



LivingSoiLL

Healthy Soil to Permanent Crops Living Labs

Proposal number: 101157502



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Why Living Labs on Permanent Crops soil challenges?

Grapevines, olives and fruit crops (apples, chestnut and hazelnuts) are some of the most economic relevant **Permanent Crops (PC)** in the EU, which are facing important challenges related to soil health issues, due to production practices, but exacerbated by climate change.



The PC selected are of utmost importance for:

- Promoting **rural economies' competitiveness and the vitality** of many **European rural areas**.
- Promoting **healthy food dietary patterns and lifestyles**, by supplying the consumption of high-quality products defined by local origin.
- **Shaping cherished landscapes**, often acknowledged as world cultural heritage, a key for thriving tourism in rural areas.



Main goals of the partnership and rationale for cooperation

Main goals:

- Establish a **network of five LLs** across Europe, with at least **50 demonstration sites (DS)** and **10 lighthouses**, focused on PC with **economic, social and cultural importance** in the EU.
- Promote the action of LL as **collaborative multidisciplinary and transdisciplinary platforms** for co-designing, co-developing, and co-implementing solutions that foster **conservation/restoration of soil health**.

Rationale for cooperation:

- **Common soil health issues identified on PC**
- **6 EU Universities** with: i) a **high scientific reputation in soil sciences and soil threats** and, on PC and production practices demonstrated by their participation in several European networks; ii) an **extensive experience of collaboration with local producers**, and **interaction with public administration bodies**.
- **Existing strong networks of collaboration in the proposed LL**, whose experience can be shared – **INTERMEDIATE LEVEL OF DEVELOPMENT**
- Partners with a **high potential for technological innovation** (e.g. IFV) in the agri-food sector with a high transference capability.
- **Partners with experience on social sciences** with capability to design strategies for knowledge and practices transference.



Living Labs location

Project Coordinator:

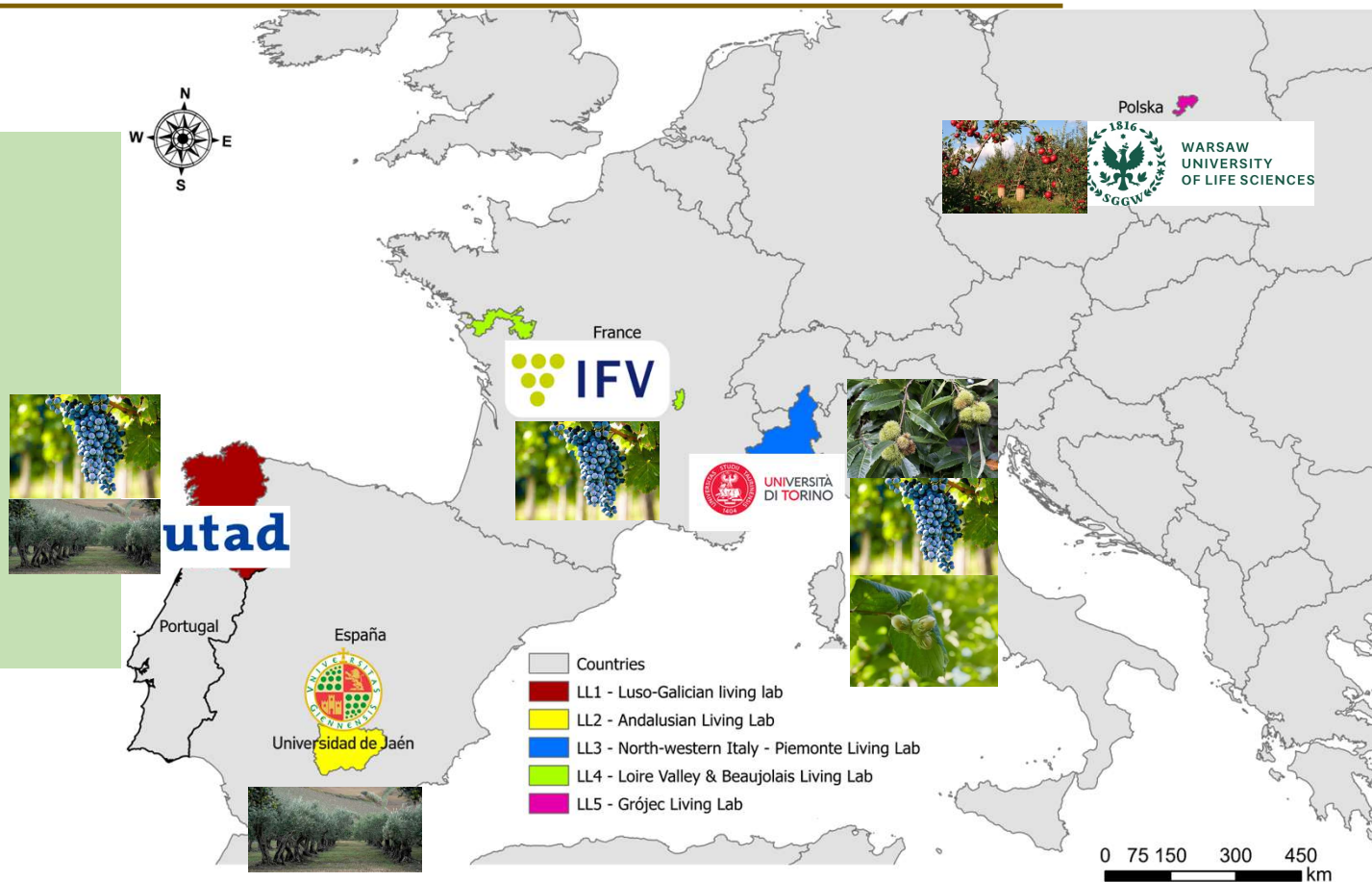
Cristina Carlos (UTAD, Portugal)

