



Federal Agency for
Nature Conservation

Urban Nature Plan: Considering quality of life, climate and biodiversity together!

A guide to implementing the EU Biodiversity Strategy 2030
in urban areas



Imprint

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1 Urban Nature Plans as an opportunity

Cities play a dual role for biodiversity loss and climate change. Through urbanisation, resource consumption and emissions, urban areas contribute to environmental degradation. However, they also offer the opportunity to enable large numbers of people to live sustainably. Cities with rich and diverse urban nature can contribute to the protection of biodiversity and serve as important refuges for animals and plants. This is why the current EU Biodiversity Strategy 2030 specifically addresses cities.

Implementing the EU Biodiversity Strategy in urban areas

The EU Biodiversity Strategy 2030 aims to reverse the loss of biodiversity. The Member States are therefore called upon to commit to the protection and restoration of nature in the European Union. In order to promote nature in urban areas, all

cities with more than 20,000 inhabitants should develop Urban Nature Plans and implement them quickly [1]. This applies to 673 cities in Germany (as of 31 December 2022). The aim of these plans is to systematically integrate the protection and promotion of urban nature into urban policy and planning, and for cities to set ambitious targets. These plans should also contribute to achieving the goals of the EU Nature Restoration Law, including no net loss of green urban space and tree cover by 2030 and a steady increase in their total area from 2030 [2].

The term “Urban Nature Plan” emphasises the focus on biodiversity, while making the plans distinguishable from existing landscape and open space planning instruments. The term nature refers to animate and inanimate nature, i.e. plants, animals and other living organisms such as soil, water and air (see the box “Why ‘urban nature’?”).



Protecting diversity: The “Park am Nordbahnhof” in Berlin is an example of the diverse urban nature in the German capital (R. Hansen)

EU Biodiversity Strategy 2030 — Greening urban and peri-urban areas

The EU Biodiversity Strategy calls on European cities to adopt “ambitious plans” to protect and promote urban nature — as a contribution to quality of life, biodiversity protection and climate mitigation and adaptation. The envisaged Urban Nature Plans should include “measures to create biodiverse and accessible urban forests, parks and gardens; urban farms; green roofs and walls; treelined streets; urban meadows; and urban hedges.”

More at: <https://eur-lex.europa.eu/legal-content/DE/TXT/HTML/?uri=CELEX:52020DC0380> [1]

Why ‘urban nature’?

There are different names for urban greenery: green and open spaces, urban green, urban nature, green-blue infrastructure or nature-based solutions. These terms emphasise different aspects. For example, nature-based solutions are designed to help address specific societal challenges such as climate adaptation or human health. Urban nature, on the other hand, refers to the totality of natural elements in urban areas [3]. The term is easy to understand and encompasses both near-natural and horticulturally designed green spaces. ‘Nature’ also includes abiotic elements and processes such as the water cycle and urban soils, thus promotes a holistic view.

In municipal practice, the terms with which the stakeholders involved can identify should be assessed. Accordingly, different terms can be used when referring to an Urban Nature Plan depending on the context and the corresponding (legal) anchoring.

Added value of Urban Nature Plans

The EU Commission sets out what Urban Nature Plans can achieve in a guidance document: They are meant to form an overarching framework that bundles, formalises and communicates a municipal commitment to biodiversity. The plans should emphasise the importance of urban nature – both in terms of general quality of life as well as for the physical and mental health of residents, protection against extreme weather events, reduction of environmental impacts through the regulation of ecosystem services, economic activities and as a habitat for animals and plants [4]. The protection of biodiversity is linked to sustainable urban development and is an important cross-cutting issue in urban policy.

The plans can lend more weight to urban nature through clear goals and priorities in the context of urban development. They can join efforts to protect against and adapt to climate change, improve quality of life and increase environmental justice by protecting biodiversity, thus making them more efficient and effective.

As part of the Urban Nature Plans, the protection of biodiversity is to be integrated into all areas of



Urban Nature Plans as ambitious strategies: Barcelona was the first city to publish a “Nature Plan” in 2021 and aims to significantly increase the proportion of green spaces, semi-natural areas and protected areas in the city by 2030. (J. Langemeyer)

urban policy, from mobility and health to air and water quality management to energy supply and climate mitigation and adaptation. The aim is to strengthen the preservation of nature and landscapes, reduce the loss of ecosystems in urban areas and promote resilient green infrastructure. Urban Nature Plans therefore represent a long-term and comprehensive strategy for the committed promotion of urban nature. A wide range of political, regulatory and financial instruments can be used for the plans’ implementation [4, 1].

Urban Nature Plans can provide an opportunity to strengthen local ideas, plans and projects and to reach a binding agreement on their implementation. It can also be assumed that climate and biodiversity goals will become increasingly important on the political agenda, raising the pressure on local authorities to take greater account of these goals in urban development.

Combining quality of life, biodiversity, climate mitigation and adaptation

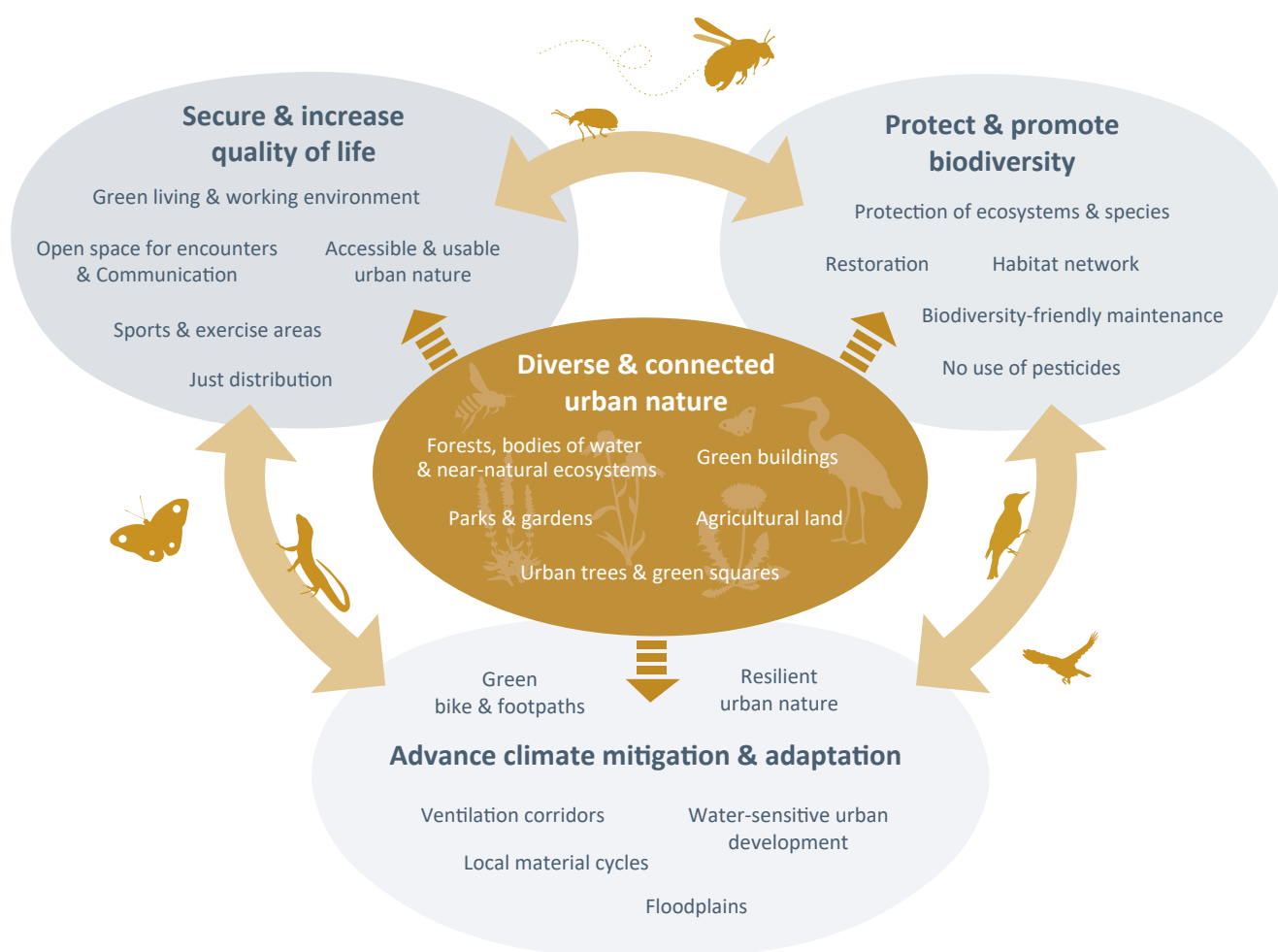
Municipalities should use Urban Nature Plans to set ambitious goals and demonstrate their progress towards achieving these. The goals and measures set out in the EU Biodiversity Strategy require holistic approaches, from strategic planning to implementation and long-term maintenance. The plans should contribute to a diverse and accessible network of green infrastructure, the avoidance of pesticide use, and biodiversity-promoting maintenance [1].

According to this integrated approach, Urban Nature Plans should especially contribute to quality of life, biodiversity protection, and climate adaptation and mitigation [4]. Creating more urban nature can mitigate the consequences of climate change, not only by providing shade and cooling, but also by retaining water and allowing it

to infiltrate during heavy rainfall. Urban soils and vegetation also contribute to carbon storage [5]. Diverse and interconnected urban nature is more robust and less vulnerable to the effects of climate change and other pressures. An increased presence of animals and plants also affects human well-being. A nature-rich urban environment can promote environmentally friendly mobility by creating attractive and safe pathways. Urban nature is important due to its aesthetic value, as a space for recreation and social interaction as well as for environmental education. In the interest of environmental justice, there should be an emphasis on creating urban nature in neighbourhoods with populations vulnerable to a high level of environmental pollution (e.g. from heat or air pollution), and in areas with a lack of green rec-

reational and leisure areas. Potential synergies to address multiple challenges in parallel are manifold, but should be specifically considered when promoting urban nature.

Diverse urban nature consists of green and open spaces that vary in their degree of near-naturalness and level of support for biodiversity. These include remnants of natural landscapes such as bodies of water and wetlands, agricultural areas close to the city centre, as well as parks, gardens, street trees and green roofs. As urban nature areas are limited and can only be gained to a limited extent, it makes a lot of sense to design areas in a multifunctional way and to tackle important urban challenges in an integrated manner.



Integrated approach to Urban Nature Plans: quality of life, biodiversity and climate mitigation and adaptation are important topics that should be jointly pursued.

Strengthening societal and political support

The EU Biodiversity Strategy to 2030 emphasises the need to proactively communicate Urban Nature Plans in order to promote awareness and thereby also support urban nature (see Chapter 4.4). Urban Nature Plans should also be backed and supported by local politicians. This presents a chance to politically anchor open space development, urban nature conservation, and climate mitigation and adaptation as important municipal issues (see Chapter 3.2).

Urban Nature Plans should also be developed in co-creative processes. Co-creation goes beyond participation and should offer citizens and other interest groups opportunities to help shape their future (see Chapter 3.4.).

Explore opportunities

Implementing the targets of the EU Biodiversity Strategy in municipalities requires ambitious local strategies that range from the protection and development of urban nature to its maintenance. Numerous cities in Germany — especially larger ones — already have a variety of planning strategies and concepts, such as open space concepts, climate adaptation strategies, landscape plans and biodiversity strategies. Some of these partially fulfil the Urban Nature Plan requirements. Depending on which plans and projects are already in place, the Urban Nature Plans can act as an umbrella strategy and bundle, expand and create new momentum (see Chapter 2).

Why this brochure?

This brochure provides suggestions for creating Urban Nature Plans. Recommendations from the European Commission's guidelines on "Urban Nature Plans" have been translated [4] and adapted to the German context. An expert dialogue and workshops with various municipalities were held to tailor the guidance to German cities. These events explored how the Urban Nature Plans should be interpreted for Germany and to what extent the numerous formal and informal plans and strategies of the municipalities already fulfil the plan requirements.

The brochure can be used as a guide by municipalities that do not yet have any plans that address urban nature. For municipalities with relevant plans in place, this guidance supports self-assessment and provides a decision-making basis for the next steps. In addition, thematically relevant, practice-oriented literature is indicated for further reading.

The realities of municipalities of different sizes are taken into account. The guidance thus aims to provide readers with suggestions for developing their own approach to Urban Nature Plans, which is tailored to their local conditions.

2 Determine the starting point

How should Urban Nature Plans be developed? What kind of planning instruments can represent Urban Nature Plans? What can be achieved by Urban Nature Plans that has not yet been accomplished by other instruments? This chapter focuses on assessing the starting point in a municipality and deriving a locally adapted strategy.

2.1 Urban Nature Plans in 10 steps outlined by the European Commission

- ☐ Understand the ideal Urban Nature Plan process

2.2 Determine the initial situation and needs for action

- ☐ Evaluate existing plans with a checklist
- ☐ Identify gaps and needs for action
- ☐ Decide whether an Urban Nature Plan should be developed

2.3 Determine the current state and scope of planning

- ☐ Compile existing spatial data
- ☐ Evaluate further plans and programmes
- ☐ Decide how comprehensive the Urban Nature Plan should be

2.1 Urban Nature Plans in 10 steps outlined by the European Commission

To support cities in the European Union in designing Urban Nature Plans, a guideline was created by the European Commission [4]. The document describes the ideal creation and implementation of an Urban Nature Plan. Recommendations for guiding this process are based on ten steps:

(1) Secure a long-term political commitment, (2) Establish a working structure, (3) Establish a co-creation process, (4) Develop long-term vision and goals, (5) Analyse the current state of nature and biodiversity, (6) Set indicators and targets, (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, and (10) Adopt, publish and implement the plan.

education and public awareness raising strategy, (9) Establish a monitoring, reporting and evaluation system, and (10) Adopt, publish and implement the plan.

If all process steps were to be followed as described in the EU guidelines, the resulting Urban Nature Plan would be a complex and costly planning project — comparable to a city-wide urban development plan or a comprehensive open space concept supplemented by an action plan, communication campaign and monitoring system. As such an approach would not be feasible for many municipalities, variants of Urban Nature Plans are proposed below that are suitable for different starting situations and capacities (see Chapter 2.3).



Steps towards an Urban Nature Plan: The process of creating and implementing Urban Nature Plans of the European Commission comprises ten process steps, from plan preparation to creation and implementation [4].

