



EDUNATE CITIES

An Erasmus+ project to promote green skills
in urban areas 2025/26

**Renaturation through the interplay of
science, politics and education**



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the European Union

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Contents



What does EduNate Cities stand for?

A focus on innovative educational formats, social participation and sustainable empowerment

Rhein-Neckar pilot region / Mannheim / D

Vestland pilot region / Bergen / NO

Tuscany model region / Florence / I

Tips & tricks for successful concepts

European cooperation framework/network: 'EduNate Cities' project

1. Vision and Strategic Context
2. The interdisciplinary consortium: role profiles and core competencies
3. Thematic pillars of cooperation
4. Operational implementation: areas of activity and knowledge flow

EduNate Cities: A European collaboration for climate action

1. Why cities are the key to the future
2. Urban challenges and the role of renaturation
6 examples of best practice
3. The Roadmap: Towards greater 'collective green competence' in 18 months
4. Green skills, educational formats and transnational added value
5. Description of the three weeks of meetings:
Focus on Germany
Focus on Norway
Focus on Italy
6. Green cities of the future / Conclusion and outlook

Thanks to the people, institutions and partnerships



What does EduNate Cities stand for?



Project theme

A European exchange on the link between urban renaturation, private engagement and educational programmes to create blue and green infrastructure within urban environments.

Background

Cities are severely affected by climate change (heatwaves, severe weather and other extreme events). A resilient infrastructure and a civil society capable of taking action are essential.

Approach

Exchange of knowledge and the use of sustainable, future-proof approaches to support urban ecosystems and raise awareness amongst the urban community.

Small-scale project

EduNate Cities is a small-scale project. Its primary focus is on providing impetus. Both the project and this brochure are designed to inspire, inform and motivate. The aim is to develop, through collaboration, a factual, professional and emotional connection that will serve as a basis for initiating and building further projects within the consortium and beyond.

Project objectives & vision

Main objective 1: To gain insights into raising awareness of environmental issues and the impacts of climate change in cities and peri-urban areas.

Main objective 2: Understanding and exchange to promote 'green skills' through lifelong learning.

Vision: To spread the burden of sustainable urban development across multiple stakeholders (politics, academia, civil society).

The interdisciplinary trio

Education (Starkmacher e.V.): Focus on educational outreach and empowering disadvantaged groups.

Politics (County Governor of Vestland): Implementation of national climate targets at regional level and in urban planning.

Academia (Fondazione Capellino): Measuring biodiversity and providing scientific support for nature-based solutions.



Rhine-Neckar Model Region / Mannheim / D

31 March – 4 April 2025 / Focus on innovative educational formats, social participation and sustainable empowerment



Day / Focus

Monday
(Education & Community)

Tuesday
(Ecology & Research)

Wednesday
(Urban Development)

Thursday
(Renaturation & Art)

Friday
(Participation)

EINLADUNG + AGENDA
Deutschland 2025



Education / Nature / City - Herzlich Willkommen
zu EduNate CITIES, einem Projekt von Starkmacher e.V.

Starkmacher e.V.

In der Woche vom 31.3. bis zum 4.4.2025 hat der Starkmacher e.V. eine Partnerdelegation mit Interessierten aus Norwegen und Italien zu Gast. Unser gemeinsames Europa-Projekt EduNate CITIES befasst sich mit Aspekten und Perspektiven in Theorie und Praxis zum Schutz und zur Wiederherstellung der biologischen Vielfalt und zur Bekämpfung des Klimawandels durch Förderung lokaler Ökosysteme. Besonders im urbanen Kontext. Und in Austausch und Zusammenarbeit mit europäischen Partnerschaften.

Im Rahmen dieser ersten Begegnungs- und Arbeitswoche 2025 in Mannheim laden wir Akteure und Akteurinnen ein, um ihre regionalen Missionen, Strategien und Konzepte zu zeigen und uns ganz praktisch an ihren Aktivitäten teilhaben zu lassen. So schaffen wir gemeinsam Beziehungen, Diskussion, Austausch und ein konstruktives Netzwerk für die Förderung unterschiedlicher lokaler Ökosysteme mit den Kernaspekten Bildung, Natur und Städte. Wir freuen uns auf unsere Gäste und Partner*innen und bedanken uns bei allen, die uns unterstützen.

Nick Bosch + Anja Roth

Montag, 31. März

Vormittag	Willkommen Impulsvorträge Grüne Schule	TUMO Center im Alteckhof, Begrüßung der Gäste/Gastgeber*innen Miya Tiny Forest, Citizen Science mit SRH University Luisenpark, Vielfaltprojekt, Diversity Tour + Spaziergang
Nachmittag		

Dienstag, 1. April

Vormittag	Bee Friendly rem Museum + CEZA Lab	Besuch Ökologischer Lehrgarten des IB, Inkl. Diversity Inspector Laborführung Prof. Dr. Wilfried Staudert, Dr. Romy-Friedrich Von Paläoklimaforschung bis moderne Klimamessung
Nachmittag		

Mittwoch, 2. April

Vormittag	Erbe der BUGA	Talk mit Michael Schnellbach + Gelände-Spaziergang Besuch Naturgarten e.V.
Nachmittag	Local Green Deal	Vortrag, Diskussion + Austausch im Technischen Rathaus

Donnerstag, 3. April

Vormittag	Tag am Neckar NABU e.V.	Perspektiven urbaner Renaturierung am Fluss Führungen an strategische Aktionspunkte in der Neckarlandschaft
Nachmittag	Kunst trifft Klima	Kunstaktion im Peer23 mit Klimaschutzagentur Mannheim

Freitag, 4. April

Vormittag	Citizen Science Klima Arena	Live am Bach mit Dr. Ulrike Geyh, SRH University HD Führung + Entdeckung "Erlebe, was du tun kannst!"
Nachmittag		

Kofinanzierung von der Europäischen Union

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Programme items and highlights

Welcome to the TUMO Centre / Keynote talks on **the Miya Tiny Forest Method** and citizen science / Afternoon: Diversity Tour and the 'Diversity Project' at the **Grüne Schule Luisenpark**.

'Bee friendly': Visit to the IB's ecological teaching garden / Afternoon: Laboratory tour at the **rem Museum** (from palaeoclimate research to modern climate measurement).

