

NBS 3

Community-based urban farming and gardening on post-industrial sites



FONDAZIONE  
DELLA COMUNITÀ  
DI MIRAFIORI ONLUS

Didactic box gardens  
in schools



## NBS description

Schools in South Mirafiori district are suffering from decreasing number of students. More well-off families tend to enroll their children in schools nearer to the city center. As a consequence, a high percentage of children in Mirafiori schools come from economically and socially disadvantaged families. Fondazione della Comunità di Mirafiori has cooperated with schools to tackle this challenge since its establishment. The introduction of gardening boxes in schoolyards are flanked by educational activities involving pupils and teachers while the pupils' families are involved in events and maintenance of the implemented NBS.

## Area of implementation

Locations of the schools from east to west:  
 ENGIM vocational school:

- school container garden: 4 wooden boxes, 120x80x40 cm; 1 wooden box 80x60x40 cm. Totalling an area of 4.32 m<sup>2</sup> at the entrance of the school and schoolyard.

Cairolì Institute:

Via Torrazza school complex (primary school, intermediate school, main office)

- school container garden: 2 wooden boxes 120x80x20 cm raised to a height of 70 cm; 10 wooden boxes 120x80x40 cm; 4 wooden boxes

80x60x40 cm, total of 12 m<sup>2</sup> in the school backyard.

Via Artom kindergarten

- school container garden: 6 wooden boxes, cm 60x80x40; 1 wooden box, cm 120x80x40, for a total of 3.84 square meters in the school backyard.

Via Rismondo primary school:

- school container garden: 2 wooden boxes 120x80x20 cm raised to an height of 70 cm at the school entrance; 5 wooden boxes 120x80x40 cm and 3 wooden boxes 80x60x40 cm in the school backyard, total area of 8 m<sup>2</sup>.

Salvemini Institute:

Castello di Mirafiori school complex (primary school, intermediate school)

- school container garden: 12 wooden boxes 120x80x40 cm, of which 2 at the school's entrance, 10 in the courtyard, total area of 11.5 m<sup>2</sup>.

Morante primary school

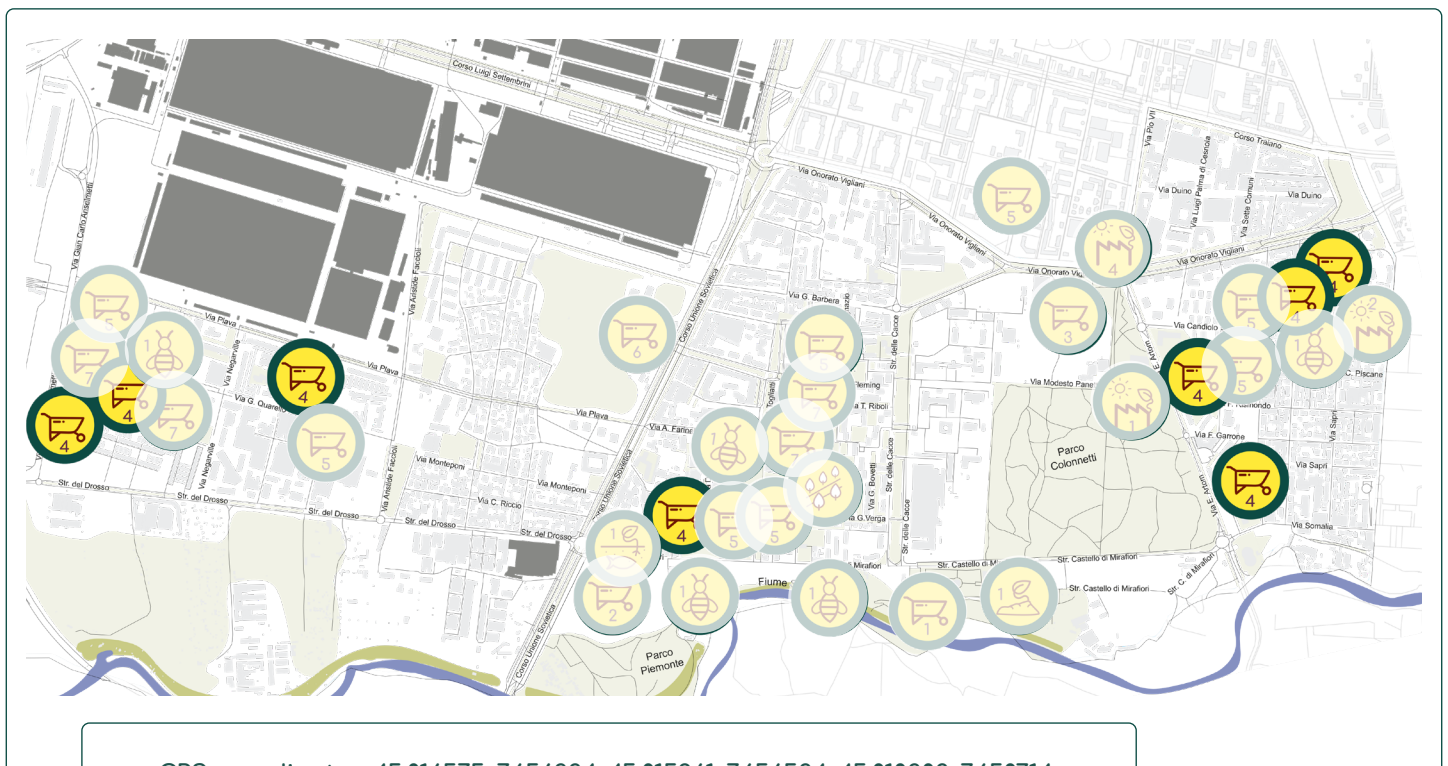
- school container garden: 4 wooden boxes 120x80x40 cm, total of 3.84 m<sup>2</sup> added by proGReg to integrate into the existing school garden

