



Living Lab Turin-Mirafiori Sud, Italy



NBS 8

Pollinator diversity
improvement and citizens
science project



Butterfly gardens
for schools and
disadvantaged people



NBS description

“Farfalle in ToUr” was initiated in Turin in 2014 by the collaboration between the national Local Health Company (LHC), Mental Health Centres and the University of Turin (Department of Life Sciences and Systems Biology). Researchers of the university train people affected by mental disabilities to become scientific disseminators and carry out all NBS activities in the Living Lab Mirafiori district:

- create and take care of pollinator gardens,
- observe and record butterfly species,
- manage a website,
- breed caterpillars,
- take part in public events and educational activities in schools and social housing areas

Aims & goals

The objective is to foster butterfly populations and diversity in Turin by creating a network of green areas. Proper management and the presence of suitable plants (food plants and nectar sources for the life cycle) allows butterflies to cross the urban

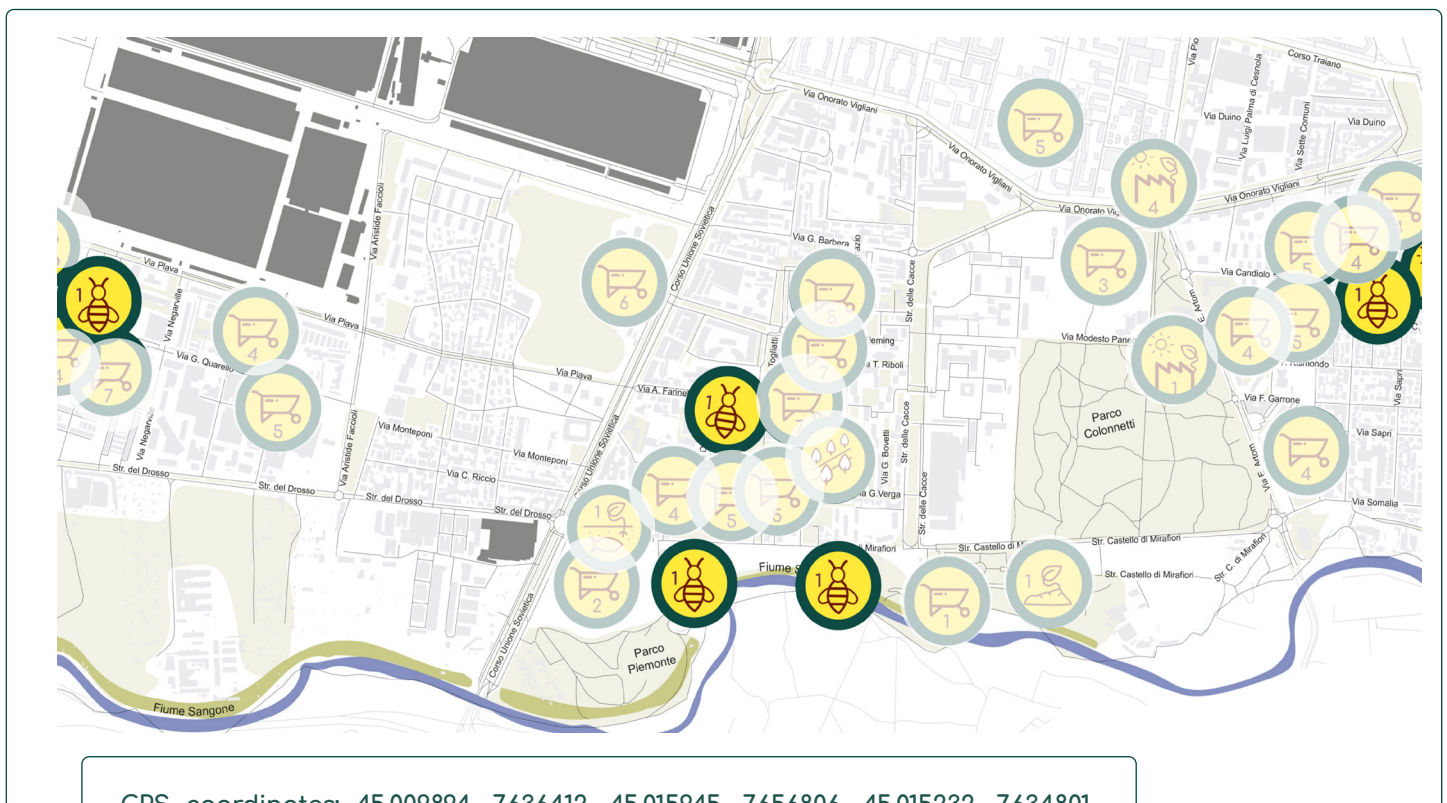
area while involving people with mental or physical disabilities to fight social stigma and foster social inclusion.

