

In collaboration with

On the occasion of



**World Forum on  
Urban Forests**  
Mantova 2018

# The nature of cities is changing

## Urban and peri-urban forests of Lombardy region



**ERS F**  
ENTE REGIONALE PER I SERVIZI  
ALL'AGRICOLTURA E ALLE FORESTE



**Regione  
Lombardia**

The exhibition 'The nature of cities is changing' and the present related brochure report just some of the several initiatives implemented thanks to the commitment of local administrations, volunteering associations and rural enterprises. Such examples show the development and the evolution of the urban forestation process in Lombardy region, from the 70's until today

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# The nature of cities is changing

## Urban and peri-urban forests of Lombardy region

The region of Lombardy is diverse and vast; it ranges from the mountainous habitats of the Alps to the flood plain of the Po river, the longest river in Italy. As a result, its environmental, landscape and socio-economic features vary significantly throughout the region.

Forests play an important role in the Lombardy region. Indeed, of the 630,000 hectares forest cover, nearly 80% is concentrated in mountainous areas, 13% is located on hilly areas and the remaining 7.3% is distributed about the plain. Forests cover 50% of the whole mountain surface area, while only 4.3% of the surface area of the plain, which is mainly characterised by rural areas and big urban settlements.

The forests of the plains are located mainly in urban and peri-urban areas and they have several fundamental functions, such as: acting as biodiversity areas, diversifying the landscape, contributing to the quality of the water, stocking large amounts of atmospheric carbon, mitigating climate change, producing wood and renewable raw materials, recreational and educational activities outdoors, producing oxygen which counteracts the presence of polluting dust in the air.

This exhibition has been created for the FAO World Forum of Urban Forests (Mantua, November 2018), and it is dedicated to these forests and to the people who contributed to their management and protection.

The exhibition is meant to be a short but intense journey on how to get to know and experience such forests and understand their value. An opportunity to show how the nature of cities is changing and to imagine a greener future together.

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Presidente ERSAF

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Assessore ad Agricoltura,  
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# The nature of cities is changing

Location of the urban and peri-urban forests of Lombardy described by the exhibition

● **BOSCOINCITTÀ**  
120 ha - Milano

● **PARCO NORD**  
640 ha - Milano

● **BOSCO DELLA BESOZZA**  
37 ha - Pioltello (MI)

● **PARCO AGRICOLO URBANO DELLA VETTABIA**  
37.5 ha - Milano

● **BOSCO DEI CENTO PASSI**  
17 ha - Gaggiano (MI)

● **ISOLA PEPE VERDE**

● **EXPO 2015**

● **PARCO DELLE ROGGE DI ROZZANO**  
34.6 ha - Rozzano (MI)

● **PARCO NATURA DI CESANO BOSCONI**  
18.6 ha - Cesano Bosconi (MI)

