URBAN NATURE PLANS +

D1.2 - Case studies with inputs from Lighthouse Cities

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Abstract	This deliverable examines the Barriers, Enablers and Best Practices in cities when developing and implementing Urban Nature Plans. Four topics are focussed upon: 1. Addressing conflicting policy agendas related to urban development 2. How plans are designed and proofed with stakeholders 3. What governance structures are applied to urban greening, biodiversity enhancement and ecosystem restoration initiatives 4. What financing models are identified and secured to fund the UNP In each of the four topics, examples are drawn from the UNP+ participant cities to highlight the challenges, enabling factors and best practices related to the topic.
Keywords	Urban Nature Plans, Case Study, Barriers, Enablers, Best Practice

EDITOR'S NOTE

This deliverable looks at the Barriers, Enablers and Best Practices in cities when developing and implementing Urban Nature Plans. Four topics are focussed upon:

1. Addressing conflicting policy agendas related to urban development
2. How plans are designed and proofed with stakeholders
3. What governance structures are applied to urban greening, biodiversity enhancement and ecosystem restoration initiatives
4. What financing models are identified and secured to fund the strategy

In each of the four topics, examples are drawn from the UNP+ participant cities to highlight the challenges, enablers and best practices related to the topic.

STATEMENT OF ORIGINALITY

This document contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both. Deliverable 1.2 runs in parallel to D1.1 (State of Play report for each partner city) and D4.2 (Establishing a Greening Cities Reflexive Monitoring baseline). It uses the same information used by deliverables 1.1 and 4.2, reframing it in the form of case study topics and with a focus on barriers, enablers and best practices in the four case study topics. The information contained within the three parallel deliverables may be duplicated but is intended for different audiences and framed differently.

Version	Issue Date	Stage Content	Changes
1	30/11/2024	Draft Document	
2	17/12/2024	Final Draft	After internal reviewing
	31/12/2024	Submitted version	Editing, formatting and typo fixing

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Glossary

UNP = Urban Nature Plan

UNP+ = Urban Nature Plans Plus (project)

UNPlanning = Urban Nature Planning

Table of Figures

1. What is in this report?

The Urban Nature Plan+ (UNP+) project is designed to support cities in building the capacity to develop robust Urban Nature Plans. As part of this ambition, this report explores the experiences of the UNP+ partner cities, their challenges, enabling factors, and best practices in relation to several steps in the UNP cycle.

During the inception and development of the UNP+ project, experts in the field as well as city representatives identified areas of importance which required focus within the 10 steps of the UNP cycle. Key areas of interest identified were:

1. How conflicting policy agendas related to urban development and land use are acknowledged and addressed
2. How plans are designed and proofed with stakeholders
3. What governance structures are applied to urban greening, biodiversity enhancement and ecosystem restoration initiatives
4. What financing models are identified and secured to fund the strategy

Challenges embedded within the four topics also emerge in the literature as areas where cities face challenges in scaling nature-based solutions (NBS). Challenges can include the presence of siloed working & inadequate financial resources to put plans into action, which are key aspects within the topics this report focuses on (Sarabi et al., 2019; Hersperger, 2018). Competition over urban space and finances makes it even more important to address conflicts in policy agendas, ensure plans are co-designed, ensure governance structures enable mutual win scenarios, and suitable finance models are established (Dorst and Runhaar, 2022).

Knowledge transfer of best practices and challenges between practitioners has been identified as a key mechanism to drive change in relation to mainstreaming the renaturing of cities (Bogatinoska et al, 2023; Roitsch et al, 2024). This report has been developed with contributions from the cities involved in UNP+, based on their experiences, to illustrate the practical challenges faced, enablers of change, and best practice examples they experience within the four topics of interest.

This report is not intended to be a full review of all challenges, enabling factors and best practices related to UNPlanning. It is an exploration of the experiences of the UNP+ partner cities. A full review article on barriers, obstacles and opportunities for implementing UGPs will supplement this report as part of deliverable 2.3 "Review article on barriers, obstacles and opportunities for implementing UGPs".

Who is this report for?

This report is aimed primarily at representatives of local authorities and other practitioners in cities, both within the UNP+ project and beyond. It is intended to support city officials to gain an understanding of some of the key challenges, enablers and best practices which cities experience when attempting to develop and implement UNPs, in the topics of focus. Understanding the challenges certain cities have experienced when doing Urban Nature

Planning can help city officials in other cities to recognise, and plan for, the potential challenges they may also face. Gaining an understanding of the enabling factors and best practices adopted and deployed in another city may also inspire new solutions to challenges.

2. What is a UNP?

An Urban Nature Plan (UNP) functions as a framework, a plan and a process, encompassing adaptive management, planning, and concrete actions to increase nature in cities. Cities, regions, and towns play a crucial role in enhancing the quality of life for people, plants, and nature. With growing challenges such as climate change, population increase, and biodiversity loss, incorporating nature into urban environments is more important than ever (Kumar, 2021). This is reflected in new and emerging policies. The EU Biodiversity Strategy 2030 mandates that European towns and cities with populations over 20,000 create an Urban Nature Plan (European Commission, 2024). This also works in tandem with, and supports, the recently adopted European Nature Restoration Regulation (NRR), which sets binding targets to restore 20% of the EU's degraded ecosystems by 2030 and 100% by 2050; in the urban realm, the NRR, aims to halt the net loss of urban green space and the urban tree cover until 2030, followed by an increase of both from 2030 on (European Commission, 2024). The NRR requires Member States to develop National Nature Restoration Plans, including an approach to comply with the urban targets in the NRR.

The Urban Nature Planning process comprises 10 steps with the final step being to publish an Urban Nature Plan.

3. How do the case studies align with the UNP steps?

The ten UNP+ steps represent a series of complementary actions that together create a strong foundation for unlocking the multiple benefits of renaturing urban areas. They can, however, represent logistical challenges for city authorities to implement in environments where resources, expertise, and capacity are typically limited (Sarabi et al., 2019). In this report, we explore direct experiences of some of the challenges faced in some of these steps and the enablers which can help city officials achieve best practices in Urban Nature Planning.

Figure 1. The UNP process

The topics explored through this report align with the UNP steps in the following way:

Topic	Step(s)
1. Addressing conflicting policy agendas related to urban development	1. Secure long-term political commitment 2. Establish a working structure 3. Establish a co-creation process 4. Develop long-term vision and goals
2. How plans are designed and proofed with stakeholders	3. Establish a co-creation process 4. Develop long-term vision and goals 5. Analyse the current state of nature and biodiversity 7. Agree on priorities, actions responsibilities, timelines and financing 8. Develop a communication, education, and public awareness strategy 9. Establish a monitoring, reporting, and evaluation system
3. What governance structures are applied to urban greening, biodiversity enhancement and ecosystem restoration initiatives?	2. Establish a working structure 3. Establish a co-creation process 4. Develop long-term vision and goals 7. Agree on priorities, actions, responsibilities, timelines and financing 9. Establish a monitoring, reporting, and evaluation system
4. What financing models are identified and secured to fund the strategy?	7. Agree on priorities, actions, responsibilities, timelines and financing 9. Establish a monitoring, reporting, and evaluation system

4. Where does this work fit in the UNP+ project?

This Case Study report is being published alongside two parallel and complementary reports all focused on the UNP+ partner cities of Paris, Barcelona, Mannheim, Belgrade and Burgas.:

- A State of Play Report for each partner city - a detailed understanding of the current position of each city concerning its progress along each of the 10 steps and its most pressing support needs.

- A Reflexive Monitoring Baseline - provides a baseline for evaluating the cities' current positions in relation to each UNP step, and establishes a mechanism for tracking each city's progress. This includes:
    - Measuring improvements along the UNP steps through the course of the project in relation to project support and resources.
    - Identifying challenges and enablers as they arise through the course of the project.

All three reports serve to act as a baseline for where our partner cities stand currently in relation to Urban Nature Planning.

This case study report brings additionality to the other two reports by taking a deep dive into each city's experiences in four specific aspects of UNP implementation. By exploring the challenges, enablers, and best practices related to the four topics and sharing this information both within and from the UNP+ project. Through disseminating this report, we aim to support all EU Member States in developing their Nature Restoration Plans, and supporting the European cities and towns to develop their UNPs and more widely to integrate renaturing into their policies, plans and actions.

Within the UNP+ project, the information within this report will be shared with partners and used to inform and shape the Urban Nature Exchanges (UNEs), the Knowledge Labs (KLs) and the Capacity Building Programme (CBP) development. These are the key activities and mechanisms for increasing the capacity of the UNP+ partner cities in their ability to develop and implement high-quality UNPs. UNEs are peer-to-peer exchanges between the partner cities. The report identifies common challenges and areas of innovation to overcome challenges that individual cities have developed that form an excellent foundation for city-to-city exchanges. The Knowledge Labs (KLs) transfer synthesised, evidence-based knowledge, answering requests by cities for synthesised knowledge that helps them to address challenges that they are experiencing. The awareness of the challenges being faced, as well as some of the enablers and best practices already being deployed, will help to shape the focus and work within the Knowledge Labs. UNP+ will develop a Capacity Building Programme (CBP) that supports European cities and towns to develop and implement UNPs. The identified challenges in this report will contribute to the conceptualisation of the CBP. The report will

also be disseminated through several channels such as the UNP+ website, Oppla or Urban by Nature to reach cities across Europe.
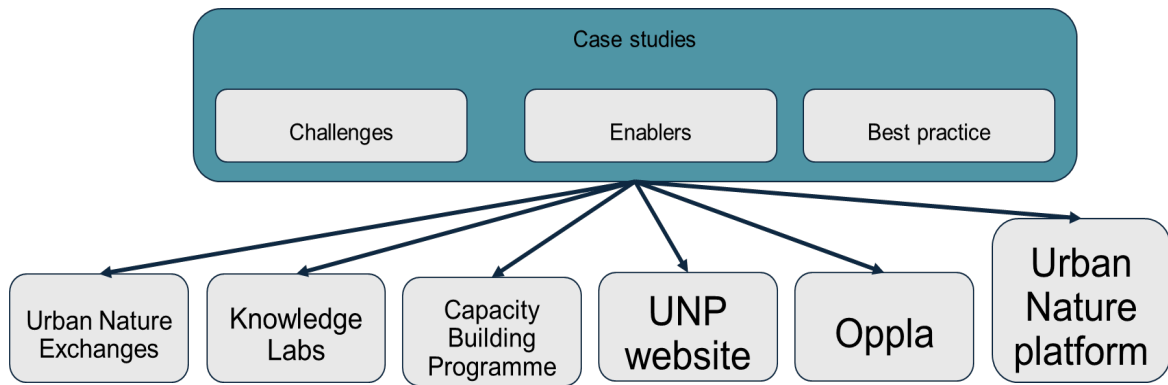

Figure 2. How case studies will be used

5. Methodology: How the case studies were produced

The content of this Case Study report, the State of Play reports and the Reflexive Monitoring report were all produced in parallel and built from much of the same source information. The case studies are based on the experiences the UNP+ partner cities have shared. Insights into the partner cities' experiences were gained in four ways. First, a self-assessment was produced by UNP+ partners and completed by the partner cities. This assessment facilitated the cities in explaining how well they are progressing along each of the 10 UNP steps, what challenges they are experiencing, and their most pressing support needs. After the assessment was completed by the cities, follow-up discussions took place between the cities, ICLEI, TCD and UEL to gather supplementary information. An additional round of one-to-one discussions took place between partner cities and TCD and UEL to gather more information and validate information for the Reflexive Monitoring Baseline. This focussed on exploring the cities' Critical Turning Points, Learning Objectives and Learning Outcomes. Critical Turning Points are significant things which happen that either move you closer to or further away from realising your objective; these sometimes include challenges and enablers. The associated Learning Objectives and Learning Outcomes developed from these Critical Turning Points and also include enabling factors and best practices. Information was also gained from a review of the partner city websites and strategic documents. All these steps together formed the information used to generate the case studies in this Case Study report, the State of Play Reports, and the Reflexive Monitoring Baseline. Each report builds from this foundational experiential knowledge but has explored the information through a different interpretative lens and framed it in a different way and for different target audiences.