The NBS combines scientific and social goals:

- scientific monitoring of butterflies
- involvement of fragile people with mental or physical disabilities against isolation and social stigma.
- providing training courses for disabled people supported by university researchers to become scientific disseminators
- carrying out all project activities: creating and taking care of pollinator gardens, observe and record butterfly species, manage a website, breed caterpillars, taking part in public events and educational activities in schools, refugee centres, social housing, care homes for elderly.

Area of implementation

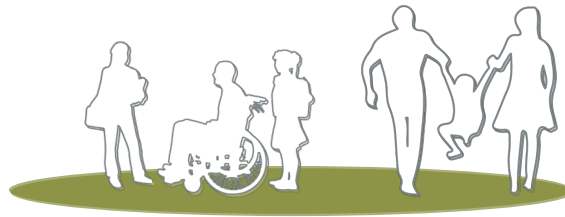
Green urban pollinator habitats are located throughout the Living Lab Mirafiori Sud forming green urban connections for different insects.



GPS coordinates: 45.009894, 7.636412, 45.015945, 7.656806, 45.015232, 7.634801, 45.018837, 7.609188, 45.015602, 7.631016, 45.038668, 7.626691, 45.017665, 7.64481, 45.08395, 7.70481, 45.00916, 7.62559, 45.011449, 7.632619

Target groups (beneficiaries)

- Disadvantaged people
- Families
- Schools of the district



Stakeholder constellations

Main responsible partner

- University of Turin (UNITO): coordination of project activities
- DBIOS, Department of Life Science and System Biology researchers work together with educators and disabled people in co-designing NBS activities. Responsible for the scientific part of the project, including expertise of butterflies' biology, ecology and monitoring.



ProGReg partners involved

- City of Turin: coordination of exchange between "Farfalle in ToUr" and other proGReg activities
- NGO Fondazione Mirafiori: green infrastructure for urban regeneration through nature-based solutions for neighbourhood residents

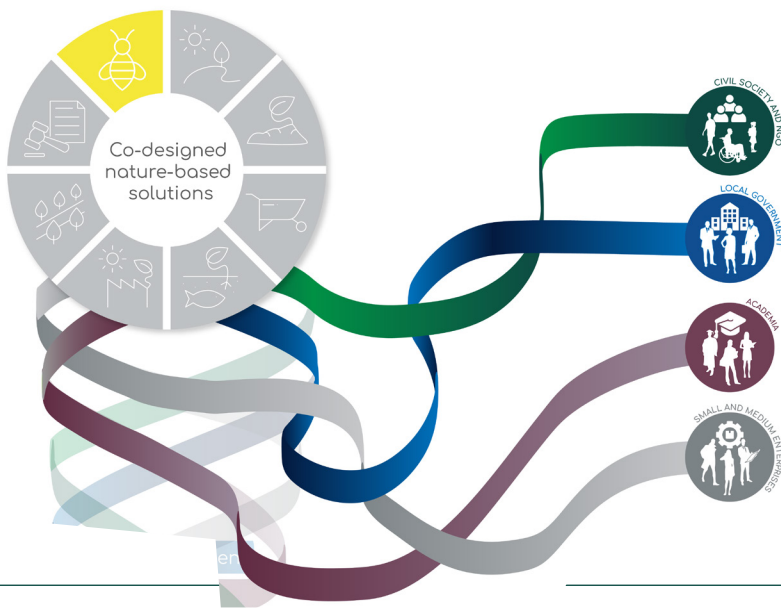


Other stakeholders involved

- La Rondine cooperativa: co-designing activities with disabled people and other partners
- Il Margine cooperativa: co-implementation of activities with La Rondine cooperative and other project partners



Co-design activities, stakeholder engagement, and pre-implementation activities



The trans-disciplinary co-design process engaged diverse stakeholders ranging from people with mental disabilities, public mental health institutions to biologists of the University of Turin, the Turin municipality, citizen associations and local schools

