

URBACT IV

BiodiverCity

Community-based approaches to foster
urban biodiversity

SIENA - INTEGRATED ACTION PLAN

2023 - 2025



(Source: freepick)



Co-funded by
the European Union
Interreg



COMUNE
DI SIENA



Project: URBACT BiodiverCity – Community-based approaches to foster urban biodiversity

Publisher: Municipality of Siena

Year: 2025

Edited by

Municipality of Siena

In collaboration with

URBACT Local Group (ULG)

Contributors

Elena Dionori

Mariapiera Forgione

*Siena has always been a city where nature, culture, and community live in close harmony. This Integrated Action Plan represents the continuation of that dialogue — **a collective effort to make biodiversity not only a goal, but a shared way of living our city.***

Over the past years, Siena has taken important steps toward an ecological transition rooted in participation and care: from the ConVerSi strategy to the Green Regulation, from BiodiverCity to the European Green Leaf Award 2027. Each of these milestones has helped us recognise that sustainability cannot be achieved by institutions alone. It must grow from the daily gestures of citizens, associations, schools, neighbourhoods, and especially from the contribution of the Contrade — a Siena unique community-based neighborhood model.

*The BiodiverCity process has also shown the strength of collaboration within Siena's Local Group, composed of associations, universities, cultural institutions, schools, environmental organisations, and active citizens. This network did not simply participate; it helped shape a shared vision, linking scientific knowledge, civic values, and practical care for our green spaces. **Together with the Contrade, this community of expertise and commitment represents a powerful partner for the Municipality — a long-term interlocutor capable of supporting future planning, implementation, and innovation.***

*This IAP is therefore not a conclusion, but a foundation. It will guide the future **Municipal Green Plan**, which will bring together policies, regulations, and community stewardship into a coherent long-term strategy for Siena's green spaces. Within the broader vision opened by the **European Green Leaf 2027**, this strategy will shape how we protect and enhance nature in our city, how we promote pollinator-friendly practices, and how we design public spaces that support health, biodiversity, and everyday wellbeing.*

As Councillor for Environment, I am proud of the community that made this possible. Siena's future — greener, healthier, and more inclusive — will be built through the same spirit of cooperation that has defined our past, and that today guides us toward a shared environmental legacy for the next generations.

Barbara Magi

Councillor for Environment, Urban Decorum and Green Area Maintenance
City of Siena

1. Executive Summary	11
2. Introduction	14
2.1 About URBACT Programme	14
2.2 About BiodiverCity network	15
2.3 Siena and its participation in BiodiverCity Network	18
2.4 Why an Integrated Action Plan?	22
2.5 The role of key stakeholders in IAP development	24
2.5.1 From Siena BiodiverCity project to URBACT BiodiverCity	26
3. Context, needs, and vision	29
3.1 Setting the scene: nature, culture and civic traditions in Siena	29
3.2 Local diagnostic and challenges	31
3.3.1 Nature-based Solutions in Siena	32
3.3.2 Main Challenges	34
3.4 SWOT Analysis	37
3.5 Towards an integrated ecological vision for Siena	38
4. Overall logic and integrated approach	39
4.1 Links to wider strategies	39
4.2 Strategic objective set for the IAP under the main objective	42
4.3 Intervention areas	43
4.4 List of actions	44
4.5 Key dimensions of integration	45
4.6 URBACT cross-cutting themes and transnational learning	48
4.6.1 Digital transformation: making biodiversity visible and accessible	48
4.6.2 Gender-equal policy-making: designing for inclusion and care	49
4.6.3 Integration across dimensions	50
4.7 How the testing actions support the action planning process	53
5. Action Planning details	54
5.1 Action Planning Tables	54
6. Implementation Framework	60
6.1 The governance mechanisms, the processes and the body responsible for implementing the IAP	60
6.2 The participatory approach after the project closure	61
6.3 Funding approach	61

6.4 Timeline	62
6.5 Monitoring and performance indicators	65
6.5.1 Multi-layered Monitoring Framework	65
6.5.2. Key Indicators	66
6.6 Risk Management	67
7. Conclusion	69
7.1 Communication and dissemination IAP	70
7.2 Ensuring Continuity and Long-Term Ownership	71
7.3 Contact details	72

1. Executive Summary

In an era of growing urban pressure and accelerating climate change, cities like Siena must find solutions that address environmental, social, and economic challenges in an integrated way. Urban biodiversity — often perceived as a marginal or luxury concern — is increasingly recognised as a strategic lever for building more resilient, inclusive, and liveable cities.

This Integrated Action Plan (IAP) was developed as part of the **URBACT BiodiverCity network**, and sets out Siena's roadmap for transforming its fragmented **green valley system** into a coherent, accessible, and vibrant ecological infrastructure. The goal is to place biodiversity and nature-based solutions (NbS) at the heart of urban development, while also reinforcing local identity, heritage, community wellbeing, and climate resilience.

Although Siena has launched several environmental initiatives and projects in recent years, this IAP represents a step forward: **a shared, strategic framework** that unifies different efforts through an integrated and participatory approach. The valleys — natural corridors cutting through the historic city and connecting it to the rural landscape — are central to this vision. Despite their ecological and cultural richness, they remain disconnected from everyday life and urban policy. The plan is therefore guided by the principle of *ecolocalism*¹ — valuing local ecosystems, knowledge, and communities as the foundation for a sustainable and place-based urban transition.

The **core challenge** lies not only in ecological fragmentation, but in the absence of a systemic governance approach that recognises the valleys and the green corridors as a collective resource. Through the BiodiverCity process, this gap was addressed with a place-based, participatory strategy

¹ Eco-localism is an environmental approach that prioritizes the protection of local ecosystems and biodiversity. It supports sustainable land use, promotes eco-friendly agricultural practices, and values the stewardship of local natural resources as key to long-term ecological balance and community well-being.

that brought together institutions, associations, Contrade², researchers, schools, and citizens around a common vision.

The plan identifies three Strategic Intervention Areas:

- **Biodiversity knowledge and practices** – supporting citizen science, monitoring and ecological education;
- **Community engagement and communication** – building shared responsibility and public awareness;
- **Policy integration and infrastructure** – embedding biodiversity in local regulations and expanding green corridors.

This Integrated Action Plan embedding biodiversity into municipal planning tools, from the new Green Regulation³ approved in May 2025, to the city's upcoming Green Plan.

Siena's IAP is not a static blueprint. It is a living framework, designed to evolve with community input and local context. The plan's long-term success will depend on continued collaboration, clear governance, adequate funding, and a shared belief that nature in the city is not just an amenity, but a common good worth protecting — together.

The Plan also builds on and complements Siena's broader sustainability trajectory, particularly the **ConVerSi – Connessioni Verdi Siena** strategy and the city's forthcoming initiatives linked to the **European Green Leaf 2027**. From 2025 onwards, Siena will also take part in the European project **BUZZ LIFE – Integrated actions to safeguard pollinators in urban and peri-urban areas**. This pilot initiative contributes to the implementation of the **New Deal for Pollinators** and aims to reverse the alarming decline of insects that ensure food security, human health, ecosystem functions, and urban well-being. Siena is one of the Italian partner cities and will play a strategic role in testing urban biodiversity governance actions with a strong social component.

² In Siena, the *Contrade* are the city's historic districts — traditional community units that date back to the Middle Ages. Each *Contrada* has its own identity, emblem, colors, and social life, representing a strong sense of belonging and civic pride. Beyond their well-known role in organizing the *Palio di Siena* horse race, the *Contrade* play a vital social and cultural function, maintaining intergenerational ties, local traditions, and community solidarity within the urban fabric. Their role in shaping Siena's social cohesion and participatory culture is explored in more detail in **Section 2.3**

³ Indicazione con link al Regolamento del Verde sul sito



Co-funded by
the European Union
Interreg



COMUNE
DI SIENA



Together, these frameworks provide coherence between planning, governance, and community action — ensuring that Siena's ecological transition is rooted in both long-term institutional vision and active civic participation.

2. Introduction

2.1 About URBACT Programme

URBACT is a European Territorial Cooperation programme that has been promoting sustainable urban development since 2002. It provides a framework for cities to work together, exchange knowledge, and develop practical solutions to urban challenges.

The program promotes **sustainable urban development** by supporting cities in implementing both horizontal and vertical policy integration. It encourages cities to re-think centralised governance structures and shift towards more inclusive and holistic models. Its **integrated and participatory approach** recognises that sustainable urban development is driven by action-oriented strategies, which are co-created and implemented with local people.

Action Planning Networks (APNs) are a fundamental component of URBACT's approach to sustainable urban development. They bring together cities facing similar urban challenges to jointly develop Integrated Action Plans through mutual learning, local stakeholder engagement, and peer exchange. Each city adapts the shared knowledge to its own local context, creating tailor-made strategies that contribute to long-term urban sustainability. Through its APNs, URBACT facilitates European territorial cooperation, fostering knowledge-sharing, policy learning, and participatory governance to address complex urban challenges.

BioverCity is an Action Planning Network made up of ten cities committed to developing community-driven strategies to enhance urban biodiversity. Running from July 2023 to December 2025, the project embraces the principles of sustainable urban development and an integrated and participatory approach, ensuring that urban development policies are both cross-sectoral and inclusive of local communities and key stakeholders.

BiodiverCity partners collaborate to design community-based methods to valorise, measure and account urban biodiversity, ecosystem services and NBS.

