

Bergamo, the Astino Valley

Biodiversity in the city



EUROPEAN LANDSCAPE CONVENTION
LANDSCAPE AWARD OF THE COUNCIL OF EUROPE
7th Session – 2020-2021
ADDITIONAL MATERIAL



Overall surface of the Astino Valley: 584,625 m² (cadastral areas), all of which are included in the Plan Agreement:

24.53 ha Astino and Allegrezza woods – Nature reserves

6.97 ha Astino Valley branch of the Bergamo Botanical Gardens

- **30,690 m²** Current surface
- **1.45 ha** Itineraries, biological corridors, and buffer areas
- **2.45 ha** Planned extension of the Astino Botanical Gardens

26.94 ha Farmland - Including pedestrian/cycle paths

2015-2019: figures for attendance at events hosted at Astino.

For the period between 2015 (the year in which the Astino complex and its branch of the Botanical Gardens were opened to the public) and 2019, an estimate has been drawn of the number of visitors to the Monastery, the Santo Sepolcro Church, and the farming/woodland areas Botanical Gardens in relation to specific events. Additionally, an overall number of **400,000** visitors has been estimated for the 2015-2019 period, including people who simply “passed through” Astino, without stopping at the monumental complex.

| | |
|------------------------------------------------------|------------------------------------|
| Exhibitions and educational itineraries | 3,000/4,000 visitors / year |
| Workshops and other teaching activities | 1,000 visitors / year |
| Activities – music in the cloister | 2,500 visitors / year |
| A series of cultural events | 1,500 visitors / year |
| Events at the Santo Sepolcro Church | 1,500 visitors / year |
| Botanical Gardens (admissions) | 20,000 visitors / year |
| Food and wine-tasting | 7,000 visitors / year |
| Sporting and recreational activities | 3,000 visitors / year |

At the centre of the municipality of Bergamo, a short walk from the historic centre of a city of 130,000 inhabitants (300,000 including the hinterland), lies the Astino Valley, which encapsulates the history and biodiversity of this area.

In the Middle Ages, a Vallombrosian monastery was built there that shaped the local landscape and ensured the development of its biodiversity. Starting in the aftermath of World War II, local and regional authorities introduced restrictions to protect the area as a green space within the territory of the industrialised city. Nevertheless, the monastery and its surroundings first fell into private hands and were then abandoned, turning into a peripheral and neglected agricultural area.

The aim of this ambitious project is to complete the process of regeneration and planning of the Astino Valley landscape that began in 2007. In that year, the monastery and its farmland were acquired by the Fondazione Misericordia Maggiore of Bergamo, which in collaboration with the public authorities, along with agricultural enterprises and cooperatives, embarked on a project to refurbish the complex and to regenerate of the valley’s landscape, following the principles of biodiversity and organic farming. This project, based on the synergy between government and private stakeholders, has also involved disadvantaged actors and the local inhabitants.

Through memoranda of intent and agreements between government and private actors, the creation of an Ethical Commitment Statement and, more generally, the participation of agricultural enterprises and cooperatives, this planning of the Astino Valley landscape has led to the restoration of the monastery and of adjacent farmhouses (Cascina Convento and Cascina Mulino), as well as of the local castle and footpaths, the creation of educational itineraries within the Allegrezza wood, the reintroduction of traditional cultivations – based on organic farming methods – and of the water supply system – reflecting the centuries-old work of the monks – and the establishment of a new branch of the Bergamo Botanical Gardens. In parallel to all this, a range of cultural, educational, and training initiatives connected to the landscape and food production have been undertaken, with the aim of restoring the Astino Valley for the benefit of the inhabitants of Bergamo.



I. The history of Astino before the launching of the project

An identity-defining landscape for the city of Bergamo, from the splendour of the Middle Ages to the years of neglect

1117, the monastery and the valley define the city's memory and landscape. After a tragic earthquake, the citizens of Bergamo donated some lands in the Astino Valley to a small church which had been built there for the salvation of the city's inhabitants. A Vallombrosian Benedictine monastery was established which within a few years became an important spiritual point of reference for the urban community, while also shaping the local landscape: through the monks' work and the help of the inhabitants of Bergamo, the valley of biodiversity was born.