● **RE LAMBRO**

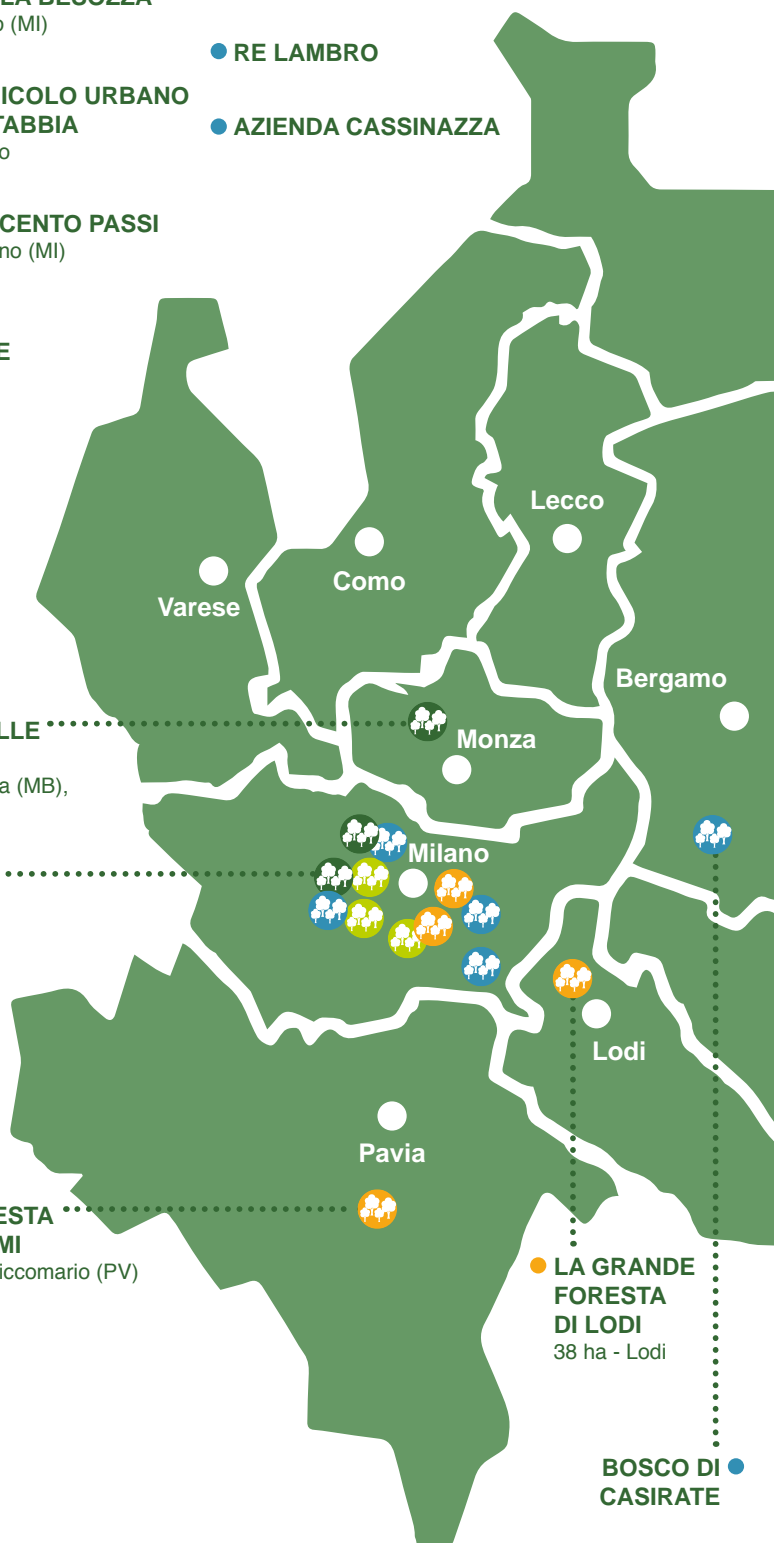
● **AZIENDA CASSINAZZA**

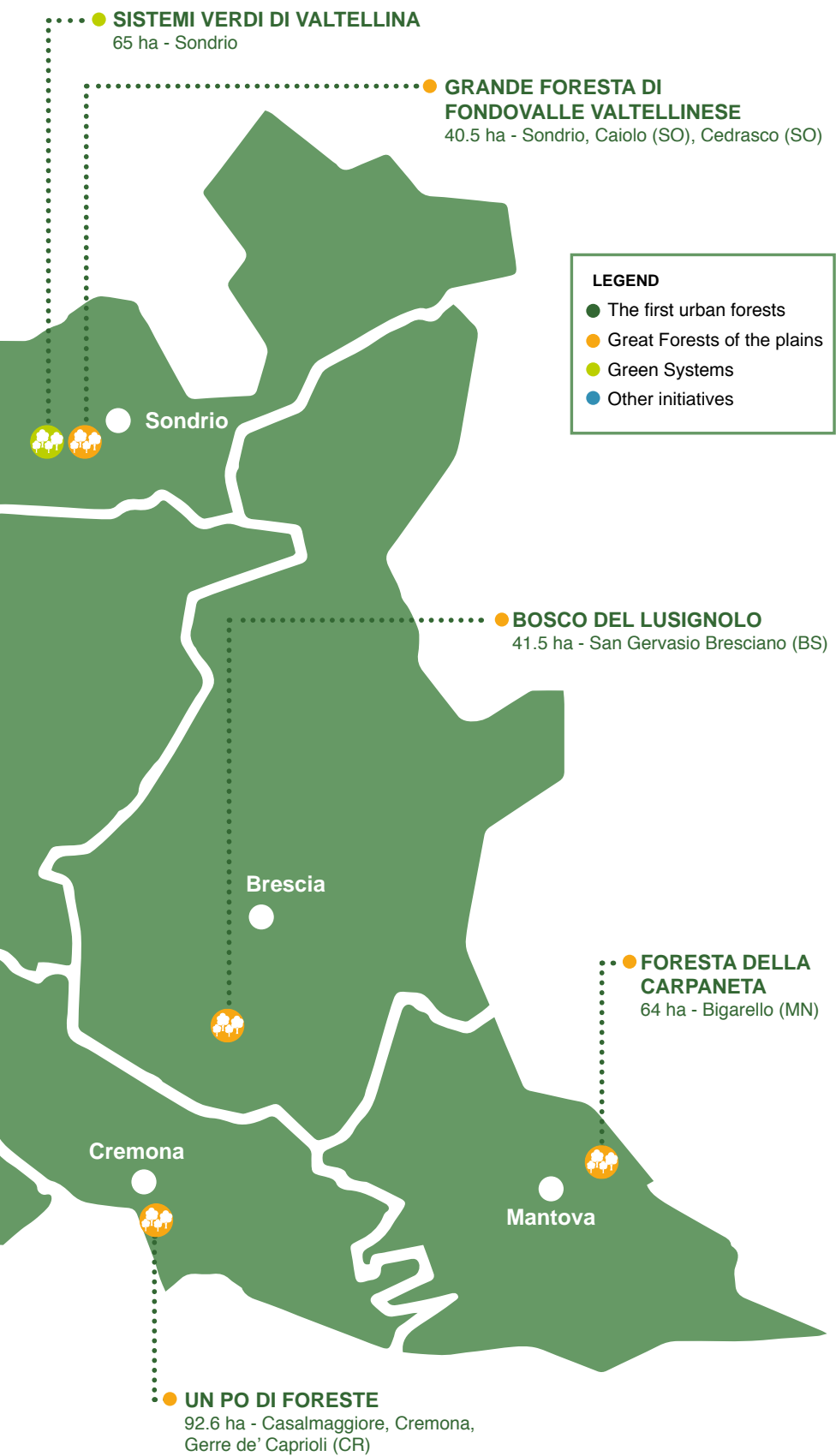
● **BOSCO DELLE QUERCE**  
42.8 ha - Meda (MB),  
Seveso (MB)

