National Final Report

Italy

WP5 Activity 6: Reporting

Contents

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Introduction

CESIE collaborated with local stakeholders, educators, residents, and environmental experts to design and implement the Biodiversity Garden at Euromadonie Roccella in Palermo. The aim was to bring biodiversity into everyday life by creating a multifunctional, educational, and community-driven green space where people could explore native Sicilian flora and engage in hands-on ecological learning. The initiative sought to reconnect residents—especially young people—with local nature while highlighting the cultural and ecological value of endemic species. The broader Euromadonie area, located in the Roccella district of Palermo, has long served as a social and cultural meeting point for families, schools, and community groups. Although rich in community activity, the neighbourhood faced increasing environmental pressures, including the replacement of natural vegetation with paved surfaces, fragmented public green spaces, and limited areas dedicated to environmental education. At the same time, strong local identity and existing networks created favourable conditions for co-creation and civic participation. Building on these assets, CESIE's Biodiversity Garden was conceived as a living laboratory where ecological awareness, cultural heritage, and community engagement could converge. With its combination of educational programmes, native plant conservation, and participatory gardening activities, the initiative addressed multiple local needs: increasing green space quality, strengthening pollinator habitats, and providing residents with opportunities to learn and actively contribute to biodiversity. As part of the wider Co-Bio project, the Euromadonie case placed special emphasis on shared learning, nature-based activities, and generational engagement, linking environmental stewardship with community cohesion.

Co-Creation process

a) Stakeholders

The co-creation process was anchored by CESIE ETS, which coordinated the initiative, facilitated community involvement, and linked expertise with local needs. A team of botanists and environmental specialists contributed scientific knowledge, identifying native Sicilian species that were both ecologically valuable and suitable for community learning. Local schools, teachers, and youth groups played a central role, participating in workshops, planting days, and educational activities that ensured the garden reflected the interests and curiosity of younger generations.

Residents and volunteers from the Euromadonie community added local knowledge and consistent hands-on support. Storytelling sessions, planting activities, and informal gatherings helped build a sense of shared ownership. Existing community networks—teachers, parents, neighbourhood associations—were essential in mobilising participation and creating continuity. The Municipality of Palermo and local environmental organisations also offered advisory support, especially regarding native flora and urban biodiversity.

This combination of scientific expertise, educational actors, neighbourhood involvement, and institutional support shaped a strong local partnership. The recruitment of stakeholders relied

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on targeted invitations, school outreach, and the mobilisation of existing relationships, ensuring collaboration from multiple levels of the community.

b) Implementation

The co-creation process was structured into research, design, and participatory implementation. Environmental experts first conducted botanical studies to determine which endemic and rare species could be conserved and showcased. These findings were translated into a spatial design consisting of thematic plots—medicinal herbs, pollinator plants, aromatic shrubs, and native trees—reflecting both ecological value and Mediterranean cultural heritage.

Workshops and meetings with teachers, residents, and volunteers shaped the garden's educational and community dimensions. Planting days brought together families, students, and gardeners to collectively establish the different zones. CESIE facilitated outdoor learning spaces, adding paths, signage, and small installations to support guided tours and immersive activities.

The garden became a dynamic learning environment supported by ongoing educational programmes: seminars on local flora, composting workshops, sessions on seed saving, and hands-on activities combining traditional knowledge with scientific guidance. Over time, local botanists and community groups took responsibility for maintenance, seasonal care, and biodiversity monitoring, ensuring long-term stewardship.

c) Developed Solutions

The Biodiversity Garden introduced a series of concrete, biodiversity-supporting solutions:

- **Creation of thematic planting zones** featuring endemic Sicilian species, pollinator-friendly plants, medicinal herbs, and aromatic shrubs.
- **Educational infrastructure**, including interpretive signage, outdoor classrooms, and guided learning routes.
- **Hands-on workshops** on composting, sustainable cultivation, and seed saving, connecting scientific practices with traditional ecological knowledge.
- **Community planting days** involving schools, families, and volunteers to reinforce shared responsibility for the space.
- **A monitoring system** to observe plant resilience and pollinator populations, supporting ongoing research.
- **Integration of cultural heritage**, highlighting the relationship between Sicilian flora and local traditions.

These solutions together created an accessible, multifunctional space supporting ecological restoration, community engagement, and environmental education.

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Key outcomes and lessons learned

Environmental Impact

The Biodiversity Garden significantly enhanced local ecological value by reintroducing and conserving endemic Sicilian plant species. The pollinator-focused plots strengthened habitats for bees and other insects, while diverse plant zones contributed to environmental resilience. The garden provided a living example of how urban areas can integrate native vegetation and serve as micro-habitats supporting ecological balance. Its ongoing monitoring component generates valuable data on plant performance and pollinator behaviour, supporting long-term biodiversity strategies.

Social Impact

The initiative strengthened community cohesion by turning the garden into a shared space for learning, recreation, and cultural exchange. Schools and families experienced nature through hands-on activities, making biodiversity tangible and relatable. The involvement of residents in planting, storytelling, and educational events fostered a stronger sense of belonging and ownership. Intergenerational participation—children, parents, educators, and elders—created connections across age groups and broadened the project's impact.

Challenges

The project also faced challenges commonly found in community-based environmental initiatives. Coordinating multiple actors—schools, experts, volunteers—required significant organisational effort. Ensuring consistent maintenance demanded long-term commitment from local groups, which needed gradual capacity building. As a multifunctional public space, the garden required balancing educational goals with conservation priorities, which occasionally led to the need for adaptive planning. Despite these challenges, strong partnerships and community motivation ensured successful implementation.

Strengths and Lessons Learned

Several lessons emerged from the Euromadonie experience. First, combining scientific expertise with participatory engagement proved essential for creating a space that was both ecologically meaningful and socially relevant. Hands-on activities, outdoor workshops, and direct interaction with plants generated stronger motivation and learning than traditional classroom approaches alone.

Second, involving schools and families early in the process ensured long-term use and stewardship of the garden. The initiative highlighted the value of building on local identity and cultural heritage—showcasing native Sicilian flora helped residents feel emotionally connected to the landscape.

Finally, the project showed that biodiversity initiatives thrive when they become community resources rather than isolated green spaces. The Biodiversity Garden now functions as a model and reference point for similar initiatives in Palermo, demonstrating how co-creation can anchor environmental innovation in local contexts.

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Conclusion

The Biodiversity Garden at Euromadonie Roccella illustrates how co-created, community-centred actions can bring biodiversity into everyday life in a meaningful way. Through planting activities, thematic plots, educational workshops, and ongoing stewardship, the garden became a vibrant space where ecological learning, cultural heritage, and community engagement intersect. The strong partnership between CESIE, environmental experts, schools, and local residents ensured that the initiative was rooted in local needs and knowledge from the outset. Despite organisational challenges and the complexities of coordinating multiple actors, the project generated lasting outcomes: enriched habitats, increased ecological awareness, and a shared sense of responsibility for nature. Looking ahead, the Biodiversity Garden stands as a living, evolving example of how urban spaces can support biodiversity while fostering community identity, education, and environmental stewardship—offering inspiration for future Co-Bio initiatives across Europe.

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