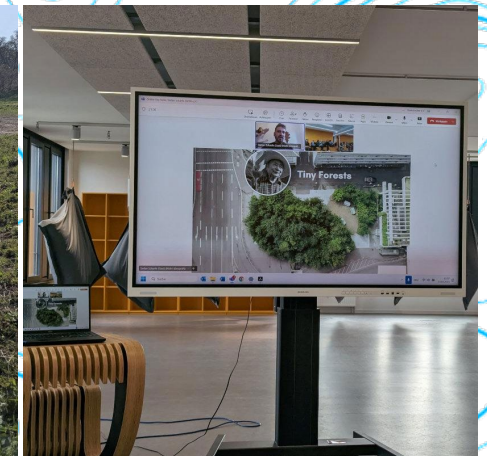
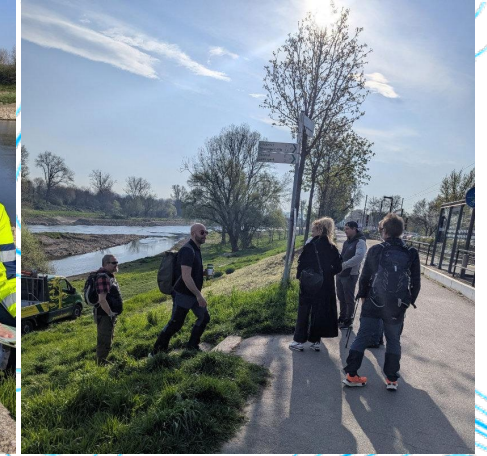
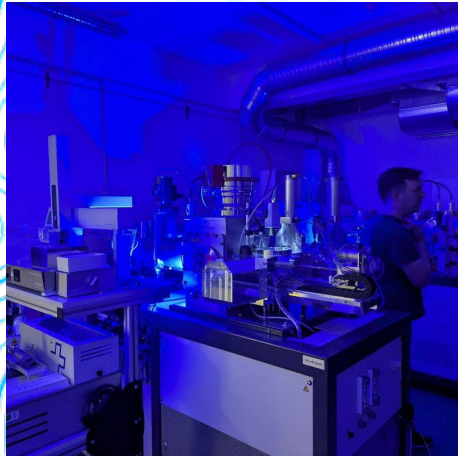
Legacy of the BUGA: Walk and discussion with Michael Schnellbach / Afternoon: Lecture and discussion on **the Local Green Deal (iDEAL)** at the Technical Town Hall.

Prospects for urban renaturation along the Neckar / NABU guided tours focusing on strategic action points; **'Art Meets Climate'** art event at Peer23.

Citizen science 'Live by the Stream' with SRH University / Afternoon: Excursion to the **Climate Arena**.

Rhine-Neckar Model Region / Mannheim / D

Focus on innovative educational formats, social participation and sustainable empowerment



Vestland Model Region / Bergen / NO

22–26 September 2025 / Focus on sustainable land use and the restoration of production land to natural forests



Day / Focus

Monday (Policy & Science)

Tuesday (Practice & Society)

Wednesday (Field Ecology)

Thursday (Education)

Friday (Urban Forestry & Management)

Program Bergen, Norway 22 – 26/9-25

Time	Theme	Where	Who
22.09. 0900	Short presentation of participants (15 min) Politics, Agriculture and Environment	Motorhallen, County Governor's office	EduNate, Christian Rekkedal, director, agr. department, Olav Overvold, senior advisor, environmental department, County governor Erik Byejelesen, senior advisor, agr. Department, County governor of Vestland
1030	City strategy for nature management and urban development	Motorhallen Bergen Municipality, Agency for Urban Environment	Ina Sem-Olsen, Client project lead, Brynjelesten, City of Bergen
	Mindetorget and EU project Biodiverse Cities	Motorhallen	Ina Sem-Olsen
1130	Lunch	Motorhallen	
1230	Latest climate research, future scenarios	Motorhallen Institute of Marine Research	Anne Britt Sande, Prof., Institute of Marine Research (Bergen)
1330	Walk through Nygårdsparken	Bergen	Torleiv Skage, Certified Private Guide (VIP Travel)
1500 - 1600	Bergen and climate change, securing Unesco- site Bryggen	The Bryggen Foundation	Bernt Håvard Øyen, Gumbjerg Andersen Hole
1800	Dinner	Våringshuset, Øvre Båken Gård	
23.09. 0900	Urban gardens and social farming	Framnes Farm, Kaland, Bergen	Solveig Lillebedt, Owner and Farmer at Framnes Farm, Inn på tunet provider, offering therapeutic farm-based activities
1200	Sundt Rooftop Garden	Bergen, Boasson AS	Sigurd Boasson, CEO
1300	Lunch	Colonielen Sørin, Sundt	Ken Petter Skorge-Kristiansen, managing director
1430 - 1600	Sustainable life and Matskogen at Landås	Bergen, Landås NIBIO, Bergen Municipality	Anna Milford Research Scientist, Division of Food Production and Society, Trine Ausgaard Andrevik, Advisor, Department of Business, Culture and Sports, City of Bergen
1800	Dinner	Lots Bistro, Bergen	
24.09. 0800	Bergen Strandskaterterminal - Vardetangen	Bergen to Austrheim	Boat trip, catamaran
0900	Invasive species removal: Hemlock, Sitka spruce	Austrheim	Olav Overvold, senior advisor, environmental department, County governor
1200	Lunch	Kilstraumen Brygge	
1300	Nordhordland Biosphere Area	Austrheim	Kjersti Isdal, Nordhordland utviklingselskap, Hildegunn Opdal, Region Nordhordland RIS
1500	Farm visit	Isdal	Kjersti Isdal
1730	Sauna	BRB Bergen	Dirk Köhnemann, sauna master
1930	Dinner	Storstuen, Bergen	
25.09. 0900	Stend VGS - agriculture and nature management	Fana, Bergen Stand Upper Secondary School (including adult education)	Leif Stigund Danielsen, principal, Tortjarn Libere, head of department
1230	Lunch	Blondehuset	
1330- 1500	Bergen Arboretum - forest and biodiversity education	University of Bergen, Milde, Bergen	Berit Gehrkus, head of section, university gardens
1800	Dinner	Pygmaton Økokafe, Bergen	
26.09. 0830	Fløibanen to Fløyen - Rundemanen	Bergen	Funicular and walk & talk
0900	Urban forest management and facilitation	Bergen Forest and Tree Planting Society	Alele Hovland, forest- and general manager
1200	Lunch	Øvre Båken Gård	
1300	Free afternoon in the city		Everyone by his or her own
1900	Dinner	Enghjørningen Fiskerestaurant	

Programme items and highlights

Presentations on Bergen's **urban strategy for nature management** and urban development / Insights into the EU '**Biodiverse Cities**' project / Afternoon: Current climate research and future scenarios from the **Institute of Marine Research**, as well as the preservation of the **Bryggen UNESCO World Heritage Site**.

Social farming and therapeutic programmes at Framnes Farm / Tour of the **Sundt Rooftop Garden** / Afternoon: Focus on sustainable living and urban food forests in the **Matskogen på Landås** neighbourhood initiative.

