



HuMUS - WP4 pilot projects

Structure of the Short final report and its publishable summary

Publishable summary

As part of the HuMUS project, the Circular4HuMUS pilot led by the Municipality of Grezzana, in collaboration with Ecoloop, promotes a territorial approach to soil health, sustainable agriculture, and circular resource management in the Valpantena Valley, Northern Italy.

The project addresses several interconnected challenges: soil degradation, inefficient organic waste management (especially pruning residues), lack of shared governance, and the need for regenerative practices across agricultural and public land. These issues are tackled through the development and implementation of a Territorial Management Agreement (TMA) – a voluntary pact between local institutions, farmers, technical experts, schools, and civil society.

Over the course of the pilot, the team facilitated a series of participatory workshops with local farmers, schools, environmental educators, and institutions. These moments of co-design helped define the vision of a "healthy and regenerative soil" and guided the creation of the TMA. The agreement serves as a practical and shared roadmap to coordinate efforts, resources, and knowledge on a local scale.

Key actions include:

- **Training and professional support** on regenerative agriculture (e.g., use of cover crops, reduction of chemical inputs, agroecological practices).
- **Promotion of vermicompost and biochar** as natural soil amendments, produced from local biomass.
- **Environmental education in schools**, including site visits to compost and biochar production facilities.
- **Future cooperation with universities** and research centers to monitor soil quality and test innovative techniques.
- **Creation of municipal urban gardens** using compost, especially on underused public lands.
- **Collaboration with Rete Valpantena** and local networks to map and promote local excellence and green initiatives.



Funded by
the European Union

A critical issue highlighted by both the Municipality and local farmers was the **management of woody pruning residues**. The project opened dialogue with the **Consorzio di Bacino** and neighboring municipalities to find shared solutions for treatment and reuse, including chipping and biochar production, thus transforming a problem into a circular resource.

The pilot's participatory governance process is a core strength. It built trust, reinforced community identity, and generated co-responsibility around soil as a common good. However, the pilot also faced limitations such as differing capacities and timelines among stakeholders, and the need for technical and financial support to ensure continuity.

The **signature of the Territorial Management Agreement on May 27, 2025**, was a milestone in consolidating this collaborative framework. It is not only as a local commitment but also as a replicable model for other rural and peri-urban territories in Europe.

Circular4HuMUS demonstrates that when local actors are empowered and connected, sustainable land stewardship becomes a concrete, achievable, and community-driven goal.

Detailed description

Concept and Objectives

The Circular4HuMUS pilot aimed to promote soil health and circular economy practices in the Municipality of Grezzana, in the Valpantena Valley, Northern Italy. The project focused on building a Territorial Management Agreement (TMA), a voluntary pact engaging local stakeholders—municipality, farmers, schools, associations, and researchers—to collaborate on regenerative practices, knowledge sharing, and sustainable soil governance.

The main objectives were:

- Promote regenerative agriculture and natural soil amendments (vermicompost, biochar).
- Foster local circular systems for organic waste (e.g., green pruning residues).
- Integrate education and training across schools, professionals, and citizens.
- Activate participatory soil governance and community co-responsibility.
- Establish the TMA as an operational and replicable tool.

Experimental Setup and Results

Throughout the pilot, several field activities and participatory sessions were organized, described in the following.

- Workshops with local farmers defined priority issues (e.g., organic fertilization, residue management).
- School activities proposed to students on the topics of composting and soil life.
- Pilot initiatives explored small-scale vermicompost and biochar production with different bio-wastes from the local farmers .
- Mapping of underused public lands identified potential areas for regenerative practices (e.g., community gardens).
- Dialogue with other municipalities and the waste consortium explored coordinated solutions



for pruning residue treatment.

Key results include:

- A shared definition of “healthy soil” in the local context.
- A set of practical actions co-designed and embedded in the TMA.
- Strengthened collaboration between Rete Valpantena, local institutions, and agronomic professionals.
- Broader awareness of circular practices and nature-based solutions.

Adopted methodology

The pilot applied a participatory approach, combining:

- Community engagement through workshops, and interviews.
- Action-research with local stakeholders to test regenerative practices.
- Educational activities integrated into school curricula.
- Multi-level governance, aligning municipal strategies with regional/national frameworks (e.g., Veneto 2050, FESR 2021-27).

The methodology was rooted in co-creation, collaboration, and capacity-building, ensuring that technical solutions were adapted to the local social and environmental context.

Resources and tools used

- Workshop facilitation materials (maps, flipcharts, participatory tools).
- Technical factsheets on biochar, vermicompost, and regenerative practices.
- Monitoring indicators for soil health and action implementation.
- Educational visits for schools.
- Local partnerships (e.g., with Rete Valpantena, Ecoloop, Rete verso, Peramculture, agronomist).