Urban Nature Plans should not be a compulsory bureaucratic exercise, but should instead promote municipal open space planning, landscape planning and nature conservation as well as climate mitigation and adaptation. They should be target-orientated and feasible, requiring them to be tailored to the local situation.

In this guidance document, some of the elements taken from the EU guidelines have been presented in a different order or combination to better reflect the usual planning processes in German cities. In addition, topics from the EU Biodiversity Strategy that are not covered in the EU guidelines, such as ecological green space management, have been added below.

2.2 Determine the initial situation and needs for action

In Germany, many municipalities already have plans, concepts and strategies in place that deal with the protection and development of urban nature. These may already fulfil aspects of Urban Nature Plans, either individually or in combination. Urban Nature Plans should not duplicate ex-

isting plans. They are intended to tackle gaps and promote an ambitious implementation of measures. Each municipality must therefore consider the best way to conceptualise an Urban Nature Plan – either as a stand-alone plan or as a targeted additional strategy. Existing plans can also be labelled as an Urban Nature Plan if they fulfil essential requirements (outlined later in this document).

Utilising the potential of established planning instruments

A variety of strategic planning instruments used by German municipalities can include aspects of Urban Nature Plans. Informal open space concepts, green space development plans, urban green master plans and similar instruments can be flexibly designed and potentially cover all topics required of Urban Nature Plans. Municipal landscape plans could also cover various Urban Nature Plan aspects if they encompass the entire urban area as well as urban nature in built-up areas (see box “Freiburg”). Municipal biodiversity strategies or climate adaptation concepts are likely to touch on selected sub-aspects of Urban Nature Plans due to their thematic focus (see table).

Freiburg im Breisgau: Landscape plan as a potential Urban Nature Plan

In recent years, the city of Freiburg i. Br. has developed a variety of planning strategies, including urban development concepts, climate adaptation concepts for heat and water, a “Biodiversity Check” and other thematic plans such as the “Gardening in Freiburg” concept and the cemetery development concept. Based on these concepts, the land use plan (FNP) and the landscape plan are currently being updated. These existing plans already cover many of the requirements of Urban Nature Plans. The transfer to the future vision or target scenario of the FNP brings together urban development goals with the goals of an Urban Nature Plan. The landscape plan defines specific guiding principles for the landscape and settlement areas and thus provides a comprehensive perspective on urban nature. If the landscape plan is accompanied by an effective implementation strategy, it can successfully fulfil the requirements of an Urban Nature Plan.

More at: <https://www.freiburg.de/pb/fnp/uebermorgen/fachkonzepte.html>

Requirements for Urban Nature Plans such as including a co-creation process, a communication strategy and an evaluation process are not always standard practice in the strategic planning of cities. Concrete measures and an implementation strategy may likewise not be included or not worked out in as much detail as proposed by the European Commission.

Suitability of various planning instruments as an Urban Nature Plan

Planning instrument	Suitability
Open space concept (etc.)	High — with a broad thematic focus, often focussing on quality of life
Landscape plan	High — if urban area is considered as a whole
Biodiversity strategy	Medium — focus on biodiversity; broader positioning possible
Climate mitigation and adaptation concept	Medium — focus on climate adaptation; broader positioning possible
Green space management plan	Low — focus on ecological green space management

For a self-assessment, a checklist was developed based on the ten steps outlined in the European Commission guidelines. The “Checklist” table shows the features of an Urban Nature Plan to be checked and an evaluation for a fictitious municipal landscape plan. If a feature is not or only partially present, the extent to which there is a need for action should be discussed. In the provided example, action is required primarily with regard to implementation and the processes that accompany implementation. The conclusions should be drawn with due consideration of the local needs for action and available capacities. As such, there is no fixed evaluation key. The detailed checklist with instructions can be found at the end of the brochure.

Larger municipalities are particularly likely to have several plans that are relevant to urban nature. These should first be evaluated individually and then considered in the context of one another. Other plans or initiatives that fulfil individual evaluation criteria can also be included so that the plans and instruments can be considered holistically.

Assess your own plans

Urban Nature Plans should not be developed in isolation from existing planning strategies. If there are existing plans that have thematic similarities to Urban Nature Plans, these should be evaluated first. Based on the results, a decision should be made as to whether an additional Urban Nature Plan should be developed and how it should be designed in order to cover the missing aspects.

Checklist for evaluating existing plans: Fictitious example of a landscape plan

Plan / Strategy:	Valuation			Fictitious example: landscape plan
	0	1	2	
Process design				
Political commitment				2
Integrated working structure				1
Co-creation process				1
Adoption and publication				2
Communication strategy				0
Plan contents				
Topic 1: Quality of life				1
Topic 2: Biodiversity				1
Topic 3: Climate mitigation and adaptation				1
Integrated consideration of the three topic areas				2
Ambitious vision and goals				2
Current state of urban nature and biodiversity				1
Action plan / implementation strategy				2
Implementation				
Implementation of measures				1
Ecological green space management				0
Evaluation and updating				1

0

Not applicable

1

Partially applicable

2

Fully applicable

0 Not applicable **1** Partially applicable **2** Fully applicable

Define needs for action

If the evaluation finds that certain topics are not covered in a municipality's existing plans, it should be decided whether an additional strategy should be drawn up or if other measures should be taken. In particular, if the topic of biodiversity has not been adequately considered and no corresponding data is available, the creation of a biodiversity strategy should be sought. If the topics of quality of life, biodiversity and climate mitigation and adaptation are dealt with in other plans, care should be taken to ensure that they are taken into account. The aim is to determine

whether there are conflicts in the objectives of the plans or whether measures from one plan can be implemented in an integrated manner so that different objectives can be jointly pursued.

In our fictitious example, the different plans of a city are analysed together (see "Evaluation" table). If there are gaps in the formulation of concrete measures and their implementation — such as in our example — these could be addressed through an additional action plan (see Chapter 4.3). If there are deficits with regard to the process design, these cannot usually be compensated for retrospectively, but could be addressed through

future activities. A public commitment on the part of the political players could be established in support of an action plan (see Chapter 3.2).

An interdisciplinary approach can be taken when implementing projects; relevant stakeholder groups could commit to this approach through an action plan (see Chapter 3.3). Co-creation can also be used in the implementation of measures (see Chapter 3.4). In addition, gaps can be addressed through subsequent updates. If necessary, Urban Nature Plans can be used as an opportunity for an update of the planning document which corresponds most closely to an Urban Nature Plan.

Key questions to determine the initial situation:

- ☐ Which city-wide plans, strategies and programmes could already fulfil aspects of Urban Nature Plans?
- ☐ What aspects do the existing plans cover? Do they jointly fulfil the essential requirements of Urban Nature Plans?
- ☐ What gaps remain, and how can these be addressed?

Evaluation of several plans in combination and assessment of the need for action (fictitious example)

	P-1	P-2	P-3	P-4	Need for action
Preparation					
Political commitment	2	1	1	2	
Integrated working structure	1	1	1	1	When implementing measures
Co-creation process	1	1	0	1	When implementing measures
Adoption and publication	2	2	1	2	
Communication strategy	0	0	0	0	Create a communication strategy
Plan contents					
Topic 1: Quality of life	2	1	0	2	
Topic 2: Biodiversity	2	1	2	1	
Topic 3: Climate mitigation and adaptation	2	2	0	1	
Integrated consideration of the three topic areas	2	1	0	1	Create an action plan
Ambitious vision and goals	2	2	2	2	
Current state of urban nature and biodiversity	1	0	2	1	covered by P-3
Action plan / implementation strategy	1	1	2	0	Create an action plan
Implementation					
Implementation of measures	1	1	2	1	Implement action plan
Ecological green space management	0	0	1	0	Maintenance strategy available
Evaluation and updating	1	0	1	0	Evaluate and update action plan

P-1: Landscape plan

P-2: Climate adaptation concept

P-3: Biodiversity strategy

P-4: Urban development plan

2.3 Determine current state and scope of planning

Once the decision has been made to develop an Urban Nature Plan, the scope of the plan must be determined. Due to limited resources, not all municipalities will be able to carry out a complex Urban Nature Plan process following all of the steps proposed by the European Commission. It is therefore necessary to assess how a municipality's Urban Nature Plan should be organised. Before deciding on the plan's scope, the current baseline and thus the starting point from which to begin the process should first be determined.

Compile existing spatial data

When preparing the Urban Nature Plan, a baseline assessment of what the current state-of-the-art is represents an important first step. This involves collecting all relevant data (e.g. specialist plans, spatial data and other planning information) and making fundamental decisions for the Urban Nature Plan.

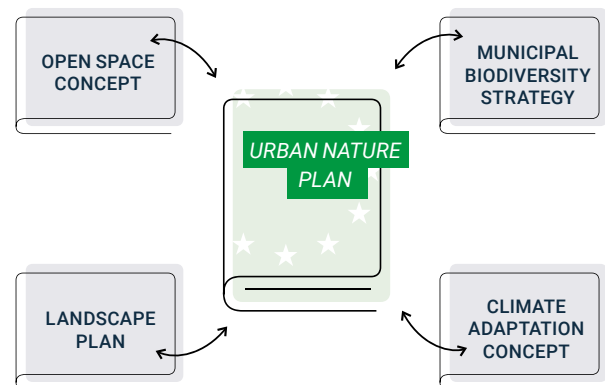
If existing plans are evaluated first, as described in the previous section, these are to be included in the data collection. Further spatial data may be available from federal and state authorities and other specialised agencies or may be procured from those (see Chapter 4.2).

Through the data compilation, it becomes evident which spatial data are available and which data are missing. It can be assessed if additional mapping needs to be commissioned to specialised businesses or departments of the municipality. This first data collection helps to estimate the effort required to create an Urban Nature Plan.

Review existing municipal plans

Other plans, projects and programmes that are not focused on urban nature should also be examined so that Urban Nature Plans can be adapted to planned developments in the municipality and

to recognise potential conflicts. These documents can include urban development plans, climate mitigation concepts and major urban development projects. The analysis can be used to identify topics that have already been sufficiently covered, open aspects and needs for action as well as potential synergies and conflicts with other urban development goals.



Urban Nature Plan as supplementary: These plans should expand a municipality's existing plans and include topics that have not yet been addressed.

Analyse political programmes and their objectives

Political strategies to which the Urban Nature Plan should contribute should also be identified and analysed. In addition to the EU Biodiversity Strategy to 2030, these could include:

- International initiatives such as the UN Decade for the Restoration of Ecosystems or the UN Convention on Biological Diversity as well as European initiatives such as the EU Strategy for Adaptation to Climate Change, the Leipzig Charter or the Green City Accord,
- Federal initiatives such as the "Nationale Strategie zur biologischen Vielfalt", the "Deutsche Anpassungsstrategie an den Klimawandel", the "Masterplan Stadtnatur" or the "Aktionsprogramm Natürlicher Klimaschutz",

- Biodiversity or climate adaptation strategies of the federal states.

Clear references to political initiatives can serve to strengthen municipal planning and emphasize the socio-political relevance of Urban Nature Plans.

Determine the planning scope

The ten steps proposed by the European Commission outline an idealised and complex planning process (see Chapter 2.1). In its entirety, such a planning process could correspond to the effort involved in an integrated city-wide urban development plan or a comparably complex open space strategy. These plans are often awarded to planning offices that contribute thematic expertise and / or skills in the areas of process design, moderation and participation.

This guidance document suggests different ways of organising the ten steps so that there is a realistic chance of developing an Urban Nature Plan in German municipalities, even if certain requirements cannot be met.

Four basic variations are possible — from a complex planning procedure to a lean action plan (see table “Variations”). When making a decision, an assessment should be made between the local

need for an Urban Nature Plan, gaps in the existing strategic plans, and the local conditions. The aim should be to ensure that the Urban Nature Plan can be developed quickly and implemented in a timely manner. Therefore, a modular approach may be appropriate.

Key questions on the planning scope:

- ☐ Is there any reason to create an Urban Nature Plan?
- ☐ What would an appropriate scope of planning be? What is a compromise between an ambitious plan and a plan that can be realised with the existing capacities and framework conditions?
- ☐ What spatial data is available, and what data still needs to be collected? How time-consuming and cost-intensive is the survey?
- ☐ Where are there synergies with urban development goals and other municipal plans? Which plans potentially have conflicting objectives?
- ☐ What political goals should the municipality commit to and what opportunities arise for the Urban Nature Plan?

Variations of Urban Nature Plans

Plan variations	A - More complex Urban Nature Plan	B - Urban Nature Plan “medium”	C - Simpler Urban Nature Plan	D - Urban nature action plan
Need for action	Comprehensive	Comprehensive/partial aspects	Sub-aspects	Selected aspects
Participants	Specialist departments, city policy, planning offices, offices for process moderation/participation, citizens + other stakeholders	Specialist departments, city policy, planning offices, selected stakeholders	Specialist departments, city policy, selected stakeholders	Specialist departments, city policy
Comparable plan/strategy	Overall urban development plan/integrated urban development concept 	Municipal open space concept 	Municipal biodiversity strategy, thematically limited specialised plan 	Thematic and event-related action plan or programme 

3 Prepare the Urban Nature Plan

Once a decision has been made in favour of an Urban Nature Plan, the process of creating the plan must be prepared. In a first step, funding must be clarified and political support secured. Additionally, working structures should be developed which involve the various relevant specialist departments at an early stage. In a further step, relevant stakeholders and interest groups should be identified and involved in a co-creative process.

3.1 Clarify questions around financing

- ☐ Secure financing for the planning process
- ☐ Apply for funding if required

3.2 Secure political support

- ☐ Create political commitment for the Urban Nature Plan
- ☐ Establish an Urban Nature Plan as a joint municipal project

3.3 Develop working structures

- ☐ Determine the roles of the various specialised offices and departments
- ☐ Build an integrated working culture
- ☐ Clarify responsibilities

3.4 Identify stakeholders and organise a co-creation process

- ☐ Identify and activate key interest groups
- ☐ Develop a co-creation process involving stakeholders

3.1 Clarify questions around financing

Personnel resources and financial means are required for creating Urban Nature Plans. Municipalities can finance the creation of plans from their own resources, but can also draw on external grants. The personnel and financial resources required depend on the scope of the envisioned plan and the design process (see Chapter 2.3).

Explore financing options

Municipalities can draw on budget funds, personnel and material resources or funds from municipal associated companies for self-financing. Particularly smaller and economically disadvantaged

municipalities that are in less favourable positions can face challenges if their own resources are insufficient. The decision as to whether an Urban Nature Plan is created by the employees in the relevant specialist departments themselves or commissioned externally also has an impact on the costs of creating the plan.