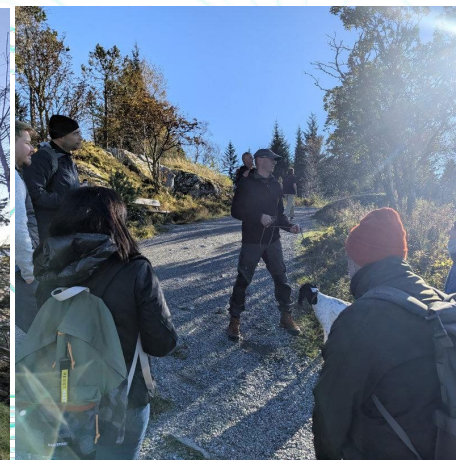
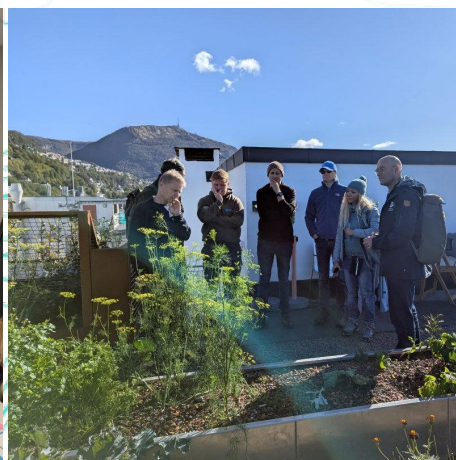
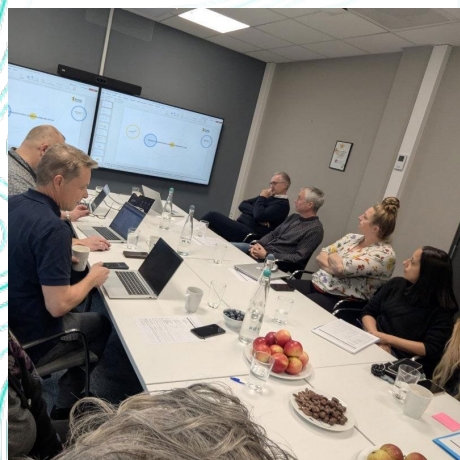
Boat trip to Austrheim to actively **combat invasive species** (hemlock and Sitka spruce) / Afternoon: Introduction to the **Nordhordland Biosphere Region** and excursion to a farm in Isdal.

Visit to **Stend VGS** with a focus on agricultural and nature management (including adult education) / Afternoon: Forest and biodiversity education at the **Bergen Arboretum**, University of Bergen.

Journey on the Fløibanen to Fløyen/Rundemanen: 'Walk & Talk' with the **Bergen Forest and Tree Planting Society** on urban forest management and the restoration of forested areas.

Vestland Model Region / Bergen / NO

Focus on sustainable land use and the restoration of agricultural land to natural woodland



Tuscany Model Region / Florence / I

21–25 March 2026 / Focus on highly specialised scientific measurement of climate impacts and botanical expertise



Day / Focus

Sunday (Culture & Architecture)

Monday (Science & Monitoring)

Tuesday (Education & Biodiversity)

Wednesday (Agroecology)

Thursday (Botany)

Programme items and highlights

Presentation of the historic **Flower Festival (STO)**

Workshop on building with natural materials

Tour of the **Manifattura Tabacchi** complex

Visit to the **Società di Orticoltura** at Villa Bardini

Presentation of the **Florence Project** by the **Fondazione Scientific** focus on analyses (CNR/UNIFI)

Afternoon: **‘F’Orti Thouar** community gardens

Visit to the **Museo Galileo** (Science & Education)

‘Paesaggiando’ guided tour of historic gardens

Workshop: **‘Seed bombs for biodiversity’**

Visit to the **Orti della Diversità** (29 urban plots)

Discussion with the **Rete Semi Rurali** (seed custodians)

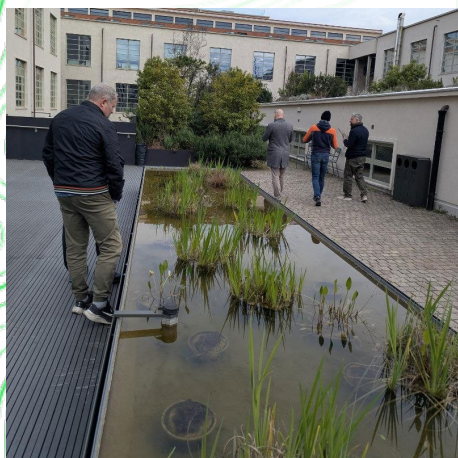
Presentation of the Florence Metropolitan Biodistrict

Exploring the collections and scientific work at the **Botanical Garden** in Florence