The 1117 donation, originally held in the Astino archives (and now in the Biblioteca Civica Mai in Bergamo), is also the first document attesting to the existence of the municipality of Bergamo. The Astino archives actually preserve much of the city's memory, as they have yielded most of the sources allowing us to reconstruct its history: this in itself reveals the close link between the monastery and the city of Bergamo.

1117-1797: the monastery flourishes. For centuries, the Astino monastery was the cornerstone of a complex ecosystem at the gates of the city, ensuring a high degree of biodiversity, primarily through the close interaction between man and nature. The monks shaped the valley's landscape, which up until then had consisted exclusively of woodland, by digging channels and introducing new crops. Through donations from the inhabitants of Bergamo, the monastery grew and prospered. The medieval buildings, which are still visible today, bear witness to its magnificence. The abbey continued to prosper between the Renaissance and the Modern Age, acquiring new works of art and sumptuous architectural spaces.

1797, the end of the monastery. With the introduction of Napoleon's measures, the monastery was suppressed and its goods were ceded to the city's Ospedale Maggiore.

1830, Astino becomes a mental asylum. Astino was converted into an asylum for the city's mentally ill.

1892-1923, the beginning of the phase of abandonment. The psychiatric hospital was closed down. The monastery began falling into disrepair and was auctioned off. Its properties were broken up.

1923-2007, decay: maize monoculture and property speculation projects. The monastery and the valley remained private property. The whole structure fell into a state of disrepair. One arm of the cloister was demolished, despite the superintendency's opposition. The valley, converted to maize monoculture, lost much of its biodiversity. The area came to be perceived as a neglected suburb of the city. Attempts were made to speculate on the properties there and the real-estate company owning the land planned to convert it into a golf course.

1951-2007, the city seeks to protect Astino. The first attempts were made by the city's authorities and inhabitants to protect Astino. From 1951, the City Council introduced restrictions to prevent urbanisation. In 1977 the Parco dei Colli was established. Various associations (Italia Viva, WWF, and local associations) took action to avert speculation and rekindle interest in Astino. In 1987, the City Council rejected the project to build a golf course.

On 15 November 2005, following the mobilisation of the urban inhabitants, eager to reverse the decay of the area, the Bergamo City Council placed on its agenda "the current situation of the Astino Monastery complex and prospects for its acquisition, restoration, and public use by means of a public-private Foundation", committing itself to pursuing a policy of public-private synergy for the regeneration of the area.



Astino Valley:
corn monoculture before
the beginning of the project.

II. The project (2006-2020): the rebirth of Astino and of the valley of biodiversity

The first stages and works on the monastic complex

2007: a first memorandum of understanding to regenerate the Astino landscape. In 2007 the Bergamo City Council took the first formal steps towards a Plan Agreement between the Bergamo City Council, the Province of Bergamo, the Parco dei Colli of Bergamo, and – as stakeholders – Società Val d'Astino s.r.l. and the Fondazione Misericordia Maggiore of Bergamo, with the aim of regenerating the Astino landscape as a whole, with special focus on the restoration of the monastery, which at the time was in an advanced state of disrepair.

2007: the Foundation's acquisition of Astino. The monastery and land in the valley were acquired by the Fondazione Misericordia Maggiore of Bergamo, which was established in 1265 as a philanthropic confraternity to aid the sick, prisoners, and poor of Bergamo, and has since stood as an identity-defining point of reference for the city's inhabitants.

2007-2014: the first phases of the project. The monastic complex was re-established as the heart of the valley. A project of regeneration of the monastery and the valley was launched. The first steps concerned the restoration of the monastery, which was in a very poor state. However, right from the start the project also extended to the enhancement of the valley's landscape. This aspect was taken into account from the very first planning attempts that were made, even before the acquisition of the complex: the regeneration of the building has always gone hand in hand with that of its agricultural heritage.

2009-2015: the first work begins on the monastery and historic farmhouses. In 2009, safety measures were implemented for the Astino monastic complex. Renovation work was extended from the monastery to the rural landscape. Safety measures were implemented in 2011 for the Cascina Mulino and in 2015 for the Cascina Convento.