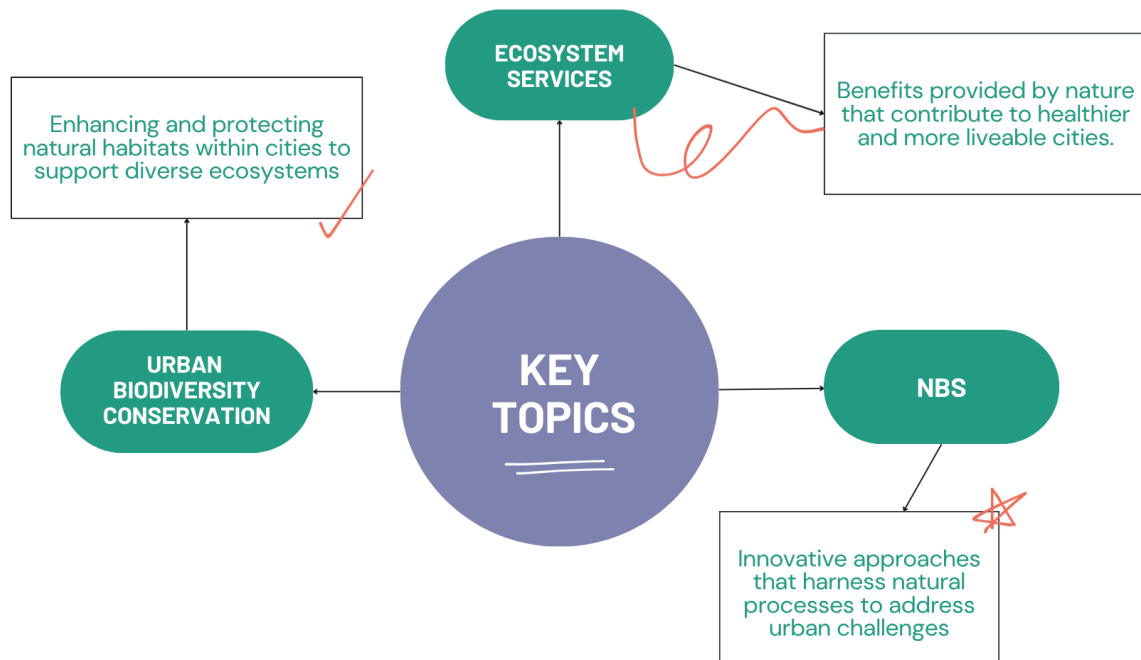
By fostering a renewed connection between people and nature in urban environments, the project **reimagines the relationship between city life and green spaces**.



The network empowers local communities to plan effective NbS, encourages environmentally responsible behaviors among citizens, and supports the development of Urban Greening Plans, contributing to the goals of the EU Biodiversity Strategy. Together, they contribute to a broader transnational learning and innovation process, helping to shape and **refine European models** for biodiversity integration in urban contexts.

2.2 About BiodiverCity network

BiodiverCity is a thematic network that explores how cities can integrate urban biodiversity, ecosystem services, and NbS into their planning and governance. It aims to **enhance the role of biodiversity in urban environments**, not only for environmental sustainability but also for improving citizens' well-being and fostering climate resilience.



The BiodiverCity network is **a vibrant community of European cities**, each bringing its own story, landscape, and approach to the relationship between nature and urban life. From the historic centre of Guimarães to the community-driven initiatives of Limerick and the evolving urban fabric of the Balkans, this transnational partnership reflects the rich diversity of Europe itself. United by a common goal – **to reintegrate biodiversity into the fabric of everyday urban living** – the network collaborates across borders. Exchanging ideas, experiences, and solutions, it creates a space where diverse experiences and ideas converge, helping each city to reimagine its future through the lens of biodiversity.

Lead Partner:

Dunaújváros – Hungary

Project Partners:

- Vratsa – Bulgaria
- Veszprém – Hungary
- Poljčane – Slovenia
- Guimarães – Portugal
- Cieza – Spain
- Limerick – Ireland
- 's-Hertogenbosch – Netherlands
- Sarajevo – Bosnia and Herzegovina
- Siena – Italy



2.3 Siena and its participation in BiodiverCity Network

Siena is an historic medieval city in central Tuscany, internationally renowned for its architecture, rich artistic heritage, and vibrant cultural traditions.

With around 54,000 inhabitants, it serves as a dynamic economic and cultural hub for the entire province, welcoming daily commuters from surrounding towns and university students from across the country.

Its rich artistic and civic traditions, academic life, and deeply rooted local identity make it a city where history and innovation coexist.

Designated a **UNESCO World Heritage Site** in 1995, Siena is uniquely situated atop hills and encircled by ancient walls that have helped preserve not only its built environment but also its ecological character. Thanks to centuries of wise urban planning (*Piano Piccinato*)⁴, particularly a restrained approach to expansion, the historic centre and the inner valleys within the walls have been carefully preserved.

The existence of green valleys is one of the most unique and defining features of Siena's landscape. Over 40% of the city area (amounting to about 72 hectares) is covered by those, which serve as natural corridors that extend from outside the wall into the city's heart.

The valleys are not only ecological assets but also cultural ones, forming a physical and symbolic continuation of the vision depicted in **Ambrogio Lorenzetti's "Allegory of Good Government" (1338–1339)**, one of the earliest and most powerful visual representations of the link between good governance, civic responsibility, and the well-being of both city and countryside.

⁴The *Piano Piccinato* refers to Siena's post-war urban development plan, drafted in 1956 by the architect **Luigi Piccinato**. It represented one of the first modern attempts to guide the city's growth while preserving its historical identity and landscape integrity. The plan introduced a visionary concept of urban balance between the historic centre, the surrounding valleys, and new residential areas, laying the groundwork for sustainable urban planning principles that continue to influence Siena's development today.



What can be seen in that 14th-century fresco remained largely unchanged until the mid-20th century, when these valleys – once actively cultivated with gardens, orchards, and small livestock farms – began to be abandoned. In recent years, however, there has been a renewed effort to recover and revalue these spaces, exploring new forms of multifunctionality that blend ecological, educational, cultural, and recreational uses. Today, they represent a historic model of **sustainable urban-rural integration** that continues to guide Siena's approach to environmental stewardship.

Siena's deep-rooted traditions and strong community ties are centered around its 17 Contrade. These neighborhood-based institutions not only preserve **local identity and social cohesion** but also play an active role in the care of public spaces and shared heritage. The historical districts divide the city and form the foundation of its civic life.

Far more than administrative or territorial units, the Contrade are deeply rooted community organizations, each with its own traditions. They play a central role in the life of residents from birth to old age, creating a strong sense of identity, belonging, and mutual support.

The most visible expression of the Contrade's vitality is the Palio, the world-famous horse race held twice a year in Piazza del Campo. But

beyond the Palio, the Contrade play an essential role in the social welfare, education, and cultural life of the city, offering spaces for gathering, learning, volunteering, and organizing public events.

Many Contrade are also actively engaged in the care of urban green spaces, including gardens and parts of the green valleys, contributing in tangible ways to the preservation and enhancement of Siena's natural heritage.



This unique model of community-based governance fosters a deep sense of responsibility for the common goods.

Siena has indeed become a national leader in **environmental initiatives**. In 2015, the Province of Siena achieved certification as a **carbon-neutral area (ISO 14064)** (<https://www.carbonneutralsiena.it/en/>), thanks to a research group who monitored data of the city and its province. In 2017 the city decided to create the **Alliance Carbon Neutrality**, an organism composed by many public and private entities (the biggest in Europe) aimed at maintaining the status. Since that, the Alliance makes a monitoring every year, and aligns its goals with the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC).

In 2021, Siena was awarded the third prize in the **Urban Award** (5th edition), in recognition of its project *Strade di Siena*, involving 32 municipalities and 15 associations to promote sustainable mobility, cycling itineraries, bike-friendly infrastructure, and networked services.

In 2023 Siena became the first city in Italy to be certified as a **sustainable tourism destination** under the Global Sustainable Tourism Council (GSTC) Destination standard. This milestone reflects years of strategic planning and operational action aimed at balancing tourism with the preservation of quality of life for residents and protection of natural and cultural assets.

Over the years, Siena has also joined various European and national projects on sustainability, among which **URBiNAT (Horizon 2020)** (<https://urbinat.eu/cities/siena/>) stands out as a key initiative, focusing on regeneration and connectivity. In 2022, the city co-designed a Healthy Corridor in the Ravacciano neighbourhood, enhancing ecological connectivity and community cohesion. Community-managed areas like the **San Miniato Community Gardens** have flourished under Siena's participation in the regional "100mila orti in Toscana" initiative. These projects have not only increased vegetated surfaces but have also made green areas more inclusive, multifunctional, and ecologically resilient. Busseto Valley was expanded as part of the **"Rigenerar_SI"** initiative, tripling its area to serve as a key urban woodland for carbon capture, biodiversity and recreation.



Similar multifunctional uses were promoted in the **Ravacciano Community Gardens**, where gardens, orchards, and bee habitats were introduced. Projects such as “*Siena BiodiverCity*” and “*X-PolliNation*” engage citizens and students in urban biodiversity observation and monitoring, contributing directly to the EU Biodiversity Strategy for 2030 and the Birds and Habitats Directives.

The city’s dedication to green spaces, eco-tourism, and community-driven environmental initiatives made it a natural fit for the BiodiverCity network. Recognizing the value of its unique ecological assets, the Municipality has sought to further its role as a model of urban environmental stewardship. Siena’s participation in the URBACT BiodiverCity network reflects its commitment to fostering a sustainable urban environment that values the integration of nature into the fabric of the city.

The network has offered a strategic opportunity for Siena to enhance and systematize efforts already underway, ensuring that **the historical balance between people, city, and nature** continues to inspire a sustainable and resilient urban future. By participating in the network, Siena offers a distinctive perspective on how NbS can be integrated not only through planning and policy, but also through culture, identity, and collective action. As one of the ten cities in the BiodiverCity network, it brings a unique contribution rooted in its **centuries-old civic model**, where strong social cohesion and a shared sense of responsibility for the common good are central to urban life.

2.4 Why an Integrated Action Plan?

In line with the URBACT method, each partner city is called to develop a Local Integrated Action Plan (IAP), tailored to its specific context, needs and challenges, and harmonised with broader EU policies on sustainability, climate adaptation, and social innovation.

In Siena, the IAP was developed through a **participatory process**, rooted in the belief that effective urban biodiversity strategies must be co-designed with local communities and stakeholders. The **methodology** adopted combined structured stakeholder engagement, collaborative workshops, and ongoing consultation. Participatory processes not only ensure that local needs and knowledge are integrated into policy decisions but also foster a sense of **shared responsibility**.

Siena's established culture of commons governance – among the first in Italy to formally recognize and support citizen co-management of public goods under frameworks like the *Labsus* model⁵ – provided fertile ground for this approach. This experience helped create **an IAP that is both technically sound and socially anchored**. Through transnational meetings and exchanges with other European cities, Siena has also benefited from knowledge-sharing and best practices, further enriching the IAP development process. The integration of local experiences with international expertise has reinforced the city's commitment to innovative community-driven strategies for biodiversity. Regular meetings provided valuable opportunities for mutual learning and exchange.