Project Manager:

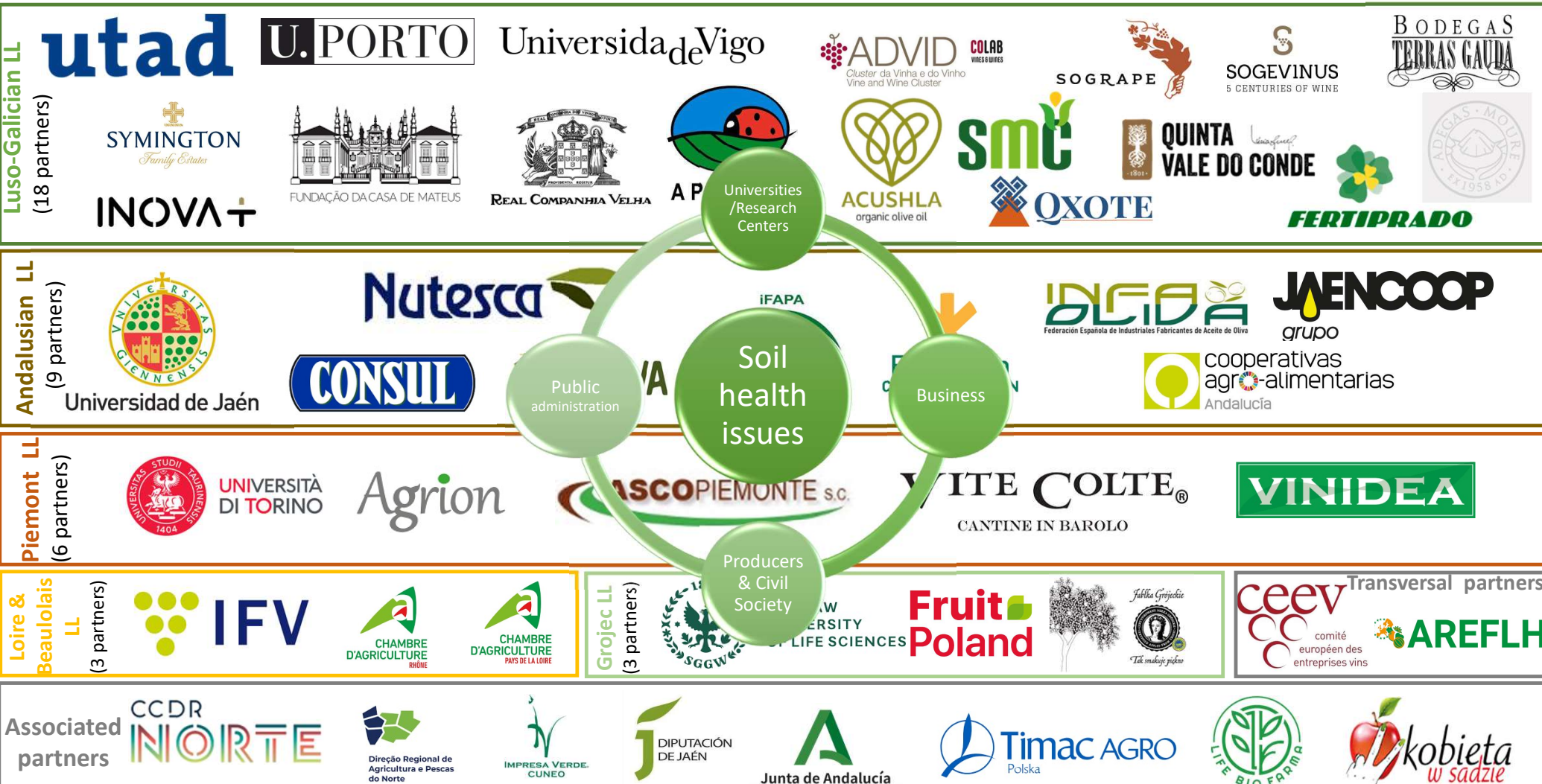
Lígia Pinto (UTAD, Portugal)