Use funding programmes

Instead of securing financing from a municipality's own funds, external funding can be used to develop Urban Nature Plans. For example, various funding programmes can be used to develop biodiversity strategies, climate adaptation concepts and other projects. In each of these



Breaking new ground in financing: The city of Turin is involved in research and development projects, generating resources and ideas that can be used to develop, for example, a landscape area on the outskirts of the city for nature conservation and recreation. The Orti Generali community garden is part of the landscape park and was realised with the contribution of EU-research funding. In addition to the 260 organically cultivated plots, there are publicly accessible areas and services as well as a café, so that the garden is not only used by the gardeners, but also by the city's population. (R. Hansen)

cases, the relevant funding conditions must be taken into account. Often, funding programmes also require a municipality to contribute with a portion of their own finances. Scientific partners can further support innovative planning through research funds. To access funding programmes, it is advantageous if the local authority has sufficiently trained staff to ensure capacity for the, often time-consuming, acquisition.

In particular, federal and EU funding programmes are relevant for the plan development process. It should be noted that some funding instruments are implemented administratively at state level and are therefore subject to different regional regulations (see table “Funding programmes”). It is important to check at an early stage whether the creation of an Urban Nature Plan is covered by the respective funding requirements.

The “Bundesprogramm Biologische Vielfalt”, for example, supports municipal biodiversity strategies, and the thematically broader preparation of an Urban Nature Plan may not be eligible for funding. Depending on how it is organised in the federal states, “Städtebauförderung” can be used to finance planning in designated urban development areas; this can include open space concepts for urban areas with a particular need for action, such as densely populated inner city districts.

Key questions on financing

- ❑ Should the Urban Nature Plan be created using the municipality’s own resources? Can municipal funding be used?
- ❑ Which funding programmes can be used to finance the creation of the plan?

Funding programmes that are eligible for the creation of Urban Nature Plans

Funding programme	Brief description	Eligibility of Urban Nature Plans	Application
Bundesprogramm Biologische Vielfalt	Funding from the Federal Ministry for the Environment for projects and concepts to implement the National Strategy on Biological Diversity	Yes, in the form of municipal biodiversity strategies and other specialised biodiversity concepts	Ongoing; but for municipal Biodiversity strategies currently annually by 1 st of February
LIFE (L'Instrument Financier pour l'Environnement) Programme	EU co-financing programme for environmental protection projects with the function of a European environmental fund; current funding programme 2021 - 2027 is based on 5 funding areas, including “Nature & Biodiversity” and “Climate Adaptation and Mitigation”	Yes	Periodically according to newly published EU tenders (usually once a year)
Städtebauförderung	Funding co-financed by the federal, state and local governments for investments in sustainable urban development	Limited, possible for sub-areas / development areas, depending on the respective funding guidelines of the states	Periodically according to reporting dates of the states or funding institutions

Sources: [6-10], see also: BUND (2022): Förderprogramme für kommunale Biodiversitätsstrategien [11]

3.2 Secure political support

Political support at the local level is crucial for a successful Urban Nature Plan. Political backing is, amongst other purposes, necessary to create the conditions for the development and implementation of an ambitious plan and to anchor the topics of the Urban Nature Plan broadly in urban policy and administration.

Achieve political commitment at a high level

Local politicians must pass a resolution mandating the creation of an Urban Nature Plan. This indicates the importance of urban nature as a tool for contributing to quality of life, climate and biodiversity targets within urban policy. It legitimises the actions of municipal employees and makes resources available. The political leadership of a municipality, represented by the mayors and city councillors, is an important partner for setting priorities within the municipality and for mobilising resources for creating an Urban Nature Plan.

A clear commitment and the involvement of high-ranking individuals lend weight to the process. The Urban Nature Plan should therefore be proactively advocated for and promoted by mayors and/or city councillors responsible for urban greenery in order to benefit the planning process.

Establish “more urban nature for all” as a city-wide goal

Broad political support is also crucial for the long-term implementation of the Urban Nature Plan, as various stakeholders must pursue the objectives of the plan in their areas of responsibility, realise measures and thus contribute to the achievement of the objectives. City policy monitors the specialist departments and can, for example, enquire about the extent to which the various departments are contributing to the implementation of the Urban Nature Plan.



Political commitment to urban nature: In Budapest, the promotion of green infrastructure has been an important urban policy concern since 2019. The proportion of green space is to increase from 6 to 7 m² per inhabitant by 2030. The position of “Chief Landscape Architect” has been created to represent the interests of urban nature in a prominent position, and a new green infrastructure department has been established. This department implements projects such as the Püskösdfürdő nature park. (R. Hansen)

Political backing also forms the basis for the exchange of information and cooperation between municipal departments and other relevant organisations [12].

The Urban Nature Plan should be a municipal project — not just the plan of a specific department. The political mandate should therefore communicate that the protection and development of urban nature are cross-departmental tasks.

In this context, the development of the Urban Nature Plan should be communicated as a short-term project that brings a variety of long-term benefits. The positive effects that arise for various policy areas and specialised offices when urban nature simultaneously stands for a better quality of life, climate mitigation and adaptation and biodiversity provide arguments for the mainstreaming of urban nature, promote broad political approval and support the coherence of political strategies (see box “Arguments”).

It would also be possible to create a staff unit for urban nature, similar to the climate mitigation or sustainability staff units in some municipalities that deal with interdisciplinary topics. The “Bundesprogramm Biologische Vielfalt” could, for example, fund biodiversity managers who can coordinate Urban Nature Plans as municipal biodiversity strategies.

Key questions on political support

- How relevant do mayors and other political decision-makers find the topics included in the Urban Nature Plan? Are there possible advocates? Who could represent the Urban Nature Plan to the public?
- Is there an opportunity to publicise the Urban Nature Plan as an important municipal project? Are there links to the local political agenda? Who could take on a mediating role between specialised departments and local politics?

- Is there a willingness to adapt structures and provide support?

Arguments that can be used to support the mainstreaming of urban nature

- Create positive local and global benefits in combating urban challenges, especially those posed by the biodiversity and climate crises
- Urgent need for action due to e.g. increased frequency of heatwaves and heavy rainfall events as well as population declines of protected species
- Significant potential costs of inaction, compared to the benefits of proactive action, e.g. the cost of damages from flooding events compared to the costs of decentralised rainwater retention systems
- Large potential for tapping synergies of different objectives due to the many benefits that urban nature can generate, e.g. between health promotion and social justice, climate adaptation and the creation of habitats
- Working together makes us stronger, e.g. by implementing urban nature measures that have many synergies or by bundling measures in particularly affected areas as part of urban regeneration.

[based on 13]

3.3 Develop working structures

An integrated approach encompassing quality of life, biodiversity and climate makes it clear that Urban Nature Plans must be developed in an interdisciplinary way. This requires integrated working structures and open communication between the various specialist departments and offices.

Overcome silos and bring specialist departments together

Various municipal offices and departments as well as various political parties and other municipal stakeholders should be involved in the Urban Nature Plan development process from the start. This enables the timely recognition of conflicts and potentially opposing goals and the formulation of common goals that can be achieved more efficiently and effectively (see box “Advantages”).

The division of topics and responsibilities into different specialist departments can create silos, i.e. a mentality in which each department focuses on its own activities and views other areas as less relevant or competent. Silo thinking hinders the flow of information and cooperation between specialist departments and stands in the way of an integrated way of working. For integrated concepts, forms of cooperation in which different specialist departments work together must be established, e.g. by forming an interdepartmental working group or similar bodies [14-15].

If there is no experience with such working methods, a culture of cooperation must also be established. For municipalities that have not yet established integrated structures between the departments involved in urban nature, the creation of an Urban Nature Plan can be an opportunity to develop and try out new forms of cooperation.

When working together, a common language must be found and the use of certain technical terms clarified — urban nature is a good example of this, as the term can be used both as an umbrella term for the diversity of urban habitats and species, and as a term for areas of nature conservation value or areas that are not maintained by humans. Such differing interpretations must be identified and addressed in order to reach a shared conceptual understanding.

If integrated approaches to cooperation are successfully implemented, many benefits can be generated, such as: avoiding the duplication of work, optimising the use of resources and improving the quality of planning through the integration of different specialist expertise [12]. Involving the relevant specialist departments can also ensure that the Urban Nature Plan fits with existing planning strategies and programmes — or brings them together. The plan should build on existing instruments and processes to create synergies.

As administrative structures differ from city to city and have different local structures, the specific municipal departments and employees that should be involved will vary. Examples of relevant specialist areas include those dealing with topics such as green and open space planning, environmental and nature conservation, climate adaptation and mitigation, urban development, transport, health, sport and social affairs, forests and forestry, agriculture or finance. Who is to be involved and to what extent also depends on the content and scope of the Urban Nature Plan.

Advantages of integrated approaches for the development of political strategies

- Enabling synergies (win-win solutions) between the sectors
- Promoting coherence between policies in different sectors (horizontal) and at different decision-making levels (vertical)
- Reduction of duplication in the process of developing political strategies, both horizontally and vertically
- Improving the achievement of cross-departmental goals
- Greater focus on the overall objectives of a municipality than on smaller sector-related objectives
- Promoting innovation in the development and implementation of policy measures
- Promoting an understanding of the impact of policies on other sectors

[based on 12]

Define responsibilities and establish an integrated working structure

An integrated approach requires a dedicated leader or management team to steer the process and take responsibility for the development of the Urban Nature Plan [14]. This requires sufficient capacity and resources as well as decision-making powers and authority.

The members of the working group need clear tasks and mandates. Communication and the exchange of information between them must also be coordinated (see box “Approaches”). It must also be kept in mind that interdisciplinary cooperation requires effort and that employees need appropriate capacities in order to be successful (see box “Chemnitz”).

Depending on the size of the city, the working structures can be simpler or more complex and the respective teams can be smaller or larger in size. It may also make sense to involve or commission external parties like planning offices to draw up the plan or carry out certain process steps and contribute innovative ideas or specialist expertise.

Key questions on working methods

- Which offices and departments are relevant for the Urban Nature Plan and how intensively should each be involved?
- What are suitable forms of collaboration? Are there already experiences and established formats that can be utilised?
- Who can take the lead? Is external expertise needed to manage or process the content?

Approaches for integrated work structures

- **Structural planning and finding common goals:**
Define a common goal and department-specific sub-goals so that all stakeholders understand their role and recognise how they contribute to achieving the common goals
- **Committed managers and clear assignment of authority:**
Clearly define roles, competences and responsibilities; ensure that the management level shows permanent commitment
- **Communication between the departments:**
Establishing effective communication channels for the exchange of ideas and data; organising joint meetings to coordinate measures and collective decision-making to promote identification
- **Liaise between departments:**
Identify coordinators to liaise between the different departments so that each department keeps to its schedule and interdependencies are understood

[based on 16]

Chemnitz: Integrated work on the Urban Nature Masterplan

The city of Chemnitz has decided to develop an Urban Nature Masterplan. The guiding themes are biodiversity, climate adaptation, health, environmental justice and environmental education. The plan is intended to take an integrated view of urban nature and raise public awareness of the value of urban nature.

A core working group was formed for the creation of the plan, which is led by the Urban Planning Department and consists of employees from the Urban Planning Department, Environmental Department, Green Spaces Department and the Press Department. Content is developed in four thematic working groups (environmental education, urban climate/environmental justice/health, biodiversity, public relations/participation). Responsibility for the working groups lies with the specialist departments that have the relevant expertise. If necessary, other departments such as the civil engineering department, building permit department, health department or housing co-operatives and many other specialist departments are involved. External service providers are not involved.

Those involved see the collaboration as constructive and productive. One challenge is that work on the plan has to be integrated into everyday working life and high workloads or vacancies in specialised offices can delay processing.

More at: <https://chemnitz.de/chemnitz/de/unsere-stadt/gruenes-chemnitz/index.html>

3.4 Identify stakeholders and shape the co-creation process

Co-creation is a collaborative approach that can be used to work with different public and private stakeholders to jointly develop more inclusive and widely accepted Urban Nature Plans. The most important steps are to find out who the stakeholders are, why they should be involved and how they can effectively shape different aspects of the Urban Nature Plan process (e.g. development, implementation, maintenance or monitoring).

Identify important stakeholder groups

While only a limited group of specialist departments, decision-makers, public agencies and external experts are traditionally involved in municipal planning, there is growing recognition of the importance of involving the local population and organised civic groups from the outset [17]. Civil society is interested in the question of how, where and when urban nature is secured and developed. Individuals and organised groups want to be included in shaping their city. Involving these stakeholders in decision-making can ensure more responsive and socially inclusive processes. It is particularly important to identify the stakeholder groups that are affected by Urban Nature Plans,

that influence urban nature or have an interest in it [18]. Relevant groups include, for example, civil society organisations such as clubs, associations and citizens' initiatives, actors in the (private) sector and municipal departments (see Chapter 3.3).

Participation ensures that different perspectives, knowledge and experiences are considered in the design of the Urban Nature Plan and that the measures in the plan are tailored to local requirements [14]. Participation can promote ownership and acceptance of the plan and enable urban society to actively participate in its implementation. This will increase the sustainability of the plan and have a positive social impact.

Design a co-creation process

The co-creation process will vary across the different phases of the Urban Nature plan depending on capacities, expertise, local culture of participation and level of ambition. The spectrum of possibilities for participation ranges from targeted consultations to approaches based on comprehensive co-design and the sharing of responsibility — i.e. from simple participation to long-term partnerships [17]. Participation can take the form of, for instance, public workshops or online participation. Co-creation formats in the narrower



Involve diverse stakeholders: There is a wide range of stakeholders that can be involved in promoting urban nature [based on 19]



Empowering active citizens: In Munich, the “Green City” association has been campaigning for environmental protection and sustainable urban development for over 30 years. The association is a contact point for citizens who want to become active and, for example, arranges green sponsorships, supports greening initiatives and provides information about opportunities for action. For example, a toolbox with practical tips and workshops is available for “green stewards” who want to take over the design and maintenance of public green spaces. (A. Schenk, Green City e. V.)

sense generally require more intensive cooperation between the participants and processes that deviate from the usual decision-making processes in municipalities.