Throughout this process, the **URBACT Local Group (ULG)** played a central role in designing and developing the IAP. It was actively engaged through thematic working groups, collaborative sessions, and iterative feedback loops — not only providing input and feedback, but also contributing to the drafting of key sections.

⁵ <https://www.labsus.org/cose-il-regolamento-per-lamministrazione-condivisa-dei-beni-comuni/>

2.5 The role of key stakeholders in IAP development



In line with the URBACT method, the development of this Integrated Action Plan was supported by the **URBACT Local Group (ULG)** and designed around the principles of the “*quadruple helix*” model – bringing together public institutions, the research and academic sector, civil society, and private or third-sector actors.

The Municipality of Siena played a pivotal role in launching the process, promoting the creation of the ULG and fostering dialogue between stakeholders. The ULG was established to create an **open, collaborative space** in which diverse key local stakeholders could co-create solutions, share knowledge, and reflect on the integration of biodiversity into urban planning and governance.

Over the past decade, a participatory process has nurtured a network of local and national actors now active in the ULG. The group built upon an existing network of collaborations developed through previous projects related to NbS, common governance, and environmental education. These initiatives have laid the groundwork for a structured and strategic engagement process under the BiodiverCity framework, ensuring that past experiences inform future policies and actions.

The group was formed through an open call to the entire city. After an initial mapping phase, around 30 participants began meeting regularly, gradually consolidating into **a committed core group of approximately 10 entities** – each bringing valuable skills, perspectives, and long-standing engagement with the local territory.

This convergence of competences made the ULG particularly effective.

The group includes environmental NGOs with practical experience in managing green spaces, academic researchers contributing scientific and methodological expertise and cultural institutions offering tools for communication and outreach.

The diversity of profiles allowed for an integrated **approach**, where ecological, social, cultural, and educational dimensions were addressed in an integrated and coherent way. The spirit of the group has been marked by openness, curiosity, and a strong willingness to collaborate – creating a fertile ground for mutual learning.

The **local coordination** has been entrusted to **MUSNAF (Accademia dei Fisiocritici Natural History Museum⁶)**.

Throughout the process, MUSNAF has served not only as coordinator, but



also as a stable institutional anchor – offering both scientific credibility and continuity. The group worked on defining local priorities, selecting relevant case studies, and shaping concrete actions. This ensured that the plan truly reflects the diverse perspectives and expertise of its members, and that proposed actions are both feasible and locally relevant. They also concretely contribute to develop guidelines for meadows practices and pollinators in urban areas. (Annex 1 and Annex 2 of this document).

⁶ MUSNAF is a scientific and cultural institution with over two centuries of experience in natural sciences, and deep roots in the academic and civic life of Siena. Founded in the late 18th century as the expression of the historic *Accademia dei Fisiocritici* (established in 1691), MUSNAF today represents a reference point in the city for environmental research, scientific dissemination, and citizen engagement in biodiversity conservation.

2.5.1 From “Siena BiodiverCity” project to URBACT BiodiverCity

In 2022, MUSNAF also led the launch of the **“Siena BiodiverCity”** project (<https://www.museostorianaturalesiena.it/partecipa/siena-biodivercity/>), a public outreach, education, and research initiative dedicated to urban biodiversity through *citizen science*. Its activities – such as the “BioBlitz”, “BiodiverCity Operations”, workshops, training sessions and the “Biodiversity Help Desk” – aim to actively involve citizens in the monitoring and conservation of urban biodiversity. These actions foster a stronger connection between citizens and their environment while generating valuable data for scientific research. By promoting a culture of shared responsibility and encouraging hands-on citizen participation, MUSNAF supports the vision of a “*biodiverse city*” where ecological awareness is embedded in everyday life. As the modern expression of Siena’s historic scientific academy, it represents a unique combination of heritage, research, and civic engagement.

This approach, rooted in local knowledge and collective action, ensures that biodiversity is not only preserved but thrives as an integral part of the city's sustainable development.



The experience gained through “Siena BiodiverCity” provided a solid foundation for the development of the URBACT BiodiverCity project, extending its principles and methods to a broader European context. To highlight this continuity and shared vision, MUSNAF authorized the use of its logo within the URBACT framework, reinforcing the link between the two initiatives and ensuring that the original spirit of citizen-driven biodiversity action remains central.



TABLE 1 - ULG stakeholders' list

Category	Stakeholder Name	Role	Key contribution
<u>Institutional actor</u>	Siena Municipality	Local government coordination	Policy-making, strategic planning, and resource allocation
<u>Institutional actor</u>	Carabinieri - Department Biodiversity Siena	Environmental protection and biodiversity conservation	Monitoring and enforcement of conservation regulations
<u>Academic sector</u>	Siena University (UniSi)	Scientific research and innovation	Biodiversity studies, sustainable urban planning
<u>non profit and academic sector</u>	Fisiocritici Natural History museum	Natural history and scientific dissemination	Research and public awareness on biodiversity
<u>Academic sector</u>	Botanical museum and garden	Scientific research and innovation	Education and biodiversity conservation
<u>civil society sector</u>	Orto degli studenti e delle studentesse	Students community urban garden	Hands-on biodiversity learning for students
<u>non profit sector</u>	Legambiente Siena	Ecological preservation and advocacy	Awareness campaigns, conservation efforts
<u>non profit sector</u>	WWF Siena	Biodiversity protection and habitat restoration	Environmental monitoring and policy recommendations
<u>Institutional actor/academic and non profit sector</u>	Alleanza Territoriale Carbon Neutrality Siena	promote climate action and carbon neutrality strategies	Developing policies for sustainable urban planning

Category	Stakeholder Name	Role	Key contribution
<u>non profit sector</u>	Siena Art Institute	Art and sustainability integration	Creative projects linking art, nature, and community
<u>profit sector</u>	Vernice Progetti culturali	Cultural education /Carbon Neutral Alliance coordinator	Organizing interdisciplinary projects on sustainability
<u>non profit sector</u>	Le Mura	Heritage conservation and ecological restoration	Urban green space restoration and cultural heritage
<u>non profit sector (with business purpose)</u>	Orto de' Pecci / La Proposta	Social and environmental sustainability	Community gardens, sustainable agriculture initiatives
<u>non profit sector</u>	ATS Boschetto San Miniato	Community-led green space project	Biodiversity conservation and local engagement
<u>non profit sector</u>	Pro+	Social innovation and community engagement	Environmental and cultural projects
<u>non profit sector</u>	Officina Solidale	Sustainability and social inclusion	Circular economy and community-based initiatives
<u>Educational Institutions</u>	Istituto Tecnico Agrario B.Ricasoli	Agricultural education and sustainability	Ecological farming and biodiversity focused
<u>non profit sector</u>	Ass. La Diana	education and cultural heritage of "Bottini" (Medieval aqueducts)	Conservation of cultural heritage

*Through this broad and diverse network of stakeholders, including the **Contrade** actively involved in the ULG activities, BiodiverCity embodies a truly interdisciplinary effort to promote biodiversity and sustainability while safeguarding Siena's historical and cultural identity.*

The participatory process underlying the ULG is aligned with a broader governance model of Siena, which emphasizes shared stewardship of common goods and citizen-led environmental initiatives. By leveraging existing collaborations and fostering new synergies, the ULG facilitates the exchange of best practices and raises public awareness of biodiversity conservation. In this way, the existing network expands and begins to communicate more systematically to give strength to a more cohesive group. **This ULG is not only a technical working group, but a reflection of Siena's civic identity** – a living laboratory where institutions, citizens, and knowledge holders co-create the city's future. Its work in the framework of BiodiverCity represents an innovative model of territorial governance, capable of integrating biodiversity into urban life in ways that are both effective and deeply rooted in local values.

3. Context, needs, and vision

3.1 Setting the scene: nature, culture and civic traditions in Siena

Siena's identity has always been defined by the balance between **nature, culture, and civic life**. Enclosed within its medieval walls, the city is surrounded by a system of green valleys that extend from the historic centre toward the countryside. These green valleys form a living ecological infrastructure that links urban and rural spaces, preserving a centuries-old harmony between people and landscape.

This connection is not only environmental but also cultural. The vision of balance between good governance and nature — powerfully depicted in Ambrogio Lorenzetti's *Allegory of Good Government* — still guides Siena's approach to sustainability today. The city's strong sense of community, embodied by the Contrade, reinforces this model: 17 historic districts that foster participation, solidarity, and care for shared spaces, often taking part in the maintenance and education around green areas.

Building on these traditions, Siena offers fertile ground for the URBACT BiodiverCity approach. The city's Integrated Action Plan (IAP) builds on this legacy, using it as a foundation for a coherent strategy that connects **biodiversity, heritage, and community wellbeing**, making nature an integral part of Siena's future urban life.

To translate these principles into action, the following **baseline indicators** provide an overview of Siena's current ecological and community landscape. They highlight the city's existing assets — from extensive green areas and community gardens to citizen-led projects and public engagement — which form the foundation for the Integrated Action Plan and its future development.