2010-2020: restoration of the frescoes and archaeological excavations. As early as 2010, the restoration of many fresco cycles in the monastery began. Work on the monastic com-

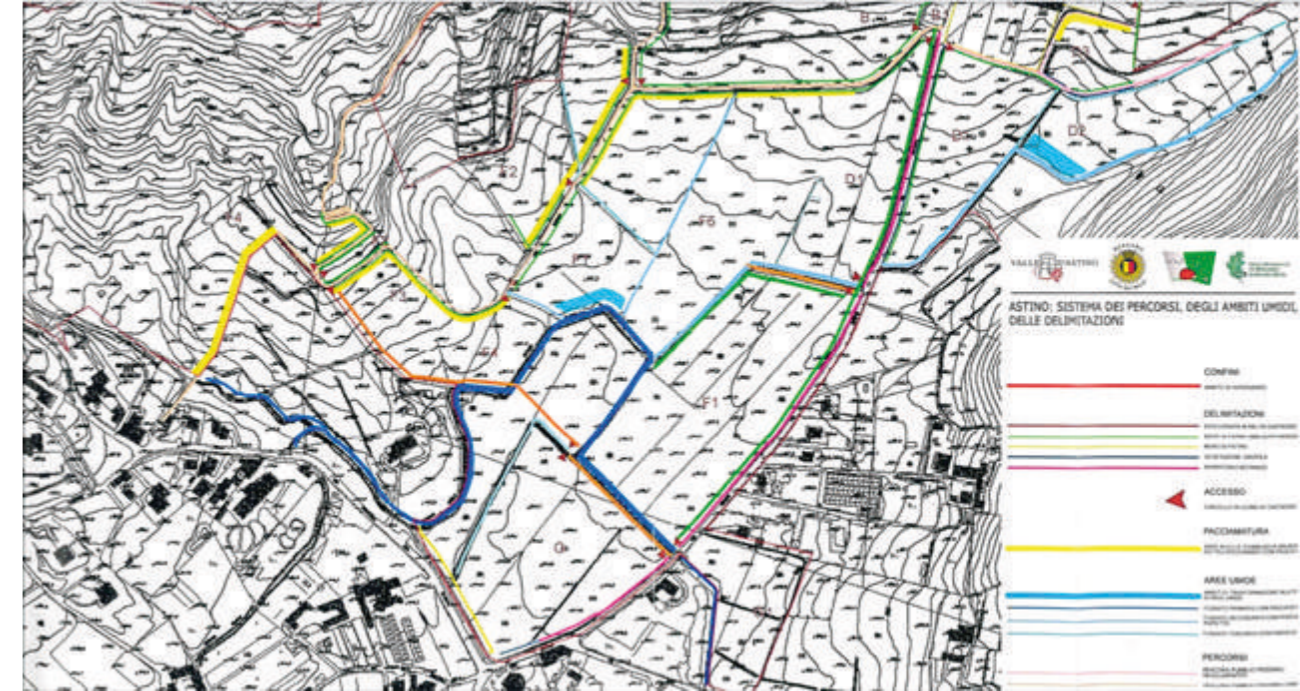
plex continued, extending to archaeological surveys that revealed the construction phases for the church and monastic buildings, the walls surrounding the complex, and fragments of medieval and modern statues, as well as traces of a nearby system of channels and even of the development of the area in pre-historical times – for instance, the interred remains of two pigs.

The agricultural landscape and botanical gardens

2011: the first work on the crops. A feasibility plan was drawn for the creation of a new orchard. Hence, a first plot of land at Astino was leased to a farmer for the growing of fruit (peaches, apricots, and cherries). At this initial stage, the need was already felt to put an end to maize monoculture, yet the use of organic farming methods was not yet foreseen.

2012-2013: an organic farming plan for Astino. A genuine agro-environmental development plan was drawn, involving the Parco dei Colli of Bergamo, Bergamo City Council, and Slow Food Bergamo. Numerous meetings were held with growers interested in the implementation of the Astino Valley Agricultural Plan.