The first step is to consider *why, in which phase and to what extent* various interest groups should be invited to participate in the design and implementation of the Urban Nature Plan [20]. The approach should be critically examined on the basis of the following key questions:

- Is it clear why a co-creation process makes sense? What is the added value for the city administration and the stakeholders?
- How can the relevant stakeholder groups be reached and involved in the process? Which groups should be involved in which phase?
- How can the process be organised in a target-oriented way for those involved? Are there real opportunities to participate in the Urban Nature Plan?
- Does the team carrying out the process have the necessary competences and resources?
- Is there enough time available to carry out a meaningful process? [21-22]

Once these questions have been answered, a suitable format and schedule should be chosen. This should take into account potential sensitivities, conflicts and power relations as well as the resources of the interest groups required for participation. As the representatives of the city administration and specialist planners are usually in an advantageous position due to their expertise, decision-making competences and time resources, unequal starting positions should be considered, disclosed and formats found in which the interest groups can constructively participate [20].

The timetable should provide an overview of the planned activities, including their objectives, participants and formats, and set realistic timelines without overburdening the stakeholders involved. Transparency helps to ensure that all stakeholders are clear about why they are involved, how the process works and how much influence they realistically have during the process [23]. This requires clear communication (see Chapter 4.4).

It can be helpful to obtain feedback from the participants about the co-creation process. This can be used to reflect on, refine, and improve future activities.

Implement an effective co-creation process

Co-creation requires careful preparation and its success depends heavily on the quality of the implementation, such as the moderation during the events. The techniques used to conduct the co-creation process should reflect the different perspectives of the participants. When evaluating the contributions from the co-creation activities and incorporating ideas into the Urban Nature Plan, technical and pragmatic decisions often have to be made. When participant ideas cannot be included in the final Urban Nature plan, feedback to the participants is important to maintain transparency and avoid frustrations.

Guidelines for co-creation

- 1. Clarity of scope and purpose:** e.g. problem identification, formulation of the desired results / ambitions, agreement on the further process
- 2. Focus on results:** expectations and expected results must be defined at an early stage
- 3. Inclusion and representation:** involvement of diverse participants in terms of expertise, representation of relevant interest groups and diverse personal backgrounds
- 4. High-quality and customised processes:** the process must be tailored to the Urban Nature Plan, use recognised methods and be carried out professionally
- 5. Systemic perspective:** discussing urban nature as a complex issue and the interdependencies between different urban development goals and encouraging those involved to abandon familiar ways of thinking

More at: Matti & Rissola (2022): Co-creation for policy [22]

Equality and fairness should also play a role in co-creation. In concrete terms, this means that the process should be designed in such a way that it takes the different knowledge, skills, time and resource constraints of the participants into account. In practice, this can mean that (several) events are planned at different times of the day, that events take place online as well as in person, or that vulnerable or marginalised groups are addressed through different language options [14]. Separate events may be required to create a safe environment for different vulnerable groups. In this way, the outcomes of the process will better reflect the diversity of urban society.

Key questions about the co-creation process

- ❑ Which interest groups are affected by Urban Nature Plans, influence urban nature or have an interest in urban nature?
- ❑ Which stakeholders are relevant for which aspects of the Urban Nature Plan process? In which phase and to what extent should they be invited to participate in the design and implementation?
- ❑ What methods and activities should be used to effectively involve stakeholders and in what timeframe?
- ❑ Does the team carrying out the process have the necessary competences and resources?



Co-developing parks: The Alster-Bille-Elbe green corridor in the Hanseatic City of Hamburg is being developed in a co-creation process. Various groups are negotiating the use and design of the former recycling centre in Hammerbrook and thus want to test new practices of communal open space development. (R. Hansen)

4 Develop the Urban Nature Plan

Once it has been determined how comprehensive the plan is to be, the relevant stakeholders have been identified and the basic framework conditions have been clarified, the creation of the Urban Nature Plan can begin. This involves identifying key spatial areas, analysing data and setting objectives. An action plan and a communication strategy should be used to prepare and manage implementation.

4.1 Set topics and develop a vision

- ☐ Define topic areas of the Urban Nature Plan
- ☐ Develop a vision in a co-creation process

4.2 Collect data and set targets

- ☐ Define spatial scope
- ☐ Collect and analyse data
- ☐ Set ambitious goals

4.3 Clarify implementation and responsibilities

- ☐ Develop an action plan with measures and priorities
- ☐ Clarify responsibilities and financing

4.4 Develop a communication strategy

- ☐ Identify and understand target groups and communication channels
- ☐ Establish partnerships and cooperation with local multipliers

4.5 Adopt and publish the plan

- ☐ Make a political decision
- ☐ Publish the plan online and keep it in people's minds

4.1 Set topics and develop a vision

Like other strategic plans, Urban Nature Plans need a focus in terms of its content or topics, a clear vision for the future and a time horizon in which this vision is to be realised. To ensure that the plans meaningfully complement and enrich the development of a municipality, links to existing plans should be taken into account and future topics identified in a collaborative process.

Define overarching topics

Urban nature can contribute to many challenges of sustainable urban development. An Urban Nature Plan should be broadly based and clearly demonstrate the importance of green infrastructure for sustainable urban development (see box “Possible objectives”).

The EU Biodiversity Strategy emphasises the topic areas of quality of life, climate mitigation and adaptation and the protection of biodiversity. Depending on the situation in the municipality, other topics may also be considered (see box “Ruhr Metropolis”). Future topics such as the mobility transition and the resulting opportunities for the reorganisation of public spaces should also be considered. Other sectoral plans of the municipality and the political objectives identified as relevant in the baseline assessment also help to determine the topics of importance for the Urban Nature Plan (see Chapter 2.3).

Based on the relevant topics, the next step for an Urban Nature Plan is to develop a vision.

Potential objectives for developing urban green infrastructure

- Promote health and quality of life
- Adapt to climate change and boost resilience
- Conserve and experience biodiversity
- Promote social cohesion and inclusion
- Foster a green ‘Baukultur’
- Foster sustainability and resource efficiency
- Strengthen economic development

More at: BfN (2017): Urban Green Infrastructure – A foundation for attractive and sustainable cities [19]

Develop a shared vision

A vision for the Urban Nature Plan represents an ambitious picture of the future that expresses the desired target state. A vision should depict a longer time horizon and be linked to concrete proposals for how to achieve it.

The topic areas and objectives of the Urban Nature Plan are defined in the vision. To ensure that the vision is robust and consistent, the topics should be relevant in the long term. The vision should also include the diversity of urban green infrastructure (see Chapter 4.2).



(RVR/Stratmann)

Metropole Ruhr: Charta Grüne Infrastruktur

The charter formulates a joint vision for the future development of green infrastructure in the Ruhr metropolis. With its adoption by the Ruhr Parliament (2022), the charter gained political relevance and acts as a development guideline and informal commitment for the region. It identifies five overarching lead topics: (I) Liveable, (II) Climate-adapted, (III) Biodiverse, (IV) Climate-friendly and (V) Circular Ruhr Metropolis. The lead topics are concretised in technical and spatial terms on the basis of 27 action goals in the “Strategie Grüne Infrastruktur”.

More at: <http://www.rvr.ruhr/themen/oekologie-umwelt/gruene-infrastruktur/charta-gruene-infrastruktur/>

A vision should be clearly defined. At the same time, it should also be open enough to allow new topics and measures to be incorporated. A vision that is too narrowly defined can be inflexible and become outdated within a short time.

As with all important steps, the topics and vision should be developed through a co-creation process involving the relevant stakeholders [20]. When developing a vision, a great deal of intellectual freedom should first be created. Creativity

techniques can be used to generate a variety of ideas, even if some of them are unrealistic (see box “Visions”). An ambitious vision can deviate greatly from the current state and may have to ignore current challenges and restrictions. Therefore, the question of how a desirable vision could be achieved should be prioritised before an idea is disregarded, even if the transformation steps might be challenging.

Participatory development of visions and spatial images — methods

Developing images of the future:

Develop, visualise and discuss various desirable future perspectives.

Backcasting:

Determine implementation steps backwards based on a jointly agreed vision of the future.

Scenario workshop:

Systematically and analytically develop scenarios and solutions to challenges.

More at: IÖW (2019): Partizipation in der Grünflächenplanung [20]; TUM (2021): Wachsende Städte im Klimawandel gestalten. Zukunftsbilder für grüne, klimaresiliente Quartiere [24]

Illustrate the vision

It also makes sense to illustrate the vision. Green rings, green belts and other open space systems are memorable spatial figures that help to communicate the green infrastructure as a coherent system (see Box “Leipzig”). These can be visualised spatially in maps or abstractly. In addition, drawings, image collages, infographics or simple

plan visualisations that can be understood by laypersons are suitable for communicating important content of the Urban Nature Plan. An attractive visualisation can increase attention and arouse interest.

Long-term time horizon and regular review

The time horizon of an Urban Nature Plan should be medium to long-term. The vision should show a target state in 20, 30 or even 50 years. The long-term perspective should ensure that not only short-term and easily achievable goals are pursued (see Chapter 4.2). As perspectives and knowledge can change with time, the vision and goals should be reviewed at shorter intervals, e.g. after 10 years. A good vision should endure for a long time so that only minor adjustments are necessary or new topics can be integrated without the entire vision becoming irrelevant.

Key questions for vision development

- ☐ Which overarching topics should be pursued?
- ☐ What should the municipality’s green infrastructure look like in the future and what should it achieve? What qualities should it have?
- ☐ Which hazards and conflicts need to be reduced?
- ☐ To what extent do the vision and the current situation diverge? Where are the greatest challenges?
- ☐ In what timeframe can the vision be realised? What is achievable in the short, medium and long-term?

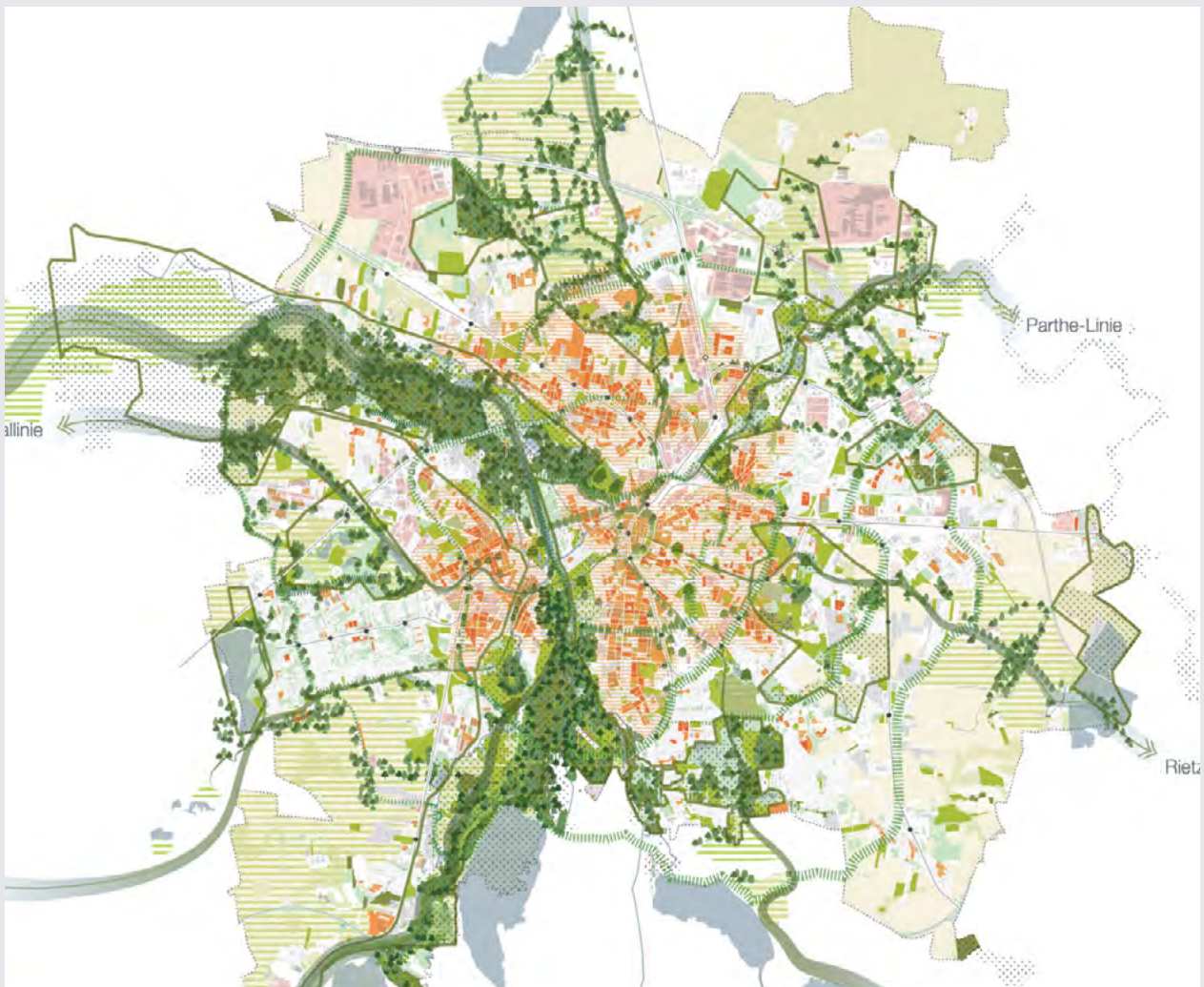


Illustration of Leipzig's green-blue open space network and landscape corridors including goals and measures (as of January 2024; City of Leipzig)

Leipzig: Masterplan Grün

With its “Masterplan Grün — Leipzig grün-blau 2030”, the City of Leipzig has formulated goals together with its citizens to safeguard and develop the green-blue open spaces and their functionality and performance. Based on this, a Leitbild of a connected green-blue infrastructure was developed. The Masterplan Grün is intended to serve as a development concept for the green-blue infrastructure and become a politically and socially accepted and application-orientated basis for action for upcoming decisions on the spatial development of the city.

More at: www.leipzig.de/masterplan-gruen

4.2 Collect data and set targets

The previously defined scope and content of the Urban Nature Plan form the framework for data collection and the formulation of specific targets. Firstly, the existing information and data should be collected (see Chapter 2.3) and then any missing data should be gathered. Depending on the topic and personnel resources, the necessary data can be collected and analysed internally or commissioned from external experts. The range of relevant data and possible indicators is very broad and requires a balance to be struck between the cost and benefit of data collection.

Define spatial scope

Not all types of green spaces and elements in the entire urban area can be given equal consideration. For that reason, defining the spatial scope and selecting suitable sites is an important step. The Urban Nature Plan should encompass the entire municipality, the inner and outer areas, while taking different types of urban nature into account.