TABLE 2 - BASELINE INDICATORS

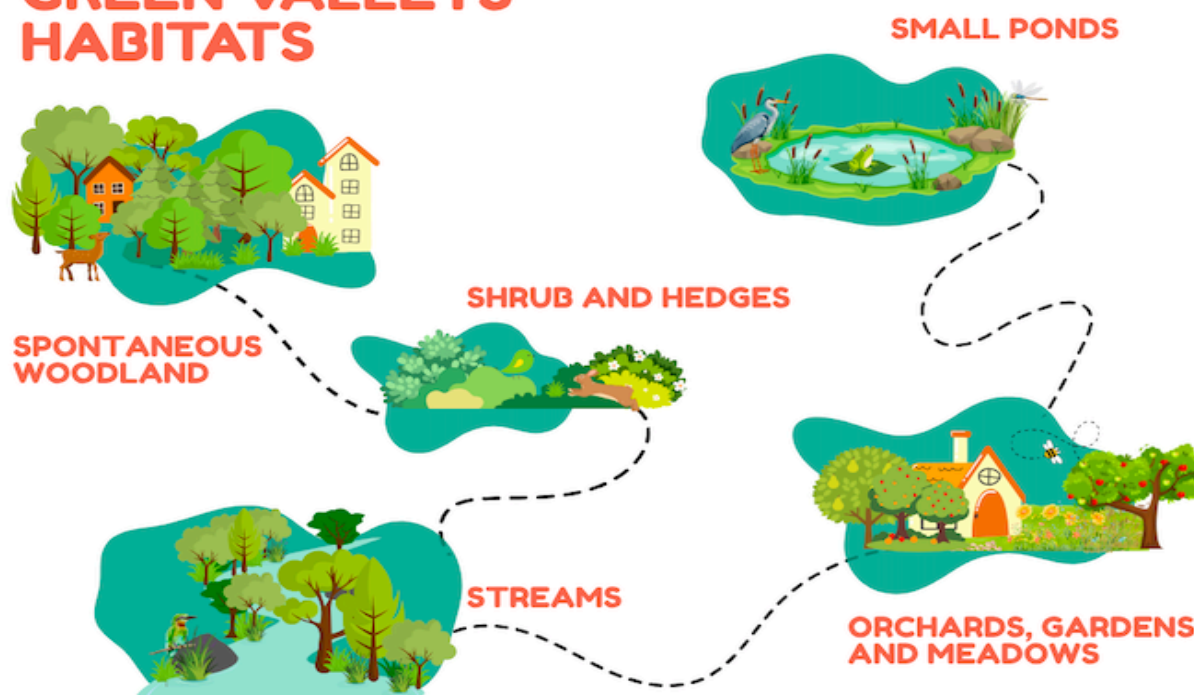
Indicator	Value / Status	Notes
% of urban area covered by green spaces	~40%	Including urban valleys, parks, gardens
Total area of urban valleys	~72 hectares	Partially naturalized, partially cultivated
Number of active community gardens	5+	Managed by a student group and organizations
NbS projects implemented since 2020	~15	Including school greening, ecological restoration, and citizen-led projects
Biodiversity monitoring system	Partial	Led by MUSNAF and University
Public engagement events (2022–2025)	30+	BioBlitzes, workshops, participatory walks, talks, meetings
Institutional biodiversity strategy	Not yet available	To be proposed as an output of the IAP
Contrade involved in green care	7 out of 17	Activities include meadows maintenance and environmental education
Biodiversity index	Not yet available	To be proposed

3.2 Local diagnostic and challenges

Siena's ecological landscape is deeply intertwined with its cultural and urban history. The city and its surroundings host a mosaic of habitats that support **remarkable biodiversity** — from forested hills and agricultural terraces to the network of green valleys that penetrate the historic centre. Among the most valuable protected areas near the city are the “Montagnola Senese” Natura 2000 site (IT5190003) and the “Montecellesi State Reserve”, both recognized at European and national levels for their ecological significance.

Within the municipal territory, land use reflects a **balanced coexistence** between urban development, agriculture, and natural ecosystems: artificial surfaces cover only 14.7% of the area, while agricultural land accounts for 63.2% and forests and natural areas 21.6%. Inside the city, more than 40% of the surface consists of green or semi-natural spaces — including around 72 hectares of urban green valleys that connect the walled city to the surrounding countryside.

GREEN VALLEYS HABITATS



The valleys — still fragmented and unevenly managed — have progressively evolved into a mosaic of semi-natural spaces and became a defining feature of Siena's urban landscape — both ecologically and culturally. They remain largely unconnected and often excluded from strategic planning, suffering from invasive species, poor maintenance and limited accessibility. Some of these areas currently serve as settings for social and environmental initiatives.

The valleys descend from the historic centre toward the countryside and already function **as ecological corridors** connecting natural and built environments. Partially rewilded and partially cultivated, they host a mosaic of habitats — a living example of how biodiversity and urban life can coexist. Beyond the walls, olive groves, vineyards, and woodland patches maintain ecological continuity and extend Siena's green infrastructure into the wider landscape. Even though many of these areas are not formally protected, they act as **informal biodiversity refuges**, providing habitat for numerous plant and animal species and contributing to climate regulation, soil stability, and scenic quality.

3.2.1 Nature-based Solutions in Siena

Siena has implemented various NbS, encompassing both environmental and social initiatives. Some notable examples include:

- **Reforestation and urban forest conservation** such as the *Bosco di Busseto* in the Buongoverno Valley, the *Giardino Nascosto* in the Pavone Valley and *Boschetto di San Miniato*, support microclimate regulation and air quality
- **Wetland restoration and conservation**, particularly in *Valle del Buongoverno*, play a key role in rainwater management and biodiversity preservation
- **Urban agriculture and social gardens**, including *La Proposta* (Orto de' Pecci), *Orto Mangione*, and *community gardens in San Miniato and Ravacciano*, foster social inclusion, food autonomy, and sustainable land stewardship.
- **Community green spaces and active participation**, such as the *Orto degli Studenti* at the University of Siena and *Orto Aperto* in

Pavone Valley, merge educational objectives with environmental care and promote intergenerational learning.

- **Environmental education and awareness programs**, including *Comunità Educante del Buongoverno*, involve NGOs, schools, and citizens in hands-on activities, linking urban regeneration with biodiversity education and the planning of “Healthy Corridors.”
- **Community bread house**, at *The Point* (Siena Art Institute) it encourages community participation through traditional bread-making, strengthens local identity, and fosters intergenerational knowledge transfer. Moreover, it promotes sustainable food practices, such as using ancient local grain varieties to support biodiversity.
- **Wood structure** in *Boschetto San Miniato*, reflects the local culture and biodiversity, fostering community engagement through participatory art.
- **Beehive provision** with hives and awareness programs in *Botanical Garden*, Ravacciano Valley, Pavone Valley, and the *Ricasoli Agricultural Secondary School*, promote ecological literacy and the conservation of both honeybees and solitary bees (friendly, non-aggressive and non-colonizing bees).
- **Walkthrough focus groups in situ** along the city walls, guided from Le Mura and La Diana organizations.
- **Citizen science and biodiversity monitoring** such as *BioBlitz*, *Biodiversity Help Desk* and *X-PolliNation* generate valuable data while raising public awareness of ecological issues.
- **Healthy green corridors**, which create continuous, vegetated pathways connecting urban and peri-urban areas, such as Ravacciano valley, *Hidden Garden* in Pavone valley. These paths, improving ecological continuity, and fostering citizen stewardship.

Community-based organizations – including Contrade – as owners or managers of green areas, are constantly involved in green spaces management and biodiversity protection efforts. Through the implementation of good practices they enhance ecological connectivity by identifying and creating **stepping-stone habitats for biodiversity**.

All these points showcase a growing and lively culture of civic engagement in ecological care. However, they reveal a **lack of systematic**

coordination and integration, often resulting in disconnected efforts that are hard to scale or institutionalise.

3.2.2 Main Challenges

The core challenge identified in Siena is the absence of a unified, systemic approach that recognizes the green valleys as a vital urban ecological infrastructure. These areas are managed in a fragmented way, with uneven and multiple accesses, disconnected interventions, and limited visibility in public discourse and policy frameworks. This **fragmentation** results in missed opportunities for climate adaptation, social inclusion, and biodiversity conservation widening the gap between citizens and nature. Despite their current limitations, they hold a **remarkable potential** to become the backbone of Siena's ecological network: spaces where citizens can experience nature within the city, where heritage and landscape coexist, and where environmental education, recreation, and stewardship reinforce each other.

To address these issues, in 2022 Siena launched **ConVerSi – Connessioni Verdi Siena** (co-financed by **ERDF fund 2021–2027**). Rather than a restoration project focused on the city walls, ConVerSi represented a first step towards a **long-term urban strategy**. The first aim was to create a **network of green areas** through a system of **healthy corridors** that will ultimately form a new “Parco delle Mura” — a living interface between sustainability and heritage. The initiatives were built on a participatory process, engaging local communities to reconnect key sites alongside accessibility and biodiversity valorization. These actions were the first steps toward a cohesive ecological infrastructure that integrates nature into the daily life of the city.

Siena's recent achievement in winning the **European Green Leaf Award 2027** further consolidates this trajectory, acknowledging the city's capacity to combine ecological innovation, community participation, and the protection of cultural heritage within a shared vision of sustainable urban living. Building on this foundation, the BUZZ LIFE project will strengthen Siena's role in developing pollinator-friendly strategies and

community-driven biodiversity actions, reinforcing the city's leadership in nature-based urban governance.

List of **main challenges**:

- Habitat fragmentation and limited ecological connectivity, particularly across urban-periurban boundaries;
- Lack of a coherent and shared framework for managing urban valleys and coordinating interventions among stakeholders;
- Limited institutional capacity to integrate biodiversity considerations into formal planning tools and regulatory frameworks;
- Underutilisation and degradation of some green spaces, often due to unclear responsibilities or maintenance costs;
- Insufficient baseline data on biodiversity trends and ecosystem services, impeding the ability to monitor, evaluate, or plan effectively;
- Under-recognition and poor management of ecological corridors, which remain disconnected or invisible in urban policy.
- Absence of a robust governance model capable of coordinating diverse actors and sustaining NbS efforts over time.

TABLE 3 - ROOT CAUSES AND EFFECTS

Root causes	Effects
Lack of formal recognition of the valleys as a unified ecological infrastructure within urban policy tools	Missed opportunities for Nature-based Solutions , particularly in addressing climate adaptation, health promotion, outdoor education, and social inclusion
Absence of integrated planning instruments that consider the valleys as multifunctional spaces (ecological, cultural, social)	Uneven access and usability of green spaces, with some valleys fenced off, abandoned, or perceived as unsafe, especially by vulnerable groups
Institutional fragmentation with different departments and stakeholders responsible for overlapping or disconnected parts of the system	Wasted potential for place-making , civic identity, and eco-cultural tourism — despite the valleys' deep historical, aesthetic, and symbolic value
Insufficient data on urban biodiversity, ecosystem services, and connectivity, which limits evidence-based decision-making	Loss of biodiversity and habitat degradation in several sections of the valleys, due to invasive species, poorly timed maintenance, or neglect
Underfinanced or volunteer-led interventions , often unsustainable in the long term	Limited community awareness and engagement , due to the absence of a shared narrative or a clear map of the valley system

3.3 SWOT Analysis

TABLE 4 - SWOT ANALYSIS

<p>Strengths</p> <ul style="list-style-type: none"> • Rich natural and cultural heritage • Strong civic culture (Contrada's model) and engaged local communities 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Lack of a dedicated municipal biodiversity strategy • Bad maintenance and connectivity of urban green spaces
<p>Opportunities</p> <ul style="list-style-type: none"> • Creation of a unified vision and identity around the valley system (ConverSI Strategy) • Expansion of participatory monitoring and collaborative stewardship • Slow-eco tourism • European Green Leaf 2027 	<p>Threats</p> <ul style="list-style-type: none"> • Stakeholder fatigue if coordination remains ad hoc and unfunded • Public disengagement due to lack of visibility or accessibility • Bureaucratic obstacles

3.4 Towards an integrated ecological vision for Siena

Siena's Integrated Action Plan is built on the idea that biodiversity, heritage, and community are inseparable dimensions of the city's identity and future.