Following the creation of a first draft of this Case Study report, each of the partner cities reviewed and provided additional information to validate and supplement the case studies, to ensure that they were co-produced based directly on their experiential learning.
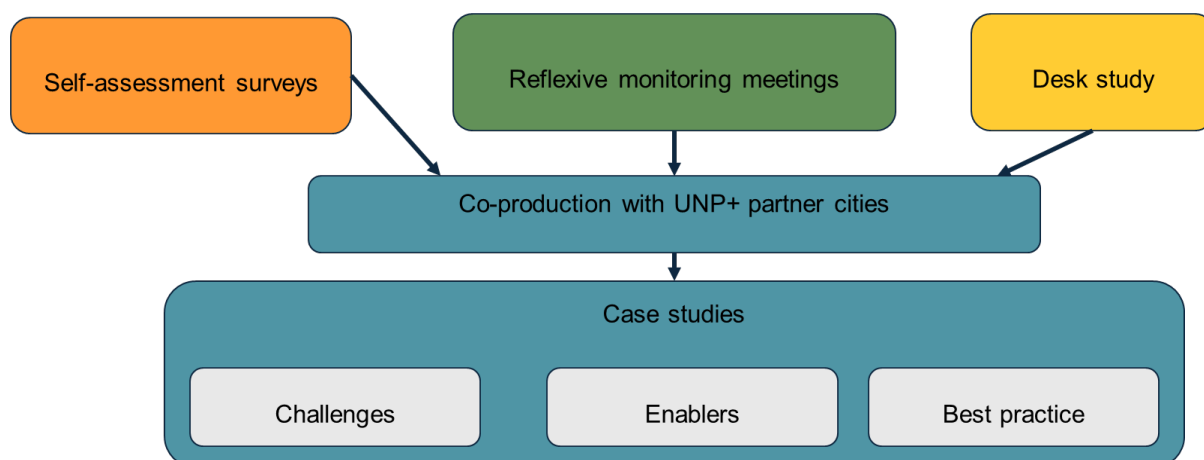
Figure 3. How case studies were developed

6. Case studies

The four topics within this report can each be treated as stand-alone exploratory documents and case studies on that particular topic. Each case study has the same format which comprises an introduction, and an overview of the topic, followed by the challenges, enablers and best practices experienced by the UNP partner cities. In this way, they are designed to be accessible to the UNP+ cities, and other cities, by making the UNP step challenge topics the entry point for accessing the information. It is intended that they will be produced as standalone documents for dissemination beyond the project partners.

Topic 1 – Conflicting policy agendas: Addressing conflicting policy agendas related to urban development

To be published as Jelliman et al. (2024) Topic 1 - Conflicting policy agendas

Introduction

The Urban Nature Plan+ (UNP+) project supports cities in developing effective Urban Nature Plans (UNPs) to integrate nature into urban landscapes. This report focuses on challenges, enablers, and best practices across one of four critical topics related to implementing a UNP: **addressing conflicting urban policy agendas**. The others are: engaging stakeholders in plan design, applying governance structures for biodiversity and restoration, and securing financing. By sharing insights and experiences from participating cities, the report aims to help other cities navigate common challenges and adopt proven solutions, advancing the creation of greener and healthier urban spaces aligned with the goals of the EU Biodiversity Strategy 2030 and the EU Nature Restoration Regulation. It is hoped that the insights in this report will help cities to more successfully develop and implement high-quality UNPs.

Topic Overview

The UNP+ cities have a range of policy agendas and plans, and inevitably there are some tensions between these. Steps 1 to 4 of the UNP process focus on ensuring the creation of a plan that has set goals and is developed collaboratively, co-productively, and with the backing of long-term political commitment.

Challenges identified by UNP+ cities

Nature policies are not linked to a department

Some UNP+ partner cities face issues when a nature plan isn't connected to a single specific department. This has been observed to create a diffusion of responsibility and reduce the level of agency needed to ensure the plan is effectively implemented. In this case, there may also not be a budget connected with implementing a plan, instead relying on portions of multiple budgets. Whilst it is often seen as a positive that a plan is connected with multiple departments, it can sometimes also have the effect of making the plan carry less weight, as it doesn't have a single department taking responsibility for driving it forward (Frantzeskaki and Bush, 2021).

Paris challenge: Not every plan has a responsible department articulated or a budget. This can make it difficult to know who must be engaged from certain departments to develop complementary plans and achieve co-benefits. However, some plans are designed to be implemented by more than one department. The activities of all departments should be in alignment with the biodiversity plan. One way this can be seen is through the work of the budget and finance department, who take biodiversity impacts into account during public tendering processes.

Barcelona challenge: There is no specific department for implementing the Natura Plan. The plan is being implemented by several departments with separate budgets (biodiversity, projects, parks, and gardens). One team was responsible for the development of the plan and then multiple departments with their own budgets and other priorities were responsible for the implementation of the plan, which can be a risk to the plan's successful implementation.

Policy objective tensions

The UNP+ cities have many plans and many policy objectives. Conversely, they do not have infinite funds, human resources or land available, so compromises and trade-offs are a common occurrence. Different plans and departments have different objectives which are sometimes in competition with each other. Ideally, objectives and plans will be established in an integrated manner to create as many co-benefits and win-wins as possible, but there are inevitably situations where trade-offs and zero-sum situations arise, an issue which arises in other cities across Europe (Hölscher, 2023).

Paris challenge: Different plans have different objectives which can often generate lively discussions between departments who are competing for use of the same public space and resources to meet their objectives. Tensions between policy objectives can also lead to tensions between departments as they compete, which can lead to reduced cooperation between departments, reducing mutual wins.

Mannheim challenge: Mannheim sometimes experiences conflicting objectives, such as the need for public spaces for events versus the desire for greening measures, which can complicate strategic alignment. As a major European transport hub and a city with the second-largest inland port, Mannheim confronts the challenge of harmonising urban development, including housing construction and infrastructure expansion, with the preservation of the environment and biodiversity. In densely populated areas, limited access to green spaces exacerbates the contentious issue of implementing biodiversity-friendly measures.

Many policies with many interaction points

UNP+ partner cities have reported that ideally, objectives and plans will be established in an integrated manner to create as many co-benefits and mutual wins as possible and then delivered in a way that continues to try and maximise the opportunities for co-benefits and reduce the requirement for trade-offs. However, it can be difficult to understand all the objectives and plans in enough detail to achieve this. This is due to the large number of plans a city may have and the even greater number of interaction points between those plans. Having a full understanding of all the interaction points is necessary to maximise co-benefits, but in practice, this is hard to achieve due to the enormity of the task of understanding all the interaction points in detail and the time it will take staff to do this, especially in departments where biodiversity is not a core duty (Collier et al., 2023). UNP+ cities have also highlighted how it is important to understand and demonstrate the range of benefits nature can have in helping to meet a wide range of policy objectives beyond those most immediately connected with nature. To best achieve this however a good understanding of the objectives of other plans and how nature can support those objectives is needed.

Paris challenge: There are a lot of plans and policies so it can be a challenge to understand all policies that impact the work and how they complement and contradict each other. Mapping of policy interactions is currently underway, but it is a large task to undertake due to the number of policies and interaction points.

Barcelona challenge: The city is working simultaneously on many plans, programmes and policies related to nature, climate and public space (Nature Plan, Tree Plan, Climate Plan, Play Plan). They all share the same goal of increasing greenery. It can be a challenge to put all the plans into context and understand all the policies that are to be implemented and how they align with or differ from each other. https://ajuntament.barcelona.cat/espaisverds/en/plans-vigents

Figure 4. Jardí de la finca de Muñoz Ramonet & Parc Natural de Collserola, Barcelona. Image credit: Barcelona city authority

Absence of biodiversity as a cross-cutting objective

In some cases, challenges can arise in the UNP+ cities because biodiversity as an objective is not sufficiently represented across objectives, plans and strategies and so other objectives take priority, an experience other cities also face (Bush et al., 2023).

Burgas challenge: Although Burgas has legislation prioritising urban initiatives, the topic of urban nature and biodiversity is not consistently addressed or integrated across all city departments and their plans.

Belgrade challenge: While Belgrade has integrated urban nature and nature-based solutions into its planning process, the city lacks specific legislation or institutional mandates to prioritise these initiatives.

Figure 5. Stari Dvor (The Old Palace), Belgrade. Image credit: Maja Jovanovic / City of Belgrade

Siloed planning

UNP+ partner cities highlight the impact of siloed working of departments at both the planning and implementation stages. Because of siloed working, mutual wins are missed. Whilst developing a plan in silo may seem more straightforward for the cities and avoids having to make compromises, the chances of necessary trade-offs during implementation increase when plans are developed in silos (Collier et al., 2023; Sarabi et al., 2019).

> **Belgrade challenge**: The city's 20 secretariats each possess well-defined strategies, however, these strategies are not effectively coordinated for implementation across different departments resulting in missed opportunities and tensions.

Enabling factors identified by UNP+ cities

Silo busting

To maximise the chances of biodiversity being integrated across multiple departments and that it gets the necessary attention required for effective implementation, it is important to work collaboratively. This means that the greatest number of co-benefits can be achieved, by aligning and synergising the development and implementation of plans by the various city departments. This is something experienced by the UNP+ cities and other cities alike (Sarabi et al., 2019).

> **Paris enabling factor**: Engaging all relevant departments across the city administration in the development and implementation of urban nature plans is essential for success. Paris highlights the importance of cross-departmental cooperation. To ensure the next Biodiversity Plan aligns with the city's priorities, Paris has organised workshops ("Comité Biodiversité" aka "CoBio") involving elected officials from a range of departments and specialised NGOs in the field of biodiversity and urban nature (fauna, flora, mediation, gardening etc.) and is reflecting on how to mobilise these stakeholders more frequently (given existing HR capacities).

Figure 6. The René-Dumont Tropical Agronomy Garden, Paris. Photo credit: Pascal Bonneau

> **Mannheim enabling factor**: To reduce siloed working Mannheim created a Local Green Deal group. An Interdepartmental group focussed on the local implementation of the European Green Deal and the EU Mission 100 climate-neutral cities by 2030. The group works closely together to develop and implement plans addressing issues such as climate change and biodiversity, maximising mutual wins where possible.