Salvemini school complex (primary school, main office)

- school container garden: 12 wooden boxes 120x80x40 cm, total of 11.5 m<sup>2</sup> in the school backyard.

"Polo dell'Infanzia" municipal kindergarten:

- school container garden: 10 wooden boxes 60x80x40 cm for a total of 4.8 square meters in the school main courtyard.



GPS coordinates: 45.016575, 7.656334; 45.015961, 7.656534; 45.010302, 7.650714; 45.014267, 7.650106; 45.013052, 7.629607; 45.019643, 7.614703; 45.019284, 7.608622, 45.020291, 7.606570.

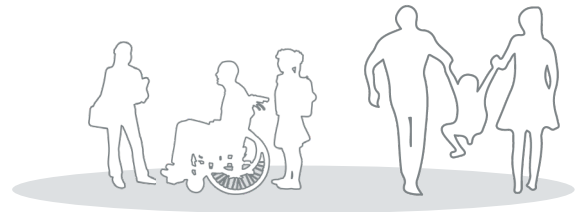
## Aims & goals

Establishing vegetable gardens in all primary schools of Mirafiori, plus two kindergarten and one vocational school, and providing educational activities focusing on sustainable agriculture, biodiversity and the proGReg NBS aims at improving the science curriculum of the schools, increase their attractiveness and raise awareness of environmental sustainability, NBS and how they can improve life quality in the cities.

The educational training also has goal of increasing the attractiveness of Mirafiori schools while teaching practical environmental behavior.

## Target groups (beneficiaries)

- Pupils, teachers and families of the pupils
- In ENGIM vocational school, the garden is dedicated to students with special education needs.



## Stakeholder constellations

### Main responsible partner

Fondazione della Comunità di Mirafiori:  
overall coordination, implementation and maintenance together with Associazione Miravolante.

### ProGReg partners involved

Associazione Miravolante (Linked Third Party): support in the implementation and maintenance of the container gardens.

University of Turin (DBios) and team of NBS Butterfly Gardens for the integration in the educational program of activities regarding butterflies and increasing pollinator biodiversity.