● **GRANDE FORESTA FRA I DUE FIUMI**  
53 ha - Travacò Siccomario (PV)

● **LA GRANDE FORESTA DI LODI**  
38 ha - Lodi

● **BOSCO DI CASIRATE**






# How many forests in the surroundings of the cities of Lombardy?

Within the European LIFE project EMOmFUr the first inventory of urban and peri-urban forests of Lombardy was realized. For urban and peri-urban forests we mean the forests, as identified according to the regional law, belonging to the urban classified municipalities according to the Moland method (JRC, 2004) modified by ERSAF (2014). Here are some of the main results!

## URBAN AND PERI-URBAN FORESTS IN LOMBARDY

**130,430 ha**   
 25,170 ha plains  
 66,325 ha hills  
 38,935 ha mountains

**17.4%** of the territory   
 6% plains  
 27% hills  
 56% mountains

## PROVINCES WITH HIGHER AREAS OF URBAN AND PERI-URBAN FORESTS

 Varese **40,000 ha**  
 for hill and mountain areas

 Milano **7,000 ha**  
 for the areas in the plains

## PROVINCES WITH FEWER URBAN AND PERI-URBAN FORESTS

 Cremona **500 ha**  
 Lodi **600 ha**

## FOREST AREA PER INHABITANT IN LOMBARDY

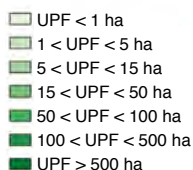
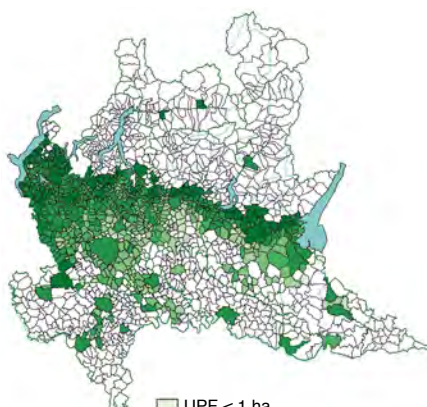
In urban and peri-urban areas  **131 m<sup>2</sup>**

In the whole region  **629 m<sup>2</sup>**

**emonfur**  


for more information  
[www.emonfur.eu](http://www.emonfur.eu)

## URBAN AND PERI-URBAN FORESTS (UPF) BY SURFACE CLASSES



# Urban forests in Lombardy: the regulatory process

1976



## THE FIRST FOREST LAW

The first forest law of the Lombardy region entered into force (L.r. 8/1976)

1980



## THE REGIONAL FORESTS AGENCY AND ERSAF

The regional law n. 4/1980 established the Regional Forests Agency which, within its jurisdiction, also has the role of producing plants and develop projects for reforestation activities.