This Integrated Action Plan stands at the intersection of several strategic trajectories that are shaping Siena's ecological transition. More than a planning document, it functions as a strategic connector, aligning and complementing the city's ongoing initiatives — from the ConVerSi project, to the European Green Leaf Award 2027. While ConVerSi focuses on establishing a physical network of green areas (*Parco delle Mura*), the IAP provides the policy, governance, and participatory framework needed to sustain and expand this long-term strategy.

At the heart of this vision lies the ambition to **transform Siena's green valleys into a connected, accessible, and socially vibrant ecological network** — a system that bridges the historic city and its surroundings while fostering inclusion, wellbeing, and biodiversity conservation.

The IAP is guided by three interrelated principles: **eco-localism**, which values place-based sustainability and the continuity between urban and natural systems; **collaborative governance**, which promotes cross-sectoral coordination and collective decision-making; and **citizen stewardship**, which recognises community participation — including the active role of the *Contrade* and civic associations — as essential for the long-term care of common goods.

The project BUZZ LIFE reinforces these guiding principles by recognising urban and peri-urban spaces as crucial ecological refuges for pollinators, where community engagement and local planning can produce measurable environmental change. The project aligns with Siena's vision of a “caring biodiversity city”, where stewardship, collective responsibility and place-based planning guide ecological transformation.

This integrated vision provides the foundation for the strategic objectives and actions described in the next sections.

4. Overall logic and integrated approach

4.1 Links to wider strategies

This Integrated Action Plan (IAP) is fully aligned with a wide range of **local, regional, national, and European strategies**. This alignment ensures coherence with Siena's existing priorities while opening new opportunities for future partnerships and funding — especially for NbS implementation, ecological connectivity, and community resilience.

At the local level, the IAP builds upon and strengthens the city's long-standing commitment to sustainability, climate neutrality, and community-based governance of common goods. Key reference frameworks include:

- **Green Regulation (Regolamento del Verde)** – approved in May 2025, establishes biodiversity-friendly maintenance standards and formalises the protection and enhancement of both public and private green;
- **Siena Carbon Neutrality strategy** – developed with the *Alleanza Territoriale Carbon Neutrality Siena*, recognises green infrastructure and ecosystem services as essential assets for meeting climate targets;
- **Urban Commons Regulation** – Siena was among the first Italian cities to adopt a framework inspired by the *Labsus* model, enabling co-management of public spaces, including green areas, through *Collaboration Pacts*;
- **Participation in European projects** – such as *URBiNAT*, which piloted NbS and participatory methods in the Ravacciano district, providing a foundation for city-wide replication and integration;
- **ConVerSi – Connessioni Verdi Siena**, co-funded under the ERDF 2021–27 program of the Tuscany Region, represents a strategic initiative for urban regeneration and green connectivity tied to the walls and the green valleys.

The IAP will also be incorporated into the next updates of *Piano Strutturale* (Structural Plan) and *Piano Operativo Comunale* (Municipal Operational Plan), embedding biodiversity, NbS, and ecosystem services

directly into the city's spatial planning tools.

The recent victory of Siena as European Green Leaf Award 2027 adds a new institutional dimension to this alignment. The recognition not only validates Siena's integrated approach to sustainability but also provides visibility and leverage to secure future funding at both national and European levels.

At the **regional level**, the IAP contributes to **Tuscany's Green Transition Agenda**, aligning with:

- the *Strategia Regionale per lo Sviluppo Sostenibile della Toscana* (2022), promoting green infrastructure, biodiversity conservation, and NbS as tools for climate adaptation and environmental justice;
- the *Piano di Transizione Ecologica (PTE)*, currently under development, which positions nature-based approaches as key to addressing urban heat, drought, and biodiversity loss.

The region of Tuscany also encourages participatory and community-based environmental governance — a principle that underpins Siena's approach — and provides funding through the PSR Toscana (Rural Development Programme) for peri-urban ecological restoration, sustainable agriculture, and urban-rural green connectivity.

At the **national level**, the IAP is consistent with major frameworks that integrate NbS into Italy's climate and biodiversity policies, including:

- the *PNRR – National Recovery and Resilience Plan* (Missions 2 and 5) supporting ecological transition, inclusion, and urban forestry;
- the *National Biodiversity Strategy (SNB)* (2022), highlighting ecological connectivity and multi-level governance;
- the *National Climate Adaptation Plan (PNACC)*, which embeds NbS into local adaptation pathways.

At the **European level**, the IAP operationalises the goals of several key EU policies:

- the *EU Biodiversity Strategy for 2030*, focused on restoring degraded ecosystems and expanding urban green areas;
- the *European Green Deal* and the new *EU Urban Agenda*, promoting integrated climate and biodiversity actions;

- the *Nature Restoration Law*, requiring ecosystems, habitats and species restoration;
- and the *Urban Greening Plans*, encouraged by the EU Climate Adaptation Strategy, which call on cities to adopt comprehensive NbS strategies.

Looking ahead, the IAP establishes a strategic framework for funding and partnership development, positioning Siena to access:

- URBACT IV follow-up funds (2026+);
- Interreg Europe, MED, and Central Europe programmes on ecological connectivity and circular bioeconomy;
- the LIFE Programme (2021–2027), particularly the *Nature and Biodiversity* strand;
- regional and national climate adaptation funds linked to the PNACC.

Through these synergies Siena reinforces its capacity to lead by example, demonstrating how an historic city can integrate heritage preservation, ecological innovation, and participatory governance within a coherent agenda.

4.2 Strategic objective set for the IAP under the main objective

To achieve its main goal of **reconnecting and regenerating the green valley system**, the IAP defines five strategic objectives:

1. Create a “green belt” for biodiversity

This objective aims to enhance connectivity by linking valleys to create stepping-stone habitats for biodiversity as a “green belt” embracing the entire city walls system. Ecological corridors will strengthen biodiversity and ecosystem services enhancing community well-being and stewardships.

2. Promote community stewardship in urban green areas

Promote inclusive and long-term care of the valleys by supporting participatory governance and community-based maintenance. Building on Siena’s strong civic fabric, this objective fosters a shared culture of responsibility and belonging.

3. Embed biodiversity and good practices in local policy

Embed biodiversity and good practices into Siena’s municipal tools to ensure that NbS become structural and long-term priorities.

4. Systematize biodiversity monitoring and citizen science

This objective aims to create a biodiversity monitoring system which includes the entire green valley system. By promoting citizen science training and initiatives like *BioBlitz*, citizens will constantly observe nature, collecting significant data which could show habitat status.

5. Raise citizen awareness

This strategic objective emphasizes the importance of engaging citizens in biodiversity conservation through education, outreach, and communication. Environmental education programs will be developed for schools and communities, fostering a deeper understanding of urban biodiversity.

4.3 Intervention areas

The IAP adopts an integrated, cross-sectoral approach that combines ecological, social, and institutional dimensions. To effectively deliver the

Strategic Objectives and realise the IAP vision, three key Intervention Areas have been identified.

a. **Ecological connectivity**

It includes habitat restoration, the creation of new links between urban valleys and surrounding natural habitats and the promotion of good practices for biodiversity to support ecosystem services and climate resilience.

→ Strategic objective n°1

b. **Urban planning**

This intervention area not only seeks to embed biodiversity and good practices into municipal planning tools and policies, but also aims to formalise the recognition of a strong and active stakeholders network.

→ Strategic objective n°2 and n°3

c. **Community awareness**

Recognising the strength of the stakeholders network, this area promotes inclusive governance by actively involving citizens, community groups, and local institutions in decision-making processes. It encourages collaborative stewardship, social inclusion, and education as central pillars to ensure long-term care and shared responsibility for green spaces.

→ Strategic objective n°4 and n°5

4.4 List of actions

The actions developed under the intervention areas build upon Siena's unique urban fabric and the shared commitment of its communities to nurture biodiversity and green spaces.

Intervention areas	Strategic objectives	Main actions	Sub-actions
Ecological connectivity	1. Create a "green belt" for biodiversity	1. Mapping stakeholder network, good practices and NbS	<ul style="list-style-type: none"> ➤ biodiversity vocabulary ➤ online survey
Urban planning	2. Promote community stewardship 3. Embrace biodiversity and good practices in local policies	2. Schedule regular ULG–civil servant meetings 3. Develop the Green Municipality Plan	<ul style="list-style-type: none"> ➤ guidelines for mowing and pollinators ➤ enhancing collaborative pacts
Community awareness	4. Systematize biodiversity monitoring and citizen science 5. Raise citizen awareness	4. Promote Citizen science and scientific monitoring projects 5. Dissemination and education campaigns 6. EcoSistema Urbano (BiodiverCity festival)	<ul style="list-style-type: none"> ➤ biodiversity vocabulary ➤ survey ➤ eco- signals in green areas ➤ bioblitzes and other monitoring activities

The testing phase played a crucial role in refining the design and focus of Siena's Integrated Action Plan. Each of the pilot actions was not only an opportunity to test feasibility but also a practical learning experience that revealed key insights for the city's long-term strategy. Through direct experimentation, Siena was able to observe which stakeholders were most ready to act and which required additional guidance or institutional support. The process also highlighted which communication formats and messages were most effective in engaging citizens, as well as the infrastructural and regulatory gaps that still limit the implementation of more ambitious biodiversity policies.

This evidence-based approach allowed the Municipality and the Local Stakeholder Group to calibrate priorities and identify realistic, high-impact actions — ensuring that the final IAP would respond to actual local capacities and community dynamics rather than theoretical assumptions.

4.5 Key dimensions of integration

Building a more connected and resilient green valley system in Siena requires more than isolated actions. **It calls for an integrated approach that bridges policies, people, data, timeframes, and resources.** Throughout the development of this IAP, integration has been a guiding principle — both in how problems are understood and how solutions are designed.

From the early mapping phase to stakeholder co-design, Siena's approach to integration focuses on building bridges: between institutions and citizens, between short-term actions and long-term visions, between urban nature and formal governance.