LL coordinators:

- UTAD (Cristina Carlos),
- Univ. of Jaen (Juan Jurado),
- IFV (Eirios Hugo),
- Univ. of Turin (Eleonora Bonifácio),
- Warsaw Univ. (Jozef Chojnicki)



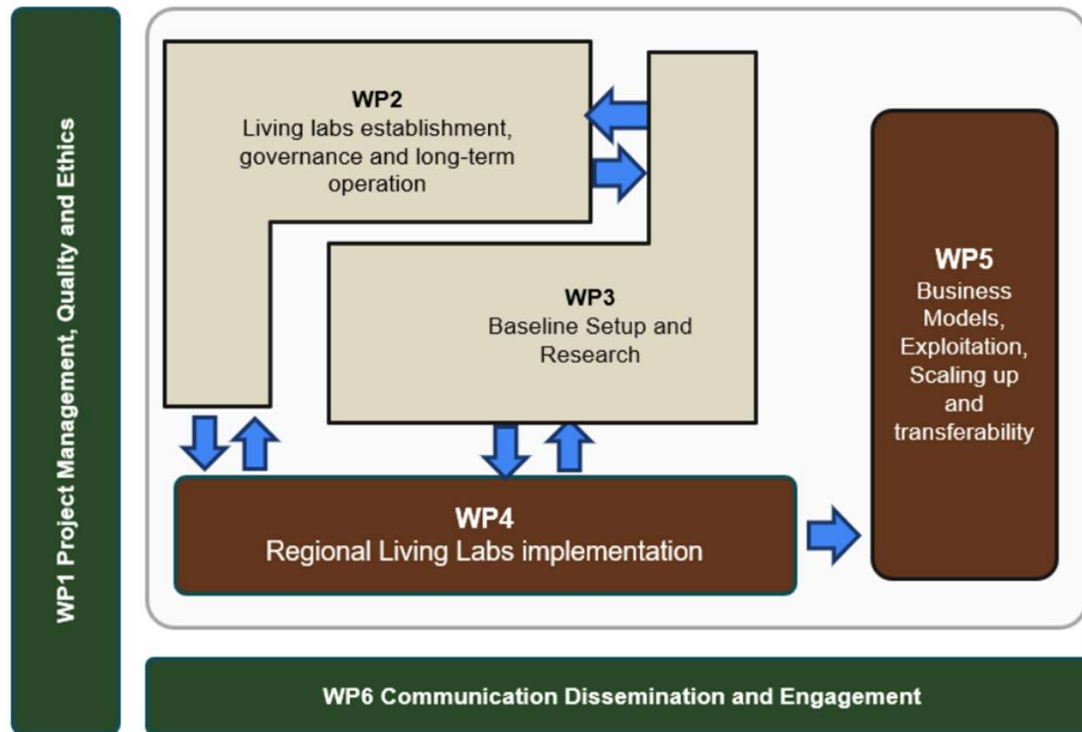
LivingSoiLL – 42 partners + 8 associated partners



Project structure

6 Work Packages (WPs), each playing a pivotal role in achieving our objectives

WP1 is dedicated to management and coordination



WP4 holds a **central position**, serving as the **hub** where the five **Regional Living Labs (LLs)** and their **experimental sites** are developed. WP4 absorbs the results generated in WP2 and WP3, transforming them into tangible solutions.

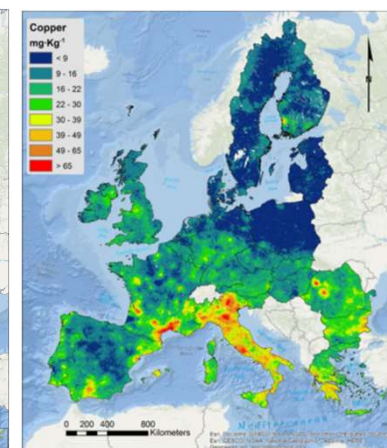
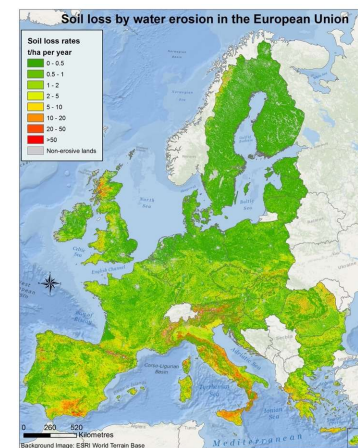
WP5 will **amplify the capacity of regional stakeholders**, scaling up and sustaining the **impact-based outcomes** of our project.