In 2002 the Agency moved to ERSAF

1983



## REGIONAL PARKS

Through the Framework law n. 86/1983, several regional parks are established in the plains and in the surroundings of cities

1989



## THE LAW IS RENEWED

The new regional Forest law (L.r. 80/1989) introduces an article on urban forests, launching the first funding

2004



## A NEW PROJECT

Article 16 of the regional law n. 27/2004 lays down:

- funding for "large new forests and new green forest systems"
- activities for the promotion and funding of urban forestation projects
- introduction of compensation for forests transformation

2005



## A 'PURPOSE FEE' TO PLANT THE TREES

Article 43 of regional law n. 12/2005 lays out an increase of the building taxes to allow for more interventions to enhance natural areas (Green Areas Fund)

2008



## CONFIRMATION OF A COMMITMENT

The new 'consolidated text' n. 31/2008 confirms the commitment of the Lombardy region towards the development of green urban and suburban infrastructures

2000 - 2016



## PLANNING

Forest Plans acknowledge urban forestation as a strategic instrument



# Boscoincittà: the first urban forest in Italy



for more information  
[www.boscoincitta.it](http://www.boscoincitta.it)

## ORIGINS



Boscoincittà was born in 1974 and is the first Italian example of urban forestation, commissioned and created by the Italia Nostra association, which still manages the area through the Urban Forestation Centre (CFU). Boscoincittà is composed of more than 120 ha of meadows, woods and wetlands that provide precious areas of silence and freedom, where one can grow a vegetable garden, fruit trees, flower or keep honeybees

## A PUBLIC PARK FOR MILAN



Located close to the San Siro stadium and together with the Trenno Park, the Cave Park and over 600 hectares of agricultural areas included in the larger surface of the Agricultural Park in South Milan, Boscoincittà is an important component of the "green belt" of the western part of Milan. The park was developed through forty years of the planning and working efforts of professionals, workers and volunteers

## CARE AND PARTICIPATION



The CFU takes care of the management of the park through several projects and activities. More specifically, entertainment activities in natural environments, research and training activities, social work and volunteering are promoted. All these contribute to the overall project aimed at the maintenance and development of the Boscoincittà area and for cultural promotion and the protection of biodiversity





# Parco Nord: a forest that conquers Milan



for more information  
[www.parconord.milano.it](http://www.parconord.milano.it)



## FROM THE ORIGINS UNTIL TODAY

The park is located in one of the most densely urbanized areas of Europe. Its conception dates back to the late '60s, but the first reforestation and redevelopment interventions began in 1983. Today, the forest covers an area of 103 hectares, in a context of almost 800 hectares of hedges, tree rows, shrubs, meadows and wetlands.

This is the largest urban forestation system in Italy



## THE FORESTS OF THE PARK

Over the years, with the enhancement of urban forestation techniques, the reforestation approaches have gradually changed, moving from the plantation of straight rows of trees to a more close-to-nature arrangement of plantations. The materials coming from the plant nurseries have been being selected more and more carefully, the focus has been moved to native species and the use of shrubs has increased. Today, the forests of the park seem to be less artificial and are rich in biodiversity, especially birds



## THE MANAGEMENT

After 35 years since the first reforestation works, the area is covered by real woods which became the symbol of a bet won. However, they constantly require care and maintenance. Today the park manages them relying on a group of national experts and carrying out in-depth analysis and monitoring. The main silvicultural intervention is the thinning, which aims to remove the trees that are dying, dangerous or are in excess, while limiting the alien species at the same time



# Bosco delle Querce: nature and memories



for more information  
[www.boscodellequerce.it](http://www.boscodellequerce.it)



## THE INCIDENT



The 'Bosco delle Querce' (Forest of the Oaks, in English) of Seveso and Meda (MB) is located in an area that was heavily polluted by a toxic cloud that was released on 10 July 1976 by the ICMESA factory in Meda, which contained, among other toxic substances, also dioxin. After this serious industrial accident, the whole area underwent huge decontamination works that entailed the removal and quarantining of about 200,000 m<sup>3</sup> of earth

## FROM A POPLAR... TO A FOREST



In 1984, when the decontamination works ended, only one tree remained standing in the area: a large poplar, which became the symbol of a life that resisted and wanted to start over again. Consequently, the area has been designated as a park, and it became a place of cultural and environmental value. The works for the transformation into a park lasted from 1984 to 1986, on a territory of about 43 hectares, corresponding to the area most affected by the tragedy