Policy integration

UNP+ cities reported that it can be effective to embed elements of biodiversity into a range of city plans, rather than only having biodiversity mentioned in one stand-alone plan. If biodiversity is mentioned in other strategies such as housing or transport, and at regional/interregional levels, this can help mainstream biodiversity as part of city planning (Collier et al., 2023).

Barcelona enabling factor: Urban nature is promoted through various municipal strategies, including the Tree Master Plan, Climate Emergency Action Plan, Urban Agriculture Strategy, and Hands-on Green Participation department initiatives. Key departments involved are Biodiversity, Hands-on Green Participation dept, Projects dept, and Green Space Conservation dept. All plans share the same commitment (increasing the greenery to 1m^2 per resident by 2030) agreed at the Paris Climate Conference (COP21) in December 2015. A climate-change adaptation measure that would be equivalent to 160 new hectares of greenery. This target was promoted by the Barcelona Climate Commitment 2015, the government measure "Urban Green Infrastructure Promotion Programme 2017-2030" and subsequently with the Climate Plan 2018-2030 (now the Climate Emergency Action Plan 2030).

Mannheim enabling factor: By integrating social and environmental justice into technical strategies, Mannheim is creating more equitable and sustainable outcomes. Although biotope network planning traditionally focuses on urban outskirts, partnerships between nature conservation organisations and farmers are expanding ecological connectivity within city limits.

Valuing the wide range of benefits of nature

Sometimes UNP+ cities as well as other European cities attempt to ensure nature is included in a range of plans such as in transport and housing by clearly communicating the benefits biodiversity can bring to those areas including potential cost savings (Hölscher, K. ,2023). For example, having biodiversity objectives in a housing strategy could then generate targets for the inclusion of Sustainable Urban Drainage systems, which will both be beneficial for biodiversity and for reducing flood risk at properties and creating a more liveable neighbourhood for citizens. Cost savings can also be realised through the integration of biodiversity objectives, such as the reduction in the intensity of mowing and green space management (Toxopeus and Polzin, 2021).

Mannheim enabling factor: Mannheim recognises the importance of understanding the social, spatial, and institutional context to maximise the co-benefits which can be derived from urban nature. By leveraging these insights, informed by the Mission Statement 2030, the city can effectively identify and address barriers and opportunities to integrate urban nature into diverse development areas.

Policy as a hub

To bust silos, integrate various policy objectives and maximise the potential for co-benefits, UNP+ cities have chosen to develop a strategic plan which connects and sits above all other plans. This strategic plan sits like the hub of a wheel and attempts to bring together and

synchronise objectives from all the other plans the city may have, making the city's activities more coordinated. (Hersperger, 2018)

> **Burgas enabling factor**: Burgas' Plan for Integrated Development (PIRO) acts like the hub of a wheel, connecting and bringing together other plans and policies. It is a vital strategic plan for the Municipality of Burgas, encompassing the entire region and outlining strategies to address local needs, seize development opportunities, and foster regional cooperation. By integrating various policies and planning resources, PIRO aims to achieve sustainable improvements in the economy, society, and environment. While not explicitly focused on urban nature and biodiversity, the plan's objectives have significant implications for these areas. For instance, improving access to green spaces, enhancing connectivity between urban and rural areas, and promoting sustainable resource management can directly contribute to the preservation and enhancement of urban nature and biodiversity in Burgas.
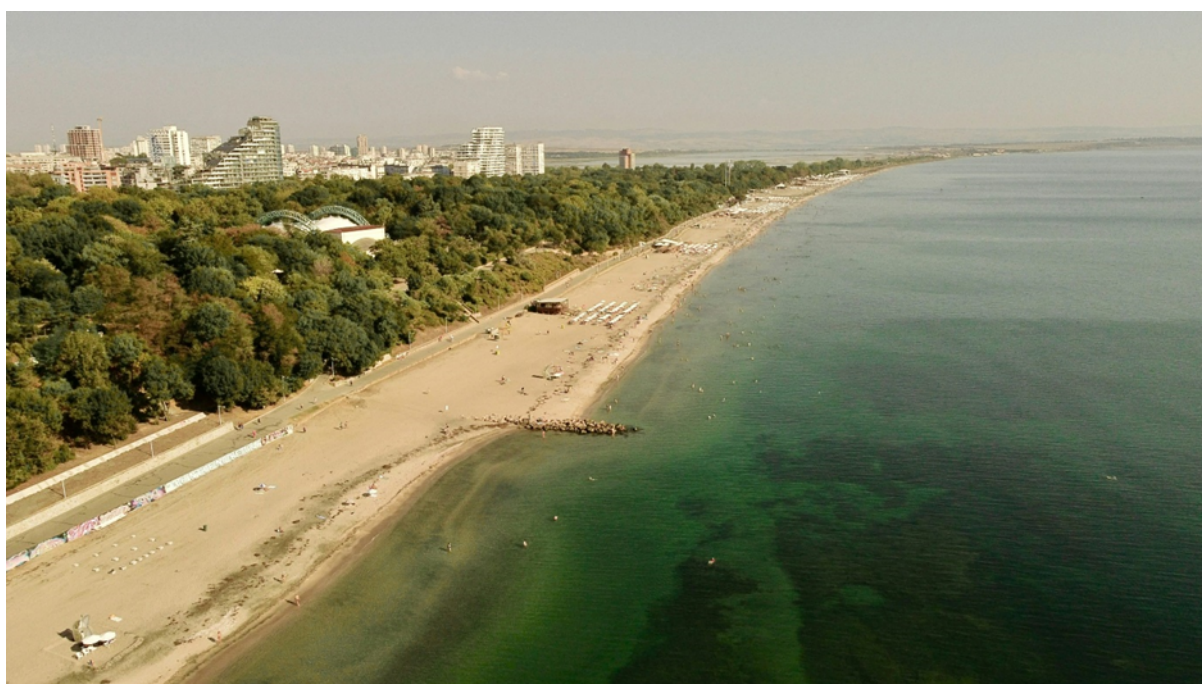
Figure 7. Burgas coastline. Image credit: Georgi Hristov

Best practices identified by UNP+ cities

Alignment and integration

Nature and the just access to nature must be integrated across the city and beyond the city boundaries. This can be achieved in different ways. The objectives could live primarily within one strategy, which was developed in coordination with other plans and multiple departments, and it could also be achieved by embedding nature and justice targets in all plans across the city's portfolio (Collier et al., 2023; Adams et al., 2023; Sarabi et al., 2019).

Paris best practice: Paris's biodiversity strategy is integrated into the city's broader planning framework. The new strategy places a strong emphasis on social justice, particularly focusing on ensuring equitable access to urban nature. By prioritising underserved areas, Paris aims to ensure that all residents can enjoy the benefits that green spaces provide. The strategy must also align with the legally binding Bioclimatic Urban Master Plan, ensuring coherence across environmental and urban planning efforts.

Strong commitment to nature embedded in policy

UNP+ city authorities have found it useful to clearly state what targets they would like to reach by working with nature. It should be made clear that nature can bring a range of benefits which help contribute to a range of policy objectives. Whether it be social or environmental objects being pursued by the city, if it's clear that working with nature is a way to reach those goals, this puts nature in a strong position and its benefits realised (Seddon, 2022).

Barcelona best practice: Barcelona's Plan Natura sets the ambitious goal of maximising social and environmental benefits from urban nature. Recognising the importance of equitable access to green spaces, Action 9 specifically focuses on addressing the needs of underserved areas. The Green Model, a key component of the plan, provides a detailed analysis of green space distribution and identifies opportunities to address inequalities in access to green space. Barcelona assesses green space distribution and accessibility at a city-wide scale. This information is invaluable in allowing them to understand where access is comparatively low, and an area should be targeted to maximise the equitable provision of environmental services. By prioritising social and environmental justice, Barcelona aims to create a more sustainable and inclusive city for all.

Conclusion

In the Figure below all of the challenges, enabling factors and best practices experienced by the UNP+ partner cities related to this topic have been laid out. Links have been drawn from challenges to enabling factors, where the enabling factor may be key to overcoming the particular challenge. Best practices are linked to enabling factors where specific enabling factors may be required for the establishment of a best practice.

Some key lessons can be learnt from the experience of the UNP+ partner cities:

- Urban nature planning is often hindered by fragmented responsibilities, conflicting priorities, and limited resources
- Competing objectives, such as infrastructure development versus green space preservation can complicate alignment. Although those other objectives can be a vehicle for including biodiversity, for example requiring investment in nature alongside the building of a new road

- Without clear departmental leadership, biodiversity goals may lack accountability and sufficient funding
- Cities should try to ensure that the Nature Plan is aligned with other city priorities to maximise cohesion and co-benefits and minimise trade-offs
- Embedding biodiversity across plans can help maximise co-benefits and ensure urban nature initiatives contribute to sustainable, equitable urban development.
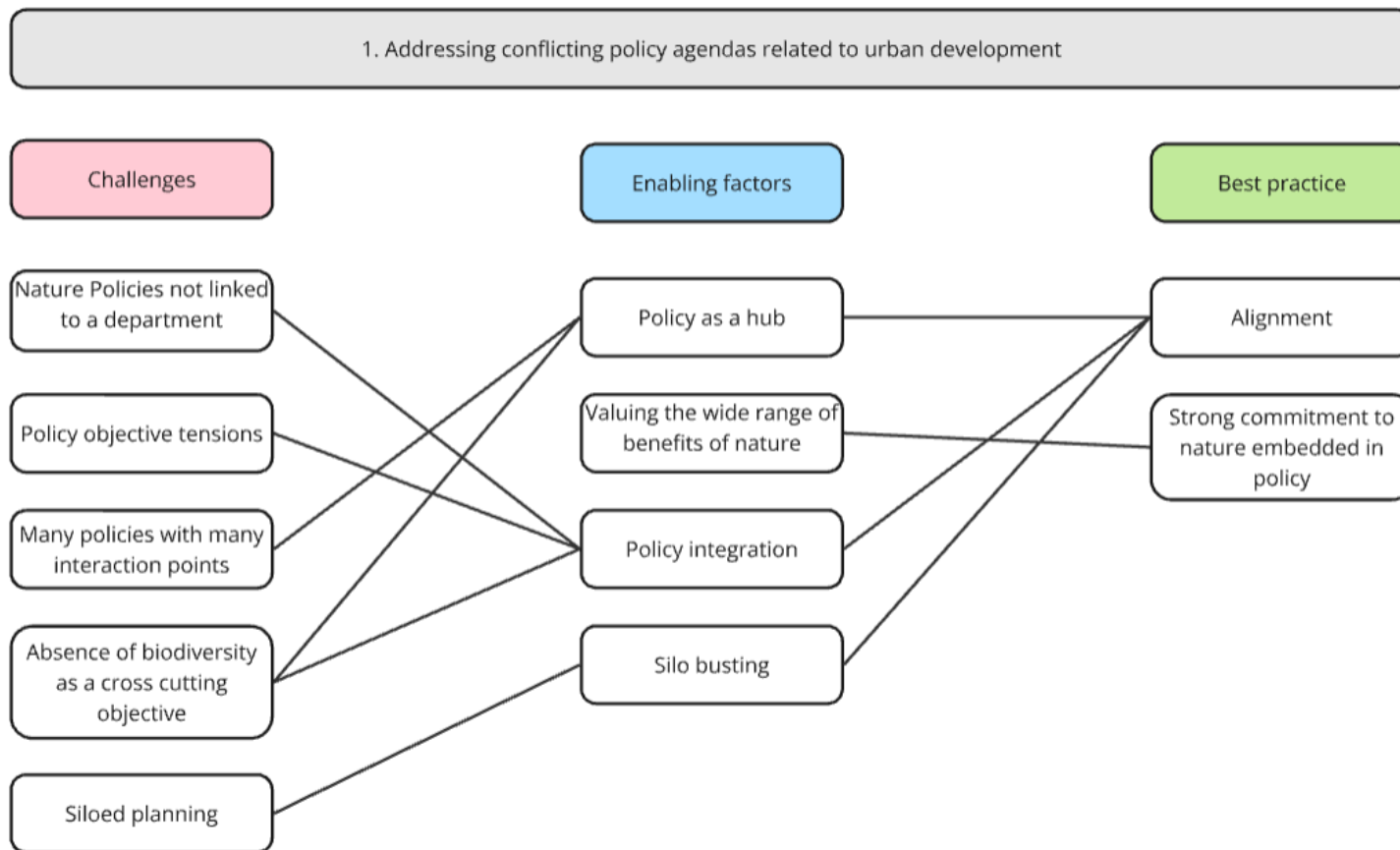- Fostering cross-departmental collaboration can also help maximise co-benefits