SATURDAY 21ST				TUESDAY 24TH			
TIME	ACTIVITY	WHO	WHERE	TIME	ACTIVITY	WHO	WHERE
MORNING	Self-arrivals of participants and Lunch on own arrangements		Foresteria Valdese di Firenze in Via dei Sassetti 11	10 AM	Visit to the Museo Galileo (Galileo Museum): a science museum and historical archive featuring digitally restored ancient documents, it organises and promotes activities and events in the fields of science and education.	Museo Galileo - specialised museum professionals and expert archivists	Piazza dei Giudici, 1, 50122 Firenze FI
4 PM	“Forti Thouar” Projects “Forti Thouar” is a community gardening initiative across five city districts, encouraging environmental education, social interaction, ecological practices, and shared stewardship of public green spaces. Workshop “plant stories” with Ingegno Project	Elena Penna (STO), Daniel Muretti (RSR), Lorenzo Scacchia (Ingegno)	Biblioteca Thouar, Piazza Tasso, FI	12 AM	“Paesaggiando” Gardens Tour: initiative promoted by the Società Toscana di Orticoltura (STO) to foster awareness of the urban environment through guided walks in the city’s parks and green spaces. Track 1: Le Rampe del Poggio, il Giardino delle Rose: headquarters of STO, giardino storico e artistico	Ella Rendi	Villa Bardini, Costa San Giorgio n°4 - FI
7 PM	Dinner and presentation of meeting programme and participants		Ramerino, cucina vegana	1 PM	Lunch		Giardino delle Rose, Viale G.Poggi 2- FI
SUNDAY 22ND				3 PM	“Orto bioativo: visit to the agroecological horticulture project.”	Ella Rendi (STO), Elena Penna (STO), Andrea Battista (orto bioativo)	via di San Carlo, 9F - Firenze 50124
TIME	ACTIVITY	WHO	WHERE	5 PM	“Custodi del verde”, a project by the Municipality of Florence to spread knowledge about the management of public green spaces among citizens. Workshop: “Urban sowing for biodiversity” Hands-on workshop on making “seed bombs” to promote biodiversity in public spaces.	Claudio Catapano e Ella Rendi - Società Toscana Orticoltura	Giardino delle Rose, Viale G.Poggi 2- FI
10 AM	free time in Florence			7 PM	“Corto Botanico Night: an aperitivo dinner, storytelling of the project, and a screening of short films.”	Ella Rendi (STO), Elena Penna (STO), Lorenzo G.	Giardino delle Rose, Viale G.Poggi 2- FI
1 PM	Lunch in Manifattura Tabacchi		Via delle Casine, 35-50144 FI	WEDNESDAY 25TH			
2 PM	Presentation of the Manifattura Tabacchi project and guided tour of the complex	MANIFATTURA TABACCHI - Agenzia Lama	Via delle Casine, 35-50144 FI	TIME	ACTIVITY	WHO	WHERE
4 PM	• Presentation of “Flower Festival”, exhibition, a historic cultural festival of the STO. • Workshop “Building with natural materials: self-construction of lightweight bamboo structures for urban green spaces”	Ella Rendi ARUNDO ART, Margherita Bertoli	Via delle Casine, 35-50144 FI	10 AM	• Visit to Orti della Diversità del Vingone: A community garden project converting unused public land into 29 urban plots for horticulture, education, recreation, and social interaction. • Visit to the headquarters of Rete Semi Rurali: A third-sector organisation and farmers’ network, participating in European projects with COSPE, and managing a seed house for custodian farmers in Scandicci. • Presentation of the Metropolitan Biodistrict of Florence: a third-sector organisation that established the Metropolitan Biodistrict of Florence, uniting associations, municipalities, and producers.	Riccardo Bocci, Daniel Muretti, Fulvio Vincenzo	Casa dell’Agrobiodiversità Piazza Brunelleschi 6, 50018 Scandicci
8 PM	Dinner at Pizzeria Barbera, Manifattura Tabacchi		Via delle Casine, 35-50144 FI	1 PM	Lunch		Casa dell’Agrobiodiversità
MONDAY 23RD				4 PM	• Botanical Garden: Exploration of the garden’s collections, scientific value, and conservation activities.	Giulia Torta Orto Botanico di Firenze,	Via Pier Antonio Micheli, 3 - Via Giorgio la Pira, 4, FI
TIME	ACTIVITY	WHO	WHERE	8 PM	Dinner		cucina, Via Giano della Bella
10 AM	Project in Florence - Fondazione Capellino • Institutional greetings and welcome - Prof. A. Alberto Giuntoli • Presentation by Dr. C. Calvi - Fondazione Capellino: Topics include partnership roles, scientific approach, and long-term outcomes. • Presentation by Prof. A. Giuntoli outlining the project’s vision, its distinctive positioning in Europe, its recognition as a best practice within the PN, and the forthcoming interventions. • meeting with presentation by Dr. M. Morabito (CNR) and Francesca Romana Dani (UNIFI) - multidisciplinary scientific approach, long-term monitoring, ex-ante & ex-post impact analysis	Prof. A. Giuntoli, Dr. C. Calvi (Board Member of Fondazione Capellino), Dr. M. Morabito (CNR), Francesca Romana Dani (UNIFI)	Villa Bardini				
1 PM	Lunch		Villa Bardini				
3 PM	• Meeting with Municipality of Florence and Fondazione Capellino • On-site visit with Prof. A. Giuntoli & Dr. E. Rendi: 2-3 intervention areas (Piazza dei Giudici, Via delle Mantonai) - understanding project context and rationale	Dr. P. Gulgcher, Councilor for the Environment of the Municipality of Florence Prof. A. Giuntoli	Palazzo Vecchio				
4 PM							
8 PM	Olive Oil Night - “Olive oil tasting and dinner”	Aleandro Ottanelli, Alberto Montignani	Giardino delle Rose, Viale G.Poggi 2- FI				

Tuscany Model Region / Florence / I

Focus on highly specialised scientific measurement of climate impacts and botanical expertise



Tips & tricks for successful concepts



Multidisciplinary: Linking

education, politics
and science from the outset to create
holistic approaches.

Knowledge transfer: Presenting

results in an engaging way to
capitalise on multiplier effects within
the urban community.

Local anchoring: Linking projects to

existing regional strategies
(such as Local Green Deals).

Networking: Involve stakeholders in

dialogue forums at an early stage to
foster enthusiasm and scalability.

EDUNATE
CITIES

1. Vision and Strategic Context



Urban transformation is currently at a critical turning point.

As former UN Secretary-General Ban Ki-Moon aptly observed, cities are the places 'where the battle for sustainable development will be won or lost'. The 'EduNate Cities' project takes up this insight and explicitly addresses UN Sustainable Development Goal 11 (Sustainable Cities and Communities) by viewing urban spaces not only as hotspots of climate change, but also as primary areas for solutions.

Cities are particularly vulnerable due to extensive soil sealing and heat islands; a resilient infrastructure is therefore essential.

The key strategic added value of this framework lies in bridging the so-called 'implementation

gap' between global sustainability goals and local reality.

Technocratic urban planning often fails if it lacks social acceptance (education) or long-term ecological validation (science).

'EduNate Cities' specifically addresses this through the synergy of science, politics and education. The aim is to move beyond costly, purely structural measures and to embed agile, low-threshold renaturation solutions deeply within urban society through educational processes.

This vision is being realised by an interdisciplinary consortium of experienced partners, whose roles are detailed below. The Small Scale project was used to identify the strengths of and synergies between the disciplines.

"Cities are the places where the battle for sustainable development is won or lost."

Ban Ki-Moon
former UN Secretary-General

2. The interdisciplinary consortium: Role profiles and core competencies



Organisation	Strategic dimension	Core expertise in the project	Years of experience
Starkmacher e.V. Germany	Education	Adult education, inclusion of marginalised groups & project management	20
County Governor of Vestland Norway	Politics	Regional development, forestry restoration & policy governance	29
Fondazione Capellino Italy	Science	Biodiversity monitoring & the 'reintegration economy' model	6

The effectiveness of 'EduNate Cities' stems from the targeted selection of partners who cover complementary dimensions of various stakeholder groups. This interplay between science, politics and education ensures that renaturation is not merely a theoretical concept. Through scientific validation from Italy, the establishment of a policy framework from Norway and educational outreach from Germany, a holistic model emerges that becomes tangible for the entire urban community.

The profiles of the three partner institutions and their stakeholders mesh seamlessly:

Whilst the Fondazione Capellino provides the scientific and economic foundation,

Starkmacher e.V. transforms these findings into teaching methods for lifelong learning processes.

The County Governor of Vestland focuses carefully on the necessary political and administrative framework for scaling up the initiative across the regions.

3. Thematic pillars of cooperation



Educational Awareness-Raising

Starkmacher e.V. draws on decades of experience and its extensive expertise to promote 'green skills' and create opportunities for participation within urban communities.