2014-2015: planning of the Astino Botanical Gardens. A memorandum of understanding (Protocollo d'intesa) was drawn up between the Lombardy Region, the Parco dei Colli of Bergamo, the Bergamo City Council, the Fondazione Misericordia Maggiore, and Società Valle d'Astino S.r.l., for the purpose of creating a natural exhibit site at Astino for the 2015 Expo. More specifically, as the document states, the memorandum takes as its starting point an "acknowledgement of the importance of the Astino Valley, of the monastic complex, and of the surrounding open areas as integral and constitutive parts of the historical, cultural, environmental, and landscape value of the city, and as crucial elements for structuring and organising the urban matrix". Its aim is to "promote agronomic, botanical, and environmental practices and forms of expertise, to strengthen active teaching methods, to regenerate and enhance spaces of cultural, educational, and environmental significance, and to reduce the gap between young people/children and the natural world." The memorandum includes the Progetto di Valorizzazione Agro-Ambientale (Agricultural and Environmental Enhancement Plan) – Piano di sviluppo Ambientale (Environmental Development Plan) – Regolamento per la gestione e valorizzazione agro-ambientale (Regulations for Agro-Environmental Management and Enhancement), which were incorporated into the 2017 Plan Agreement. In 2015, the Fondazione Misericordia Maggiore granted the Bergamo Botanical Gardens a free lease of the land required to set up an Astino branch. In other words, an overall planning of the agricultural area was undertaken, which entailed the creation of ecological corridors, the re-establishment of boundaries throu-



Top: the system of paths, wetlands, and boundaries at Astino.

Below, the Bergamo City Council's plan for the Astino section of the Bergamo Botanical Gardens.

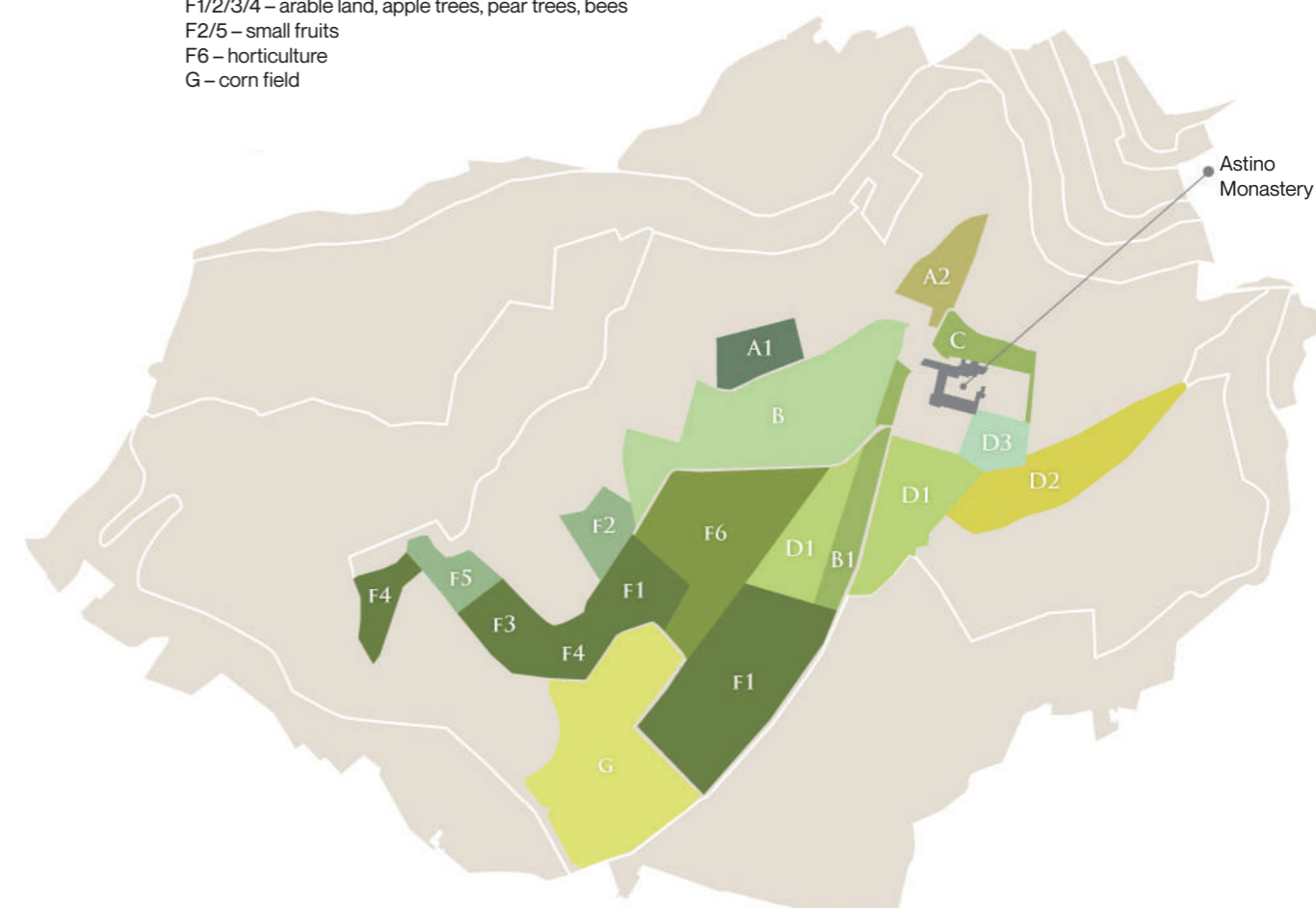
gh dry stone walls and chestnut wood stakes, the management of wetlands, the readapting of the irrigation network, and the creation of a network of pathways to grant visitors physical, functional, and visual access to the defining elements of the Astino Valley.