Figure 8. The challenges, enablers and best practices experienced and suggested by UNP+ partner cities with links showing which enabling factors may help overcome certain challenges and which enabling factors may contribute to the establishment of best practices

Topic 2 - Co-producing plans: How plans are designed and proofed with stakeholders

To be published as Jelliman et al. (2024) Topic 2 - Co-producing plans

Introduction

The Urban Nature Plan+ (UNP+) project supports cities in developing effective Urban Nature Plans (UNPs) to integrate nature into urban landscapes. This report focuses on challenges, enablers, and best practices across one of four critical topics: **engaging stakeholders in plan design.** The others are: addressing conflicting urban policy agendas, applying governance structures for biodiversity and restoration, and securing financing. By sharing insights and experiences from participating cities, the report aims to help other cities navigate common challenges and adopt proven solutions, advancing the creation of greener, healthier urban spaces aligned with the goals of the EU Biodiversity Strategy 2030 and the EU Nature Restoration Regulation. The insights in this report will help cities to more successfully develop and implement high-quality UNPs.

Topic Overview

Step 3 of the Urban Nature Planning (UNP) cycle focuses on establishing a co-creation process to co-create UNPs. Designing UNPs with stakeholder input presents several challenges but also offers opportunities to strengthen engagement and collaboration and ensure that co-benefits can be achieved.

Challenges identified by UNP+ cities

Inconsistent approach to engagement across departments

Departments across a city may have different approaches to creating and implementing plans. Even if a plan is developed in a very integrated way by one department to yield co-benefits, another department may then create another plan in their area in a siloed way, creating friction points and trade-off situations with the first plan (Oseland, 2019). This occurs in UNP+ partner cities as well as other cities. Different engagement approaches during the delivery of plans by different departments may confuse the engagement expectations of citizens (Hölscher, 2024).

> **Paris challenge**: The planning and design processes vary depending on which department is responsible for the plan/strategy. Therefore, co-creation varies from project to project and may happen at different stages of a process. There is however a consistent approach to

how public consultations are run, with an online platform being used to engage the public in consultations (https://decider.paris.fr/decider/jsp/site/Portal.jsp).

Vulnerable groups difficult to engage

An experience among UNP+ cities is that it can be difficult to include all segments of society in the creation and delivery of plans. This is often most true of vulnerable or marginalised people, who may not have their voices heard and can be difficult for city officials to reach (Hölscher, 2022).

Mannheim challenge: For Mannheim, reaching all citizens, particularly marginalized groups, continues to be a significant challenge.

Burgas challenge: Despite efforts, the City of Burgas faces significant challenges in consistently reaching and engaging all residents, especially marginalised groups and those with diverse educational backgrounds.

Paris challenge: One engagement tool Paris uses is an online consultation platform to attempt to engage citizens in public consultations, however, they find that consultation contributions from vulnerable groups are often underrepresented.

Coordinating many contributors is difficult

It is often the wish of UNP+ partner city officials to include many stakeholders in the creation and delivery of a plan. However, the more success they have in this and the greater the number of participants gathered, the more difficult coordination becomes. The practical challenges of organising events, collecting and analysing feedback and communication grow with the number of participants involved (Van der Have, 2022).

Barcelona challenge: Establishing a co-production process for the "Plan Natura" with so many involved agents from totally different fields has been a challenge. The development of the action plan included a comprehensive participatory process aimed at sharing the initial diagnosis, agreeing on key challenges and objectives, and gathering proposals related to green spaces and biodiversity. A total of 10 sessions were conducted, engaging over 100 participants from both internal departments and external stakeholders associated with the City Council. Citizens were also actively involved through the online platform Decidim, ensuring broader public engagement and input into the planning process. The magnitude of the participatory process and the number of people involved makes coordinating activities challenging.

Maintaining engagement over time is difficult.

It can often be easier for the UNP+ partner cities to engage citizens at the beginning of activities but difficult to maintain their engagement over a longer period. This leads to a drop-off in engagement over time. It also takes time to build relationships between city staff and citizens and if engagement declines the process of relationship-building may need to start again (Leino & Puumala, 2021).

Mannheim challenge: Mannheim experiences challenges with maintaining long-term citizen involvement. They face difficulty in fostering public engagement that extends beyond individual projects and remains consistent over time. Many citizens prefer to contribute to the implementation of a single project, as they often have limited time and are not inclined to take on broader responsibilities. This makes it more difficult to build long-term relationships and to include citizens in the longer-term maintenance of green space.

Expectation management

Sometimes in the UNP+ cities, it can be unclear to citizens how they are supposed to be involved in co-production activities, what results their inputs lead to and why the city is deciding to take the actions it is taking. This can lead to pushback from citizens when they feel that they are not clear on the rationale for the city's actions (Hölscher, 2022).

Mannheim challenge: For Mannheim, a challenge lies in managing realistic expectations about the opportunities available for citizen participation. Some citizens have been engaged in design and maintenance work. From this engagement, the citizens have come to understand that it is sometimes beneficial for biodiversity to leave the grass to grow long. However, in some areas, there is a need to keep the grass short for traffic safety, keeping sightlines clear at roundabout approaches for example. This has caused some confusion and dismay from some citizens who query why the grass is being kept short when they have been told it should be kept long to increase biodiversity.

Communication strategy lacking

A communication strategy may be either inadequate or non-existent in some of the UNP+ cities. This can make it difficult for them to coordinate communication with citizens, particularly if communication about similar topics is needed from multiple departments. Ad-hoc, sporadic communication coming from different departments is likely to lead to confusion and disengagement of citizens. (Ferreira et al., 2020)

Mannheim challenge: Developing a communication strategy remains a challenge for Mannheim, as it currently lacks a strategic approach to public awareness and education. The city recognises that educating the public on the benefits of urban nature is essential to

> fostering greater citizen engagement. Having a coherent communication strategy with links to the engagement and co-creation strategy would be beneficial.

> **Barcelona challenge**: The city recognises the importance of communicating the values of nature by incorporating the communication plan as a project included in the action plan. At the moment, efforts are focused on internal communication (between departments). Greater communication towards the citizens and other external stakeholder groups such as NGOs and civil society groups is lacking. Experts in environmental communication are needed.

Organisational inertia

Sometimes a city, including UNP+ partner cities, may have a long history of using an approach which is not particularly participatory. All organisations have some level of inertia. Like a heavy ship beginning to turn, change takes time, and it can seem easier to keep heading in the same direction than to change course (Sarabi et al., 2019).

> **Belgrade challenge**: Getting started remains a challenge; without a legal mandate, committed leadership or bottom-up action initiatives risk staying in the preliminary stages. Establishing a continuous co-creation process within the City Administration is still difficult.

Enabling factors identified by UNP+ cities

Plan sessions well

To get the most out of the time and effort that stakeholders invest in the participatory process, UNP+ partner cities suggest careful planning is needed to ensure that any participatory activities are as fruitful as possible. This could include communicating the objectives of participatory activities and sharing any information beforehand so that the efficiency and effectiveness of time spent in co-production activities is as great as possible (Van der Have, 2022).

> **Barcelona enabling factor**: Barcelona maximises engagement by planning information and input sessions well in advance, setting clear objectives, and providing materials beforehand. Setting clear objectives for the meetings and sending out materials beforehand allows participants to familiarise themselves with the topics and important information in advance of the meeting which means their time spent at the meeting can be as productive and fruitful as possible.

Use a variety of engagement methods

UNP+ partner cities suggest using a variety of engagement methods to help to successfully include as many citizens and other stakeholders as possible. This is particularly important if cities want to reach a wider audience such as vulnerable or marginalised groups and those without access to technology (Van der Have, 2022).

Barcelona enabling factor: Barcelona engages residents through surveys and remote methods, supplementing traditional face-to-face meetings. Live co-creation sessions provide the most impactful results.

Paris enabling factor: Paris engages residents in guided walks to identify opportunities to improve urban nature and biodiversity. Another innovative scheme Paris launched is called "Permit to Plant". This scheme allows citizens to apply for a permit from the city which will allow them to garden wherever they like within the public spaces of the city. This allows citizens to put their creative mark on the streets and will encourage community maintenance and care for public spaces. Permit holders are asked to pledge their support for sustainable gardening by avoiding pesticides and embracing eco-friendly practices. To encourage the growth of bee-friendly plants, urban gardeners can access starter kits containing topsoil and seeds, helping them contribute to the greening of their communities. Another project is the "Sparrow Neighbourhood" project, where citizens can participate in putting up nest boxes, putting out bird seed and participating in guided walks as part of Paris' drive to bring wildlife back into the city. These activities among others take place as part of a schedule of activities easily found through a website. Activities like the ones offered by Paris, help foster long-term engagement with the public and create a strong sense of ownership in the local area. https://www.paris.fr/evenements/nature-a-paris-le-programme-13407

Figure 9. Paris streets. Photo credit: Daniel James

Use digital engagement tools

Digital engagement tools can represent one method for helping city authorities reach more and a wider pool of citizens, allowing them to contribute to co-production. UNP+ partner cities also report that it can create a space for citizen interaction and lively discussion in a way that can be collected and used to inform decision-making in the city. A digital approach doesn't work for everyone though so should be part of a larger palette of approaches (Van der Have, 2022).

> **Barcelona enabling factor**: The planning team engaged citizens by launching a 'creation and debate' space on the Decidem platform and hosting two information and discussion sessions. Entities representing vulnerable populations actively participated. The Decidem platform allows the Barcelona team to reach all members of the population and receive their input on planning initiatives and on-the-ground projects. https://ajuntament.barcelona.cat/digital/en/technology-accessible-everyone/accessible-and-participatory/accessible-and-participatory-5

> **Burgas enabling factor**: The Burgas team has found that using online tools allows them to reach a wider audience including hard-to-reach groups. Burgas uses its municipality website, local websites, local newspapers, online surveys and stakeholder meetings to increase its engagement of a wider range of citizens.