Scientific proof of concept

The Fondazione Capellino provides the justification for policy decisions and lends scientific credibility to educational content. The practical implementation programmes run by the Società Toscana di Orticultura transform theoretical approaches into dynamic activities that continuously and authentically foster understanding, engagement and relationship-building.

Policy implementation

The County Governor of Vestland is examining the transferability of various approaches – including transdisciplinary ones – from stakeholders, both locally and within cross-border networks, into municipal strategies (e.g. the conversion of commercial forests into natural forests).

The project centres on the search for effective, nature-based solutions for urban areas.

The focus is on methods such as the Tiny Forest approach, urban community gardens (forest gardens) and targeted measures for biosphere conservation and increasing biodiversity.

The three model regions serve as test environments

- Mannheim (Rhine-Neckar metropolitan region), Germany
- Bergen (Vestland), Norway
- Florence (Tuscany), Italy

Each region contributes specific best-practice examples, which are evaluated as part of the operational phase model. The synergy effects of the interdisciplinary assessment represent the key added value.

4. Operational implementation: Areas of activity and knowledge flow



The 18-month project cycle follows a logical roadmap that ensures the transfer from theory to local practice through cross-sectoral synergies.

- **Knowledge development and transfer (A1):**

This phase forms the foundation. The mutual transfer of pedagogical learning building blocks (Starkmacher), political steering mechanisms (Vestland) and scientific monitoring methods (Capellino) is essential to enable all partners to act as competent multipliers.

- **Working week in Germany (A2 – Focus on pedagogy):**

In Mannheim (April 2025), the focus was on engaging civil society through the 'iDEAL' Local Green Deal. Among other things, the Tiny Forest method, the legacy of the BUGA and other activities and initiatives were analysed as educational learning spaces.

- **Working week in Norway (A3 – Focus on Politics & Forestry)**

In Bergen (September 2025), the political strategy for the restoration of natural forests was discussed. This included a visit to the Institute of Marine Research (climate scenarios), a tour of the EU project 'Biodiverse Cities' and the 'Nordhordland Biosphere Area'. The focus here was on practical expertise such as the management of invasive species (removal of Sitka spruce and hemlock).

- **Working week in Italy (A4 – Focus on Science & Biodiversity)**

In Florence (March 2026), the Fondazione Capellino demonstrated its pilot project on measuring the impacts of climate change and the scientific validation of nature-based solutions to improve urban quality of life.

- **Documentation of project results (A5)**

The systematic collation of the collected data served as a strategic guide for consolidating and scaling up the results at European level.



1. Why cities are the key to future



The city as a focal point of change

The strategic importance of urban resilience has taken on a new dimension in the context of global climate change. Today, cities act as a magnifying glass for ecological and social crises: they are both the main contributors to and the primary victims of climatic instability. Anyone working today as an urban planner or local politician must consistently rethink urban space as a resilient living environment.

The challenges are physically tangible: the massive sealing of land with concrete and asphalt transforms neighbourhoods into heat islands, which severely impair quality of life and public health. As traditional infrastructure projects often fail due to high costs and protracted planning cycles, the 'EduNate Cities' project identifies holistic and feasible solutions.

As a small-scale initiative, the project serves as an effective starting point for building strategic partnerships. The core thematic objective is the synergistic combination of low-threshold renaturation and targeted educational programmes for 'Green

'Competences'. This interdisciplinary bridge between ecological practice and pedagogical foundations is essential not only for bringing about urban transformation in terms of physical infrastructure, but also for embedding it within civil society.

Cities are the main drivers of the climate crisis, but they are also the most effective laboratories for its solution. Rather than waiting for slow political processes, 'EduNate Cities' focuses on direct renaturation. The aim is to bring nature back to where it is most urgently needed – into the cities.

This project sees itself as the start of a collaborative, holistic process on the path from a global challenge to concrete, local action.

Our cities are the vibrant centres of our civilisation, yet they are under pressure. In times of global warming, concrete and tarmac are transforming urban spaces into dangerous heat traps. Where nature once thrived, grey infrastructure now seals the ground. Yet it is precisely here that the greatest potential for sustainable solutions and climate-protective measures lies.

Milestones for society:

Raising awareness: Developing a deep understanding of that green infrastructure is not a luxury, but a survival strategy.

Participation: Neighbourhoods move from being spectators to taking action and get involved in participatory projects.

Scalability: Tried-and-tested educational formats are adapted so that every European city can benefit from our experience.

2. Urban challenges and the role of renaturation



Challenges (examples)

A solution through green infrastructure

Heat islands (caused by high levels of land sealing)

Tiny forests, public gardens, green and blue veins that provide significant cooling and air filtration, making use of what the respective neighbourhoods have to offer

Loss of biodiversity

Natural forest restoration: Strategic conversion of former timber production areas into resilient natural forests

Social alienation from nature

Forest gardens (Food Forests): Community-managed plots as places for social learning and self-sufficiency

Overloading of the sewerage system

Unsealing: Creating infiltration areas through targeted demolition and greening measures.

The ongoing sealing of land with concrete and tarmac has transformed cities into heat islands, highlighting the need for greater climate resilience – that is, the ability of urban systems to cushion the impact of extreme weather events. Whilst traditional urban planning often fails due to bureaucratic hurdles and high costs, 'EduNate Cities' focuses on low-threshold, nature-based solutions that enable direct interaction with the local population.

Over the course of the project, various challenges were identified, to which sustainable solutions are assigned here as examples.

These examples can all be found in the model regions, which served as living learning environments for the project. The project leaders were inspired by approaches characterised by passion, expertise and consistency, which can now be used as a basis for discussion and the development of further implementation ideas.

Tiny Forest – Germany

An open-air classroom and a vibrant learning environment



Section	Content
Example	Tiny Forests based on the Miyawaki method – small-scale, very densely planted mini-forests designed to promote biodiversity, provide cooling and support environmental education. The project focused in particular on the Tiny Forest in Mannheim as a learning and demonstration site.
Location within the project	Mannheim (Rhine-Neckar Metropolitan Region, Germany)
Green Competences	An understanding of ecological interrelationships, climate literacy, knowledge of biodiversity, sustainable behaviour, participation, responsibility for public spaces, systems thinking, and practical skills in the fields of nature conservation and urban ecology.
Level of education	The Tiny Forest serves as an ‘open-air classroom’. It facilitates experiential learning about biodiversity, soil ecology, climate change, nature observation and citizen science. It is particularly suitable for schools, adult education and extracurricular learning environments.
Political Level	Tiny Forests can support local climate adaptation and biodiversity strategies. They create visible community engagement projects that require relatively little space and foster collaboration between local authorities, educational institutions and civil society. They are well-suited as a building block for Local Green Deals, climate protection programmes or urban development schemes.
Scientific Level	Tiny Forests offer opportunities to study biodiversity, microclimates, CO ₂ sequestration, soil development and the social use of urban green spaces. They are suitable as real-world laboratories for monitoring and citizen science initiatives, as well as for evaluating nature-based solutions in urban areas.
Relevance to lifelong learning	A Tiny Forest makes sustainability visible and tangible in everyday life. It thus becomes a living learning environment where people of all ages can develop and apply green skills.