It is advisable to define the baseline elements of green and open spaces of city-wide relevance — many cities have already identified the important green and open spaces such as parks, green corridors, forests and water systems in open space concepts or landscape plans. Tree-lined avenues in densely built-up areas or settlement areas with a high proportion of gardens can also form part of the basic framework. Overall, the Urban Na-

ture Plan should not only focus on public open spaces because the diversity of urban nature also concerns private or non-public areas [19].

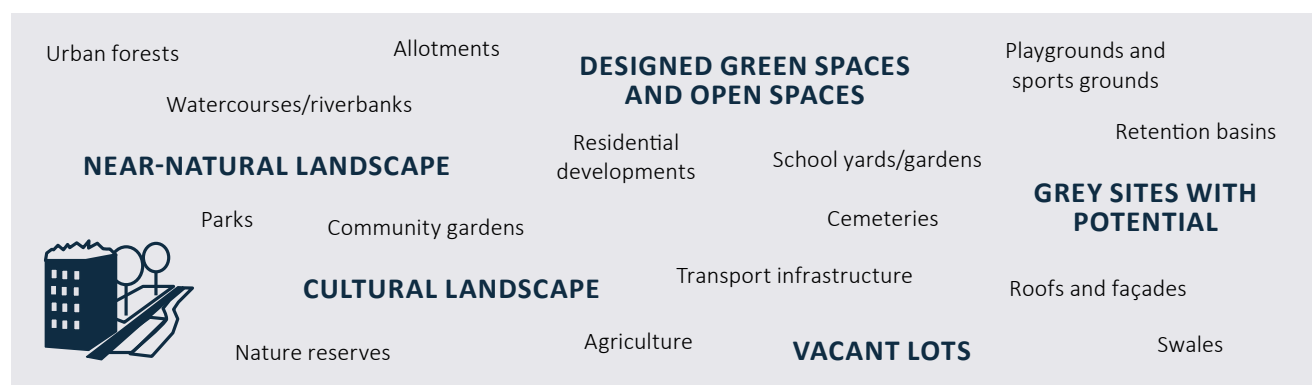
Densely sealed areas with a low proportion of greenery should also be recorded as areas requiring special attention. Separate surveys may be useful for important but small-scale urban nature elements such as green roofs.

The amount of greenery can be determined quantitatively and independently of spatial types and ownership ratios using aerial or satellite images (see box “Greenery”). Such analyses provide information on the spatial distribution and are suitable for long-term monitoring. The proportion of trees is also relevant to the EU Biodiversity Strategy and can be recorded using digital methods.

Greenery in German cities

In the research project “Wie grün sind deutsche Städte?”, a comprehensive urban green grid was developed and a nationwide comparison of green spaces was carried out. High-resolution laser scan and aerial images were analysed for individual cities, demonstrating the potential of these methods for municipal green monitoring.

More at: BBSR (2022): Wie grün sind deutsche Städte? [25]



Promoting the diversity of urban nature: Defining suitable sites for an Urban Nature Plan [based on 19].

Federal “Orientierungswerte” for public green spaces

Federal target values are provided by the “reference values and parameters for public green spaces” [26]. These values relate to urban nature in public spaces and establish values in relation to the green functions of recreation, health, climate and biodiversity (see table). In Urban Nature

Plans, these indicators should be complemented by additional targets and corresponding databases (see subsequent chapter).

Record the current state and future developments

Different quantitative and qualitative data are required in accordance with the topics for the Ur-

Functional reference values (“Orientierungswerte”) for public green spaces

Functions	Indicators (selection)	Reference values (p.p. = per person)
Recreation Health Climate	Green space supply	4 m ² / p.p. Neighbourhood green (250 m footpath) 6 m ² / p.p. Residential area green (500 m footpath) 7 m ² / p.p. District green (1,000 m footpath) 7 m ² / p.p. Total urban green space (5 km public transport)
Recreation Health Climate	Green accessibility	100 % population reach public green spaces (≥ 1 hectare) within walking distance (500 m)
Recreation Health Climate Biodiversity	Equipped with street trees	Main traffic / access roads: one tree / 15 m on both sides Side roads: one side one tree / 15 m Narrow side streets: one tree on one side / 33 m Car parks: one tree (large-crowned) per 4 parking spaces
Recreation Health Climate	Equipped with roadside greenery	At least 20 % of the area in the street
Recreation Health Climate	Green space connectivity	500 m maximum distance between two green spaces
Recreation Health Climate	Environmental justice	Prioritise the implementation of orientation values for the provision of green spaces in disadvantaged or simple residential areas
Biodiversity	Diversity of species and habitats	Bird species: Index value 100 compared to initial value of 1970
Biodiversity	Naturalness / relevance to nature conservation	At least 20 % of all public green spaces to be of nature conservation value

Source: [26]

ban Nature Plan (see box “Databases”). First and foremost, data on green and open spaces that are part of the Urban Nature Plan are relevant, as is more specific data for the respective topics.

A baseline survey should provide an overview of the existing data, its suitability and up-to-date-ness. The aim of collating existing data and adding new data should be to have the spatial information available in compact formats and to be able to process it in a digital geoinformation system. Many local authorities use, for example, a digital environmental atlas or landscape plan or other digital environmental information systems for this purpose. Municipal green space information systems (GRIS) can bundle important data for individual green and open spaces. In Berlin, for example, information for biotopes was added to the GRIS as part of the “Handbook of Good Maintenance” in order to better take ecological aspects of maintenance into account [27].

In order to be able to categorise past and future processes, the historical development of green infrastructure and future developments should also be taken into account.

Databases for Urban Nature Plans

Recommended data

- Urban nature areas
- Urban areas with a particular need for greening
- Habitat and species surveys

Possible additions

- Provision of green spaces for the population
- Socio-economic data: Age, health and income of the population
- Flood risk maps
- Climate and air quality maps
- Clean air plans



Collect data on biodiversity: Cities should have up-to-date data, especially on areas that are important for local biodiversity, such as the Panzerwiese in Munich with its many Red List species. (R. Hansen)

Biodiversity data

The data relevant to the recording and assessment of biodiversity is extremely diverse and ranges from information on habitats to the occurrence and distribution of plant species and the biotope network and permeability of the urban area. Particular attention should be paid to species and habitats for which there is a special regional or local responsibility, as well as key and umbrella species. The condition of protected areas should also be regularly recorded.

Mapping requires appropriate expertise in landscape ecology, flora and fauna. In many municipalities, there is corresponding expertise in the associations, whose services should be valued and data meaningfully integrated. Data from regional and national monitoring systems should also be utilised [28].

It is advisable to set up a long-term monitoring system in which the status and distribution of valuable biotopes and species groups are recorded at regular intervals (see Chapter 5.3).

Data on quality of life and environmental justice

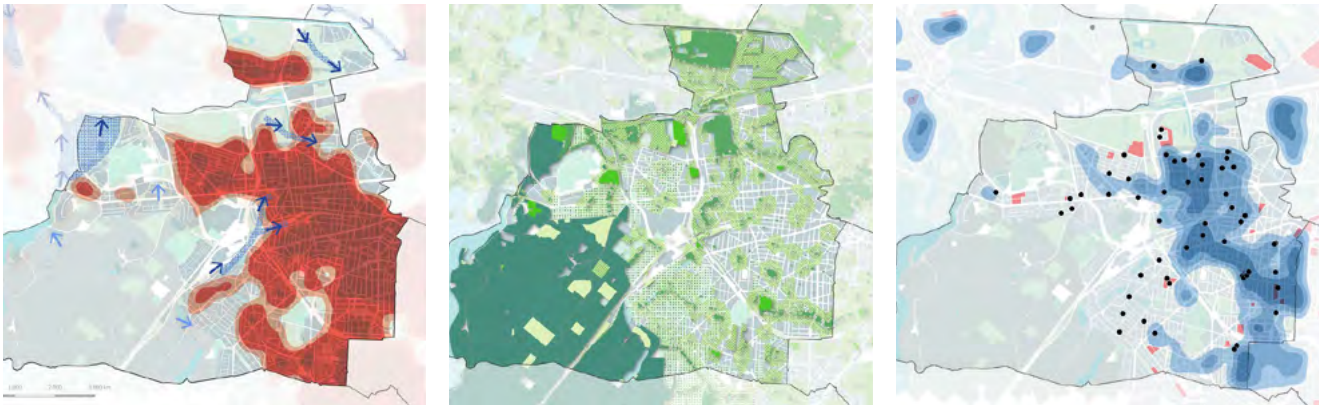
In order to improve environmental justice, particular attention should be paid to accessibility and an equitable distribution of public green spaces within urban neighbourhoods. Sufficient accessible public green spaces should be provided, especially in disadvantaged or basic residential areas without access to private green spaces. When creating or upgrading green spaces, it is important to keep gentrification mechanisms to a minimum to prevent residents from being pushed out of neighbourhoods due to rising rents.

Environmental justice also involves reducing environmental pollution. Low-cost residential areas are often exposed to greater environmental pollution (see box “Environmental justice toolbox”). This includes noise or air pollution, especially from particulate matter. Due to the health impairments caused by environmental pollutants, these should be reduced in residential areas. Noise and air pollution maps can therefore be a relevant basis for planning and elements of green infrastructure can be planned in a way that reduces environmental pollution. In cases of high air pollution, for example, it must be ensured that the tree planting shields the pollution, while simultaneously preventing pollutants from accumulating under the tree crowns.

Toolbox Environmental Justice

The Deutsches Institut für Urbanistik (Difu) has developed an online toolbox “Umweltgerechtigkeit” that provides local authority stakeholders with a wealth of practical information and tips on the topic of environmental justice. The toolbox explains the term environmental justice and contains checklists, practical examples and literature references, including a checklist with 10 steps for more environmental justice in the municipality or an overview with indicators.

More at: <https://toolbox-umweltgerechtigkeit.de/>



Maintain data on adaptation to climate change: The BAFOK or “Bezirkliche Konzept zur Anpassung an die Folgen des Klimawandels” for the Berlin district of Charlottenburg-Wilmersdorf contains spatial data for climate adaptation as well as targets and measures for the topics of water-sensitive urban development, heat-adapted urban development, climate protection and disaster prevention. (bgmr)

Data on climate change

In order to be able to react to the consequences of climate change, data on the local effects of global warming in particular should be included such as urban nature’s vulnerability to both dry and hot phases as well as flood events or storms. In addition, urban nature and sustainable solutions should be implemented in areas where the population is particularly affected by heat waves or at risk from flooding. For such cases, urban climate mapping such as climate and air quality maps, hazard maps such as flood maps or cloud burst maps are especially relevant. The preservation of fresh air corridors is particularly important and must not be obstructed by tree belts, compact woodland planting or building.

Data on the tree population

The tree canopy cover — i.e. the proportion of the urban area that is covered by the tree canopy — is suitable for long-term monitoring of the entire city. Due to the diverse ecological and cli-

matic services provided by trees, a canopy cover of 30% of the urban area is required [29]. With remote sensing methods, it is possible to analyse image material and determine the proportion of crown cover. To date, comprehensive analyses such as the “Street Tree Layer” from the European Copernicus Land Monitoring System only cover dense tree populations or very large-crowned trees [30].

In order to systematically manage tree care and initiate tree preservation measures in good time, it is important to record the number of urban trees and monitor their development. Due to poor site conditions and dry years, street trees have a shorter lifespan and higher failure rates (see box “Urban trees”). To maximise the age of the trees and to expand the range of species in a targeted manner, master data such as tree species or trunk circumference as well as data on the health of the trees must be recorded. Old trees have the greatest value for biodiversity and the welfare effect in the city and should therefore be preserved for as long as possible (see box “Pfaffenhofen”).

EIN KONZEPT FÜR PFAFFENHOFENS STADTBÄUME



Falsche Baumpflege führt zu frühzeitiger Fällung.

DAS MITEINANDER IST ENTSCHEIDEND

Wissen, nachhaltige Baumpflege und politischer Wille müssen Hand in Hand gehen, um unsere Stadtbäume zu erhalten. Viele Städte haben aus den Erfahrungen und Fehlern der Vergangenheit gelernt und immer mehr Kommunen setzen mittlerweile auf den nachhaltigen Aufbau eines Baumbestands. Sie lassen gesunde Bäume alt werden, damit sie mehreren Generationen ihren Nutzen bringen.

Für den Teamleiter Stadtgrün bei den Stadtwerken Pfaffenhofen Mario Dietrich ist klar: „Eine moderne Baumpflege nach dem Drei-Säulen-Konzept braucht Rückhalt in Politik und Öffentlichkeit.“ Daher will das Stadtgrün-Team Bewusstsein schaffen, Entscheider beraten und die Bürger informieren über Pfaffenhofens Stadtbäume.



Alte Bäume bringen den größten Nutzen.

Pfaffenhofen an der Ilm: Stadtbaumkonzept

The town of Pfaffenhofen an der Ilm wants to increase its tree population as a contribution to species protection and climate adaptation. The city planted 500 new urban trees from 2019 to 2021. Climate-resistant tree species were selected. The planting and maintenance strategy is intended to ensure that the urban trees develop well and reach an advanced age.

More at: <https://pfaffenhofen.de/artikel/baeume-in-pfaffenhofen/>

(M. Dietrich)

Urban trees in a changing climate

As part of the research project “Stadtbäume im Klimawandel (SiK): Klimafolgen-Monitoring und Anpassung”, an integrated strategy was developed to adapt Hamburg’s tree population to climate change. Part of the strategy is climate impact monitoring for street trees in order to assess the vulnerability of tree species to drought and heat stress. In addition, measures and instruments are to be developed to preserve and further develop the tree population.

More at: <https://www.hamburg.de/stadtbaeume-im-klimawandel/>

Set concrete targets

Based on the vision and the analysis of the state of urban nature, concrete targets can be defined. This should take place in a co-creation process in which the relevant stakeholder groups are given

an insight into the results of the data analysis and invited to jointly discuss.

Targets can be quantitative or qualitative. They are an expression of the desired target state or the desired quantity and/or quality of certain indicators. Targets can, for example, relate to avoidance, reduction or improvement. It is recommended that objectives are long-term (10-15 years) and that they should be “SMART” — i.e. specific, measurable, achievable, results-oriented and time-bound, and assigned to a responsible person or organisation [4]. Depending on the design of the Urban Nature Plan, it may also make sense to keep the objectives more open and general, as this keeps them flexible and prevents them from quickly becoming obsolete in the event of deviations. Care should then be taken to ensure that measures are planned according to the SMART principle so that the Urban Nature Plan can be implemented (see Chapter 4.3).