Planning and preparatory activities (administrative and technical procedures)

„Farfalle in TOur“ was launched in the city of Turin in 2014 through the collaboration of DBIOS (UNITO) and the Mental Health center upon the request of doctors, professional educators and users of Mental Health Centers (MHC). The first Italian Citizen Science project in which users of Mental Health Day Centres became citizen scientists. Supported by zoology laboratory staff of DBIOS, users have the following responsibilities:

- setting up a green area with foodplants and nectar plants for butterflies
- surveying butterflies regularly visiting the green area
- Involving citizens of District 3 in Mirafiori Sud by distributing seeds, foodplants and nectar plants to be placed in private gardens or balconies
- Activating a project (“Butterflies go to school”) for knowledge transfer and awareness raising with a Primary School of the same district. Carrying out workshops and caterpillar breeding (*Vanessa cardui*) with children for two years.

Implementation budget

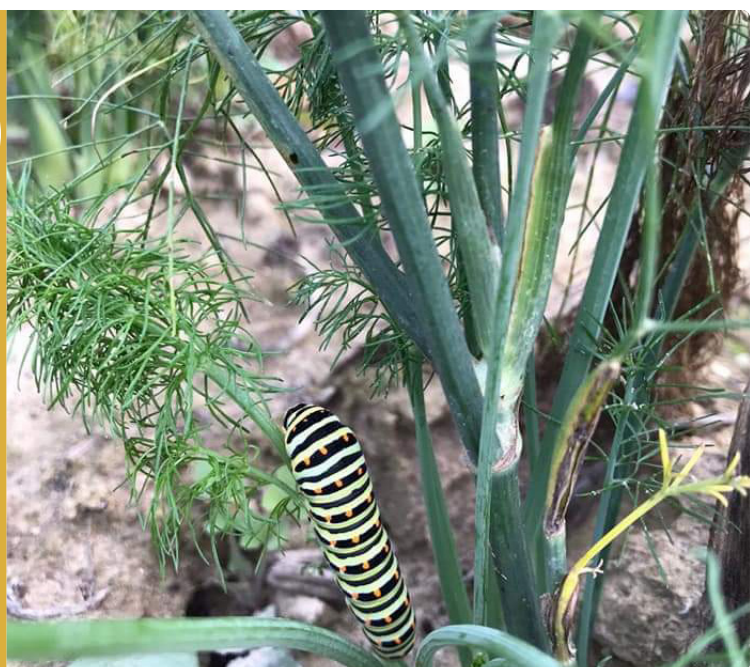
Total implementation budget: 59.000 €



ProGReg funds from City of Turin to Cooperativa Rondine for activities from 2020 to 2021 (total 22.000 €):

- 540 € for the supply of plants from Orto che Cura (Il Margine)
- 18.000 € from self-financing activity made by Cooperativa Rondine-Il Margine
- 3.360 € for University researcher teaching

University of Turin (DBios) funds: 37.000 €



Co-design and engagement activities

The City of Turin and Fondazione Mirafiori identified vulnerable groups in the district interested in the butterfly activities. "Farfalle in ToUr" group and the municipality suggested different activities for the group of physically and mentally disabled people/scientific disseminators.

Joint Living Lab NBS co-designing activities at the interfaces between NBS 3 community gardening and NBS 6 Green corridors to create green biotope networks for butterflies and pollinator insects.

Key achievements and implementation results

ProGleg project created synergies between the different departments of the City of Turin, local associations and citizens:

- Training 12 disabled people to become "butterfly scientists"
- Creating and maintaining a butterfly garden by "Il Margine" users in the community center "l'Aquilone" and the cultural centre "Bunker".
- Participating at the "InGenio" exhibition (Turin, 13 - 25 September 2019), with urban butterfly photos and laboratories
- Participating in educational activities within the PON (National Operational Programme on Education) project won by the I.C. Racconigi Primary School
- Planning educational activities in schools and in other cooperatives/communities hosting fragile people (2021)
- Editing an online kit that collects all materials