## THE FOREST TODAY

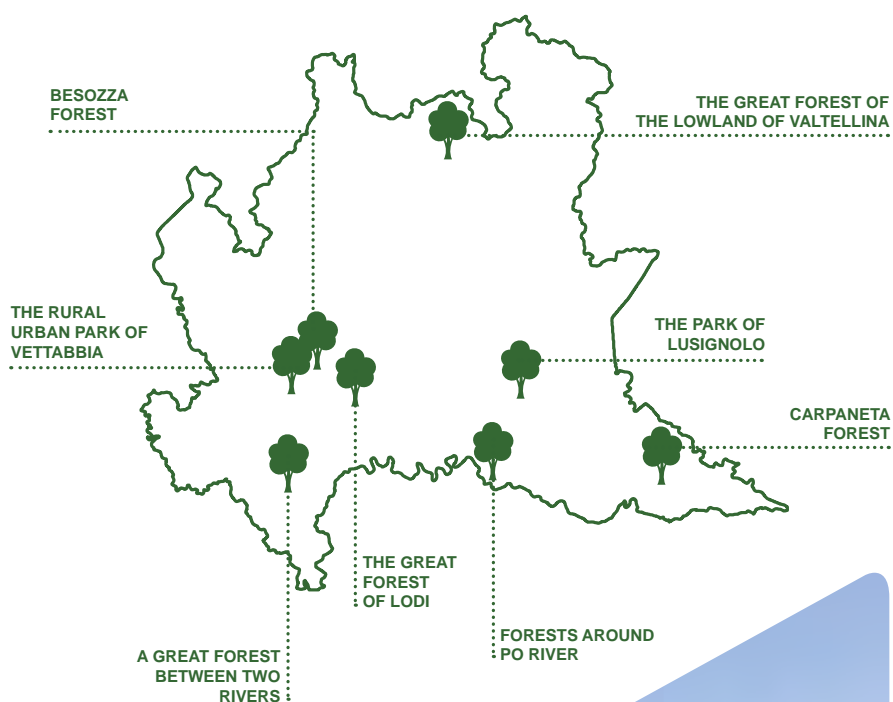


Since December 2006, Bosco delle Querce is a regional natural park, managed by the municipality of Seveso in agreement with the municipality of Meda. In collaboration with various local associations, several initiatives have been promoted for the enhancement and use of the area. The park today, has its own visitor centre which offers environmental education activities for children and adults. In the area, there is also a 'path of the memory' which has been conceived to address directly the heart of the visitors..



# The Great Forests of the plains

The project was born in 1999 thanks to the General Department for Agriculture of the Lombardy Region. The idea of transforming areas of at least 35 hectares into "Great Forests" arose simultaneously and at a time when there was an increased interest in the valorisation of multifunctional and sustainable agriculture. Additionally, the international context was characterised by the first international conventions on climate change and biodiversity. The challenge was undertaken thanks to the involvement of provincial and local administrations, universities, associations and rural workers. The project became a reality in 2002, and, in a decade, the 8 "Great Forests" were developed as we know them today. A total of 404 hectares of land were affected, 324 of which are forests ex novo, created through the plantation of about 470,000 plants and the construction of 56 kilometres of cycle paths. The total funding amounted to 18.9 million euros (M€), of which 13.65 M€ was provided by the Lombardy Region, 3.37 M€ by other public entities, 1 M€ by private individuals and 0.88 M€ by the Cariplo Foundation.



# The Great Forests of the plains

## CARPANETA FOREST



**Municipality**  
Bigarello (MN)  
**Surface**  
64 ha  
**Cost**  
2,000,000 €

Part of the land of one of the most characteristic farms in the province of Mantua is covered by a mixed oak woodland with hedgerows, tree rows, cycle paths and an area equipped with recreational and didactic facilities (Parco di Arlecchino). The whole area is managed by ERSAF.

## BESOZZA FOREST



**Municipality**  
Piozero (MI)  
**Surface**  
37 ha  
**Cost**  
1,900,000 €

The Besozza forest was created on the edge of a strongly urbanized area, and it is characterized by the presence of the typical "Lombard ditches", fountains, wetlands, tree fields and urban vegetable gardens. All these features together make it an oasis of biodiversity.

## A GREAT FOREST BETWEEN TWO RIVERS



**Municipality**  
Travacò  
Siccomario (PV)  
**Surface**  
53 ha  
**Cost**  
2,699,182 €

Inside the Park of the Ticino river, and located at the confluence of the Ticino and Po rivers, a poplar plantation has been transformed into a humid forest. This has recreated a precious environment, that cannot be found anywhere because of the negative impact of human activities.