### Other stakeholders involved

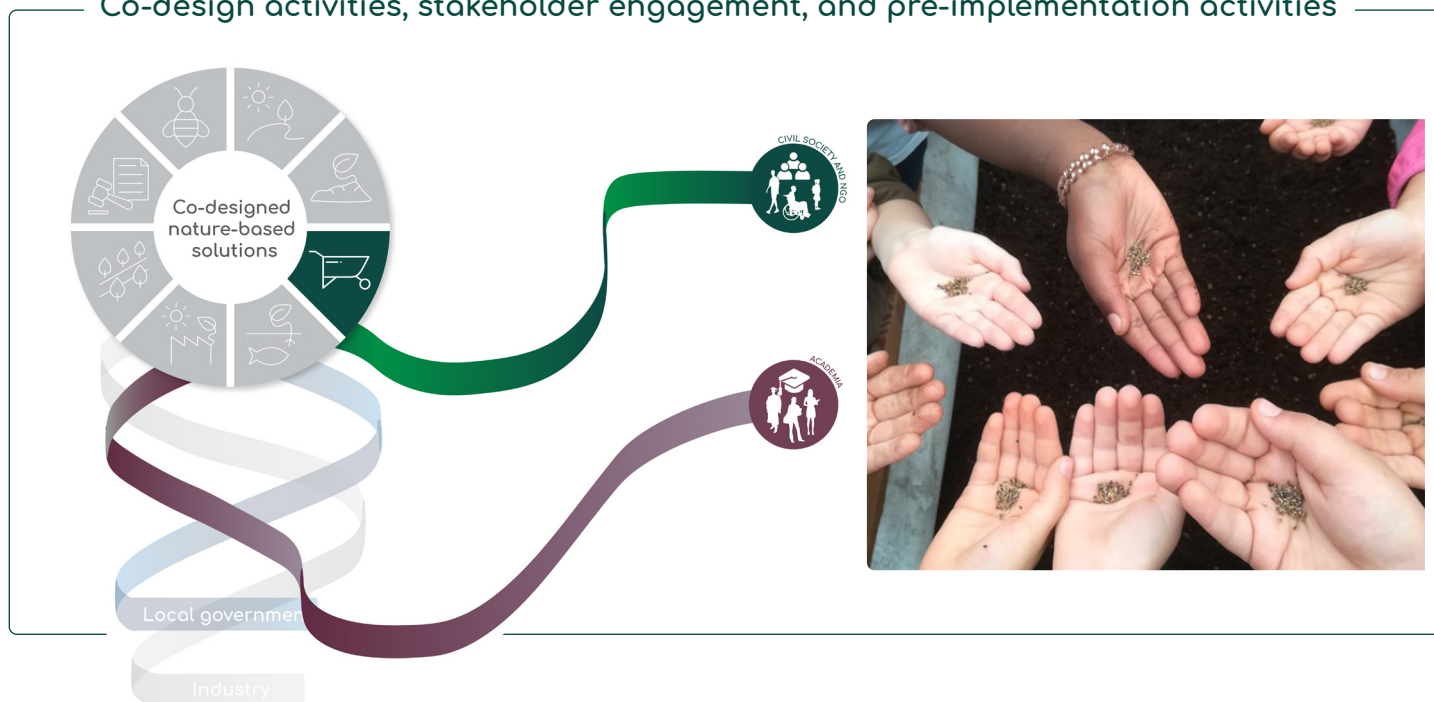
Teachers: during the second-year activities the number of classes asking to participate in the project was too high to satisfy all requests.

Non-teaching staff cooperates in the maintenance of the gardens.

Parents and grand-parents participating in co-design workshops and offered their availability to participate in the maintenance of the gardens



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



### Planning and preparatory activities (administrative and technical procedures)

Meeting with the schools' principals and teachers represented the first step of planning. Secondly, organising co-design workshops involving teachers, non-teacher staff, pupils and their families. The co-design workshops addressed:

- practical set-up of the gardens
- maintenance of the gardens and organizing according activities
- discussing the plans with the school's managers and teacher concerned
- conducting on-site inspections in all schools to identify suitable sites for the implementation of the school gardens.

The NBS implementations on the schools' premises required the approval by the school managers and the school board, to which the preliminary project had been proposed.

### Co-design and engagement activities

For each school garden, a first meeting was held with teachers concerned, who supported organising a co-design workshops to discuss the different aspects of the NBS implementation and maintenance, such as:

- number and dimensions of the containers, positioning of the boxes in the school premises,
- types of vegetables to be cultivated,
- involving families in managing the gardens.

Based on the outcomes of the co-design workshops, the school container gardens were installed together with the pupils, their families, or both.

The NGO, together with the teachers planned the educational activities at the beginning of each school year, which are tailored to the needs of each class.

The ENGIM vocational school process has been slightly different, as the garden is part of the activities aimed at students with special needs: The garden was designed jointly with the school manager and the support of teachers. The gardens were implemented with mentally disabled students.

### Key achievements and implementation results

Teachers reacted positively to the proposal of school container gardens and actively responded and engaged. The number of classes interested to participate in the project exceeded the offer for the second school year. Non-teaching staff are also keen to be engaged and cooperate in maintaining the gardens.

Moreover, parents and grand-parents participating in co-design workshops positively commented on the project and offered their availability to contribute to maintaining the gardens. However, the Covid-19 pandemic forced the interruption of activities and their involvement, which had been

planned for the spring-summer 2020. This situation stretched into the school year 2021/2022 with events in the school gardens with engaged parents not feasible. An event at Cairoli's kindergarten took place in June 2022.