2014: with the memorandum of understanding, the cultivation plan is also finalised. An Ethical Commitment Statement was created, obliging farmers to use organic methods. This choice to focus on organic methods was intended, as we read in the press release produced by the Fondazione Misericordia Maggiore on 24 November 2014, to “protect the area’s characteristic flora and fauna”. The farming contract was signed by new farmers, who agreed to respect the Ethical Commitment Statement, whether they worked independently or in cooperatives which, as in the case of OIKOS, also have social aims (Arrigoni Beatrice, Castel Cerreto Soc. Cooperativa, Azienda Agricola OIKOS Cooperativa, Soc. Agricola Elav, Soc. Agricola Santa Laura).

2014-2020: Astino’s crop varieties begin to grow. Starting from 2014, new leases were issued, on the condition that those who signed them use organic methods of cultivation. The Astino crop plan slowly began to take shape over the years, aided in part by scientific advice from the universities; this plan aimed at crop selections which would be appropriate to the high clay content of the land and its hydrogeological characteristics, as well as the valley’s tradition and history. Local farmers, whether they work independently or in cooperatives, must present projects, based on organic methods, in accordance with the Ethical Commitment Statement. The OIKOS cooperative employs disadvantaged individuals in the cultivation of grapes. The Arrigoni farm cultivates wild berries and medicinal herbs, reviving a typical vocation of medieval monasteries. The Castelletto farm grows olive trees, which documentation shows were already present in the Astino area in medieval times, through the reintroduction of a native strain (the sbresa olive). A native variety of olive tree (the Oliarola) is also cultivated on the Santa Laura farm, which produces medicinal herbs as well. The Matteo Moioli farm grows apple and pear trees and aromatic herbs, and also keeps bees. The Sant’Anna farm has a fruit orchard. The Castel Cerreto cooperative (founded in 2017) pursues “social agriculture in the service of the community and the territory”, involving an association of families in the management of a vegetable garden and offering courses for professional training. The Elav brewery cultivates hops. Flax and hemp have also been planted.

Cultivation plan:

- A1 – olive grove
- A2 – Botanical Gardens
- B – orchard
- B1 / C – permanent meadow
- D1 – vineyard
- D2 – hop
- D3 – herbs
- F1/2/3/4 – arable land, apple trees, pear trees, bees
- F2/5 – small fruits
- F6 – horticulture
- G – corn field



Astino Valley: flax in bloom.

Fig. 1: horse ride - a view from the Botanical Gardens.
Fig. 2: aerial view of the monastery and its landscape.
Fig. 3-4: cloister interior.
Fig. 5: traditional transhumance, taking place in autumn.
Fig. 6: church of Santo Sepolcro.
Fig. 7: cultivated fields in the Astino landscape.



Astino as a cultural centre: events and landscape education

2015: Astino opens to the population. On the occasion of Expo 2015, the monastery and the Astino Botanical Gardens were open to the public and given back to the citizens. Two catering venues were also opened inside the cloister: a bar and a restaurant.