BUGA Heritage – Germany

Sustainable urban development and civil society



Section	Content
Example	BUGA Heritage refers to the long-term, community-led and environmentally sustainable reuse of the former military and exhibition sites (in particular Spinelli Park and the U-Halle) as green infrastructure to support climate adaptation, promote biodiversity, foster co-creation and encourage civic engagement as part of the Local Green Deal.
Location within the project	Mannheim (Rhine-Neckar Metropolitan Region, Germany), key areas: Spinelli Park, U-Halle, North-East Green Corridor
Green Competences	Climate resilience and adaptation skills, circular thinking and resource efficiency (Cradle-to-Cradle), skills for socio-ecological transformation, civic self-organisation, the ability to participate, a connection with nature and environmental education in urban areas, as well as an understanding of the Sustainable Development Goals (SDGs).
Level of education	The revitalised areas and the U-Halle serve as spaces for learning and creativity in the field of Education for Sustainable Development (ESD). They provide opportunities for experiential learning for schools, organisations and the general public.
Political Level	As a cornerstone of integrated urban development and the Mannheim Local Green Deal, this project demonstrates how the conversion of disused military sites into large-scale open spaces and areas for local recreation can be achieved. It strengthens links between the local authority, the development agency and civil society through participation and co-determination.
Scientific Level	Research platform for urban resilience, adaptation to climate change, 'sponge city' concepts and circular construction (circular economy/circular architecture of the U-Halle). It serves as a real-world laboratory for investigating microclimate effects (cold air corridor), biodiversity monitoring (e.g. on Spinelli) and the scientific monitoring of socio-ecological transformation processes involving strong citizen participation (citizen science).
Relevance to lifelong learning	The BUGA legacy fosters sustainability in everyday urban life that can be experienced across generations. Through the ongoing commitment of associations, initiatives (e.g. BUGA Friends, Weltacker teams) and municipal events, the space becomes a permanent platform where citizens can actively test, develop and pass on their green skills to the next generation.

Bergen Arboretum - Norway

Biodiversity and Climate Research



Section	Content
Example	Arboretum and Botanical Garden (Arboretet og Botanisk hage på Milde) – Scientifically curated plant collections (focusing on rhododendrons, historic roses and endangered plant species) aimed at conserving biodiversity, promoting environmental education and researching climate change in a regional and global context.
Location within the project	Bergen (Milde, Vestland County, Norway)
Green Competences	Climate change expertise (understanding of phenological shifts and changes in seasonal rhythms), dendrological and systematic knowledge of plants, nature conservation expertise in the preservation of endangered species, responsibility for cultural heritage (historic gardens), public participation and community engagement (citizen science, voluntary nature conservation) as well as circular environmental awareness (the 'Miljøfyrtårn' eco-label).
Level of education	An interactive outdoor learning centre for students at the University of Bergen (UiB), schools and the general public. It facilitates hands-on, intergenerational learning about ecology, plant conservation and the relationship between humans and nature (e.g. through historical crops at the 'Blondehuset').
Political Level	It is embedded in the regional biodiversity and sustainability objectives of the University of Bergen and Vestland County. It fosters collaboration between academic institutions, government forestry and environmental authorities, and civil society groups, and promotes participatory environmental policy.
Scientific Level	A living research collection comprising around 1,800 species for the study of biodiversity, evolutionary botany and the impacts of climate change. A real-world laboratory for transdisciplinary sustainability research (including, amongst other things, as part of the EU/UiB research project CALENDARS, which investigates societal adaptation to changing climatic seasons and phenology).
Relevance to lifelong learning	As a nature and recreation area open free of charge all year round, the Bergen Arboretum enables people of all ages to engage with ecological change on an ongoing basis. It encourages visitors to integrate theoretical knowledge of climate change into their own everyday gardening and environmental practices.

Forest garden Matskogen - Norway

Municipal Initiative for Civil Society



Section	Content
Example	Matskogen på Landås – A community-run urban forest garden (Food Forest / skoghage) on common land, which combines regenerative farming methods for food production (over 100 edible plant species, such as walnuts, wild fruit, perennial vegetables and herbs) with nature conservation and community building.
Location within the project	Bergen (Landås, south-western slope of Mount Ulriken, Western Norway)
Green Competences	Permaculture and regeneration skills (layered cultivation, ground cover, humus formation), knowledge of perennial crops and wild vegetables (e.g. wild garlic, ostrich fern, Heligoland cabbage), expertise in the conservation of pollinator habitats (insect protection), practical skills in the field of regenerative urban ecology, and the ability to organise communal commons initiatives.
Level of education	The woodland garden serves as a demonstration garden and an open 'outdoor classroom' for young and old alike. In addition to practical courses on composting, grafting and seed collection, there is an ongoing partnership with the local grammar school (Langhaugen VGS): pupils carry out biological and chemical soil analyses, identify plants and devise their own school garden designs.
Political Level	What began as an initiative from a civil society network is now organised as an independent association. The municipality of Bergen is providing the land; the City Environment Agency and the municipal agricultural office are supporting the project as a key component of Bergen's green strategies for urban agriculture.
Scientific Level	Real-world laboratory for urban biodiversity. The garden is being scientifically mapped as a habitat for pollinators, and an exceptionally high diversity of insect species has been documented. It also serves as a testing ground for regenerative methods in a humid, temperate coastal climate.
Relevance to lifelong learning	A space for slowing down, where nature sets the pace ('jorden som setter tempoet'). Through intergenerational gardening, cooking at the communal fire pit and running the local seed and plant exchange, sustainability is made tangible, learnable and kept alive in everyday life for everyone in the area.