TABLE 5 - CURRENT INTEGRATION LEVELS IN SIENA

Integration Aspect	Current Level	Notes / Comments
Cross-sectoral (Policy) integration	Medium	The new Green Regulation is a step forward; integration into urban planning ongoing.
Stakeholder integration	Medium-High	Strong civil society involvement; more institutional coordination needed.
Spatial integration	Low-Medium	Valleys treated as a system; peri-urban links under development.
Temporal integration	Low-Medium	Most actions are short-term; need for a long-term roadmap.

Knowledge integration	Medium-High	Citizen science and academic collaboration ongoing; data sharing still fragmented.
Financial integration	Medium	Structural financing not yet secured; good opportunity with the Green Leaf Award 2027
Institutional integration	Low-Medium	Some interdepartmental collaboration exists; coordination needs consolidation.
Regulatory integration	Medium	Green Regulation is a key milestone; integration into spatial tools in progress.
Operational integration	Medium	Strong volunteer and NGO actions; requires clearer shared protocols.
Education / Communication integration	Medium	Awareness campaigns and storytelling actively promote biodiversity literacy.
Monitoring & Evaluation integration	Low-Medium	Citizen-led monitoring is active, but not yet systematic or institutionalised.
Transnational integration	Medium	Active learning from BiodiverCity and CERV network; uptake into local policy under way.

To fully achieve an integrated transition, Siena priorities are:

- Institutionalising governance frameworks that align stakeholders network and institutions efforts;
- Securing long-term financing to support and scale existing pilot actions (the *Green Leaf Award* could be a good opportunity);
- Empower the community participation with stakeholder (organisations and Contrade);
- Embedding biodiversity into the city's urban planning and development tools;
- Systematising biodiversity monitoring to inform adaptive management;
- Enhancing intergenerational and gender-inclusive access to green spaces.

In this sense, the IAP is not an endpoint but the beginning of a deeper transformation: one where the city learns to govern biodiversity as a shared, strategic, and co-managed resource — central to Siena's identity and sustainable future.

4.6 URBACT cross-cutting themes and transnational learning

The challenges that Siena faces — from fragmented green spaces to under-recognised urban biodiversity — cannot be addressed by environmental strategies alone. They require cultural change, inclusive governance, and communication tools that reach and engage diverse communities. In this sense, the IAP integrates the URBACT cross-cutting themes of **digital transformation** and **gender-equal policy-making**, not as afterthoughts, but as essential dimensions of a deeper ecological transition.

4.6.1 Digital transformation: making biodiversity visible and accessible

Siena's IAP leverages digital tools to bridge the gap between technical knowledge and public understanding. The communication and promotion campaign — developed collaboratively with local stakeholders — uses **short social media videos** (Biodiversity vocabulary) to speak about biodiversity, pollinators, and mowing. These videos are designed to translate scientific and ecological concepts into accessible, relatable messages, allowing a wider audience to engage with the topic on their own terms.

The mapping process began with a **public online survey**, designed to assess the community's baseline awareness. The results directly informed the focus of the campaign and helped local actors choose three priority topics: what urban biodiversity means, the importance of pollinators, and how selective mowing supports ecological health.

During the **BioBlitz events**, participants are invited to use the **iNaturalist app** to photograph and upload biodiversity observations. These data are automatically georeferenced and collected in the MUSNAF "Siena BiodiverCity" permanent project on iNaturalist. In parallel, training workshops are held, led by experts, to teach participants how to use the app effectively — from taking photos to uploading and contributing ecological data. This dual approach — combining digital engagement with hands-on training — helps bridge the gap between citizens and biodiversity science. It makes the act of monitoring urban nature both accessible and meaningful, while contributing to a shared dataset.

Siena also plans to integrate digital citizen science tools in the near future, building on experiences shared by Guimaraes and Limerick, where residents used smartphone apps to monitor pollinator populations in parks and gardens or to play thematic treasure hunts. These tools, beyond data collection, helped strengthen citizens' emotional connection with nature.

4.6.2 Gender-equal policy-making: designing for inclusion and care

Urban green spaces are not neutral. How they are used — and by whom — reflects deeper social dynamics, including those related to **gender, age, caregiving, and mobility**. Siena's IAP was designed with this awareness in mind, recognising that inclusive access to biodiversity means addressing who is included in decision-making, who benefits from interventions, and whose experiences shape policy priorities.

The Local Group itself reflects this commitment: its composition includes women-led associations, educators, caregivers, environmental volunteers, and health professionals, who bring a care-based and relational lens to green governance. Their input helped shape specific actions — from the accessibility of green valleys, to educational walks tailored to children, elderly citizens, and people with reduced mobility. Several stakeholders who care for green areas on a daily basis (community gardens, school yards, neighborhood meadows) are led or co-led by women, whose work is often grounded in **practices of care and community cohesion**. This aligns with feminist approaches to urban biodiversity, which emphasize not only access, but the quality of interaction people have with nature in their everyday lives.



In this way, both **digital transformation** and **gender-equal policy-making** are not treated as parallel or secondary concerns, but are woven into the IAP's core logic. They shape how biodiversity is communicated, how green policies are developed, and how actions are designed to serve the entire urban community — including those voices too often excluded from traditional planning processes. **The IAP recognises that a just ecological transition must also be a cultural transition.**

4.6.3 Integration across dimensions

The IAP weaves together multiple strands of action — ecological restoration, policy reform, participatory governance, and public communication — into a single, coherent framework.

TABLE 6 - OVERVIEW OF HOW THE MAIN ACTIONS ADDRESS THE 3 CORE DIMENSIONS OF INTEGRATION

Action	Dimensions of integration		
	Environmental	Social	Economic / Institutional
1. Mapping stakeholder network, good practices and NbS	Tracks biodiversity habitats and improves ecological connectivity	Engages citizens, schools, and NGOs	Supports data-informed policymaking
2. Schedule regular ULG–civil servant meetings	Embeds biodiversity into planning and maintenance standards	Strengths the identity sense and empowers stewardships and collaborations	Empowers funding opportunities
3. Develop the Green Municipality Plan	Promotes ecological resilience with institutionalized good practices policy	Addresses perceptions and fosters urban green spaces care culture	Aligns municipal and citizen practices
4. Promote citizen science and scientific monitoring projects	Monitors biodiversity (habitats and species) and empower scientific database (iNaturalist BiodiverCity project)	Makes complex concepts accessible to all, promotes ecological literacy, enhances accessibility to green spaces, activates local networks and empowers local associations	Strengthens institutional accountability and mobilises multi-actor planning capacity
5. Dissemination and communication campaigns	Promotes urban biodiversity	Makes complex concepts accessible to all, promotes ecological	Strengthens institutional accountability and mobilises multi-actor

		literacy, enhances accessibility to green spaces, activates local networks and empowers local associations	planning capacity
6. EcoSistema Urbano (BiodiverCity festival)	Collects biodiversity data	Creates inclusive events around nature, enhances accessibility to green spaces, activates local networks and empowers local associations through co-managemen t	Mobilises multi-actor planning capacity

This cross-dimensional approach reflects the reality on the ground: actions that support biodiversity also enhance well-being, reduce inequalities, and build local resilience — when they are co-designed, inclusive, and grounded in place.

5. Action Planning details

5.1 Action Planning Tables

TABLE 7 - Action 1 : Mapping stakeholder network, good practices and NbS

Component	Details
1. Implementation Steps	<ul style="list-style-type: none"> - Identify key stakeholders and target areas through a questionnaire - Collect and analyse existing NbS and good practices - Create an interactive map/database - Share results with ULG and public
2. Timing	First mapping phase: January-May 2024 Continuous mapping 2025
3. Responsibilities	Municipality of Siena (coordination) and MUSNAF
4. Costs	Approx. €3,000 throughout the course of the project
5. Funding	Urbact funds
6. Monitoring Indicators	<ul style="list-style-type: none"> - N°. of stakeholders mapped - N°. of answers of the survey - Survey qualitative results - NbS/good practices identified - Map accessibility and usage data
7. Risk Mitigation	<ul style="list-style-type: none"> - Limited data: engage multiple partners early - Poor-quality in results: clear questions - Low participation: personalized communication and regular follow-up/periodic meetings - Digital divide: technical support during the implementation

TABLE 8 - Action 2 : Schedule regular ULG–civil servant meetings

Component	Details
1. Implementation Steps	<ul style="list-style-type: none"> - Define schedule and main objectives - Appoint focal points in each municipal department - Hold quarterly meetings - Document outcomes
2. Timing	- Nov 2025 (first ULG–civil servant meeting) – Ongoing
3. Responsibilities	Municipality of Siena
4. Costs	not defined yet
5. Funding	Municipal budget
6. Monitoring Indicators	<ul style="list-style-type: none"> - N° of meetings held - Attendance rate - Action points implemented
7. Risk Mitigation	<ul style="list-style-type: none"> - ULG/civil servant fatigue - Lack of continuity: set fixed calendar - Low engagement: integrate meetings into department agendas

TABLE 9 - Action 3 : Develop the Green Municipality Plan

Component	Details
1. Implementation Steps	<ul style="list-style-type: none"> - Sharing of mowing and pollinators guidelines - Open call for participatory process - Define planning team - Launch participatory process, based on the principles and provisions of the Green Regulation approved in May 2025 - Use findings to inform green space management and policy development - Draft and review plan - Final adoption and publication
2. Timing	<p>First draft: 2026</p> <p>Final draft: 2028</p>
3. Responsibilities	Lead: Municipality
4. Costs	Approx. €35,000 for materials, coordination, facilitation, and technical tools
5. Funding	<ul style="list-style-type: none"> - Municipal funds (education & environment budgets) - Regional funding (e.g. Regione Toscana) - Potential EU calls (e.g. URBACT follow-up)
6. Monitoring Indicators	<ul style="list-style-type: none"> - N°. of stakeholders engaged - N° municipal sectors involved - Stakeholders' feedback - Plan completion and approval - Measures included in future planning tools
7. Risk Mitigation	<ul style="list-style-type: none"> - Low participation: create more occasion of communication inside the municipality - Delay in approval: align with policy timelines early

TABLE 10 - Action 4 : Promote *Citizen science* and scientific monitoring projects