2015-2020: Astino becomes a cultural centre. Beginning already with its reopening, numerous events have taken place in Astino's building complex, all of them connected to well-defined themes: landscape, cultural goods, and food. This dense cultural activity allowed citizens to re-discover Astino and to educate themselves on the value of landscapes. Particular attention has been paid to the activities with children and inter-generational dialogue. These include:

- Solo exhibitions by leading Italian landscape photographers, such as **Luigi Ghirri** (the true father of Italian landscape photography), **Franco Fontana**, **Nino Migliori**, and **Olivio Barbieri**.

- The realisation of a **permanent exhibition**, including displays with 3D reconstructions that tell Astino's history through the results of the archaeological excavations, which are thereby made available to visitors.

- **The museum itinerary and the exhibition *Il Monastero restituito – La storia, i restauri, le opere ritrovate*** (The Monastery Restored – History, Restorations, Artefacts, 23 June – 31 October 2016): this presented to visitors the results of the restoration and the art-historical discoveries relating to the heritage of Astino's monastery complex.

- The **Luigi Veronelli** exhibition ***Camminare la terra*** (Walking the earth), 21-05-2015 / 31-10-2015. From Veronelli's own words, we can immediately perceive the idea behind setting up this exhibition (originally at the Triennale in Milan) in the former Vallombrosian Monastery of Astino: "If Astino could be converted, as one would like it to be, into a 'multi-purpose study and conference centre', part of the complex would prove quite suitable to my needs. Not only that: the surrounding property could be transformed into experimental vineyards, and this could contribute to restoring and protecting the landscape, to revitalising farming in the hills, and to relaunching Bergamo's viticulture". The exposition collected books, objects, newspaper clippings, documents, pictures, and photos, and rebuilt a part of the historical winery. This exhibition in Astino was an invitation to meet a well-known personality, one central to the culture of our country, a well-rounded intellectual – editor, journalist, and gastronome – who worked in the second half of the twentieth century, relying on his well-thought-out and strong convictions, yet always eager to discuss his ideas with those of different views.

- The **FORMAE – Bonum, Pulchrum, Verum exhibition** 01-10-2015 / 31-10-2015, organised as part of the FORME DI ECCELLENZA (FORMS OF EXCELLENCE) event, within the project **FORME – Bergamo capitale europea dei formaggi** (FORME – Bergamo, European Cheese Capital), was a bold attempt to break down the barriers that have always divided the various forms of human activity. It has become an all-too-common practice to place art in one category (in a sort of high-cultural and spiritual hall of fame), and to set handicrafts aimed at the satisfaction of primal human needs in another category (on a more popular, and thus simpler level). In the FORMAE exhibition, on the other hand, the great Bergamasque dairy tradition has been put on display, together with some important expressions of the contemporary visual arts (sculpture, paintings and photography).

- The **Historian's Workshop – educational workshops on history. "Alla scoperta della valle di Astino"** (Discovering the Astino Valley), a workshop and free tours for classes of various ages and levels from Bergamo and the province. The Historian's Workshop offers the possibility for students and teachers to gain "education in heritage and citizenship" through workshop activities that use original sources, cultural assets and the rich heritage provided by the Fondazione Misericordia Maggiore. In particular, on the occasion of the Festa nazionale dei Nonni (National Grandparents' Day), an event was held in October 2019, called "Nonni vi presento Astino" (Grandparents, Let Me Introduce You to Astino) in which children taught their grandparents about Astino's history.

- **Incontriamoci al monastero** (Let's Meet at the Monastery), a series of cultural meetings – Astino's centuries-old artistic, historical, naturalistic and agricultural patrimony is on display. Initiatives aimed at enhancing the monastery as a central point of cultural development and participation through in-depth exploration with experts on various themes connected to the millenary history of the monastery. The most important moments of the monastery's history were reviewed, and through this initiative disseminated more broadly to the public, from its Vallobrosian foundation to its transformation into a mental institution.

- Collaboration with the **Italian Touring Club's Aperti per voi** (Open for You) project for the opening of the Santo Sepolcro Church.