The EU guideline proposes core objectives and additional objectives (see box “Targets”). The core objectives should be taken into account in

every Urban Nature Plan. In addition, targets from EU policy and national orientation values should be given consideration. The EU Nature Restoration Law sets targets in this regard; there should be no net loss of urban green space and tree coverage and an increase in the total area from 2030 [2].

The additional objectives should be in line with the thematic focus of the Urban Nature Plan.

Key questions for formulating objectives

- ☐ Have goals been set in line with the vision?
- ☐ Are the targets ambitious and at least in line with the long-term targets of the EU Biodiversity Strategy 2030?
- ☐ Have objectives been set out in writing and are they SMART — specific, measurable, achievable, relevant and time-bound?

Targets for Urban Nature Plans

Core targets

- Stable or increasing share of urban nature areas (public and private)
- Stable or increasing proportion of tree canopy cover and increasing number of newly planted trees
- Appropriate proportion of protected areas

Possible additional targets

1. Change in land use

- Higher proportion of urban nature area
- Reduction of land use and soil sealing

- Higher proportion of buildings with green walls, facades or roofs
- Establishment of ecological green space management
- Unsealing of surfaces and restoration of soil functions
- Higher proportion of urban nature area
- Reduction of land use and soil sealing
- Higher proportion of buildings with green walls, facades or roofs
- Establishment of ecological green space management
- Unsealing of surfaces and restoration of soil functions

2. Biodiversity

- Higher proportion of protected areas and protected habitats
- Higher proportion/higher quality of biodiverse parks and gardens
- Higher proportion of street trees
- Higher species numbers for certain taxa such as birds, pollinator insects/for native plants and animals (or creation of habitats for these species groups)
- Biotope network

3. Adequate provision of green spaces in all neighbourhoods

4. Reduction of problematic invasive species/promotion of site-adapted native species

5. Reduction of environmental pollution

6. Increase in climate mitigation and adaptation

[4, adapted]

4.3 Clarify implementation and responsibilities

In order for an Urban Nature Plan to be implemented successfully, clear guidelines for action must be in place. This includes defining priorities and concrete measures, agreeing on a realistic time frame, clarifying roles and responsibilities as well as securing funding.

Create an action plan

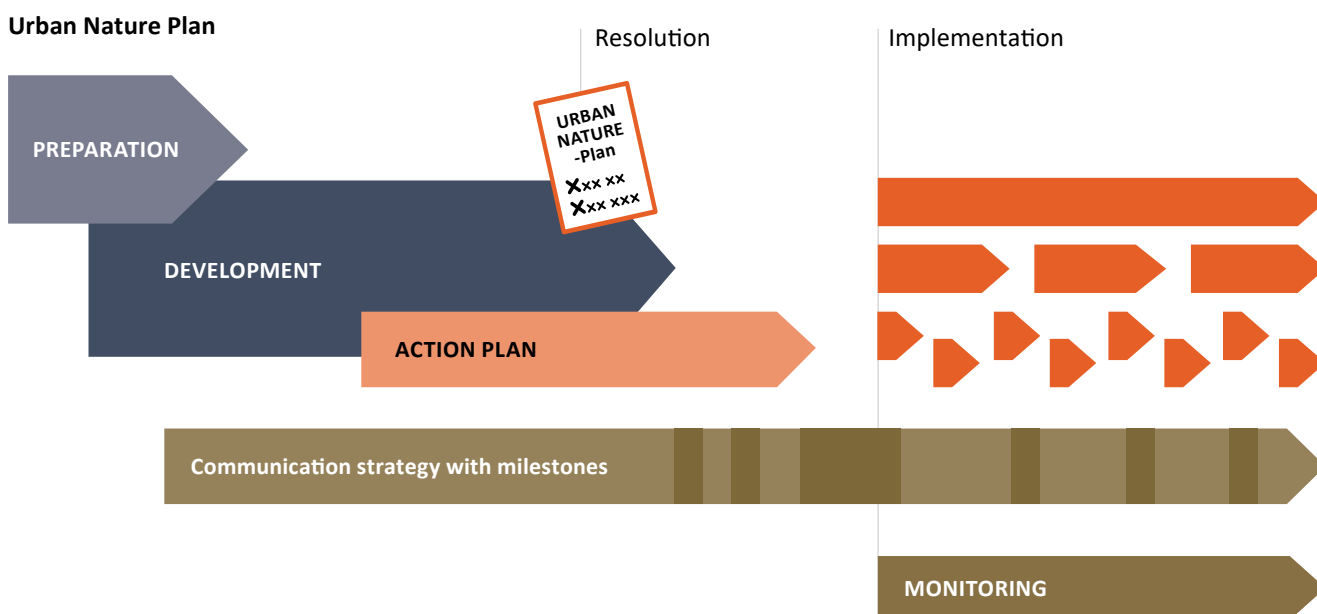
In an action plan, goals and decisions can be converted into concrete action steps and tasks, creating links between the measures and determining a sequence of implementation. The action plan should define short, medium and long-term priorities for action. Dividing large projects into smaller work packages can reduce complexity and facilitate implementation. In addition to a list of the individual action steps, the respective responsibilities for implementation, a time horizon and funding should also be defined.

The action plan can either be drawn up separately or integrated into the Urban Nature Plan. It is also worth drawing up an action plan for existing strategies in which objectives and measures have already been defined but no time horizons, responsibilities and budgets have yet been set. This allows the strategy to be implemented in a targeted manner. Measures from various strategies can also be bundled, prioritised and concretised in an action plan.

Set priorities and measures

The previously formulated goals must be backed by concrete measures. These should have a temporal and spatial reference. The cost framework and responsibilities should also be defined.

Based on various fields of action, the measures can be bundled into packages of measures and assigned different priorities for implementation. Once a final set of measures has been defined, the next steps are assigning responsibilities for



Focussing on rapid implementation: An Urban Nature Plan should be implemented promptly, which is why the implementation should already be considered in an action plan during the development phase. A communication strategy should accompany the entire process and communication activities should be intensified at certain milestones. Monitoring should record the implementation of projects and measures and be used for follow-up evaluations.

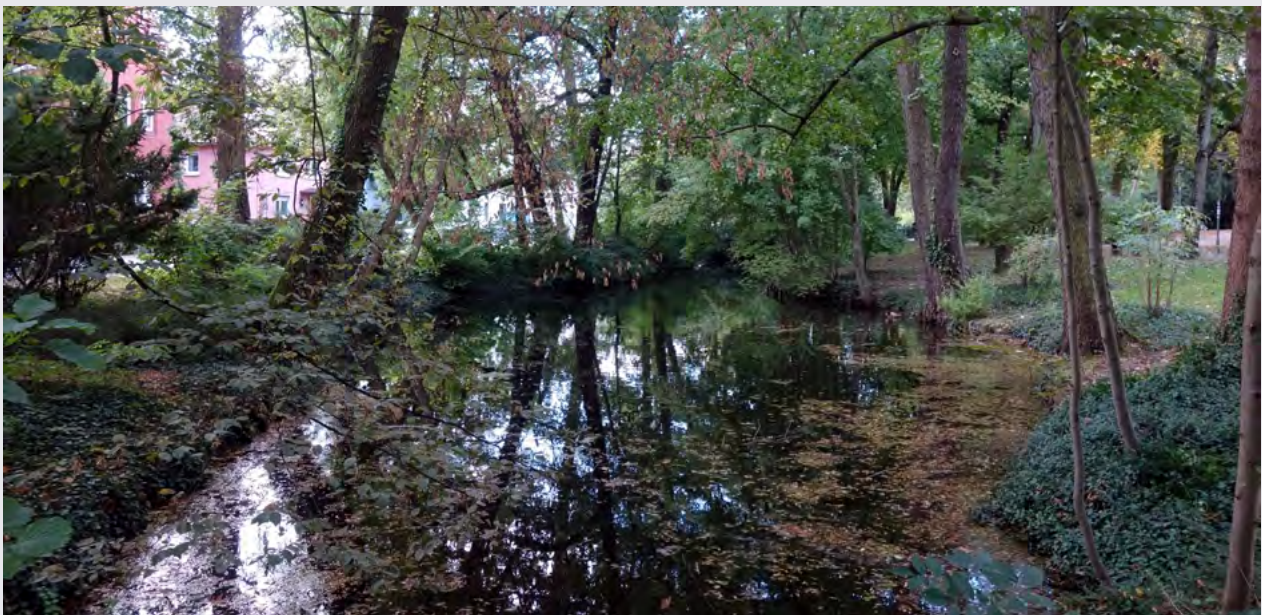
implementation, creating a timeline, identifying funding sources und describing the measures including their steps for implementation in a detailed manner.

The following questions should be taken into account: What is the scope of the project, how can it be implemented and what are the measures to be implemented? Where should the measures take place? What could the potential positive and negative effects of the measures be? Who will take responsibility for the measures and their implementation? How high are the costs and how will the financing be secured? In what timeframe should the implementation take place and what project steps need to be taken?

In many urban development plan and sometimes also in open space strategies, the descriptions of the planned measures are given in the form of factsheets (see box “Offenbach”).

Clarify responsibilities

For the individual measures, persons or organisational units with suitable skills, competencies and capacities should be identified and defined who can take on a leading or supporting role in the implementation. Specific organisational units can assume responsibility for the implementation of a measure, as can several actors working together. In this context, interdisciplinary collaboration can also be an option [31].



(R. Hansen)

Offenbach am Main: Measures in the ISEK “Zukunft Stadtgrün”

The Integrated Urban Development Plan (ISEK) “Zukunft Stadtgrün — Grünes Ringnetz in der äußeren Kernstadt” of the city of Offenbach am Main aims, among other things, to further develop the open space system, to promote environmental justice and to protect biodiversity. It contains 20 individual measures to realise these goals. For each of these measures, a detailed factsheet was created with information on the implementation period, costs, funding sources and priority for action as well as a project description.

More at: https://www.offenbach.de/buerger_innen/bauen-wohnen/gruene_stadt/meldungen/isek-zukunft-stadtgruen.php



Development of green infrastructure as a long-term task: The Hans-Baluschek-Park is a 1.5 km long green corridor in Berlin that was financed as a compensatory measure. It is part of the “Grüne Hauptwege”, a Berlin-wide network of approx. 575 km of green corridors that has been planned and implemented since the 2000s. (R. Hansen)

Define timeframe

A timeframe should be defined for each step associated with individual measures, specifying when each phase of implementation should take place and be completed. A time horizon should also be defined for the entire package of measures and a suitable sequence for the implementation of the individual measures should be found. To ensure rapid realisation, the timetable should cover a period of 3 to 10 years and be updated and revised regularly [4].

Secure financing

In order to secure long-term funding for the measures, all possible short, medium and long-term sources of funding for the measure should be analysed and evaluated. In addition to the usually available financial resources such as municipal budgets, national and EU funding, an extended search for new sources of funding and funding programmes is also recommended. A list of important funding instruments that can be used to finance measures from Urban Nature Plans can be found in Chapter 5.1.

Once suitable funding instruments and sources of financing have been found, a financing plan can be drawn up. In addition to the implementation costs, the costs for sustainable maintenance should also be taken into account.

Key questions for action planning

- ☐ Will the objectives of the Urban Nature Plan be translated into an action plan or an implementation strategy?
- ☐ Has a timetable for implementation been agreed on?
- ☐ Are the measures described in concrete terms?
- ☐ Have leadership and support roles/responsibilities been assigned?
- ☐ Is sufficient financing secured?

4.4 Develop a communication strategy

Although societal awareness surrounding climate change and biodiversity loss has generally increased, many city dwellers are not aware of the importance of urban nature in their everyday lives. A communication strategy integrated into the Urban Nature Plan offers the opportunity to communicate the value of nature and increase local support for the plan.

Develop a communication strategy

The communication strategy should be understood as a component of the Urban Nature Plan with the aim of:

- increasing the visibility and impact of the plan,
- raising awareness of the value and benefits of healthy ecosystems and the risks of biodiversity loss,
- motivating the urban community to work together.

A well-thought-out communication strategy can significantly contribute to the success of the plan by fostering public engagement, trust and support, managing (mis)information and supporting the image and values of the city. The strategy can also ensure that the plan remains in people's minds.

Depending on capacity, communication activities relating to the Urban Nature Plan can be taken over by the press office or — if available — by municipal departments specialising in environmental and sustainability education. External planning offices can also be brought in to take over communication for a limited period of time.

If capacities and knowledge in the field of public relations are limited, the communication strategy should focus on selected activities and important milestones; e.g. public participation in the preparation of the plan, the political adoption and publication of the plan and the implementation of particularly outstanding measures, so that selected but regular reports on the urban plan are made.

If possible, communication indicators can be integrated into the monitoring of the Urban Nature Plan to track the target groups and impacts achieved (see Chapter 5.3). These can be simple indicators such as numbers of website visits, participants in public events or engagement in social media, as well as more sophisticated methods such as representative surveys, e.g. to measure changes in public perception.

Understand target groups

Communication around the Urban Nature Plan can be aimed at the general public at a city-wide level or at specific target groups (e.g. in certain neighbourhoods) depending on the resources available and the objective. When it comes to communicating with the general public about the Urban Nature Plan, only fairly general messages about the plan as a whole can be disseminated. Relevant aspects to be communicated include, for example: the motivation and need for the creation of the plan, the main objectives of the plan, the expected benefits for the general public (healthier, greener, more resilient cities) and how citizens can get involved, take action to support implementation, apply for funding or spread the message (see box "Hamburg").

Hamburg's green roof programme "Auf die Dächer – Fertig – Grün!"

Hamburg's green roof strategy includes a promotional programme for green roofs based on the pillars of advertising and dialogue. The communication campaign "Auf die Dächer – Fertig – Grün!" included poster advertising, brochures, press articles, award ceremonies, excursions and internet advertising to inform people about the advantages of green roofs. The aim was to raise awareness of the strategy itself and the financial support available.

More at: <https://www.hamburg.de/foerderung/4364756/gruendachfoerderung/>

When implementing Urban Nature Plans, it can be helpful to define some of the target groups more precisely. These could be children and young peo-

ple or older people, teachers/educational institutions, local companies, healthcare professionals or property owners who could implement greening measures. Alternatively, communication campaigns could be targeted at specific neighbourhoods, for example those particularly affected by poor air quality, the urban heat island effect or the limited availability of green spaces. Of course, individuals within these groups have different needs and varying levels of commitment to urban green spaces, resulting in different levels of interests in the objectives and activities of the Urban Nature Plan (see Chapter 3.4).