Figure 10. Burgas city centre. Image credit: Mulleflupp at Wikivoyage

Use reflexive monitoring to support co-creation

Understanding how your activities are moving you towards your objectives is crucial if you want to more successfully reach your objectives. One way to see how well you're moving towards your objectives is by using Reflexive Monitoring. Reflexive Monitoring allows an individual, team, or organisation to diary their activities, identifying critical turning points that move them closer to, or further away from their goals. In so doing, it helps to capture, reflect on, and share learning to evolve and improve processes and practices (Lodder, 2022). If a city's objective is to co-produce and implement plans with stakeholders, Reflexive Monitoring helps the city to understand how well they are progressing towards that objective, what is holding them back, and how they can improve their practices.

Burgas enabling factor: As a legacy of the Connecting Nature project in which Burgas took part, Burgas uses Reflexive Monitoring to support their Co-creation work. Reflexive Monitoring helps the team to track progress, successes and barriers in real-time to help them improve their co-creation approach on the ground. Practitioners keep a dynamic learning agenda where they record events which have moved them further away or closer to achieving their objectives. They then discuss what they need to do to overcome any

NGO activation

Sometimes stakeholders are more receptive to working with intermediary organisations such as NGOs rather than city officials in some of the UNP+ partner cities. This can be for a variety of political and relational reasons including perceived neutrality, but also sometimes NGOs simply possess skills which aren't present in the city staff. Working with NGOs who can effectively engage citizens and other stakeholders may increase the effectiveness of a participatory approach. (Whitehead et al., 2017)

Belgrade enabling factor: The Belgrade city team finds it easier to collaborate with NGOs than with state institutions, which often lack a culture of collaboration and adaptability. The public demonstrates greater receptivity to initiatives led by NGOs and trusts NGOs more than the authority to deliver successfully.

Engagement with international projects

Some UNP+ partner cities report that they have learnt new skills and gained experience in participatory approaches and stakeholder engagement by engaging in, or with, international projects. Seeing how other cities go about engaging stakeholders and getting support from project partners can improve a city's capacity for stakeholder engagement (Van der Have, 2022).

Belgrade enabling factor: Belgrade has actively participated in Horizon 2020 projects, gaining experience in co-creation processes and other ways of working. Participating in international projects helps you gain access to new approaches, expertise and networks.

Choosing the right tool for the job

The most suitable engagement approach and engagement tools will differ depending on the context. It can differ between different situations in the same city, and it can differ between cities. This includes choosing the desired level of participation, as in some cases it might be preferable to use a full co-creation process and in some cases, a lighter touch can be more suitable. When participants can enter and exit the process is also something to consider (Van der Have, 2022; Roitsch, 2024). This is an approach that UNP+ partner cities among others strive to do.

Use inclusive approaches

Be mindful of using inclusive approaches to make sure you hear all the voices out there. It is important that all of society can contribute. Using inclusive approaches, considering activity times, locations and formats can help to achieve this. Approaches could also provide child care, transport to the venue, providing food or expenses. Consideration could also be given to how to ensure that all voices in the room are heard by not only using large open forums where the loudest voices tend to shine through. There are a wide range of factors which can potentially hinder participation. An inclusion plan can help you frame engagement activities. The use of a skilled facilitator can be useful if these skills are lacking within the administration staff. (Van der Have, 2022; Roitsch, 2024).

Develop a communication strategy

A communication strategy both for a department and the city as a whole can be very useful to help citizens understand how they can be involved, what happens as a result of their involvement and why decisions were taken in the way they were (Ferreira et al., 2020)

Figure 11. River Neckar & Luisenpark, Mannheim. Image credit: Mannheim city authority

Best practices identified by UNP+ cities

Engaging from start to future

A plan is both created and implemented, which then includes the legacy and maintenance activities of any urban nature schemes. It can be useful to have stakeholders involved in all stages. Starting engagement early can result in stakeholders having more sense of ownership of the plan and any on-the-ground nature schemes (Van der Have, 2022; Roitsch, 2024).

Paris best practice: For Paris, ongoing citizen engagement with stewardship and maintenance is very useful. To increase the chances of success of ongoing engagement, Paris engages citizens early on so that they are part of the entire journey. At the Bois de Vincennes Park, the largest green space in Paris, authorities pursue active community engagement in the management and enhancement of the park. Public participation is integral to ensuring the park remains accessible and aligns with ecological and recreational goals. Residents have contributed through participatory initiatives, which have involved discussions and planning processes focused on biodiversity preservation and the sustainable use of park resources. https://oppla.eu/casestudy/22601

Figure 12. Collective garden, Chapelle and Goutte d'Or district, Paris. Photo credit: Pascal Bonneau

> **Mannheim best practice**: Mannheim has made significant strides in developing its UNP by embedding co-creation processes at various stages of planning, especially for projects that directly impact residents, including park development, public space design, and urban greening initiatives.

Sustained participatory approach

UNP+ partner cities have reported that having mandates and structures in place within the city can ensure the continuation of a participatory approach and stakeholder approach through time and help overcome the initial challenge of inertia for cities which are not up to speed with stakeholder engagement yet.

> **Barcelona best practice**: A formal decree mandates participatory planning in Barcelona, ensuring its ongoing use. The City Council has established the Citizen Participation Regulation (2022), which mandates the inclusion of participatory processes for significant municipal actions. The City Council is required to consult citizens on specific municipal actions during their planning stages and before final approval. These processes are required for developing or amending plans and programs of municipal interest, changes to urban planning, and major urban transformation projects. This framework ensures that residents have a structured role in shaping decisions that impact the city's development.

Figure 13. Outreach session in Parc del Laberint d'Horta & Citizen Science Day, Barcelona. Image credit: Barcelona city authority

Mannheim best practice: Mannheim has a Participation Advisory Board, a permanent body, which ensures and improves the quality of the city's citizen participation process. In some cases, the board may provide mandatory recommendations for improvements to participatory processes.

Belgrade best practice: Serbia's legal framework incorporates provisions for public participation in planning and policymaking. The Law on the Planning System requires public involvement in developing public policy documents, while the Law on Planning and Construction requires two stages of participation for spatial and urban planning: Early Public Consultation and Public Consultation. Despite these mechanisms, engagement often remains limited to fulfilling basic formalities, with minimal two-way communication between authorities and the public. Additionally, the Nature Protection Law includes mandates for co-creation in certain contexts, offering opportunities for more collaborative approaches in specific cases.

Including key entities

For a plan to be as successful as possible, with as much buy-in as possible, the co-creation process must include key stakeholders and consider their views during both its development and implementation (Connop, 2021; Sarabi et al., 2019).

Barcelona best practice: Barcelona's Natura 2030 Plan was developed through a co-creation process involving a diverse range of stakeholders. This included city departments, researchers, scientists, consultants, citizens, environmental and community-based groups, and other relevant organizations. A core group of city officials and experts guided the planning process, while collaborative workshops involving city departments, external

experts, and citizens shaped the plan's goals and strategies. Technical expertise was provided by organisations like CREAF, ICO, and ISGLOBAL, while public consultations and online platforms were used to gather feedback and ideas from the wider community.

Mannheim best practice: Mannheim has successfully established a co-creation framework that actively involves citizens and stakeholders in the urban planning process. This is a central component of the city's urban nature initiatives, which are strongly oriented towards the needs of the community.

Belgrade best practice: While developing the Green Infrastructure Strategy, the Secretariat for Environmental Protection engaged an external expert team of almost 20 professionals and 10 students, and established a Task Force with over 40 members from public and civil sectors. The Task Force had four meetings in one year (from October 2023, until October 2024), and used various co-creation methods which have not been used ever before in public policy document development, e.g. World Cafe discussions, and role-play.

Conclusion

In the Figure below all of the challenges, enabling factors and best practices experienced by the UNP+ partner cities related to this topic have been laid out. Links have been drawn from challenges to enabling factors, where the enabling factor may be key to overcoming the particular challenge. Best practices are linked to enabling factors where specific enabling factors may be required for the establishment of a best practice.

Some key lessons can be learnt from the experience of the UNP+ partner cities:

- Inconsistent engagement approaches by different departments during the development or implementation of plans may confuse the engagement expectations of stakeholders
- City administration finds it difficult to include marginalised people in plan co-creation
- Coordinating engagement activities with many stakeholders can be logistically challenging
- Maintaining long-term involvement and managing citizen expectations are also problematic, particularly when communication strategies are unclear or absent.
- Organisational inertia further hinders progress
- Using a diverse range of engagement approaches and tools suited to the context can be beneficial
- Reflexive monitoring can help improve the engagement approach over time
- It can be useful to work with NGOs to facilitate and bridge the gap with other stakeholders
- An inclusion framework can be used to set out an inclusive engagement approach

- Early engagement can result in more sustained engagement from stakeholders
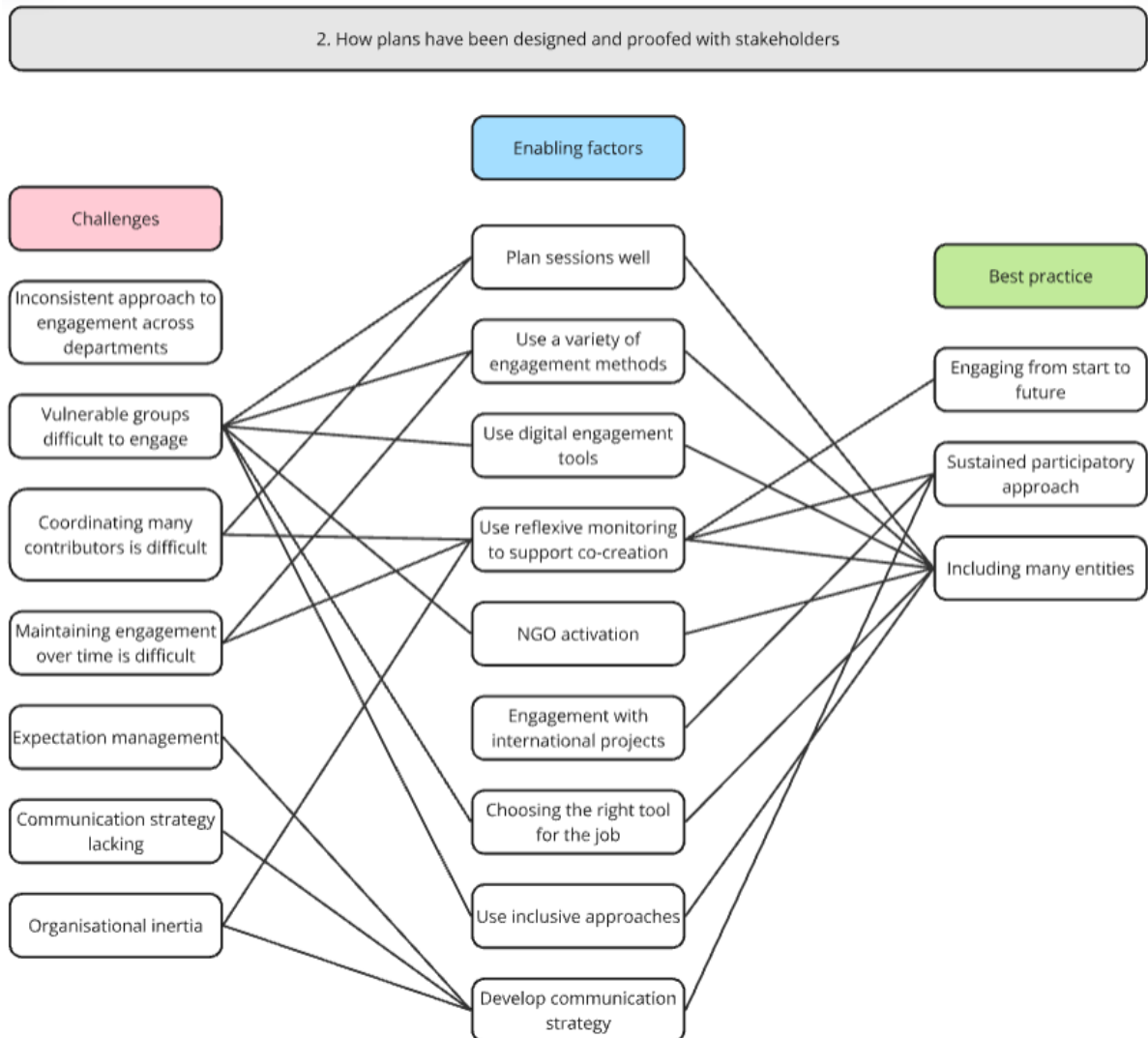- Mandates can ensure co-creation takes place