Component	Details
1. Implementation Steps	<ul style="list-style-type: none"> - Recruitment and training of experts - Organize training sessions for volunteers and local community on monitoring techniques and use of tools (e.g., iNaturalist app) - Conduct Bioblitz events and other citizen science activities - Collect and analyze data, sharing results with community and decision-makers - Integration of findings into biodiversity knowledge base - Develop online data platforms
2. Timing	<ul style="list-style-type: none"> - 2025 BioBlitz events in selected valleys to biodiversity monitoring. - 2026-2027- Rotating BioBlitz events across all valleys. Integration into Green Leaf monitoring and citizen data collection. - 2028-2030: Consolidation of citizen-generated data into a digital map of biodiversity hotspots.
3. Responsibilities	<ul style="list-style-type: none"> - Lead: MUSNAF - Partners: Municipality, University of Siena, local NGOs (e.g. Legambiente, Siena Art Institute, Le Mura), schools, Contrade
4. Costs	Approx. €20,000/year (training, tools, coordination, events)
5. Funding	<ul style="list-style-type: none"> - Municipal funds (education & environment budgets) - Potential EU calls (e.g. LIFE, URBACT follow-up)

6. Monitoring Indicators	<ul style="list-style-type: none">- N°. of citizens science (BioBlitz) events held- N°. of stakeholders involved in organization- N°. of participants trained and engaged- N°. of biodiversity records submitted via iNaturalist- Species/areas monitored- Data collected and used
7. Risk Mitigation	<ul style="list-style-type: none">- Low participation: targeted outreach and inclusive approach- Data quality: involve expert validators for species identification- Volunteer fatigue: rotate tasks, recognize efforts- Technical gaps: provide simple tools and guidance



TABLE 11 - Action 5 : Dissemination and education campaigns

Component	Details
1. Implementation Steps	<ul style="list-style-type: none"> - Launch of public online survey to assess community awareness - Creation of thematic information signage - Production of short dissemination videos - Organization of public events and workshops to share mowing and pollinators guidelines - Ongoing monitoring of engagement through social media analytics and feedback collection - Communication activities in relation with the Green Leaf Award 2027
2. Timing	<ul style="list-style-type: none"> -2025 Initial survey and content development: -2025 Launch of the long-term communication and awareness campaign. - 2026- 2027 Expansion through participatory storytelling and social media. Alignment with Green Leaf 2027 themes. - 2028-2030 Evolution into a permanent platform for community dialogue on sustainability.
3. Responsibilities	<p>Lead: Comune di Siena (Communication Dept.)</p> <p>Partners: Local environmental NGOs, social media agencies, MUSNAF, Contrade representatives</p>
4. Costs	Approx. €15,000 for video production, campaign management, events, and materials + approximately € 50.000 related to the Green Leaf Activities
5. Funding	<ul style="list-style-type: none"> - Municipal communication budget - Support from european grants - Potential sponsorship from local businesses
6. Monitoring Indicators	<ul style="list-style-type: none"> - N° of video views and shares - Survey participation rates and follow-up engagement - Attendance at workshops/events - Feedback from stakeholders and citizens

	<i>-The share of voice for biodiversity increased after the launch of the awareness campaign.</i>
7. Risk Mitigation	<ul style="list-style-type: none">- Limited reach: develop tailor content to diverse audiences, use multiple platforms- Misinformation: include expert voices to counter myths- Low event turnout: coordinate with community leaders and Contrade groups for promotion- Risk of audience fatigue: use different perspectives to talk about biodiversity



TABLE 12 - Action 6 : EcoSistema Urbano (BiodiverCity festival)

Component	Details
1. Implementation Steps	<ul style="list-style-type: none"> - Thematic ULG meetings to organize it - Define festival concept and team - communication plan - Promote and run the event - Collect feedback and plan future editions
2. Timing	<p>Planning process: Jan–April 2025</p> <p>First edition festival: May 2025</p> <p>2026 :Annual co-designed editions with stakeholders.</p> <p>2027: Green Leaf Edition featuring the “Contrada Verde” competition.</p> <p>2028-2030: Continuation as a legacy event to promote biodiversity and civic engagement.</p>
3. Responsibilities	<p>Lead: Siena Municipality</p> <p>Partners: ULG</p>
4. Costs	Approx. €25,000 per edition
5. Funding	<ul style="list-style-type: none"> - Municipal communication budget - Support from european grants - Potential sponsorship from local businesses
6. Monitoring Indicators	<ul style="list-style-type: none"> - N° stakeholders involved in organizations process - Public feedback - Participation rates and follow-up engagement - Attendance at workshops/events - Feedback from stakeholders and citizens - Awareness rate (in local/regional/national scale)
7. Risk Mitigation	<ul style="list-style-type: none"> - Limited reach: tailor content to diverse audiences, use multiple platforms - Misinformation: include expert voices to counter myths - Low event turnout: coordinate with community leaders and Contrade groups for promotion

- | | |
|--|--|
| | <ul style="list-style-type: none">- Weather disruptions: plan indoor alternatives- Audience fatigue or topic saturation: Renew the festival concept every year with fresh themes and collaborations |
|--|--|



6. Implementation Framework

6.1 The governance mechanisms, the processes and the body responsible for implementing the IAP

The governance of the IAP will be coordinated by the Municipality of Siena, with operational responsibility shared between the Urban Planning, Environment, and Green Departments. Strategic direction and implementation will be steered by a Local Stakeholder Group—an open, evolving network of institutions, associations, researchers, schools, and civic actors already active in the promotion of biodiversity and care of green areas.

A core governance task will be the ongoing mapping and coordination of biodiversity-related projects and actors across the green valleys. This dynamic map—regularly updated and publicly accessible—will serve as both a monitoring tool and a living infrastructure for collaboration. It will allow the city to identify synergies, avoid duplication of efforts, and foster cross-sectoral partnerships that make urban biodiversity work more coherent and impactful.

The Municipality will also take the lead in **formal policy integration**, including the final **approval of the new Green Plan** and the **institutional adoption of technical guidelines**—such as the selective mowing protocol and the "Bees in the City" recommendations produced by local academic experts. These tools will be embedded into municipal maintenance standards and shared with residents and local caretakers to promote a harmonized, biodiversity-friendly approach to urban green management.

Green infrastructure planning will be supported by strategic interventions, including the development of ecological corridors along the city walls, the expansion of community gardens into other valley areas, and targeted habitat restoration, particularly in zones affected by fragmentation.

6.2 The participatory approach after the project closure

The participatory governance model developed through the IAP will remain active beyond the project's completion, sustained by a set of recurring and structured initiatives designed to strengthen civic engagement, shared responsibility, and transparency.

In view of the activities to be developed for the *European Green Leaf 2027*, Siena will build upon this participatory foundation by starting from its **network of stakeholders** — institutions, associations, schools, and citizens — actively involving them in defining the festival's future programme and related actions. Their contribution will be essential to ensure that upcoming initiatives reflect shared priorities and continue to evolve as collective processes.

The ***BiodiverCity Festival (EcoSistema Urbano)*** will be institutionalized as an annual event bringing together institutions, stakeholders, and citizens to celebrate biodiversity, present outcomes, and exchange good practices. It will act as a key moment of public accountability, highlighting both achievements and future challenges.

Citizen science initiatives — such as *BioBlitz* events held in different valleys — will continue to play a central role in biodiversity monitoring. These activities will not only generate valuable ecological data but also enhance collective understanding of how ecological fragmentation affects urban nature.

The **communication and awareness campaign** launched during the action-planning phase will evolve into a long-term platform, using accessible formats — such as social media videos and visual storytelling — to inform and engage a wider audience. Themes and content will be co-created with local actors, reflecting community feedback and emerging priorities. Together, these components form a **participatory architecture that goes beyond consultation toward co-responsibility** — ensuring that the IAP remains a living, adaptive strategy rooted in the city's social and ecological fabric.

6.3 Funding approach

The Municipality of Siena can build upon the *ConVerSi – Connessioni Verdi Siena* strategy, co-financed by the ERDF 2021–2027 programme with a total investment of €7 million, to advance the design and realization of its natural corridors. Although not directly tied to the IAP's specific actions, *ConVerSi* strengthens the physical dimension of this plan, enhancing the accessibility and ecological continuity of Siena's green valleys while complementing its participatory and governance framework.

Furthermore, Siena's recent recognition as *European Green Leaf Award 2027* (€ 200.000,00) provides a strong platform to access new funding opportunities — from European, national, and regional programmes to private sponsorships, foundations, and CSR initiatives. Building on this momentum, Siena should develop a **mixed funding strategy** that combines institutional and private resources with citizen-based contributions, creating a true funding mix.

This approach envisions multiple sources of support: **private companies** and local enterprises, long-term **institutional programmes**, and active community involvement — not only through volunteer engagement and participatory management of regenerated green areas, but also through **citizen donations of time, skills, and collective work** for the care and shared use of public spaces.

Such an inclusive and diversified funding model will ensure the financial sustainability of Siena's green transition, reinforcing partnerships and cultivating a shared sense of ownership over the city's ecological future.

6.4 Timeline

The implementation of Siena's IAP is structured over a **five-year horizon (2025–2030)**, balancing short-term actions that consolidate existing momentum with medium-term objectives that require stronger institutional investment and cross-sectoral coordination.

2025 – Laying the foundations

2026–2027 – Scaling and mainstreaming

* Green Leaf 2027 activities

2028–2030 – Consolidation and legacy

This timeline allows Siena to progress step by step, reinforcing local ownership while aligning with evolving national and EU priorities for nature-based solutions, climate adaptation, and inclusive urban development.