The more is known about the context and profile of the target group, the greater the chance of the intended messages being properly worded and thus understood by the target group [17]. Aspects such as the preferred tone of communication (e.g. serious or playful, professional or informal) and the local conditions should be taken into account where possible in order to adapt the messages and the type of communication channels used.



Drawing attention to urban nature: The Hamburg "Dachtage" 2020 drew attention to the greening potential of roofs with a diverse programme of events and cultural activities. (J. Heicks)



Inspiring enthusiasm for urban nature: The “Neue Mitte” urban wilderness park on the former Nordbahnhof railway station in Vienna preserves habitats for many animal species and encourages visitors to experience nature. The interactive exhibition “#BeAButterflyYourself” draws attention to the diversity of butterflies and invites visitors to take butterfly selfies. (R. Hansen)

Identify communication channels

Different communication channels and forms should be selected to address all facets of the diverse urban society. These include traditional local media, print products (flyers, reports) as well as infographics, digital platforms, websites, videos and social media posts. Where possible, the Urban Nature Plan should be promoted via both online and offline channels to increase its reach.

When choosing channels, it is important to consider the preferences and behaviours of different social groups. For example, some residents are active on certain social media, while others are more likely to use local newspapers or community events. A multi-channel strategy that utilises the strengths of each medium ensures that the message of the Urban Nature Plan reaches a diverse audience as effectively as possible [32].

If resources are limited, it can be helpful to focus on regular press releases, social media posts and an up-to-date website to achieve the communication goals. The tone of all communication materials should reflect the values of the Urban Nature Plan, such as promoting collaboration, engage-

ment, creativity and innovation, as well as emphasising the importance of the plan for biodiversity and climate goals.

Principles for effective communication

Effective communication requires the materials to be appealing and informative and to convey a specific message that is understood by the target group. However, the content should also emotionally appeal to the target groups. Visual elements, storytelling techniques and memorable stories can make the content accessible to the audience. In addition, easy-to-understand content can encourage the participation of the general public. Catchy slogans can be a helpful tool, e.g:

- Urban Nature Plan XY — More green for a higher quality of life, biodiversity and climate adaptation
- Urban Nature Plan XY — Protecting the climate and living well
- Urban Nature Plan XY — Together for more greenery

Regardless of the nature of the content created, the following principles should be observed as part of all communication activities:

1. Clarity: The information must be formulated and communicated in such a way that it is clear and understandable.

2. Objective: The objective of the communication must be clear from the outset, e.g. conveying or obtaining information/raising awareness, calling for action, incentivising behavioural change, etc.

3. Completeness: Complete content can be processed more effectively and quickly by the addressees, thus avoiding misunderstandings or confusion.

4. Time frame: The communication strategy and measures should be linked to the implementation of the Urban Nature Plan. Especially when resources and capacities are limited, important milestones should be defined on which communication activities are focussed, e.g. the implementation of important measures (see Chapter 5.1).

The tone should be both friendly and informative, motivating, dynamic and inviting. The aim is to summarise the essence of the Urban Nature Plan in clear and convincing statements that resonate with the identified target groups to ensure effective communication.

Partnerships and co-operations

Partnerships and cooperation with local multipliers can significantly increase the reach of the Urban Nature Plan [14]. Public figures, local environmental organisations and other clubs and associations, schools, sports associations and businesses can communicate the messages of the Urban Nature Plan to new target groups and activate interested individuals or financial resources. Joint events or campaigns can be organised for this purpose.

Key questions regarding the communication strategy

- Which target groups should be addressed to increase the visibility and impact of the plan, raise awareness of urban nature and motivate urban society to work together?
- Which activities, milestones and communication channels should be focussed on?
- What partnerships or co-operations can be established to increase the effectiveness of the communication strategy?

Bad Saulgau: Diverse nature as part of the municipal identity

The town of Bad Saulgau has been recognised many times for its commitment to biodiversity. The municipality's biodiversity strategy includes nature trails and nature walks, watercourse renaturalisation, habitat development, the ecological transformation of urban greening and the NaturThemenPark. The trails and the park provide residents and visitors with knowledge and encourage them to experience nature. A "Gartenfibel" provides practical tips for promoting biodiversity in private gardens. The many years of experience are passed on via a self-established practice network in order to foster exchange between municipalities.

More at: <https://www.bad-saulgau.de/tourismus/natur/index.php>

4.5 Adopt and publish the plan

Once the contents of the Urban Nature Plan have been negotiated with the stakeholders and the plan has been finalised, it can be adopted. A subsequent publication should ensure that the plan is accessible to all interested citizens.

Adopt the plan

The finalised Urban Nature Plan should be adopted at policy level. In addition to the legal and formal adoption procedure, a high-profile event should be organised. It should recognise the achievements of those involved in the creation of the plan and increase its visibility.

Publish the plan

The adopted Urban Nature Plan should be made available online for all interested parties to view. Ideally, it should also be integrated into a more detailed website and contain information on the implementation process, updated sections and monitoring and evaluation. Additional interactive

features that enable citizens to provide feedback or participate in projects to implement the plan are desirable.

Maintain commitment to the plan

Another important task is to ensure that political commitment to the Urban Nature Plan is maintained, that it is implemented by the city administration and that it does not lose relevance. This is a long-term task that should involve key political representatives and other high-level decision-makers as well as various stakeholder groups and the general public.

Key questions for adoption and publication

- ☐ Will the Urban Nature Plan be politically approved and publicised?
- ☐ Is the finalised plan easily accessible to all citizens? Are there opportunities for feedback?
- ☐ How can the commitment to the plan be maintained in the long term?



Pursue long-term strategies: The city of Lisbon has been developing nine green corridors for over 10 years, which are intended to promote recreation and mobility by bike and on foot, biodiversity and climate adaptation. Near-natural urban greenery that is not irrigated and is therefore not permanently green, but is yellow and brown during part of the year is new to the city's population. (R. Hansen)

5 Implement the Urban Nature Plan

Once goals have been defined and measures and priorities established, the next step is to realise the Urban Nature Plan and implement it permanently. Long-term management and ecological maintenance measures are essential to preserve urban nature. Through regular monitoring and evaluation, implementation can be checked and the Urban Nature Plan adjusted if necessary.

5.1 Implement measures

- ☐ Finance measures and start the implementation process
- ☐ Maintain commitment to the Urban Nature Plan and create awareness
- ☐ Highlight opportunities for urban society to get involved

5.2 Maintain urban nature

- ☐ Establish measures and strategies for ecological green space management
- ☐ Promote sustainable urban agricultural areas as part of urban nature
- ☐ Involve urban society in care and promoting commitment

5.3 Review and communicate implementation

- ☐ Establish a monitoring approach
- ☐ Evaluate and communicate the monitoring results
- ☐ Adjust and further develop the Urban Nature Plan as needed

5.1 Implement measures

The aim of this chapter is to implement the finalised Urban Nature Plan and thus achieve tangible improvements in terms of the quantity and quality of urban nature. A first step in this direction is to determine the financing options for the individual measures and action steps. Pragmatic and strategic considerations should be taken into account when implementing the measures. Continuous and high-profile implementation of the Urban Nature Plan helps to anchor it in the consciousness of urban society and maintain political commitment.

Financing measures

Municipalities can access different sources of funding for the realisation of projects. With their own budget funds in the form of a fixed budget or their own budget titles for the Urban Nature Plan, the measures resulting from the plan can be reliably implemented.

The calculation of budget funds should adequately cover the amounts to be paid.

If the corresponding budget funds are not available, funding programmes can provide support. There are a number of federal and European funding programmes that can be used to support the implementation of measures from Urban Nature Plans (see table “Funding programmes”). The different funding conditions must be taken into account in each case. For some of the suitable programmes, funds are released in accordance with state law requirements; it is important to find out about the current status of funding requirements from the responsible state authority before submitting an application. Urban development funding can also be used to implement measures from the Urban Nature Plan. Urban development funding aims to remedy urban development and social deficiencies in the respective development areas, which also includes measures to promote urban nature.

Funding programmes for financing measures

Funding programme	Brief description	Eligible measures
Bundesprogramm Biologische Vielfalt	See table in chapter 3.1	New planting, redesign, upgrading, species protection, environmental education, public relations
LIFE (L'Instrument Financier pour l'Environnement)	See table in chapter 3.1	New planting, redesign, species protection, public relations
EFRE (European Regional Development Fund)	Financing instrument of EU cohesion policy to reduce regional development disparities; formal definition of the distribution of funds with the respective member state and its regional partners involved	Depending on the respective funding guidelines of the federal states; example NRW: New construction, upgrading, redesign, modernisation, unsealing
Städtebauförderung	See table in chapter 3.1	Depending on the respective funding guidelines of the federal states; example Hesse: New planting, upgrading, unsealing, redesign

Sources: [9-10, 33-36]

Further funding opportunities can be obtained through donations from private individuals, foundations and associations or sponsorship from companies. Funding can be acquired through high-profile campaigns in which specific projects are presented as the object of support [19].

Strategically implement measures

The action plan serves as a guideline for implementing the Urban Nature Plan's measures (see Chapter 4.3). It is advisable to start with simple measures that can be quickly implemented in order to demonstrate rapid success. These should also have a visible impact on the population and be communicated so that the implementation of the Urban Nature Plan is clearly evident. One example of this could be a near-natural redesign of monotonous roadside greenery or species-poor lawns, as this can be implemented easily and cost-effectively and has an immediate impact on the cityscape.

Pilot measures and model projects should also be implemented promptly, for example to gain local experience with new infiltration trenches planted with perennials or to raise awareness of certain topics, such as climate-friendly square design.

More complex measures should be started at an early stage, as they often require extensive preparation. For example, contracts for technical planning or construction measures must be put out to tender in good time.

The measures that are being implemented at any given time should be communicated to the public on a regular basis (see Chapter 4.4). This will ensure that the public remains aware of the Urban Nature Plan. The implementation of measures is also an opportunity to involve political players or multipliers and maintain their commitment to the plan. Ground-breaking ceremonies, opening celebrations and other events can create such an occasion.



Redesigning and adapting open spaces: The "Climate Square" Paul-Arnsberg-Platz in Frankfurt am Main was partially unsealed and redesigned as a climate-adapted model project. (R. Hansen)



Integrating semi-public and private spaces: As part of the “Treffpunkt Vielfalt” project, monotonous green spaces owned by co-operative, municipal and private housing companies were transformed into natural gardens. (R. Hansen)

Motivating urban society to get involved

In addition to the measures that can be implemented on areas owned by the city, it is also important to include private land to achieve the goals of an Urban Nature Plan, as these often make up a significant proportion of the city’s area. Private landowners and companies must also be mobilised for this purpose. Sports clubs and housing co-operatives also often have areas that are relevant for urban nature. In order to persuade the owners or managers of these areas to pursue the objectives of the Urban Nature Plan on their properties, incentives must be created and information provided that demonstrates the benefits that a nature-orientated and climate-friendly design of the areas can bring.

A direct approach is usually time-consuming, but is often the only way to reach property own-

ers. To create incentives, funding programmes can also be set up to implement measures from the Urban Nature Plan on private or institutional land, e.g. through funding programmes for courtyard and building greening. These programmes must be advertised so that they reach the target group. Citizens with small private gardens or balconies can also make a contribution to species-rich urban nature. It is therefore also worth motivating private individuals to organise their own areas in a way that is close to nature (see Box “Gemeinde Haar”).

The implementation of measures in public areas can also be an opportunity to involve local residents or interested parties, for example in the creation of flowering meadows or planting campaigns. Participation activities and offers for personal involvement help urban society to identify with the objectives of the Urban Nature Plan.

Key questions for implementation

- How can funding be secured? How can additional sources of funding be tapped?
- Which measures can be implemented promptly? Which require long-term preparation?
- What are strategically important measures with symbolic power or high public impact? How can these be utilised in the best possible way?
- How can urban society and local decision-makers be involved in implementation?



(J. Ruthenkolk)

Gemeinde Haar: NaturSchauGarten

The municipality of Haar is committed to biodiversity protection. Green spaces are being converted into nutrient-poor biotopes and the municipality has been certified with the “StadtGrün naturnah” label. The NaturSchauGarten serves as a showcase project. Visitors can find out how a garden can be designed to be as species-rich as possible. The garden is a biotope and habitat for native plants and animals and provides inspiration for garden design at home. For example, there are various types of dry stone walls made from natural stone and rubble, which can be easily replicated in a private garden and provide a habitat for numerous animal and plant species. The garden is located at the recycling centre and is accessible during opening hours. For those interested, the municipality also provides an information pack on ecological garden design.

More at: <https://www.gemeinde-haar.de/de/leben/Umwelt-Klimaschutz/Haar-blueht-auf/Naturschaugarten>

5.2 Maintain urban nature

Care and management are crucial for maintaining the ecological quality of urban nature. Ecologically orientated maintenance requires appropriate strategies and qualified personnel. Citizens and associations can also be involved in suitable areas.

Ecological maintenance of urban nature

Conventional maintenance of urban green spaces often damages or destroys habitats and populations of animals and plants and is not adapted to the life cycles of species. Therefore, maintenance concepts are needed that combine ecological aspects with traffic safety, aesthetics and recreational use. Smaller towns such as Bad Saulgau show that the entire management of green spaces can be reorganised. In Bamberg, too, the maintenance of roadsides has been reorganised in such a way that valuable sandy grassland biotopes are preserved and networked. Such examples show that ecological maintenance can increase biotope and species diversity and save resources such as fuel and fertiliser.

For larger cities, the transition is a complex endeavour that requires either a change in practices or a different approach to the allocation of care services altogether. If the city has its own maintenance units, a gradual transition is possible (see Box “City State of Bremen”). Berlin has drawn up a comprehensive strategy for a more ecological green space management with its “Handbook of Good Maintenance”, which it is currently implementing on a trial basis via pilot projects in the districts in order to adapt the strategy to practical requirements if necessary [27]. Frankfurt am Main and many other cities focus on the upgrading and ecological maintenance of selected areas such as (wildflower) meadows in parks and have corresponding programmes [38].

City State of Bremen:

Biodiversity strategy of the Umweltbetrieb

The Umweltbetrieb of the City State of Bremen is a state enterprise responsible for the maintenance of urban green spaces and has its own biodiversity strategy. The “biodiversity-enhancing maintenance practices” that will be implemented in the future and which are already in place include: leaving deadwood to decompose, keeping open sandy areas free, and planting insect-friendly perennials. Meadow areas should only be mowed once or twice a year. Watercourses are carefully desilted and watercourse edges are maintained in sections. There is a separate action plan for urban trees.