Lessons learned

- Co-creation builds trust: Local actors responded positively when actively involved in decision-making.
- Start small, scale gradually: Pilot actions such as composting or public garden reuse must be simple and replicable.
- Clear responsibilities are key: The TMA helps clarify who does what, when, and how.
- Inter-municipal cooperation is essential: Waste and soil management are regional issues—shared governance is needed.

Challenges included bureaucratic delays, uneven capacity among actors, and limited funding for full-scale implementation of all proposals.

Impacts

The **HuMUS project** has been highly valuable for the Comune di Grezzana and its local partners, enabling the **co-creation of a Territorial Management Agreement (TMA)** for soil health through a structured and inclusive participatory process. It offered an unprecedented opportunity to integrate **environmental innovation, community participation, and policy development** into a shared strategy for sustainable land management.

Stakeholders Involved in the Participatory Process

Over the course of the pilot (October 2023 – May 2025), more than **140 participants** were actively involved across events, workshops, technical meetings, and educational activities. They can be categorized as follows:

- **Public Entities**
 - Comune di Grezzana
 - Istituto Comprensivo Statale "G. Pascoli" Grezzana (VR)
- **Academia and Research**
 - Experts from local agronomy and soil health networks
 - Collaboration with Permacultura Italia and the local Order of Agronomists
- **Industry/Enterprises (Agricultural and Circular Economy Sector)**
 - Farms (Bellamoli Giardini, Villa Pellegrini, Società agricola Ripa della Volta srl, La Collina dei ciliegi società agricola srl)
Composting professionals and biochar producers
 - Local businesses and cooperatives involved in sustainable agriculture
- **Citizens, Civil Associations, NGOs :**
 - Members of **Rete Valpantena**
 - Local residents involved in school activities and urban gardening
 - Students and teachers from secondary schools
 - Cultural and environmental NGOs (Verona Fablab, ReteVerso)

Ethical Principles and Regulatory Compliance

The project was guided by a commitment to **ethical, inclusive, and transparent participation**, with attention to both social and legal responsibilities:

- **Gender Balance:**

Equal opportunity was ensured in all events and engagements. A balanced representation of genders was encouraged in panel discussions, interviews, and educational activities. Female participation was particularly strong in the education and farming sectors.
- **Data Protection and GDPR Compliance:**

All personal data collected during the pilot (e.g., attendance lists, survey responses) were managed in full compliance with the **EU General Data Protection Regulation (GDPR)**. Participation was voluntary, informed consent was requested for any use of images or personal input, and no sensitive data were stored beyond the scope of reporting.



- **National Legal Frameworks:**

The pilot respected Italian national regulations regarding **transparency in public engagement, environmental education, and waste management practices**. Specific attention was given to legal aspects concerning the reuse of biomass and pruning residues (ramaglie), as well as the urban planning provisions in **Legge Regionale Veneto 14/2019 (Veneto 2050)**.

- **Accessibility and Inclusion:**

Meetings were held in accessible venues, and communication materials were designed to be understandable by non-experts. A participatory methodology was adopted to ensure all voices could be heard, including those of smaller producers or less organized stakeholders.

Annexes

September 2024: meeting with the Comprehensive Institute of Grezzana

At the beginning of September, the Kick-Off Meeting (KOM), held in the municipal council hall, was attended by the Municipality of Grezzana, EcoLoop and the Comprehensive Institute of Grezzana, marking the official start of project activities.



November 2024: involvement of schools

In collaboration with the State Comprehensive Institute “G.Pascoli” of Grezzana, we conducted a laboratory on soil quality and the importance of implementing good agricultural practices to preserve them. We talked about composting and biochar, actively involving the children present through quizzes divided into groups.



November 2024: involvement of local businesses

The Humus project was presented as a part of the activities of the Valpantena Network, an organization that brings together local actors - farms, local authorities, associations and citizens - with the aim of promoting sustainable practices, making the most of local resources and foster collaboration between economic and social realities in the valley. Within this context, some farms have decided to change their



Funded by
the European Union

perspective on the management of grape processing waste such as marc and pomace. These materials, often treated as waste, have been recognised as a valuable resource for soil regeneration. Some companies have therefore chosen to make them available to Ecoloop, which has initiated the first tests of vermicomposting. This experiment has started a virtuous cycle in which every element of agricultural waste is reintroduced into the production system, contributing to soil fertility, waste reduction and environmental resilience of the entire territory.

March 2025: compost in agriculture and farmer involvement

In March, local farmers were directly involved in an experimental project to test the effectiveness of compost produced from grape marc and pomace - by products of processing grapes and olives - as a natural agricultural soils. Through this experiment, it was intended to exploit organic waste of local origin, turning them into a useful resource to improve the fertility of soils and reduce the use of chemical fertilizers.