F'Orti Biblioteca Thouar - Italy

Cultivating gardens and relationships



Section	Content
Example	The first collectively managed urban gardening initiative in Florence, based in the historic cloister of the Pietro Thouar Public Library. Under the motto 'Coltivare Orti e Relazioni' (Cultivating Gardens and Relationships), it combines urban agriculture with social inclusion, culture and environmental education, and collectively looks after the public space.
Location within the project	Florence (San Frediano district, Oltrarno, Tuscany region, Italy) – Cloister of the Pietro Thouar Library (Piazza Torquato Tasso 3) within the historic building complex of the former Leopoldine.
Green Competences	Agroecological and biodiversity skills (organic farming, preservation of local and traditional crop varieties, understanding of natural material cycles), skills for promoting urban biodiversity on a small scale, skills in participation and cooperation, awareness of the commons (Beni Comuni), environmental awareness, and the linking of experiences of nature with cultural work.
Level of education	It brings together culture and cultivation, both physically and symbolically. It serves as a vibrant learning space for all citizens. Surrounded by raised beds, it imparts practical knowledge about agroecology, organic and biodynamic farming, and local crop diversity, supported by educational workshops, readings and seminars.
Political Level	A pioneering model for the civic co-creation of public spaces, based on the municipal regulations governing common goods (Regolamento dei Beni Comuni). The management of the allotments is organised collectively through cooperation agreements. It marks a shift away from the model of individual community gardens towards a purely collective commons structure.
Scientific Level	A real-world laboratory for urban agroecology and participatory plant breeding in the densely built-up, historic city centre. Under the scientific guidance of Rete Semi Rurali, research is being conducted into how the use of traditional, local crop varieties under strictly organic and biodynamic conditions strengthens urban resilience, and how green oases affect the microclimate of historic stone structures. A case study on urban biodiversity and social cohesion.
Relevance to lifelong learning	A meeting place for people of all ages that embeds daily learning within the neighbourhood. Through direct interaction between literary education (library) and practical, eco-friendly gardening, people of all ages gain a deeper understanding of ecological interrelationships and experience collaborative action for a sustainable future as part of everyday urban life.

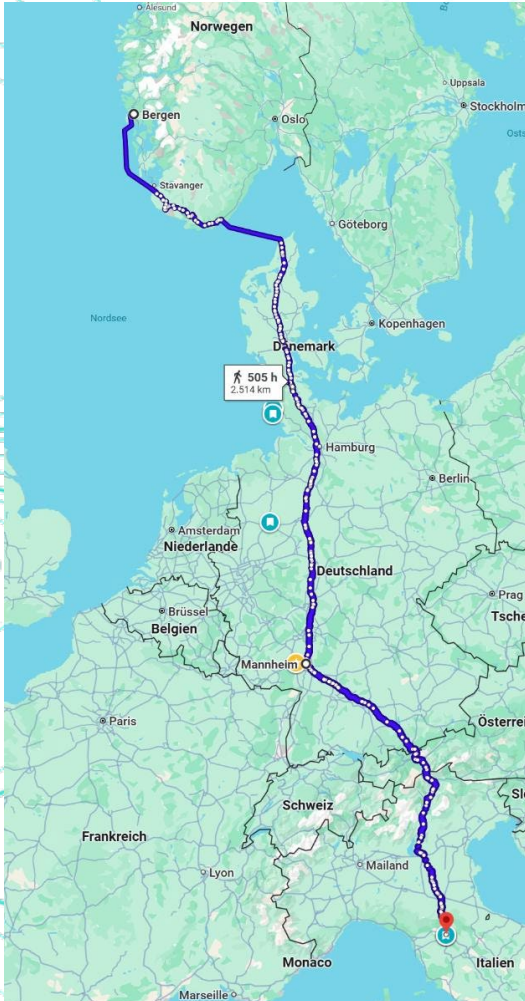
„Paesaggiando“ Gardens Tour - Italy

Guided Tours with a focus on education



Section	Content
Example	“Paesaggiando” Gardens Tour – A series of guided tours, organised by the Società Toscana di Orticoltura and the Rete Semi Rurali, exploring the history of the urban and rural landscapes of Florence and Scandicci, highlighting the social and environmental development of urban green spaces.
Location within the project	Florenz und Scandicci (Region Toskana, Italien) – Route von Florenz (Giardino delle Rose, Rampe del Poggi, San Niccolò, Giardino Bardini, historische Bibliothek der Società) nach Scandicci (Isolotto, Ex-CNR-Park, Orti della Diversità, Casa dell'Agrobiodiversità).
Green Competences	An understanding of history and the landscape (the development of urban green spaces as a cultural substrate), raising awareness of biodiversity and seed conservation, knowledge of botanical species (e.g. rose varieties, historic ornamental plants, crops), awareness of urban space and the environment, and intergenerational communication and participation skills (interaction between residents and visitors).
Level of education	A mobile open-air classroom in an urban setting that combines historic landscape architecture (e.g. the 19th-century Poggi-Piano, the 1950s garden city model) with modern agroecological practices (Orti della Diversità). Suitable for adults, families and tourists, as well as for fostering links between educational institutions.
Political Level	Cooperation between civil society, local government and organisations promoting tourism and culture. This serves as a prime example of sustainable cultural tourism, raising public awareness of the value of green infrastructure, and fostering a holistic approach to integrated urban planning, historic monuments and modern climate action.
Scientific Level	Citizen science and transdisciplinary research into landscape history. Investigation of the ecological evolution of urban green spaces and their value for the urban microclimate and biodiversity. Access to unique historical sources in the Società's specialist library and the Agrobiodiversity Library creates opportunities for research in cultural history, botany and agroecology.
Relevance to lifelong learning	It conveys the realisation that urban landscapes are not static, but adapt dynamically to human and climatic needs. Guided tours, hands-on experiences of nature and interactive elements foster a lasting interest in local gardening, natural history and shared responsibility for the urban environment.

3. The Roadmap: Towards greater 'collective green competence' in 18 months



From 31 December 2024 to 29 June 2026, we will embark on a journey of knowledge exchange that goes far beyond mere meetings.

A1: Knowledge development and transfer: The project partners will align their areas of expertise both in the run-up to the project and throughout its duration, thereby creating a shared foundation.

A2: Exchange week in Germany: Learning from a well-integrated network of various public, official and private approaches and initiatives that bridge the gap between political strategy and responsible civil society action in the Rhine-Neckar metropolitan region. Mannheim (Rhine-Neckar metropolitan region): Pioneering work with ambitious stakeholders, using methods that are often minimally invasive and closely linked to the city's Local Green Deal. This demonstrates how small green oases can positively influence the microclimate of an industrial city.

A3: Exchange week in Norway: A hands-on experience. The programme includes a visit to Matskogen in Landås, drawing inspiration from the Sundt Rooftop Garden, and actively combating invasive species in Austrheim. Bergen (Vestland region): Focus on edible woodland gardens (Matskogen) and the protection of biodiversity through the conservation of native plant and animal populations and the restoration of former timber production areas.

A4: Exchange week in Italy: Focus on evidence. Participants will learn how the success of biodiversity measures in Florence is scientifically verifiable. Representatives from the Società Toscana di Orticoltura will demonstrate how this is put into practice and communicated to the urban population. Florence (Tuscany): Testing nature-based solutions to enhance urban biodiversity within a densely built-up historic urban environment, supported by precise scientific measurements.

A5: Documentation of project results
The results and the underlying process are compiled. The project, with the networks it has established and the experience gained, serves as a basis for further measures, whilst the documented concrete examples serve as inspiration for possible solutions.