Figure 14. The challenges, enablers and best practices experienced and suggested by UNP+ partner cities with links showing which enabling factors may help overcome certain challenges and which enabling factors may contribute to the establishment of best practices

Topic 3 – Governance structures: What governance structures are applied to urban greening, biodiversity enhancement, and ecosystem restoration initiatives

To be published as Jelliman et al. (2024) Topic 3 - Governance structures

Introduction

The Urban Nature Plan+ (UNP+) project supports cities in developing effective Urban Nature Plans (UNPs) to integrate nature into urban landscapes. This report focuses on challenges, enablers, and best practices across one of four critical topics: **Applying governance structures for biodiversity and restoration.** The others are: Addressing conflicting urban policy agendas, engaging stakeholders in plan design, and securing financing. By sharing insights and experiences from participating cities, the report aims to help other cities navigate common challenges and adopt proven solutions, advancing the creation of greener, healthier urban spaces aligned with the goals of the EU Biodiversity Strategy 2030 and the EU Nature Restoration Regulation. The insights in this report will help cities to more successfully develop and implement high-quality UNPs.

Topic Overview

Step 2 of the Urban Nature Planning (UNP) process focuses on establishing a working structure. Working structures may take many forms. Some UNP+ partner cities have a single department or team responsible for the development of a UNP and some cities create a multi-department working group to create the plan. Once the plan has been made, cities also take different approaches to delivery. Again, the responsibility for delivering on the plan may sit with one department or team, or the objectives in the plan may trickle into multiple departments to implement. The working structure can shape both the development and delivery of plans in the UNP+ partner cities, with clear responsibility and coordinated action being crucial to their success (Sarabi et al., 2019).

Challenges identified by UNP+ cities

Siloed working

Ideally, objectives and plans will be established in an integrated manner to create as many co-benefits and mutual wins as possible, and then delivered in a way that continues to try and maximise the opportunities for co-benefits and reduce the requirement for trade-offs (Sarabi et al., 2019; Collier et al., 2023). Developing plans in silos can result in more friction and potential trade-offs during implementation, which is sometimes the case among UNP+ partner cities and others (Sarabi et al., 2019).

Burgas challenge: A formal structure to facilitate interdepartmental collaboration and goal achievement is currently lacking. Colleagues typically connect on an ad-hoc basis as needed. This arrangement makes the coordination of cross-departmental activities more challenging.

Belgrade challenge: Interdepartmental cooperation, particularly between construction and urban planning departments, is significantly hindered by a lack of communication. This is evident in the challenges posed by development pressures on green spaces. Despite regulations mandating a minimum percentage of green space requirement for new housing projects, weak enforcement and monitoring often lead to non-compliance. In addition, Belgrade's 20 secretariats, each with their own strategies, operate in silos, limiting coordination and hindering the effective implementation of city-wide goals. However, the Draft Green Infrastructure Strategy (DGIS) proposed a new organisational unit within the Secretariat of Environmental Protection to deal with all aspects of the preservation and development of green infrastructure. A new unit should be established in 2025 and will be responsible for the implementation of the Strategy, cooperation with other relevant institutions, new initiatives, and applying and implementing projects through various funds and partnerships. Moreover, the Action Plan of the DGIS proposed the integration of green infrastructure topics in the realm of work of several other institutions: the Secretariat for Education and Children's Welfare, the Secretariat for Utilities and Housing Services, the Secretariat for Urban Planning and Construction, the Secretariat for Inspection, Supervision and Communication, etc. Finally, the Action Plan envisaged that in 2026 a delegated green infrastructure expert needs to be engaged in the team of the Department of the Main Urban Planner, as well as in the Urban Planning Committee.

Figure 15. Riverside, Belgrade. Image Credit: Maja Jovanovic / City of Belgrade

Disconnect between plan creators and delivery teams

Some UNP+ partner cities face issues when a nature plan isn't connected to a single specific department. This can create a diffusion of responsibility and reduce the level of agency, which is needed to ensure the plan is effectively implemented. In this case there also may not be a budget connected with implementing a plan, instead relying on portions of multiple budgets. Whilst it's often seen as a positive thing that a plan is connected with multiple departments;

it can sometimes also have the effect of making the plan carry less weight as it doesn't have a single department taking responsibility for driving it forward (Vandergert et al., 2022)

Barcelona challenge: Plan Natura was developed by a small team within a single department. Other departments, such as architecture, are responsible for implementing on-the-ground projects aligned with the plan's objectives and actions. Although other departments were involved in the creation of the plan Natura, they may feel that it isn't "their" plan and so not buy into it as much as if it were a plan created by people from multiple departments. A plan being jointly created and owned might lead to greater buy-in from those departments. Barcelona staff highlighted that the successful implementation of the plan hinges on adequate human resources. A dedicated department would streamline the process. However, the current team of seven is overburdened, juggling both regular duties and plan implementation. Budgetary constraints further limit the possibility of hiring additional staff, hindering the plan's effectiveness.

Decentralised & disjointed biodiversity monitoring

In some of the UNP+ partner cities, a challenge can arise by not having all biodiversity monitoring data available in one place. Different teams and departments may be doing bits and pieces of ad-hoc biodiversity monitoring. If it is not coordinated, it is impossible to know if the monitoring being done in one team is useful and complementary to the monitoring being done by another team. Without a centralised place to access and analyse all data, it is impossible to understand biodiversity on a city-wide scale and make informed decisions about biodiversity actions based on this (Dumitru, A. 2022). This can be improved by establishing a local record centre and biodiversity partnerships crossing administrative boundaries (Gaia & Jones, 2019).

Mannheim challenge: While effective indicators exist for soil protection, air pollution control, small-scale monitoring, and tree monitoring, a central registry for species occurrence data remains absent. Mannheim recognises the need for a comprehensive data strategy to address this gap. Currently, data management is fragmented across various departments, limiting accessibility and awareness. The city's ongoing data strategy aims to establish standardised data collection, management, and accessibility practices.

Burgas challenge: Data management, collection, and inventory are not centralised. Instead, these responsibilities are distributed across multiple departments. For instance, the Ecology Department focuses on the ecological aspects of green infrastructure, while the Construction Department handles data related to infrastructure projects. The European Projects and Programs department manages EU-funded projects, which may include green and blue infrastructure initiatives. This fragmented approach can hinder efficient data sharing and analysis.

Belgrade challenge: Belgrade developed the Green Areas GIS database, maintained by the Public Utility Company "Belgrade Greenery": http://gispublic.zelenilo.rs/giszppublic/Map but it is not regularly updated, it does not map any urban nature on privately owned land, and it insufficiently maps biodiversity indicators. The Draft Green Infrastructure Strategy plans "Measure 2.1. Establishment of an integrated green infrastructure planning system based on relevant information bases", and certain donor funds are expected for this work. It should encompass the development of a digital database of City green infrastructure, the unification and synchronisation of available information on the quality of the environment and endangering factors, as well as the creation of thematic studies for improvement of the structural and functional features of the elements of green infrastructure. A comprehensive mapping and GIS tool which is publicly accessible may help to bring all of the information together to be viewed and analysed.

Coordination challenges

The involvement of multiple districts, departments, and agencies in managing urban nature highlights its significance in UNP+ partner cities but also introduces considerable coordination challenges. The complexity of aligning roles and responsibilities across these entities can impede effective implementation and monitoring, particularly for tasks that require specialised expertise (Sekulova and Anguelovski, 2017).

Barcelona challenge: The extensive involvement of various districts, departments, and agencies in Barcelona's urban nature management, while indicative of its importance, poses significant coordination challenges. This complexity can hinder effective implementation and monitoring, particularly for tasks requiring specialised knowledge, such as fauna monitoring. To overcome these challenges and ensure the long-term health and quality of urban nature, strong interdepartmental collaboration is essential. This collaboration can help streamline processes, share resources, and maintain consistency, even without additional funding or personnel.

Paris challenge: To ensure the plantation of 170,000 trees promised by 2026 by Mayor Hidalgo, the Green Spaces and Environment department has set up a task force to collect data from all relevant departments and private owners. Having an endorsement by a senior official can make a big impact on delivery success. This is an important coordination and technical challenge to ensure communication between GIS tools and other monitoring systems from Green Spaces, Public Works and Mobilities, Sanitation, Housing departments and private developers. The result of this monitoring is communicated to elected officials and made publicly available on the city's website for all Parisians to follow the delivery of projects.

Enabling factors identified by UNP+ cities

Clear responsibilities

City authorities, including in the UNP+ partner cities, have found it important that any plans or action plans lay out which departments and teams are responsible for delivery and monitoring (Sekulova and Anguelovski, 2017). This ensures that everyone knows who should be doing what and who they might need to be involved in the area of responsibility. However, it should also remain adaptable to enable participation from other stakeholder groups (Vandergert et al.,, 2022).

Paris enabling factor: Three key city plans, the Climate Plan, the Bioclimatic Urban Masterplan, and the Biodiversity Plan 2025-2030, are currently undergoing updates. In each of these plans, responsible stakeholders are identified for the plan's implementation.

Barcelona enabling factor: The Natura action plan designates specific leaders and internal agents for each initiative. A dedicated team of seven individuals is responsible for overseeing the three lines of action and two focus areas outlined in the plan.

Structured cooperation

It has been useful for UNP+ partner cities and other cities to put structures in place such as steering groups, task forces, and advisory boards to create vehicles for discussion, co-production and action (Vandergert et al., 2022). Without these structures, activities may take a more ad-hoc form and risk making less progress. There could also be a role for neutral partnership structures, including NGOs and national government agencies to co-ordinate plan development and link between the planning and delivery processes (Hansmann, 2016). The role of partnerships with NGOs or national agencies and mentoring may help to create bridges between departments (Whitehead et al., 2017).

