digital control systems will constantly be measuring data and calculating the relevant KPIs in terms of efficiency and yields of the installation to avoid unexpected functioning modes or patterns. This data will be reviewed and validated by the plant operators.
	WP6-3	EULS	Data quality for development of optimisation model	Technical	KOL, BIOM	2	3	3	1	1	MODERATE	1	Regular contact with relevant stakeholders. To organize regular meetings to ensure collecting all relevant data for development of optimisation model.
	WP6-4	EULS	Unforeseen costs related to upgrading existing biomethane infrastructure for agricultural machinery.	Financial	KIS	2	2	2	3	1	MODERATE	1	Create a step-by-step integration plan and test components separately.
	WP6-5	EULS	Delays in equipment deliverty	Schedule	BIOM	2	1	3	1	2	MODERATE	0,875	potential components will be ordered as soon as possible to avoid long delivery dates or potential compatibility issues

	WP6-6	EULS	Agro-intensive farming practices increase damage and contamination risks	Technical	INDEREN	1	1	1	1	1	LOW	0,25	Special care will be taken to ensure that farmers and workers are informed of any specific maintenance requirements or risks associated with the ECOLOOP systems and are supported at all times by technical experts.
	WP6-7	EULS	A severe and widespread drought, or the outbreak and spread of a highly contagious pest	Technical	INDEREN	1	2	2	1	2	LOW	0,4375	The entire project consortium team will discuss and adapt the strategy and using other types of crops and tress not affected.
	WP6-8	EULS	Weather-related damage and some market price fluctuations	Technical	AVA-ASAJA	2	1	1	2	1	LOW	0,625	Such risks can be transferred through market-based tools such as insurance and futures markets, or through cooperation agreements between farmers.
	WP6-9	EULS	Increased pest population attracted to high humidity because of photovoltaic shading and water evaporation	Technical	INDEREN	2	1	1	1	1	LOW	0,5	Risk reduction strategies will be implemented, such as the cultivation of healthy soil, the planting of resistant varieties, the correct distribution of plants and planting in the appropriate seasons, the planting of a diverse crop mix and the use of natural pesticides where appropriate.
	WP6-10	EULS	Delays in acquiring permits and licenses for project	Tech nical	AVA-ASAJA	2	1	3	1	2	MODERATE	0,875	To reduce any delay some of the corresponding entities are already part of the

			testing in the plants									consortium or has been already contacted.
	WP6-11	EULS	Unfavourable weather conditions to perform logging activities to achieve wood for testing in Fibenol biorefinery factory	Technical	FORE	2	1	1	1	3	MODERATE	0,75	Schedule logging works to 2025 autumn at the latest.
	WP6-12	EULS	New growth techniques and wood species not compatible with Fibenol technology (e.g. different mechanical hardness such that wood is not broken down).	Technical	FIBE	2	3	1	1	2	MODERATE	0,875	1. Screen wood properties before testing in the plant to focus on theoretically better suited wood species. 2. Modify plant processing parameters to better match different wood species (e.g. increased grinding, more severe reaction conditions, etc.). 3. If some wood species are not suitable, test other species more rigorously.
	WP6-13	EULS	Lack of planted black alder stand on abandoned marginal lands that have reached dimensions that are suitable for wide-scale sampling.	Technical	EULS	4	1	1	1	1	MODERATE	1	The majority of black alder plantations are newly planted and the trees are still extremely small. To fill the necessary repetition of wide-scale sampled stands for chemical concentration and heavy metals analyses then black alder stands on the same soil type from forest lands will be included.

WP7 Project impact evaluation and replication strategy	WP7-1	INDEREN	Insufficient capacity of replication of the outputs delivered in the project	Technical	TRAKIA	2	1	1	1	2	LOW	0,625	The partners are aware of the direction of the project to deliver market relevant results aligned with end users' priorities. Moreover, an extensive analysis will take place to define a roadmap for replication in different scenarios.
WP8 Dissemination, communication and exploitation activities	WP8-1	ETRA	Regulatory framework conditions not favourable.	Financial	ETRA	3	2	1	1	2	MODERATE	1,125	An extensive analysis of the existing regulatory conditions will be part of the project and a document for policy makers with recommendations will be done after that.
	WP8-2	ETRA	Unsuccessful exploitation strategy in terms of attracting the relevant stakeholders	Financial	ETRA	2	1	1	2	2	LOW	0,75	A detailed analysis of the market and the products developed will be done during the project to detect gaps in the market to be covered by the project.
	WP8-3	ETRA	Lack of cooperation of the project partners due to IPR issues.	Financial	ETRA	2	2	2	2	1	LOW	0,875	Possible IPR issues have been discussed among the partners already in the proposal phase and IPR and access right clauses will be included in the CA which will be signed before the project starts to avoid future disputes.

	WP8-4	ETRA	Insufficient protection of personal data managed during the project demonstrations.	Financial	ETRA	1	1	1	1	1	LOW	0,25	Specific procedures are defined to collect, storage, protect, retain and destruct sensitive and confidential personal information from participants of the project demonstrations.
	WP8-5	ETRA	The project contravenes ethical principles or applicable legislation.	Financial	ETRA	1	1	1	1	1	LOW	0,25	There are specific tasks to ensure the compliance with the ethics and legal requirements during the project.
	WP8-6	ETRA	Low market uptake due to lack of interest, high competition or market saturation	Financial	ETRA	2	2	2	3	2	MODERATE	1,125	Offer flexible business models and establish partnerships with key stakeholders and early adopters to drive acceptance
	WP8-7	ETRA	Poor dissemination due to lack of results and material	Schedule	ETRA	2	2	2	1	2	LOW	0,875	To mitigate poor dissemination due to a lack of results and materials, ECOLOOP will focus on early content development, progress-based communication, partner contributions through a Contributions Calendar,social media engagement, and adaptive dissemination strategies to maintain visibility and engagement until concrete results are available.

	WP8-8	ETRA	Low number of scientific publications	Schedule	ETRA	2	3	2	2	2	MODERATE	1,125	To collaborate with academic institutions and researchers to increase publication efforts and prioritize submitting results to high-impact journals and conferences.
	WP8-9	ETRA	Low participation/organization by ECOLOOP partners in events	Schedule	ETRA	2	2	2	1	1	LOW	0,75	To establish clear roles, set early deadlines, provide additional support or incentives, and create a list of potential events to ensure timely and active involvement.