2015-2020: the offices of the Astino Botanical Gardens are integrated into the cultural programme of the building complex. Educational workshops, divided by age-group and using a methodology which favours a hands-on approach, were proposed. These included group discussions, interdisciplinary practical workshops, science cafés, cooking, theatre, dancing and musical meetings, and biodiverse food sales, all of them with a cultural connection to the themes that constitute the reasoning behind this open-air museum. The Bota-

nical Gardens' Valle della Biodiversità (Valley of Biodiversity) and the monastery were the location for one of the meetings of the European project "BigPicnic. Big Questions – engaging the public with Responsible Research and Innovation on Food Security" (1916-1919, as part of the Horizon 2030 programme). On this occasion, the institute's 16 partners, including 12 European botanical gardens (Berlin, Edinburgh, Madrid, Lisbon etc.) had the opportunity to meet and to work in this unique location. The mosaic of Astino's landscape with its fruit orchards, forests, fields, and hedgerows lends itself to contemplation on the difference between natural and human environments, the role of the agricultural landscape, and also the ways that all these things are interconnected. Guided tours and workshops were organised for schools and for the general public, in a general course, which was held twice, dedicated to the management and enlargement of country hedges. One of the primary aims of the Botanical Gardens is to express the many connections between Nature-Culture-Agriculture.

2020: new projects for augmented reality during the pandemic. Together with the university of Pavia, Astino won a competition to create augmented reality tours, so that the building complex could be used even during the pandemic.

A new governance of the project: the farmer's association and plan agreement

2016: the farmers join together into an association. APAB was born, the association of Astino farmers who adhere to the Progetto di valorizzazione agroambientale della Valle d'Astino (the agro-environmental development project for the Valle d'Astino) and who subscribe to the ideals and the cultural and environmental values contained in the Carta Etica del Progetto Astino, il Monastero e il suo contesto. APAB promotes both products and values. At the same time, a label for Astino's farming products was also created, contributing in turn to their distribution in the short-chain system connected to the city. While up to this point the planning had been guided above all by the public, through the involvement of the population and associations of the city, the autonomous initiative of the farmers marked an important step in the direction of the ever greater sustainability and durability of Astino's landscape.

2016-2017: the Plan Agreement. A new platform was created for Astino's governance. In 2017 a new Plan Agreement was settled on by Fondazione Misericordia Maggiore, the Bergamo City Council, the Regional Government of Lombardy, the Provincial Government of Bergamo and the Parco dei Colli. The Regional Government too, then, joined the network of territorial public institutions that participated in the regeneration of Astino's landscape.

This agreement developed the guidelines agreed on already in 2007 and fine-tuned over the years (with decisive moments coming in the three-year period between 2014 and 2016), putting them into practice in an ever more ambitious way. The new Plan Agreement stands out for the organic nature of the interventions it proposes and for its extremely detailed planning, made possible by in-depth analysis tools: 1) Il Rapporto Ambientale e Programma di Monitoraggio VAS (The Strategic Environmental Assessment [SEA] Environmental Report and Monitoring Plan), together with a non-technical summary; 2) a location document; 3) an illustrative report which considers the history of the monastery and the valley; 4) the masterplan; 5) the planning documents; 6) the project to institute a specialisation school; 7) the agri-environmental project; 8) the town planning variations and the transposition acts; 9) the environmental impact study; 10) the SEA reasoned opinion, impact assessment, and summary statement; 11) the time table; and 12) the financing plan.

2017: enlargement of the Astino Botanical Gardens. As per the Plan Agreement, the perimeter of the section dedicated to the Astino Botanical Gardens was enlarged, with an area being dedicated to the display of fruit plants and woodland areas.

2017: reforesting Astino's woods. The Regional Government co-financed a project for the reforesting of the Astino woodlands. The measures taken involved the maintenance of the biostasis for oak and hornbeam groves, alder groves, and downy oak groves, the renaturalisation and/or stabilisation of the black locust groves.

2017: G7 meeting on agriculture held at Astino. On 14-15 October 2017, the *G7 meeting on agriculture*, together with the ministers of agriculture from Italy, France, Germany, Japan, Great Britain, Canada and the United States, convened at Astino to discuss the key issues of food resources and their distribution and sustainability. This was the first time that this meeting took place, not in a city, but in an agricultural context. But it was also an important opportunity for the promotion of the Astino landscape and of its values beyond the Bergamo territory. Simultaneously with this event, conferences on the same themes were also organised, and schools were involved. The entire city celebrated the Settimana dell'agricoltura (Farming Week).