Barcelona enabling factor: One of the factors in the successful development of Barcelona's Natura Plan 2030 was the establishment of a dedicated planning committee/steering group to facilitate interactions and cooperation. The committee comprised the Biodiversity Department, Hands-on Green Participation Department, Project Department and Green Space Conservation Department. The committee was created by and contained members from all of the departments related to the Plan Natura, ensuring a variety of views were included and that an effective communication forum was established.

Figure 16. Parc Natural de Collserola, Barcelona. Image credit: Barcelona city authority

Best practices identified by UNP+ cities

Integrated working

Embedding biodiversity into a range of city plans, rather than limiting it to a stand-alone strategy, has created more opportunities to enhance biodiversity through various sectors such as housing and transport in cities including the UNP+ partner cities. This approach not only broadens the scope for biodiversity-related activities but can also unlock additional funding streams. To ensure biodiversity is integrated effectively across multiple departments and receives the attention it requires, a joined-up approach is essential. Aligning and synergising the development and implementation of plans across city departments and other stakeholder groups maximises co-benefits, allowing for more cohesive and impactful outcomes (Sekulova and Anguelovski, 2017; Vandergert et al., 2022).

Paris best practice: The increasing complexity of urban challenges necessitates greater interdepartmental collaboration. As citizens often expect seamless service delivery, regardless of departmental boundaries, cities must foster cooperation to effectively address these challenges. This is apparent in the Catalonia Square Urban Forest, which involved close cooperation between the Green Spaces and Environment department and the Public Works and Mobilities department. Visions at times were not in perfect alignment but by working closely together a positive path forward could be achieved. Paris exemplifies this trend with its strategic mandate, which prioritises biodiversity across multiple departments. This high-level political document, updated every six years, fosters a collaborative approach, ensuring that nature and biodiversity are integrated into the work of multiple departments. During the revision phase, working groups were organised to gather inputs from all relevant departments (public works, housing, education, sports, finance, communication) and a draft was circulated to all elected officials for further amendments and comments before introduction to City Council.

Mannheim best practice: The city of Mannheim has established a Local Green Deal group. An Interdepartmental group focussed on the local implementation of the European Green Deal and the EU Mission 100 climate-neutral cities by 2030. The group is closely connected to many departments of the city's administration and can therefore speed up processes and provide better support to citizens in their projects. The group also engages with other NGOs and stakeholders beyond the city administration.

Barcelona best practice: Some of the actions included in the plan are closely related to the promotion of cooperation and the improvement of governance. Firstly, through the approval of a local law on the conservation and promotion of biodiversity in all public works. Secondly, by promoting training on green and biodiversity for the entire staff of Barcelona City Council. Lastly, by creating three transversal work teams: Green and health, biodiversity conservation and green city model.

Conclusion

In the Figure below all of the challenges, enabling factors and best practices experienced by the UNP+ partner cities related to this topic have been laid out. Links have been drawn from challenges to enabling factors, where the enabling factor may be key to overcoming the particular challenge. Best practices are linked to enabling factors where specific enabling factors may be required for the establishment of a best practice.

Some key lessons can be learnt from the experience of the UNP+ partner cities:

- Siloed working is a common challenge which can increase departmental friction points and missed mutual wins which could be reached through the integration of objectives and delivery
- Fragmented biodiversity data storage and management can make it difficult to evaluate biodiversity across the city
- A lack of formal coordination structures can lead to inconsistent implementation
- Multiple departments handling different elements of a plan may dilute accountability and hinder effective implementation
- Successful approaches rely on well-defined roles, still open to the input of other stakeholders
- Establishing formal structures such as steering committees or task forces can foster cooperation across departments and the involvement of wider stakeholders and partners, leading to more cohesive and impactful outcomes
- Integrating biodiversity goals into various city plans, not just standalone strategies, ensures greater coordination and can unlock additional funding and resources.
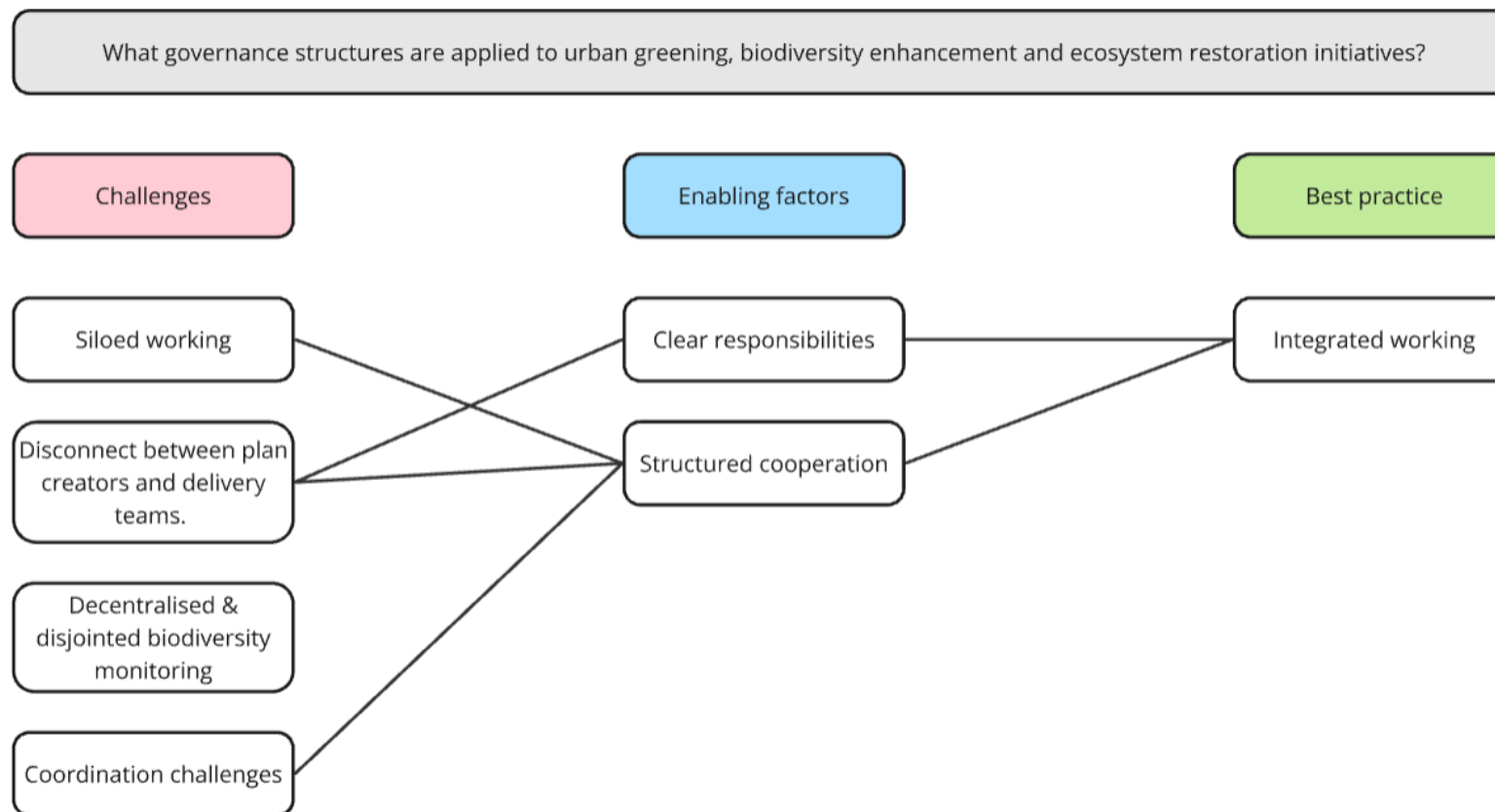
Figure 17. The challenges, enablers and best practices experienced and suggested by UNP+ partner cities with links showing which enabling factors may help overcome certain challenges and which enabling factors may contribute to the establishment of best practices

Topic 4 – Financing models: What financing models are identified and secured to fund the strategy?

To be published as Jelliman et al. (2024) Topic 4 - Financing models

Introduction

The Urban Nature Plan+ (UNP+) project supports cities in developing effective Urban Nature Plans (UNPs) to integrate nature into urban landscapes. This report focuses on challenges, enablers, and best practices across one of four critical topics: **Securing financing.** The others are: Addressing conflicting urban policy agendas, engaging stakeholders in plan design, applying governance structures for biodiversity and restoration, and **securing financing**. By sharing insights and experiences from participating cities, the report aims to help other cities navigate common challenges and adopt proven solutions, advancing the creation of greener, healthier urban spaces aligned with the goals of the EU Biodiversity Strategy 2030 and the EU Nature Restoration Regulation. The insights in this report will help cities to more successfully develop and implement high-quality UNPs.

Topic Overview

Step 7 of the Urban Nature Planning (UNP) cycle involves putting the financing in place to ensure the UNP can be created and the actions and objectives within it can be implemented and achieved. UNP+ partner cities currently experience challenges in this area, and the solutions are less well formed than for other steps and aspects of the UNP process. This report explores issues related to financing experienced by the UNP+ partner cities. A full report on the wider state-of-the art of NBS financing, business models and job creation opportunities can be found as part of deliverable 2.1 of the UNP+ project "State-of-the-art in NBS financing, business models and job creation opportunities".

Challenges identified by UNP+ cities

Turbulent funding landscape

It can be difficult for the UNP+ partner cities and other cities to make plans, action plans and set objectives if budgets cannot be reliably predicted. Many cities have an annual budgeting cycle which means budgets for nature-related work may go up or down annually. This can make it difficult to do effective long-term planning (McQuaid and Fletcher, 2022).

> **Paris challenge**: Securing adequate funding remains a persistent challenge, often requiring robust political advocacy to ensure support. The constraints of annual budget cycles and the need to renegotiate political priorities each year introduce uncertainty and can disrupt long-term planning efforts. However, the provision of roadmaps for the entire

mandate in 2020 has provided a degree of stability. These roadmaps, which outline strategies through 2026, have remained unchanged, enabling the continuation of planned initiatives despite financial and political complexities.

Burgas challenge: Given the city's reliance on external funding, developing long-term plans remains challenging. Bugas currently focuses on a 7-year planning horizon, with annual reports submitted to the mayor.

Belgrade challenge: A 10-year biodiversity plan is a significant step toward a more sustainable future. However, the absence of a dedicated budget poses a significant challenge. Without sufficient funding, the plan remains in its early stages of development, limiting its potential impact. However, the Draft Green Infrastructure Strategy envisages almost 12 million EUR for the first 3 years of the implementation of the Action Plan (2025-2027). 28 million will be needed from 2025 until 2032.

Mannheim challenge: Very often there is just a budget or funding for the creation of a plan, like the biotope network planning, but there is no budget for the implementation.

Budgets independent of the plan

In some cases in the UNP+ partner cities, a plan may be created which does not have a single budget dedicated to its implementation. The plan may rely on multiple departments carrying out work in alignment with the objectives of the nature plan with those departmental budgets being used to meet all objectives of the department, which include objectives trickling through from the nature plan. This creates a layer of disconnect between the objectives in the plan and the finances to deliver on the plan. The budget of each department may be pulled in different directions to meet a range of objectives, with only some of those objectives originating from the Urban Nature Plan (Toxopeus and Polzin, 2021).