March 2025: compost in agriculture and farmer involvement



April 2025: workshop with the school

The project takes shape with the involvement of boys and girls in schools, as part of a collective journey towards more sustainable agriculture and healthier soil. After a brief description of the project, the boys and girls took a close look at the different composting plants and experiments with different types of seeds.



April 2025: participation in Climact Expo

On 10 April, the Municipality of Grezzana together with its partner EcoLoop took part in the Cli-Act Expo 2025, a national event dedicated to good practices for combating climate change and promoting environmental sustainability. Designed to raise awareness and bring together citizens, young people, businesses, civil society and local government to make a system in the fight against anthropogenic climate change. On this occasion, we had the opportunity to present the project "Circular4Umus".

The participation in Clim-Act Expo was an important showcase for the Municipality of Grezzana, which could share its experience with other virtuous realities, establish new collaborations and strengthen their commitment to ecological transition.



APRILE | CAMERA DI COMMERCIO DI VERONA



April 2025: organization of workshop on business and citizenship

On 14 April at the civic hall "Bodenheim" was organized a participatory workshop divided into two moments: the first, aimed mainly at farms in the territory of Valpantena, focused on the use of sustainable agricultural practices and with a moment of discussion on common problems and possible solutions to be adopted, with the intervention of agronomist Amma Stromengher.

The second phase, which was designed to involve all citizens, focused instead on vermicomposting practices and the use of biochar, to raise community awareness of the importance of preserving soil quality through sustainable techniques.



May 2025: project presentation during the Permaculture event

The Circular4Umus project was presented at the conference on permaculture, held as part of the DaMule festival, organized by the Municipality of Grezzana. This event, which combines culture, environment and civic participation, was an important opportunity to share experiences, visions and practices related to sustainability and regeneration of the territory. The presentation outlines the project's objectives and actions.



Conferenze
PERMACULTURA
A cura di **ALESSANDRO FANTONI**

Gin-ECOLOGIA
A cura di **VALERIA MOLFESE**

La Permacultura è un approccio di progettazione che mira a creare sistemi agricoli e di insediamento sostenibili, imitando e migliorando i processi naturali. Si basa su principi come l'etica, la progettazione, la diversità e la resilienza, per creare sistemi produttivi duraturi e in armonia con l'ambiente.

Venerdì
9 MAGGIO
2025 Ore 18.00

Sala Bodenheim
Via Segni 2 Grezzana (VR)
INGRESSO LIBERO

Presentazione del progetto europeo Cicolar4UMUS a tutela e salute del suolo a cura del Comune di Grezzana e di Marta Dai Prè di:

ECOLOOP
reshape your impact

Info Biblioteca Comunale via Segni 2 Grezzana (VR)
Tel 045 8650169 biblioteca@comune.grezzana.vr.it



The

Comune di Grezzana, in partnership with Ecoloop SRL SB, actively promoted the Circular4HuMUS pilot across a range of platforms. This included dedicated web pages, news articles, social media campaigns, and public engagement events.

Key Communication Channels and Outreach

- **Municipality Website**
 - Project launch and updates:
 - [European Contribution Announcement](#)
 - [Project Page - Circular4HuMUS](#)



Funded by
the European Union

- [TMA Signing Invitation](#)

- **Social Media and Press**

- o [Comune di Grezzana Facebook](#)
- o [Verona Network article & video](#)
- o [Ecoloop LinkedIn](#)
- o [Ecoloop Instagram](#)

Participatory and Dissemination Events Overview

Event	Date	Location	Description	Type	Participants
Soil Carbon - Middle School	25/10/2024	Grezzana	Soil education workshop	Dissemination	74 students
Circular4HuMUS + Rete Valpantena Webinar	14/11/2024	Online	Stakeholder engagement session	Communication	13 agricultural companies
Vermicompost and Food Scraps Workshop	25/03/2025	Grezzana	School workshop on circular organic practices	Dissemination	19 students
ClimAct Expo 2025	10/04/2025	Verona	Circular4HuMUS presentation during agriculture forum	Dissemination	39 general public
Soil Regeneration & Sustainability Workshop	14/04/2025	Grezzana	SWOT & planning session with partners	Participatory Workshop	25 project partners
Citizen Science: Vermicompost & Biochar Workshop	14/04/2025	Grezzana	Public event on composting and biochar	Dissemination	50 citizens
Permaculture & Agroecology Workshop	09/05/2025	Grezzana	Public demonstration and soil discussion	Dissemination	40 citizens
Final TMA Signing Ceremony	26/05/2025	Grezzana	Signature of the Territorial Management Agreement	Policy Event	20 signatory partners

Engagement Highlights



Funded by
the European Union

- **Total participants:** Approx. **280 people**
- **People from the different stakeholder types:**
 - o Public entities: 25
 - o Academia: 10
 - o Agriculture enterprises: 45
 - o Citizens / NGOs: 200 (incl. students, families, civil society)