produced during lockdown

- Creating and maintaining a butterfly oasis in the community centre at Via Nomis di Cossilla and a butterfly box in Spazio Wow (NBS Pollinator friendly garden) by "La Rondine" users
- Securing irrigation of Orto Wow by social cooperatives Il Margine and La Rondine, from June to September by mentally disabled users in collaboration with Fondazione Mirafiori and Parco del Nobile
- In 2022, creating three new butterfly oases and organising two activities with school children
- Monitoring activities of butterfly populations along the two transects of Orti Generali and along the NBS 6 Green Corridor by users of Mental Health Centres, researchers and educators at Scuola Cairoli in 2019 and 2021.
- Children and vulnerable people built a new Butterflies Oasis in a school garden and established a small breeding of *Papilio machaon* in order to understand the butterfly life cycle.
- Farfalle in ToUr plan three laboratories focused on urban butterfly conservation in Orto WOW.

Critical implementation issues and barriers encountered



Progress has been slow at times because users require extra time to carry out activities. However, constant user participation is driving the project as they are greatly motivated due to feeling part of the community.

Synergies with other proGleg activities



NBS 3 - Several urban gardening interventions



NBS 6: Accessible green corridors

UNITO suggested suitable pollinator plants.

Collaborations with schools: laboratories with primary and middle schools, i.e. a school event PrimaVera Festa in 2021.

Training and dissemination events in connection with pollinator friendly garden.

A number of activities took place at WoW Garden

during 2021:

- „Farfalle in ToUr“ History of the project and butterfly exhibition
- „Discovering butterflies“ - Butterfly monitoring and observation
- „Farfalliadi“ - Interactive games to discover butterflies
- „From seed to seed, let's sow seeds“ - Meeting on plants and construction of seed bombs
- Butterfly Festival

Links with other external projects or activities

"Biodiversity Turin for pollinators" project for monitoring and conservation of pollinators in Piemonte Park in collaboration with Orti Generali and CRT funding.

Communication activities



- Press release of the visit to the city of Piraeus (September 2019)
- Several articles in the local press.
- The project group manages a Website (www.farfalleintour.it)
- Facebook (www.facebook.com/farfalleintour)
- Instagram accounts, publishing scientific contents and updates on the activities on an ongoing basis.
- Participation at the International Replication Event for proGReg held in June 2022.
- Giving lessons about the project in a high school in Turin.
- Producing digital content (i.e., videos) - users talk about their experience with the project.

Maintenance & Sustainability beyond proGReg

Maintenance by the association or community that created each butterfly garden. Il Margine and La Rondine cooperatives will continue to support the projects with own funds, proposing the activities to their users.

Financial contributions will be necessary to finance project activities and materials. To convince other associations to participate and keep committed, a membership fee will be required of anyone joining "Farfalle in ToUr" and receive training workshops. School activities will require a contribution by the school.

This NBS is certainly replicable at national level given the Mental Health System organization facilitates the involvement of people with mental disorders. Monitoring methods used are shared and accepted by the scientific community. Project results will be available online soon in EU open source:

www.oppla.eu/casestudy/21250

NBS benefits and co-benefits for the Living Lab Turin

The nature-based project Farfalle in ToUr has benefitted the Living Lab in multiple ways:

- Educational offering about butterflies (information events, lessons) for disadvantaged people
- Increasing social inclusion, reducing social stigma
- Improving urban ecosystems through butterfly

boxes containing suitable pollinator plants

- Promoting social cohesion through fruitful collaborations between civil society, public authorities and academia
- Demonstrates the potential of nature for improving health and well-being.

NBS 8 benefits and co-benefits



Fact Sheet



NBS 8

Pollinator diversity improvement and citizens science project



Butterfly gardens for schools and disadvantaged people

Contact:

✉ farfalleintour0@gmail.com

🌐 www.farfalleintour.it



🌐 www.progireg.eu

🐦 @proGReg

in proGReg-project

📘 proGReg: Nature for Renewal

📷 #proGReg

📺 proGReg: Nature for Renewal

📺 proGReg: Nature for Renewal

Partners



UNIVERSITÀ
DEGLI STUDI
DI TORINO



CITTA' DI TORINO



FONDAZIONE
DELLA COMUNITÀ
DI MIRAFIORI ONLUS



ORTI
GENERALI

The sole responsibility for the content of this publication lies with the authors and any use that may be made of the information contained therein. It does not necessarily represent the opinion of the European Union or the REA.



This project has received funding from the European Union's Horizon 2020 innovation action programme under grant agreement no. 776528.