Therefore, involving families in the maintenance of school gardens not yet been achieved. During the summer 2022, volunteering by some non-teaching school staff and integrated staff from Fondazione Mirafiori took care of the school gardens.

Educational activities in primary schools were concluded in June 2022. Teachers have expressed interest in continuing the activities and stressed the importance of involving external expertise provided by FM. Therefore, local stakeholders are engaged in fundraising and grant-writing activities in order to provide further support to the schools.

### Critical issues and barriers encountered during implementation

Covid-19 pandemics forced the interruption of involving stakeholders and beneficiaries planned for the spring-summer of 2020. However, the activities were rescheduled to 2022.

For school gardens in general, the critical issue revolves around engaging stakeholders maintaining/irrigating the gardens during the summer months given holidays and restricted access to the schools' premises, therefore only non-teaching staff has been involved so far.

### Synergies with other proGReg activities

The NBS School gardens and related educational activities have many links to other NBS since they are designed to introduce pupils to basic concepts of proGReg principles (biodiversity, the importance of soil, biogeochemical cycles etc.). Currently, it is predominantly linked to



#### NBS 8 - Butterfly Gardens

Activities are designed together with the University of Turin to help pupils learn about concepts of butterflies' life cycle and ecological importance.

### Links with other external projects or activities

Fondazione Mirafiori is partnering and coordinating school garden activities with "Batti il 5", a national project offering a program aimed at improving the curriculum in STEM subjects at schools, among others.

#### Communication activities



Teachers and the co-design workshops are key links to pupils' families directly involved in the NBS.

Reaching a wider public through the participation in local events hosted by the schools:

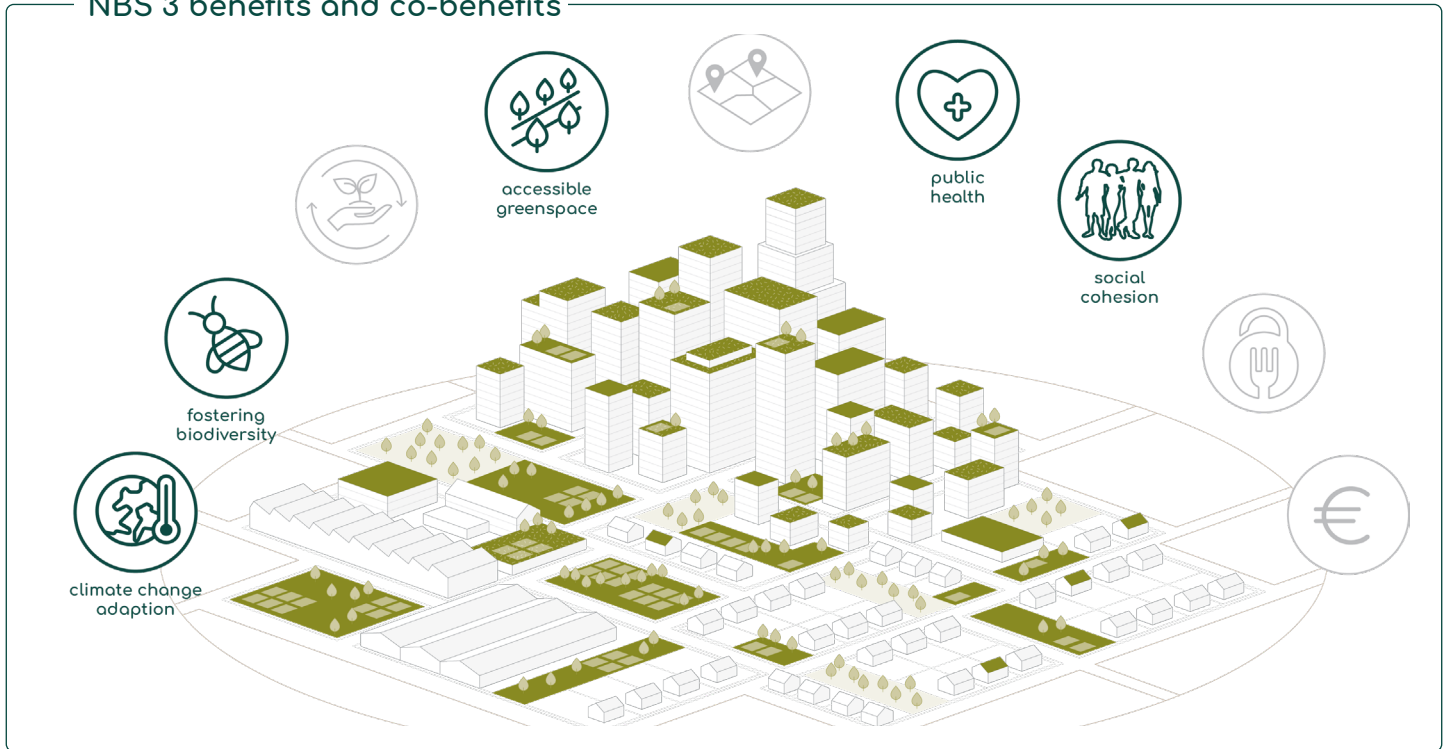
- "PrimaVera Festa" (May 18th, 2019): yearly event where neighborhood schools present activities to families, citizens and cooperating organisations.
- "Feste della Partecipazione", series of events end of September and first half of October 2019: primary and intermediate neighborhood schools promote the participation of families in school life.
- Fondazione della Comunità di Mirafiori organized gardening workshops for children as part of these events.