Barcelona challenge: The plan lacks dedicated funding for each action. Instead, it relies on budget allocations from various departments, including communication, maintenance, parks and gardens, education, and urban space. This disconnect between the plan and the budget could weaken the plan's influence over how budgets are spent and those budgets in other departments may be also being pulled in different directions by other competing plans. Currently, the possibilities of green taxation and other alternative management and financing methods for the creation and maintenance of green spaces are being studied, such as private sponsorship, stewardship actions, temporary assignments of use, permits and discounts.

> **Mannheim challenge**: Securing a long-term budget for maintaining green areas is a recurring issue. The green spaces office faces significant constraints, including limited staffing capacity and insufficient funds or experience to contract external companies for maintenance. These challenges create gaps in the upkeep of green spaces, impacting their quality and accessibility over time.

Cost estimation challenges for delivery

Part of step 7 the UNP process is to estimate the costs for delivering the plan and identify funding sources for those costs. However UNP+ cities can sometimes find it difficult to accurately estimate the costs of the implementation of an infrastructure project and therefore to place precise figures on the actions within the plan, an issue which is often present in the planning and delivery of infrastructure projects (Toxopeus and Polzin, 2021).

> **Barcelona challenge**: Quantifying the exact costs of implementing specific actions can be challenging due to the time-consuming nature of detailed budgeting. Additionally, applying detailed budgets may not always be practical or realistic in certain contexts as there can be unseen costs which can't quantified in advance.

Figure 18. Parc de les Glòries, Barcelona. Image credit: Bacelona City Authority

Fragmented funding

Sometimes the UNP+ cities among others are relying on small funding pots coming from different sources. This can make it more difficult for them to effectively implement plans at the desired scale (McQuaid and Fletcher, 2022).

> **Mannheim challenge**: A significant challenge remains in developing a coordinated funding strategy. Mannheim highlights the fragmented nature of current funding approaches, relying on individual initiatives like climate funds. This lack of a unified financial framework hinders the full implementation of action plans and underscores the need for a comprehensive strategy that links all initiatives.

Enabling factors identified by UNP+ cities

Demonstrate long-term direction

UNP+ partner cities expressed that they find it beneficial to align their goals to long-term goals at the national or international levels. This makes it clear what their intended direction of travel is over the long term and this commitment helps in securing funding (Toxopeus and Polzin, 2021; McQuaid and Fletcher, 2022).

> **Mannheim enabling factor**: Strong political backing is a critical factor in the success of urban nature initiatives. Mannheim's engagement with European sustainability projects highlights the importance of securing political commitment, ensuring alignment with European standards, and obtaining the necessary resources for implementation. This support is vital for the long-term viability of green projects, as, without it, changes in political leadership could lead to the reversal or discontinuation of previous initiatives. The presence of stable, long-term political support is essential to maintaining the momentum and consistency of these important urban developments, something which is needed for the lifespan of successful green infrastructure.

Best practices identified by UNP+ cities

Political commitment

In the experience of the UNP+ partner cities and other cities, having a strong political mandate in place with senior-level endorsement can increase the reliability of city-level funding being secured for the continued implementation of the plan (Cho et al, 2023; Toxopeus and Polzin, 2021).

> **Paris best practice**: Biodiversity has become a central political mandate for Paris, with strong backing from the city's leadership. This political commitment has translated into a more reliable budget for planning and implementing nature-based initiatives across the city. The election of Christophe Najovski as deputy mayor for urban greening, green spaces, biodiversity, and animal welfare further underscores the city's dedication to integrating biodiversity into urban planning. His role ensures that these priorities are consistently supported, helping to secure the necessary resources for their successful execution.

Conclusion

In the Figure below all of the challenges, enabling factors and best practices experienced by the UNP+ partner cities related to this topic have been laid out. Links have been drawn from challenges to enabling factors, where the enabling factor may be key to overcoming the particular challenge. Best practices are linked to enabling factors where specific enabling factors may be required for the establishment of a best practice.

Some key lessons can be learnt from the experience of the UNP+ partner cities:

- Annual budgets can be unpredictable and fluctuate each year making long-term planning more difficult
- The fragmentation of funding sources, often reliant on external grants or specific initiatives, further complicates the implementation of comprehensive action plans by reducing the security and reliability of funds, although this resource scarcity may spark innovation in delivery approaches
- Enabling factors include strong political backing and clear long-term commitment, which can stabilise funding and ensure continuous support for green projects
- Best practices include establishing a mandate for spending, which ensures that urban nature initiatives are prioritised within political agendas, leading to more reliable and consistent funding streams.
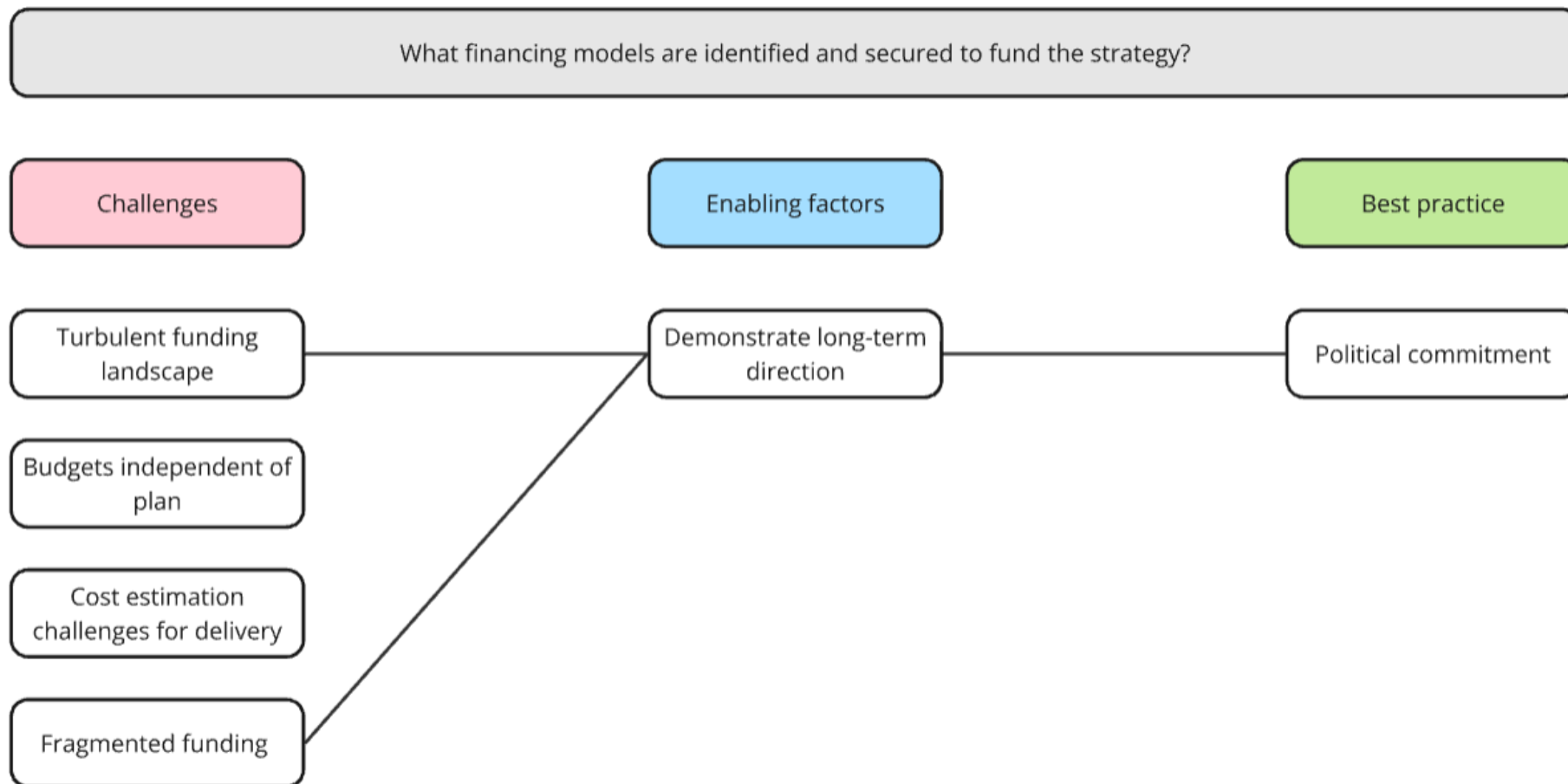
Figure 19. The challenges, enablers and best practices experienced and suggested by UNP+ partner cities with links showing which enabling factors may help overcome certain challenges and which enabling factors may contribute to the establishment of best practices.

7. Conclusion

This report highlights the key challenges the UNP+ partner cities have faced when attempting to develop and implement Urban Nature Plans. It also draws attention to the enabling factors which have helped the cities overcome those challenges and which might represent best practices and be transferrable to other cities. These insights can help cities across Europe to gain inspiration in how they approach developing and implementing UNPs, learning from the challenges and successes of the UNP+ partner cities.

The experiences of the UNP+ cities demonstrate the complexities and opportunities inherent in urban nature planning (Sarabi et al., 2019). By examining challenges, enabling factors, and best practices across four critical topics; addressing conflicting policy agendas, stakeholder co-creation, governance structures, and financing, a series of actionable lessons have emerged. These include fostering integrated working structures, embedding biodiversity goals across municipal plans, and establishing clear governance frameworks. These challenges are closely related to those experienced by other cities in Europe attempting to scale up nature-based solutions and Green Infrastructure (Frantzeskaki and Bush, 2021; Sarabi et al., 2019). Stakeholder engagement has proven critical, underscoring the need for diverse and inclusive co-creation processes supported by robust communication strategies (Hölscher, 2023; Collier et al., 2023).

The financing of the delivery of UNPs remains a significant challenge (McQuaid and Fletcher, 2022), with UNP+ partner cities highlighting the need for dedicated funding streams, innovative financing mechanisms, and long-term political commitments. Strengthened interdepartmental coordination, strategic partnerships, and alignment with broader policy objectives are crucial for unlocking resources and ensuring the effective implementation of urban greening initiatives (Toxopeus and Polzin, 2021).

The insights from this report also feed back into the UNP+ project to make the Urban Nature Exchanges, Knowledge Labs, and Capacity Building Programme better targeted to the needs of the UNP+ partner cities. Alongside the State of Play Reports and Reflexive Monitoring Baseline report, this document forms a comprehensive foundational understanding of the position of the UNP+ partner cities in their journey towards the successful development and implementation of UNPs.

By sharing their diverse experiences, the UNP+ cities provide valuable insights for other municipalities seeking to integrate nature into urban planning. Their collective journey underscores the importance of collaboration, adaptive management, and the continual exchange of knowledge to achieve sustainable, equitable urban development (Bogatinoska et al, 2023; Vandergert et al. 2022).

The findings and recommendations presented here contribute to the broader objectives of the UNP+ project, supporting cities across Europe in enhancing their capacity to develop and implement high-quality UNPs. By addressing the identified challenges and leveraging the

highlighted enablers and best practices, cities can create greener, more resilient urban environments that benefit biodiversity and urban communities alike (Sarabi et al., 2019).

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