## THE PARK OF LUSIGNOLO



**Municipality**  
San Gervasio  
Brescia (BS)  
**Surface**  
41.5 ha  
**Cost**  
3,800,000 €

Located along the Lusignolo canal, this forest is characterized by architectural structures that lead the visitors to the discovery of the forest ecosystem. Several paths and boardwalks, which are also accessible to visually impaired people, allow for walking through the canopies of the trees



# The Great Forests of the plains

## FORESTS AROUND PO RIVER



**Municipality**  
Casalmaggiore,  
Cremona e Gerre  
de Caprioli (CR)  
**Surface**  
92.6 ha  
**Cost**  
2,500,000 €

An important intervention for the restoration of the land and its ecological characteristics has been carried out in the floodplain areas of the Po River. The area is characterized by the presence of a wood with great naturalistic and ecological value, cycle and pedestrian paths, resting areas and watchtowers for didactic-faunistic purposes.

## THE GREAT FOREST OF LODI



**Municipality**  
Lodi  
**Surface**  
38 ha  
**Cost**  
1,500,000 €

This reforestation initiative, carried out along the river Adda, is important for its proximity to the city of Lodi. The Great Forest, also characterised by mycorrhized plants for the production of truffles, is partially included in the Parco Adda Sud

## THE GREAT FOREST OF THE LOWLAND OF VALTELLINA



**Municipality**  
Sondrio, Caiolo  
e Cedrasco (SO)  
**Surface**  
40.5 ha  
**Cost**  
2,040,500 €

The project aimed to contribute to the enhancement of the precious and delicate areas of the Valtellina valley. Thanks to the reforestation intervention, but also to the creation of cycling pathways, training trails, mountain bike tracks and playgrounds, natural and recreational aspects of the area have also been improved

## THE RURAL URBAN PARK OF VETTABIA



**Municipality**  
Milano  
**Surface**  
37.46 ha  
**Cost**  
2,494,439 €

The intervention was implemented within the Parco Agricolo Sud Milano and aims at restoring the rural landscape of the Vettabbia Valley, through the establishment of a vast agroforestry system and a theme park related to the regeneration of the waters. The same waters are the protagonists of the historical identity of these places



# Green Systems of Lombardy



Following the Great Forests project, the Lombardy Region continued its commitment to create green infrastructures for the benefit of the territory through the “Green Systems of Lombardy” project, which started in 2005. To date, 1,248 hectares have been planted, thanks also to a regional contribution of 27.8 million euros. In this panel we collect some of the most significant examples.

## GREEN SYSTEMS OF VALTELLINA



The project, which covers about 65 hectares, entailed the expansion of the “Great Forest”, the plantation of new forests and the creation of new naturalistic areas in the valley of Valtellina and Chiavenna. Picnic areas, recreational spaces and cycle paths have also been envisaged

## NATURE PARK OF CESANO BOSCONI



The project entailed a series of interventions aimed at the environmental restoration of an area of 18.6 hectares within the South Milan Agricultural Park, specifically in an intensely urbanized context. Woodlands, tree rows, scrublands have been created, and two water springs of particular importance have been reactivated

## THE PARK OF ROGGE DI ROZZANO



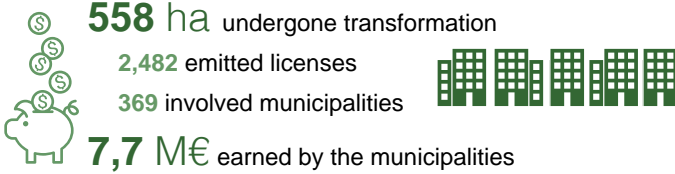
The project involved a total area of about 34.6 hectares. Afforestation operations have been carried out, as well as the restoration of riparian banks and strips of land along the watercourses, the creation of a new wetland area, and the building of cycle paths and footpaths



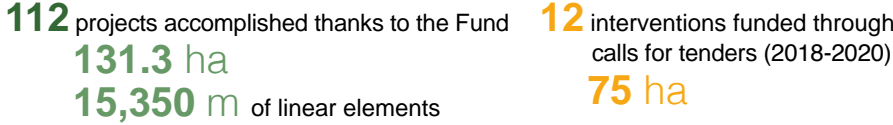
# Green Areas Fund: hindering the overbuilding

Recently, in Lombardy, there has been a gradual decrease in agricultural land surface inversely proportional to a sharp increase in urbanized areas. For this reason, the Lombardy Region has set up the Green Areas Fund, which is based on the concept of compensation for the exploitation of land. Starting from 2009, any interventions that subtract "actual agricultural land" are subjected to a percentual increase of the construction fee, from 1.5% to 5%. The amount gained from such increased fee must be compulsorily used for forest interventions with an ecological relevance and an enhancement of wilderness. This panel reports the results of the Regional Law for the Management of the Territory (Article 43, paragraph 2 bis, Law 12/05) after 9 years after its establishment.