4. Green skills, educational formats and transnational added value



A key focus of the project is the definition and promotion of 'green skills'. These encompass not only specialist ecological knowledge, but above all a systemic way of thinking and the 'courage to act' needed to play an active part in the transformation as members of civil society. Starkmacher e.V., as the project lead, also integrates educational methods to empower people – particularly those with limited access to education – to participate in society.



A successful educational format for urban ecology is characterised by three features:

Multi-perspectivity:

The integration of political, scientific and modern educational perspectives enables learners to gain a holistic understanding of systemic interrelationships.



Learning-by-doing methodology (hands-on experience):

By learning through real-world examples such as the Tiny Forest in Mannheim, knowledge is emotionally anchored and barriers to abstraction are broken down.



Transferability (scalability):

The formats are designed in such a way that they can be evaluated and adapted to different local contexts, thereby ensuring European added value.

The collaboration between Bergen, Florence and Mannheim creates a multilateral effect

Through this exchange, climate trends are anticipated and mapped onto future scenarios. For example, Tuscany serves as a 'glimpse into the future' for the Rhine-Neckar metropolitan region, enabling it to take preventive action in response to increasing heatwaves.

The project is closely linked to existing frameworks in order to harness synergies between civil society engagement and urban strategies.

The partners contribute to the multinational framework: Scientific monitoring (Italy):

Provision of measurement methods to verify the effectiveness of nature-based solutions.

Political mandate (Norway):

Integration of ecological transformation into administrative structures and agricultural strategies.

Educational methodology (Germany):

Development of interactive curricula and formats to mobilise the urban community.

5. Description of the three weeks of meetings / Focus on Germany

Focus on Germany: Education and civic participation in Mannheim

In the Rhine-Neckar metropolitan region, the emphasis was on imparting green skills through an educational 'learning-space methodology' and by engaging the urban community. The activities linked innovative approaches to renaturation directly with educational work for sustainable development.

Local Green Deal / IDEAL and the Federal Horticultural Show: these initiatives bring together concrete agreements between politicians, academia and the public in an engaging way.

Projects such as the Luisenpark Green School, Peer 23, the 'Ecological Teaching Garden' and 'Bee Friendly' promote urban biodiversity and offer practical, accessible opportunities for participation to work together to make Mannheim greener and healthier.



rem Museum / CEZA Lab: By combining palaeoclimate research with modern climate measurements, a link is forged between Earth's history and current climate adaptation. This site serves as a scientific knowledge hub to provide historical and measurable evidence for the need for resilient urban structures.

Tiny Forest (Mannheim): This planted mini-forest serves as a highly concentrated learning space. As a community-led initiative, it functions as an 'open-air classroom' that makes ecological complexity tangible for schools and neighbourhoods within a very small space, whilst strengthening local self-efficacy.

Transdisciplinary communication and imaginative learning spaces are crucial for translating abstract climate targets into concrete educational formats that promote direct civic action.



EduNate Cities: A European collaboration for climate action

5. Description of the three weeks of meetings / Focus on Norway



Focus on Norway: Practical nature management brings the concept to life in Vestland

In the Vestland region, concepts of ecological transition have been made tangible through a specific 'learning site methodology'. The activities demonstrate the transition from purely commercial forestry to biodiverse systems.

Forest gardens (Matskogen på Landås): This project in Bergen serves as a real-world laboratory for social farming. It enables the transfer of knowledge about edible forest ecosystems and natural management directly into the local community, thereby strengthening local self-efficacy.

Invasive species in Austrheim: Here, the issue of biological invasions was addressed. The targeted removal of species such as the hemlock (*Tsuga heterophylla*) and the Sitka spruce (*Picea sitchensis*) is essential to create space for native, resilient plant communities.

Biodiversity at the Arboretum (Milde): As a facility of the University of Bergen, this site combines forestry research with public education. It serves as a central knowledge hub for communicating complex forest ecology.

Committed initiatives and a meaningful integration of activities are essential for building expertise, for activities that complement and inspire one another, and for tangible, long-term measures.





EduNate Cities: A European collaboration for climate action

5. Description of the three weeks of meetings / Focus on Italy



Focus on Italy: Scientific evidence builds trust in Florence

In the Tuscany region, concepts of urban resilience are being brought to life through a rigorous scientific approach and the monitoring of nature-based solutions (NBS). These activities have demonstrated how ecological data forms the basis for quality of life in urban areas.

Florence pilot project (Fondazione Capellino): In this real-world laboratory, nature-based solutions are being implemented to reduce heat and promote biodiversity. The effectiveness of green infrastructure is scientifically validated through rigorous ex-ante and ex-post measurements of variables such as CO₂ sequestration and air and soil quality.

F'Orti Thouar (community gardens): These gardens, spread across five city districts, promote social interaction

and ecological practices. They serve as learning spaces for 'Custodi del verde' (Guardians of the Green), where people in neighbourhoods actively contribute to urban biodiversity through workshops such as building bamboo structures or making 'seed bombs'.

Botanical Garden (Florence): As an institution of high scientific value, this site combines botanical conservation with public education. It acts as a central hub for communicating knowledge about plants and the importance of biodiversity within the historic urban context.

Scientific evidence builds trust in sustainable, forward-looking solutions across all scales. This, in turn, helps to motivate and empower urban communities to protect ecosystems, biospheres and, quite specifically, their own living environments.



6. Green cities of the future / Conclusion and outlook

Three overlapping images of green leaves, tilted at different angles, positioned on the left side of the slide.

EduNate Cities is a pioneering funding project; it demonstrates that we are not alone and powerless in the face of the climate crisis in our cities. By combining robust scientific evidence with political will and educational measures, we not only share the responsibility for our future amongst many, but also arrive at holistic solutions.

Key message for civil society: Urban ecology means bringing nature back into our living spaces as a response to the climate crisis. By building 'green skills', people develop the personal capacity to play an active role in shaping their city.

Sustainability is not just a topic for experts, but a form of social participation that makes our cities liveable and sustainable for the future.

This documentation of the project results serves as a basis and aims to raise awareness of interdisciplinary collaboration and holistic approaches to environmental and climate protection in an urban context.

The consortium wishes to provide impetus for successful renaturation, which both it and other organisations can draw upon to tackle climate and environmental protection in other European cities.

Furthermore, in the spirit of lifelong learning, the project aims to raise awareness amongst civil society in a sustainable manner and to motivate people to play an active role in shaping the future. The transformation towards climate-resilient cities is not a one-off process, but a collective endeavour based on continuous knowledge-building and cross-sectoral cooperation.

'EduNate Cities' demonstrates that open-ended networking, respectful dialogue and European cooperation are effective measures for climate and environmental protection in our cities.

Thanks to the people, institutions and partnerships



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