Educational activities are promoted by publishing a leaflet with different activities organized by Fondazione Mirafiori and partners for the schools, including dedicated pages of proGReg activities and Batti il 5 activities respectively.

During the Covid-19 pandemic, open public events in the school's premises were not permitted apart from small parties for pupil's parents (access restricted to one parent per pupil) at IC Cairoli's kindergarten: parents had the opportunity to visit the container garden, and pupils prepared herb cuttings to bring home to cultivate with their parents.

 Facebook page of Fondazione Mirafiori announces all school garden events and activities

### NBS 3 benefits and co-benefits



### NBS benefits and co-benefits for the Living Lab Turin

The NBS has provided all primary schools of the neighbourhood with open-air classrooms to experiment and learn about sustainable agriculture and the interaction between plant cultivation and the ecosystem.

The educational activities allowed to introduce key themes of proGReg to pupils such as care for the environment, basics of producing food but also the social aspect of gardening. Moreover, providing schools with tools and methods for teaching these concepts of understanding natural processes.

Moreover, installing the wooden boxes on concrete pavings help mitigate heat island effects. The plant choice according to guidelines provided by DBios of UNITO ensured the creation of green spots with resources for local pollinator populations.

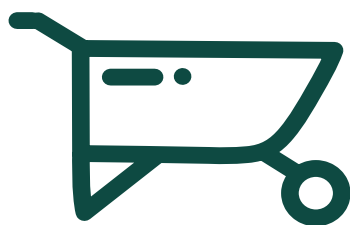
### Maintenance & Sustainability beyond proGReg

Fondazione Mirafiori staff will gradually hand over the maintenance of the gardens to teachers, non-teaching staff and families during the project phase of proGReg. It is planned to form a group of volunteers and accompany them towards a sustainable management of the gardens.

The school container gardens and linked educational activities are part of Fondazione Mirafiori's strategy and continuous effort to support schools in the Mirafiori Sud district.

The goal is to provide schools with the instruments to autonomously manage the NBS. However, Fondazione Mirafiori will be available for support beyond proGReg if needed.

# Fact Sheet



## NBS 3



### Community-based urban farming and gardening on post-industrial sites



Didactic box gardens  
in schools

Contact:

- [v.bianco@fondazionemirafiori.it](mailto:v.bianco@fondazionemirafiori.it)
- [www.fondazionemirafiori.it](http://www.fondazionemirafiori.it)
- [www.facebook.com/fondazionemirafiori](https://www.facebook.com/fondazionemirafiori)



- [www.progireg.eu](http://www.progireg.eu)
- [@proGReg](https://twitter.com/proGReg)
- [proGReg-project](https://www.linkedin.com/company/proGReg-project)
- [proGReg: Nature for Renewal](https://www.facebook.com/proGReg-Nature-for-Renewal)
- [#proGReg](https://www.instagram.com/proGReg)
- [proGReg: Nature for Renewal](https://www.youtube.com/channel/UCproGReg-Nature-for-Renewal)
- [proGReg: Nature for Renewal](https://www.youtube.com/channel/UCproGReg-Nature-for-Renewal)

## Partners



UNIVERSITÀ  
DEGLI STUDI  
DI TORINO



FONDAZIONE  
DELLA COMUNITÀ  
DI MIRAFIORI ONLUS