Implementation Timeline – Siena IAP (2025–2030)

Action Area / Activity	2025 – Laying the Foundations	2026–2027 – Scaling and Green Leaf	2028–2030 – Consolidation and Legacy
Governance & Regulation	<p>Approval of the Municipal Green Regulation</p> <p>Consolidation of the biodiversity stakeholders map.</p>	<p>Continuous stakeholder engagement.</p> <p>Institutionalisation of cross-departmental mechanisms for policy integration.</p>	<p>Mid-term review and potential update of the IAP.</p> <p>Integration into long-term municipal planning.</p>

			Urban Green Plan
BiodiverCity Festival	Launch of the annual <i>BiodiverCity Festival</i> as a fixed appointment.	Annual co-designed editions with stakeholders. 2027: Green Leaf Edition featuring the “ <i>Contrada Verde</i> ” competition.	Continuation as a legacy event to promote biodiversity and civic engagement.
Communication & Awareness	Launch of the long-term communication and awareness campaign.	Expansion through participatory storytelling and social media. Alignment with <i>Green Leaf 2027</i> themes.	Evolution into a permanent platform for community dialogue on sustainability.
Citizen Science & BioBlitz	<i>BioBlitz</i> events in selected valleys to biodiversity monitoring.	Rotating <i>BioBlitz</i> events across all valleys. Integration into Green Leaf monitoring and citizen data collection.	Consolidation of citizen-generated data into a digital map of biodiversity hotspots.
Green Infrastructure & Gardens	Planning and prioritisation of ecological corridors. Identification of pilot areas for community gardens.	Expansion of green corridors toward peri-urban areas. Creation of new community gardens and participatory	Monitoring and maintenance of corridors. Integration of biodiversity indicators into

		maintenance agreements.	municipal systems.
Green Leaf 2027 Programme	—	2026: Participatory co-design and monitoring of the Green Leaf programme. 2027: Implementation and <i>Contrada Verde</i> competition.	Monitoring results of Green Leaf and institutionalize some activities
Monitoring & Sustainability	—	Ongoing monitoring of actions and results.	Development of long-term sustainability strategy. Design of financial mechanisms and legacy partnerships.

6.5 Monitoring and performance indicators

A robust, transparent, and adaptive monitoring system is essential to ensure that Siena's Integrated Action Plan remains effective, measurable, and accountable over time. Monitoring serves not only to verify progress but also to guide continuous learning and adaptation, ensuring that both institutional and community actors remain engaged and informed.

6.5.1 Multi-layered Monitoring Framework

The monitoring process will operate on three interconnected levels:

- **Strategic Monitoring**

Led by the Municipality of Siena in collaboration with the IAP Coordination Unit, this level will track progress towards the plan's overarching goals. It will evaluate how effectively the green valley system evolves into an integrated, accessible, and ecologically functional network, and how social awareness and participation contribute to this transformation.

- **Operational Monitoring**

Focused on the implementation of individual actions, this level will assess adherence to timelines, resource allocation, and interdepartmental coordination. Each action identified in Section 5 includes specific indicators, responsible bodies, and monitoring milestones, ensuring consistent follow-up and accountability.

- **Community-Based Monitoring**

Local stakeholders and citizens will actively contribute to data collection and evaluation through ongoing *BioBlitz* events and digital citizen-science platforms such as *iNaturalist*. These participatory tools will generate real-time ecological data, foster shared knowledge, and strengthen civic engagement in biodiversity stewardship.

6.5.2. Key Indicators

TABLE 13 - KEY INDICATORS

Indicator	Type	Frequency	Source
Number of biodiversity monitoring events (e.g. BioBlitzes)	Output	Quarterly	Local stakeholders/MUSN AF
Number of citizens involved in awareness and training activities	Output	Semestral	Event reports/partners
Area (m ²) covered by reduced mowing practices	Outcome	Annual	Municipality technical departments
Number of green corridors newly established or connected	Outcome	Annual	Municipality / GIS data
Reach and engagement of communication campaigns	Output	Monthly	Project analytics
Stakeholder satisfaction and engagement levels	Qualitative	Annual	Focus groups / surveys
Institutional adoption of biodiversity-related policies	Structural	Milestone-based	Municipal Council records
Number of new NbS implemented	Output	Annual	Local stakeholders

Monitoring results will be collected and discussed annually with the Local Stakeholder Group (ULG) and presented publicly during the *BiodiverCity Festival – EcoSistema Urbano*, ensuring transparency and shared learning.

Adjustments to actions or priorities will be made based on findings, allowing the IAP to remain a **living strategy** — flexible, evidence-based, and responsive to changing conditions and community needs.

6.6 Risk Management

Given its participatory and cross-sectoral nature, Siena's IAP operates within a complex **ecosystem of actors, resources, and environmental variables**. Proactive risk management is therefore essential to maintain coherence, financial stability, and community trust over time.

The Municipality will adopt a **dynamic and adaptive** approach to risk, combining regular monitoring with early intervention. Risks will be reviewed annually by the Local Stakeholder Group and the IAP Coordination Unit, ensuring collective oversight and transparent decision-making.

This approach focuses not only on mitigating potential issues but also on **building institutional resilience**, allowing the plan to adapt to political, social, or climatic changes.

TABLE 14 - KEY RISKS AND MITIGATION MEASURES

Risk	Impact	Likelihood	Mitigation Strategy
Lack of political continuity or support	High	Medium	Ensure formal adoption of key tools (Green Plan, biodiversity guidelines); promote cross-party understanding and public visibility of results.
Stakeholder fatigue or disengagement	High	Medium	Maintain regular communication, celebrate small wins (e.g. festival), and ensure tangible recognition of stakeholder contributions.
Insufficient or delayed funding	Medium	Medium	Diversify funding sources (EU, regional, private, civic); prioritise low-cost/high-impact actions; establish phased implementation.
Poor inter-departmental coordination	Medium	Medium	Continue cross-departmental meetings and designate an IAP Coordinator to facilitate integration and data exchange.
Public resistance to reduced mowing	Medium	High	Intensify communication efforts using accessible language, storytelling, and

and new green practices			direct citizen involvement (e.g. in Bioblitzes).
Data collection inconsistency (e.g. biodiversity monitoring)	Medium	Medium	Provide training to citizen scientists; collaborate with universities and experts to ensure data quality.
Climate-related events (e.g. droughts, storms)	Medium	Increasing	Design green corridors with resilience in mind; incorporate adaptive maintenance protocols. promote water-wise planting and soil health.

Risk management will not be treated as a static checklist but as an **ongoing, participatory process** that integrates feedback and learning.

Key mechanisms include:

- **Annual joint reviews** with the Local Stakeholder Group to identify emerging risks or needs.
- **Flexible implementation timelines** that allow the city to adapt to funding, regulatory, or environmental shifts.
- **Responsive communication strategies** to manage sensitive issues and maintain public trust.

By viewing risk as a **shared civic responsibility**, Siena's IAP strengthens not only its operational reliability but also its long-term resilience — ensuring that ecological, social, and institutional systems evolve together in support of a sustainable urban future.

7. Conclusion

7.1 Communication and dissemination IAP

Communication has been a central pillar of Siena's IAP from the very beginning — not only as a means to raise awareness, but as a tool to build **shared ownership and civic participation**. The dissemination strategy for the IAP's final version follows this same principle: **inclusive, accessible, and grounded in local voices**.

The Municipality will continue to use multiple communication channels — including public events, the official website, social media, schools, and local media — to share the IAP's objectives, progress, and results. Particular attention will be given to highlighting the contributions of local stakeholders and citizens, reinforcing continuity and a shared sense of responsibility for Siena's ecological transition.

The BiodiverCity Festival (ECOSISTEMA URBANO), already piloted as a platform for visibility and dialogue, will evolve into an **annual event** dedicated to sharing achievements, presenting new projects, and strengthening the community around urban biodiversity. Educational programmes, collaborations with cultural institutions, and citizen science activities will ensure that biodiversity remains a living and visible issue in Siena's urban life.

In parallel, the Municipality will work to structure an **integrated, multi-level communication plan** that connects institutional communication, technical dissemination, and community storytelling. This plan will be developed **in collaboration with the URBACT Local Group (ULG)**, ensuring that local voices and experiences are actively represented in the city's broader sustainability narrative. The ULG will play a key role in co-designing messages, curating content, and promoting initiatives within their own networks — helping to translate the IAP's strategic vision into concrete, relatable communication. Starting from 2026, the municipal communication strategy will also integrate BUZZ LIFE's awareness campaign, promoting Siena internationally as a "Pollinator-Friendly Heritage City", combining cultural identity and

ecological stewardship. This reinforces Siena's European Green Leaf agenda and its contribution to the EU Biodiversity Strategy 2030.

These dissemination and engagement actions will not end with the IAP cycle. Thanks to Siena's victory in the European Green Leaf Award 2027, they will be integrated into a broader municipal communication strategy on sustainability and green transition. The visibility and resources associated with the award will allow the city to consolidate what has been achieved through the IAP, expanding communication and educational activities into a coherent long-term framework that connects biodiversity, heritage, and community wellbeing.

7.2 Ensuring Continuity and Long-Term Ownership

The IAP is conceived not as a standalone document, but as an **integrated, living framework** designed to be embedded in Siena's governance and planning tools. Its continuity is ensured through a combination of institutional commitment, civic participation, and long-term investment in environmental sustainability.

- The **Green Plan (Regolamento del Verde)** will act as the formal entry point for many of the IAP's principles and actions — including biodiversity-friendly maintenance practices such as reduced mowing, community stewardship, and the protection of pollinators. This regulatory milestone provides a stable foundation for embedding the IAP's objectives within everyday municipal operations.
- **The Local stakeholder group (ULG)** will continue beyond the URBACT project, evolving into a permanent platform for dialogue, co-management, and knowledge exchange. Regular meetings will monitor progress, update actions, and ensure that all stakeholders — from institutions and associations to citizens and the Contrade — remain engaged in shaping Siena's ecological transition.
- Over the coming years, the Municipality of Siena is committed to consolidating and expanding its investment in environmental protection, urban biodiversity, and participatory governance. Many actions are already active or low-cost, supported by existing

networks and local expertise; others will benefit from new financial opportunities at **regional, national, and European level**. The IAP provides a strategic framework to guide this investment and to attract complementary resources, particularly in the fields of climate adaptation, ecological connectivity, and civic engagement.

- A key tool to ensure long-term ownership will be the expansion of **Collaboration Pacts (Patti di Collaborazione)** — formal agreements between the Municipality and citizens or associations for the shared care of public spaces and common goods. These pacts embody Siena's participatory governance model, turning civic responsibility into concrete, long-lasting actions for urban biodiversity and landscape care.
- Finally, the strong **political and technical ownership** within the Municipality — from environmental services to planning, education, and communication — guarantees that the IAP is not a parallel effort, but an integral component of the city's long-term ecological transition. Through these combined efforts, Siena reaffirms its commitment to building a more connected, resilient, and co-managed city — one where nature, culture, and community evolve together.

7.3 Contact details

General Secretariat, City of Siena

Phone: +39 0577 292 203

Email: segreteria.generale@comune.siena.it

Department of Environment, Urban Decorum and Green Area Maintenance

Councillor **Barbara Magi**

Email: barbara.magi@comune.siena.it