2019-2020: the new pedestrian/cycle paths and the completion of a plan for soft mobility. Cycling and foot paths were made for Astino and the Astino Madonna del Bosco. The walkways around the monastery complex were also finished. The Via Ripa Pasqualina parking lot was completed, near to but outside of the valley, to allow people with reduced mobility to access and enjoy the landscape.

2019-2020: Astino becomes a training centre for Landscape Studies and food culture.

2019-2020: Astino becomes a training centre for Landscape Studies and food culture. In 2019 a Framework Agreement was reached with the Accademia di Astino S.r.l. for the use of spaces within the monastery and for the establishment and management of the Scuola di Alta Formazione (Specialisation School, 24/05/2019). In 2020 the *Université d'été* was introduced too. The *Université d'été* was founded in 2004 on the initiative of the Fondazione Europea Il Nibbio (FEIN), which had participated in the preparatory workshops of the European Landscape Convention, and with the partnership of various universities. This is a full-immersion course for promoting greater awareness and spreading of the values of the Convention. Beginning in 2020, the *Université d'été* was opened at Astino.

Fig. 1-2: restoration of the frescoes and archaeological excavations (2010-2020).

Fig. 3: In 2020, the *Université d'été* opened in Astino.

Fig. 4-5-6: Astino as a cultural centre. Numerous events have taken place in Astino's building complex, all of them connected to well-defined themes: landscape, culture, food.

Fig. 7: the G7 meeting on agriculture, together with the ministers of agriculture from Italy, France, Germany, Japan, Great Britain, Canada and the United States, convened at Astino to discuss the key issues of food resources and their distribution and sustainability.



Bibliography on the Astino project

On the Astino landscape prior to the beginning of the project:

Fulvio Adobati, Moris Lorenzi, *Astino e la sua valle*, Bergamo, 1997.

On the history of Astino:

Astino Monastero della città. 750 anni nella storia di Bergamo, ed. Attilio Bartoli Langeli, Bergamo, Fondazione Misericordia Maggiore, 2014.

On the restoration work in the monastery (restoration, archaeological excavations, interpretation of historical data):

Alessandra Civai (ed.), *Il monastero restituito. Astino: La storia, il restauro, le opere ritrovate*, Bergamo, 2016.

On the project developed for the agricultural landscape and Botanical Gardens:

Renato Ferlinghetti, Processi di risignificazione e rigenerazione della corona dei Corpi Santi di Bergamo, *Monastero e territorio: periferie dello spirito e dello spazio*, eds. B. Castiglioni, S. Zaggia, Padova University Press, 2019.

Gabriele Rinaldi, Il distacco dell'uomo dalla natura: azioni locali per favorire una riconciliazione a Bergamo, *Iconemi: alla scoperta dei paesaggi bergamaschi*, Bergamo University Press, 2013, pp. 9-16.

Gabriele Rinaldi, Uomo, piante e botanica: gli orti botanici, una prossima avventura, in *D'erbe e piante adorno. Per una storia dei giardini a Bergamo*, ed. M. Mencaroni Zoppetti, Bergamo, 2008, pp. 499-515.

Gabriele Rinaldi, L'orto botanico di Bergamo come attrattore sociale: educazione ambientale, didattica, turismo, networking con gli altri spazi del verde pubblico, *Iconemi: alla scoperta dei paesaggi bergamaschi*, Bergamo University Press, 2015, pp. 37-40.

For the landscape exhibitions held at Astino between 2015 and 2020, the following bilingual catalogues (Silvana Editore, Milan) have been published as part of a Landscape Trilogy, ed. by Corrado Benigni, Mauro Zanchi:

Luigi Ghirri, *Pensiero paesaggio* – Thought Landscape.

Mario Giacomelli, *Terre scritte* – Written Landscapes.

Franco Fontana, *Dietro l'invisibile* – Behind the Invisible.



Bergamo, the Astino Valley | Biodiversity in the city

partners