WP6 will **disseminate the outcomes of the project** :

- It will serve as the **interface between our project** and the **quadruple/quintuple helix stakeholders**.
- It will promote **wider social adoption and awareness of our innovative solutions**.
- It **fosters dialogues with policymakers** and collaborates with other relevant EU projects and initiatives.
- It ensures that **our results are market-oriented** and integrated into the stakeholders' ecosystems.

WP2, WP3, and WP5 are the **backbone** upon which our project's science and technology innovations are built. They will serve as the **foundation for subsequent implementation in WP4**.

Soil health challenges and Mission Soil objectives addressed



Mission's Specific Objectives	Luso-Galician LL	Andalusian LL	North-western Italy - Piemonte LL	Loire Valley & Beaujolais LL	Grójec LL
	Vines/Olives	Olives	Vines/ Chestnuts/ Hazelnuts	Vines	Apples
1. Reduce desertification					
2. Conserve soil organic carbon stocks					
3. Stop soil sealing and increase re-use of urban soils					
4. Reduce soil pollution and enhance restoration	+	+			+
5. Prevent erosion	+	+	+	+	
6. Improve soil structure to enhance soil biodiversity	+	+		+	
7. Reduce the EU global footprint on soils					
8. Improve soil literacy in society	+	+	+	+	+

Ongoing activities or activities to develop at each LL

Living Lab	Experimental sites		Partners		Ongoing or planned soil health-related work
	Identified	Target	Identified	Target	
LL1 Luso-Galician	20	20	13	>15	<ul style="list-style-type: none"> a) cover crops (using autochthonous and water-parsimonious species; mulching and reduced tillage) b) cover crops terminated with a roller c) use of amendments (on-farm composted residues, vermicompost, zeolite, biochar, biofertilizers)
LL2 Andalusian	15	15	7	>15	<ul style="list-style-type: none"> a) soil erosion, soil pollution, and water scarcity. The experimental solutions involve the use of organic matter, compost, plant cover, and biochar hydrofilters. In addition, we are monitoring changes in soil health using remote sensing sensors. All experimental sites are related with Olive trees use of organic matter, compost, plant cover, and biochar hydrofilters
LL3 North-western Italy - Piemonte	6	10	6	>10	<ul style="list-style-type: none"> a) soil erosion (vineyard), b) chestnut (litter management, organic matter and fertility conservation, composting).
LL4 Loire Valley & Beaujolais	0	10	3	>10	<ul style="list-style-type: none"> a) cover crops with low water needs b) use of mulches, biochar or biobased woven groundcover c) sustainable management of organic matter
LL5 Grójec	1	10	4	>10	<ul style="list-style-type: none"> a) testing of different floor management systems in apple growing b) testing mulching with wide range of organic litter including agricultural waste and its effect on soil quality and fertility

Financial Support to Third Parties use and objective

LivingSoilLL consortium will put together an administrative and financial procedure to support the selected 'Associated Experimental Sites', allowing them to actively participate in the Living Labs' activities.

Challenges and Recommendations

- The quadruple helix framework poses significant challenges for project managers in terms of coordination and collaboration.
- LL with a high geographical extension causes a funding imbalance, which is not well seen and understood.
- Co-creation process is not well understood and difficult to implement due to budget justification requirements
- The negotiations after project approval can be highly demanding.
- ✓ The quadruple helix framework should be considered as a guiding principle for the proposal. Portugal is per sure a good example in what regards the link between academy, industry, and the primary sector. The number of partners from the sector was one of the reasons of success of this proposal.
- ✓ EU is expected to limit the geographical dispersion of the Living Labs.
- ✓ Take into account as much as possible funding balance between LL.
- ✓ In what regards soil monitoring frameworks, provide as much details as possible in terms of number of demonstration sites (DS), their extension, number of samples to be collected, indicators to be evaluated and corresponding protocols. This information must be clearly reflected in the justifications of the budget.

Acknowledgements



Maria João Fernandes (PT)



Cláudia Sá (PT)



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Thank you for your time!