## CONVERSION OF THE AGRICULTURAL LANDS (2009-2018)

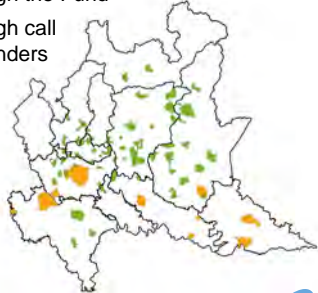


## COMPENSATION ACTIVITIES IMPLEMENTED



Municipalities involved in the projects

- through the Fund
- through call for tenders



## TYPES OF INTERVENTIONS

- Green systems (GS) dominated by forests  
**21** projects, **24.9 ha**
- GS dominated by linear elements  
**30** projects, **11.8 ha**,  
**13,507 m** of linear elements
- GS dominated by natural elements  
**44** projects, **42 ha**, **1,843 m** of linear elements
- Silvicultural treatments  
**14** projects, **51 ha**
- Land purchases to restore wilderness  
**3** projects, **1.6 ha**



# The green makes its way

## Initiatives by citizens, enterprises and institutions

### ISOLA PEPE VERDE: A SHARED GARDEN



This initiative comes from the will of a group of citizens from Isola Zone in Milan who wanted to recover an abandoned area for public use purposes, as many green areas had already been lost. In the last decades. To achieve this, an Association was created to present and take care of the restoration project implemented in 2013. Today the park is intensely used for aggregation events, work, workshops and shows.

### ENVIRONMENTAL ASSOCIATIONS



Nowadays, there are many initiatives for the protection and valorisation of green areas characterised by high participation of civil society: let's think for instance to the experience of Italia Nostra with Boscoincittà, or to the many green areas managed by Legambiente, WWF, LIPU and other single local associations. An inventory of such precious initiatives is highly overdue, but when is this going to happen?

### GREEN ENTERPRISES

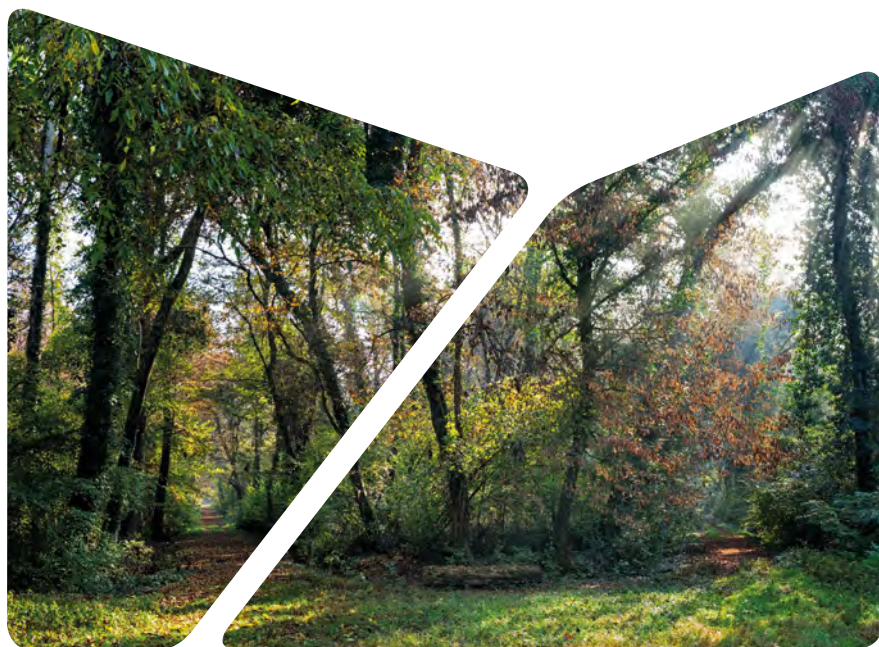


With the increase of the interest on environmental protection issues and thanks to the implementation of the Kyoto agreements on climate change, several companies decided to become developers of forestation interventions in order to compensate their greenhouse gases emissions. Therefore, many green areas were born in the surroundings of urban centres, aimed to take care of the planet but also to enhance the welfare of its citizens

### A FOREST ON THE LANDS OF MAFIA



In Gaggiano (MI), based on a request by the Municipality and its citizens, a piece of land that was confiscated from the mafia has been transformed into a green area of 17 ha, called "Bosco dei Cento Passi". Wetlands, cycle paths, bird-watching stations and trees all exist in these woods and are dedicated to those who lost their lives during the fight against organized crime





# The green makes its way

## New approaches to the territory

### EXPO 2015

During EXPO 2015, landscape restoration and ecological compensation measures were undertaken by the organizing company. Cycle paths were created for the former and were provided with walkways, benches and vegetable gardens, taking care of the green areas that might have been affected. The envisaged compensation measures include improved forest management applied to already existing woods, afforestation activities, creation of wetlands and the restoration of water springs. In total, 37 interventions were implemented on more than 100 hectares



### RELAMBRO

ReLambro, a project funded by the Cariplo Foundation, saw the involvement of public administrations, universities and associations. It was implemented in an area in the suburbs of Milan, where the challenge is to restore degraded natural land to give it back to the city. Interventions to enhance ecological connectivity have been carried out through the plantation of woodlands, copses, hedges and flowering meadows.



### CASSINAZZA FARM

78 hectares of woods, 107 of wetlands, 65 of recently reforested areas, 50 of meadows, 110 km of hedges and tree rows located on a farm producing rice. The Cassinazza Farm, located about 20 km from Milan, represents a case of high technological innovation. For 20 years, it has been basing its development on ecological restoration as a main objective. Thanks to the aforementioned implemented areas of ecological importance on this farm, the number of species of birds increased by 170%, while species of mammals increased by 81%, and species of butterflies, dragonflies and other insects have doubled their numbers. Consequently, soil fertility has increased by 71%.



### CASIRATE FOREST

22 hectares composed of new woods, hedgerows, tree rows, flowering meadows, orchards and a vegetable garden of aromatic species: these are the interventions implemented in order to provide with large green agro-forestry systems the plains near Casirate (BG). The forest, created to compensate for large road infrastructures, was envisaged to restore naturalness, reduce pollutants, enhance ecological corridors and supply spaces for recreation



# What has changed after the first 50 years of activities?



## POLITICAL AWARENESS

Urban forestation practice is introduced in the strategic documents and plans of the Administrations



## INVOLVEMENT OF CITIZENS

More and more people commit to the protection and valorisation of the urban green areas



## NEW ACTIVITIES

Walking groups, forest kindergartens, and other initiatives focusing on green areas have emerged



## EXPANDING FORESTS

Forests are growing and expanding, also in the surroundings of the urban centres



## MONITORING

Specific monitoring protocols on urban forest ecosystems have been developed



## ECOSYSTEM SERVICES

Urban forests are now considered a strategic tool to promote biodiversity, improve water quality and enhance citizens' well-being



## FUTURE-ORIENTED CITY

'Vertical forest' of Milan, as well as some other projects, show that a new connection has been established between trees and cities, and that a challenge for new ideas has started



# The future of the urban forests in Lombardy

For urban societies, especially those living in metropolises, forests and green areas are essential features to ensure an enhanced quality of life and for granting health and well-being of the populations. Therefore, what should be the next actions for the future of Lombardy's urban forests?



To adopt strategies and political guidelines to increase the cover of forests and green systems through building natural infrastructure capable of improving the resilience of cities to climate change



To launch a Regional Strategic Project to plan, link and foster both the actions and the stakeholders involved in the development sector and in the management of urban forests



To keep on with the monitoring actions on the existing urban forests, supporting the EMoNFuR network and spreading its results



To invest on the evaluation of Ecosystem Services provided by urban forests of Lombardy to its population



To involve citizens, stakeholders, managers and planners of the urban areas in a network aimed at the study, the management and exchange of good practices



To develop and promote alternative and innovative solutions for the increase and implementation of urban green areas in the cities (vertical and horizontal forests, neighbourhood forests, heritage trees, forest kindergartens...)



To develop and enforce the Chart of Milan promoted by the EFUF - European Forum on Urban Forestry





## Call for actions

Urban forests and trees guarantee several benefits, since they make our communities:

**WILDER**  
Green spaces  
nurture biodiversity

**GREENER**  
Cities need forests, people need  
green spaces

**CLEANER**  
Urban forests and  
trees help clean the  
water and the air

**HEALTHIER**  
Trees and green  
spaces encourage  
healthy lifestyles

**HAPPIER**  
Being 'in  
the garden'  
makes us  
feel good!

**WEALTHIER**  
Urban forests  
foster green  
and circular  
economy

**COOLER**  
Urban forests and  
trees cool  
the atmosphere,  
naturally

**SAFER**  
Urban trees and forests  
boost resilience and help  
fight climate change

**TOGETHER** we can  
achieve our vision  
of greener, healthier  
and happier cities  
**FOR ALL!**