More at: <https://www.umweltbetrieb-bremen.de/gruenpflege/unsere-biodiversitaets-strategie-19650> und <https://umwelt.bremen.de/umwelt/parks-gruenflaechen/handlungskonzept-stadtbaeume-1267302>

Maintenance and development plans or management programmes should be developed for parks and other large green spaces that also protect and promote biodiversity and take climate change adaptation into account. Long-term maintenance must be taken into account when planning and restoring green spaces, and the authorities responsible for maintenance must be involved in the process.

In addition to the establishment of a green space management system, it is important that maintenance staff are appropriately qualified. For valuable areas, for example, a special biotope maintenance team can be set up with appropriately trained staff.



Establishing new types of open spaces: In the “Essbare Stadt Andernach”, fruit, vegetables and other useful plants are grown in publicly accessible areas, made freely accessible to everyone and made available for harvesting. The town of Andernach is a pioneer of being an Edible City. Some areas are maintained by citizens’ groups, while others are looked after by a non-profit organisation for vocational training and qualification. (R. Hansen)

Another important aspect of nature-friendly green maintenance is the avoidance of pesticides, as stipulated in the EU Biodiversity Strategy. Even if pesticides are used against pests and invasive species, they not only destroy individual species, but also damage native wild plants and destroy the habitat of beneficial organisms. The use of pesticides in urban green maintenance should therefore be completely avoided.

Promote sustainable urban agriculture

Urban agriculture, allotment gardens and urban gardening initiatives create urban nature that is maintained by farmers and citizens. These areas can be habitats and promote agrobiodiversity in urban areas. Horticulturally utilised soils have a high proportion of humus, promote soil life and store carbon. Agricultural areas close to the city and communal gardens should be managed according to ecological principles and in line with the objectives of Urban Nature Plans. Allotment gardens and community gardens can promote biodiversity and sustainable living in the city through biodiversity-promoting cultivation, food production and as a recreational and meeting space.

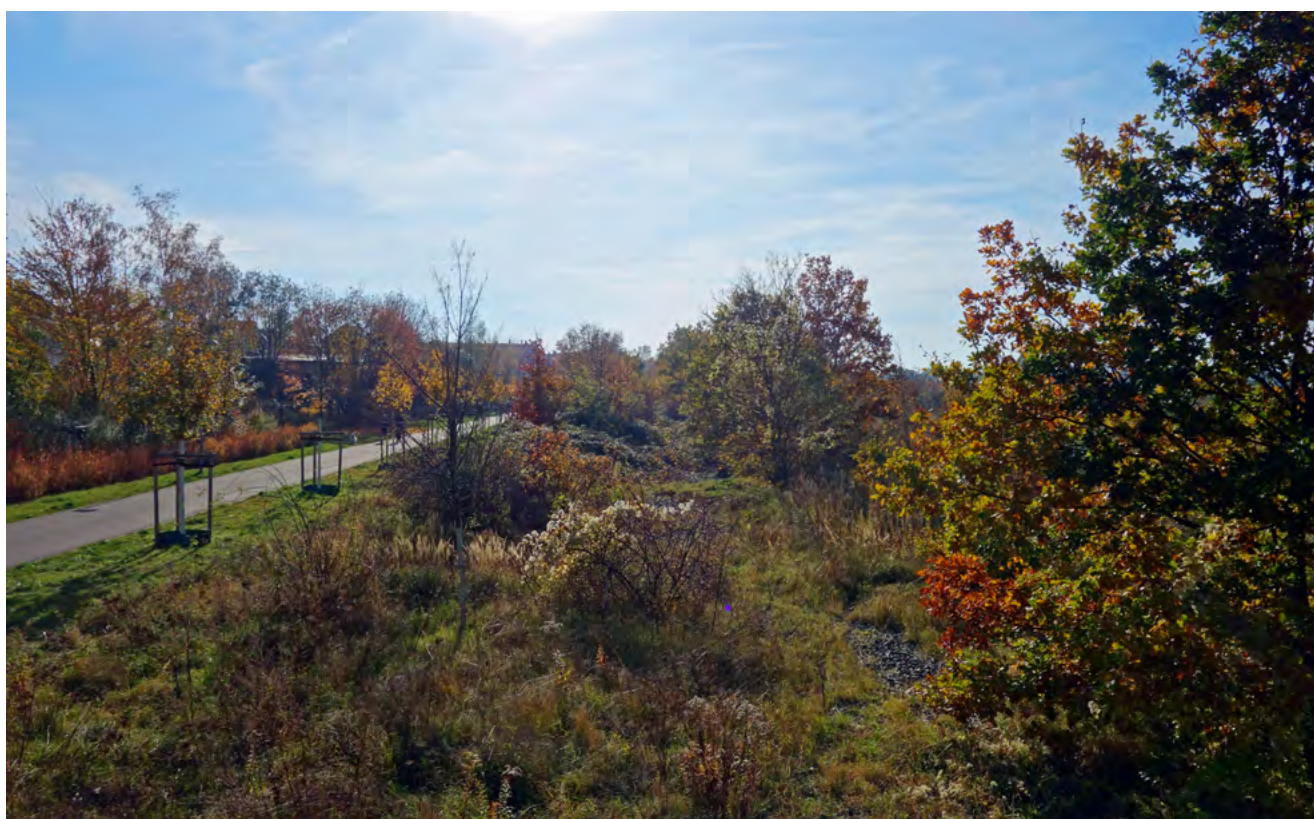
Involve urban society in maintenance activities

Ecological maintenance with small-scale maintenance processes adapted to the life cycles and mobility of species is incompatible with the economically optimised green space management of many municipalities. In many cities, however, there are committed citizens who would like to get involved in the maintenance of green spaces in their neighbourhoods. This makes it possible to award maintenance sponsorships to citizens or associations, provided that traffic safety and other requirements are guaranteed. A common example is the stewardship of tree pits or watering for newly planted trees. However, groups of citizens can also take on more demanding tasks such as the maintenance of car parks or parts of green corridors. Nature conservation organisations take on the maintenance of biotopes on their own or

leased land. Untrained volunteers can also be involved in temporary maintenance work under professional guidance, e.g. in the maintenance of orchards or the clearing of coppice marshes and heathland. Active participation strengthens citizens' identification with their urban nature and can enable maintenance measures that are not economically viable.

Key questions for maintenance

- What are short-term measures or strategies for more ecological maintenance? Which changes are necessary for a comprehensive reorganisation of urban green maintenance?
- How can those responsible for maintenance be better involved in the development and enhancement of green spaces?
- Which areas should receive a qualified maintenance and development plan?
- How can more ecological expertise be brought into the bodies responsible for maintenance? How can ecological requirements be integrated into the tendering process for maintenance measures?
- How can citizens be involved in maintenance? What are suitable areas or activities and how can interested parties be approached?



Developing urban nature with society: In a co-creation process, the “Bürgerbahnhof Plagwitz” has been created on the derelict industrial railway station in Leipzig’s Plagwitz district as a green space with a wide range of ecological and cultural features. The facilities include a construction playground, community gardens, play areas and an urban forest. The “Ecken wecken” foundation acts as an independent sponsor and forms the interface between users, neighbourhoods and the city administration. (R. Hansen)

5.3 Monitor implementation

Urban Nature Plans should be implemented promptly. Activity monitoring is a first step and should include an assessment of whether the plan's objectives are being achieved and if the quality and quantity of urban nature is improving.

Monitor and communicate the implementation process

In order to achieve the objectives of the Urban Nature Plan, it is important to regularly review the implementation of the planned measures as well as their impact. Through a subsequent evaluation of the monitoring results, weaknesses in the implementation of the plan or in the impact achieved can be identified, and the plan can be adjusted or expanded if necessary. The results of this evaluation should be kept transparent and communicated publicly. This promotes understanding and acceptance for the further development of the Urban Nature Plan and the implementation of further measures.

In order to make the implementation of the Urban Nature Plan as efficient as possible, monitoring, evaluation and reporting should be planned at an early stage and integrated into the process. Additional effort and duplication of work should be avoided by checking whether there are already suitable monitoring or evaluation systems in place in the municipality into which the monitoring of the Urban Nature Plan can be integrated.

Monitor activities

A first step in checking whether the implementation of the Urban Nature Plan is working in practice is to monitor the activities carried out and measures implemented. If possible, this should include an annual review of whether the planned measures have been implemented, are in the

process of being implemented or whether implementation has not yet begun. A straightforward example of what such an activity monitoring may look like can be found in the city of Mainz's Biodiversity Strategy (see box "Mainz").

Monitor biodiversity

To check whether the Urban Nature Plan is having the desired effect, it is important to monitor the development of species diversity and biotopes. This involves the systematic recording, measurement and observation of biotope structures and the occurrence of plants and animals. Such monitoring can be very complex and requires special expertise.

As it is not feasible to regularly record the entire diversity of plant and animal species, it is advisable to monitor certain indicator species. Careful consideration should be given to the selection of such indicator species, with a focus on whether they can be recorded regularly and at what cost, and how representative these species are of other areas of biodiversity. This is because it is not necessary to record every single animal and plant species in order to check the effect of biodiversity-promoting measures. By recording certain indicator species, a good overview of the development trends in biodiversity can be obtained. Regarding monitoring locations, it may also be sufficient to define representative selection areas distributed across the urban area where regular monitoring is carried out [40]. The monitoring of biotope areas relevant to nature conservation also provides information on the development of biodiversity.

It is advisable to develop a multi-year monitoring concept with which selected species and biotopes are investigated in varying sequences (see box "Gütersloh"). This way, the available resources for monitoring can be utilised in a targeted manner.



(R. Hansen)

Mainz: Activity monitoring of the Biodiversity Strategy

The Biodiversitätsstrategie of the City of Mainz lists all planned measures for achieving the various strategic goals in a table and indicates the status of implementation for the years under review. A simple colour code shows whether the measure has been implemented (green), implementation activities have already begun (yellow) or implementation has not yet begun (red). This makes it easy to see how the implementation is progressing and where further action is needed.

More at: Biodiversitätsstrategie Mainz (2020) [39]

Gütersloh: Monitoring biological diversity

The “Programm zur Bewahrung der biologischen Vielfalt” adopted by the city of Gütersloh in 2015 contains a portfolio of measures as well as a concept for monitoring and evaluating the development of biodiversity. Biotopes and planning-relevant species covering various habitat types and animal classes were defined for this purpose. Various habitat types and species groups are regularly recorded with the aim of ensuring that the most up-to-date data possible is available on the entire spectrum of species and biotopes. Monitoring provides information on the development over time and allows the effectiveness of the measures implemented to be monitored.

More at: <https://www.guetersloh.de/de/rathaus/fachbereiche-und-einrichtungen/umweltschutz/programm-biologische-vielfalt.php>

Monitor further effects

Comprehensive monitoring of the implementation of an Urban Nature Plan should also provide an overview of how the implemented measures have affected citizens, e.g. in terms of the equitable distribution of green spaces. Chapter 4.2 proposes various indicators and “orientation values” that help to monitor and categorise the development of urban green spaces and their equitable distribution.

Data collection through citizen science

Citizen science can be a useful way to involve the population in biodiversity monitoring and to increase knowledge about the species occurring in the urban area. Automated identification apps

can be used in citizen science projects to record biodiversity. With the help of these apps, species sighted can be identified relatively easily by uploading photos. Although they do not yet provide a 100 % reliable result as of now, they are becoming increasingly reliable. One example is the “BioBlitz” campaign, in which as many animal and plant species as possible are recorded in a certain period of time. BUND and other partners have organised this type of mapping for the district of Herford. All citizens with a smartphone can take part in the campaign and only need to download an app to identify the species [41].

Evaluation— assess success and adapt measures

During the evaluation process, monitoring results are assessed. This allows positive and negative



Verifying success: In Paderborn, the “Mittlere Paderquellgebiet” was renaturalised and made accessible. Monitoring showed that the spring area was quickly colonised by the animals and plants native to these habitats. The monitoring of the fish fauna showed a rapid recolonisation of the watercourse, but also the consequences of dry years with correspondingly low water levels. (R. Hansen)

developments to be identified and the success of the work to be realistically assessed. Action requirements can then be derived from the results of the evaluation.

Both interim evaluations during the ongoing process as well as final evaluations after the measures have been implemented can be carried out. The overall process, individual elements, the implementation of individual measures, the achievement of objectives, process control as well as public relations and participation formats can be assessed.

The evaluation serves to monitor success and checks whether the set goals are being met and the desired effects of the measures are being achieved. The results should be recorded in a report and used to further develop the Urban Nature Plan at regular intervals and adapt it if necessary. In this way, successful measures can be promoted more strongly and measures that prove to be ineffective can be discontinued [40].

Transparency and reporting

The results of the evaluation should be publicised at regular intervals and communicated to the population. In this way, acceptance for further measures can be promoted and further tasks can be better justified to municipal decision-makers. In addition, transparent reporting ensures that the results of the evaluation are taken into account going forward and that future decisions are based on the knowledge gained.

Key questions for the review

- ☐ Were the goals achieved? Where is there still a need for action? Which goals remain current?
- ☐ Did the implemented measures lead to the desired effects? Which measures were particularly successful and which were not?
- ☐ What problems have been identified? Have work priorities changed?
- ☐ How can the Urban Nature Plan be adapted and, if necessary, further developed?

Summary

Determine the starting point

Are there already planning strategies in place that correspond to an Urban Nature Plan?
Is there a need for further action?



Carry out
a self-evaluation:
(→ Checklist)

One or more plans collectively cover the essential aspects of Urban Nature Plans (including the topics of climate mitigation and biodiversity conservation).

No need for action

Communicate that an Urban Nature Plan already exists.

A plan or several plans together cover many aspects, even if some are missing.

Define needs for action

Is a supplementary action plan sufficient or should a complete Urban Nature Plan be drawn up?

There are no current plans that correspond to an Urban Nature Plan, or the majority of aspects / essential aspects are missing.

Determine the basics, set the scope and start planning

Assess: What is a demanding but suitable Urban Nature Plan, fitting for the situation of the municipality?

Create an Urban Nature Plan



Ambitious, but a perfect fit

The following steps describe the creation and implementation of a comprehensive Urban Nature Plan. They can and should be adapted to the situation in each municipality!



Prepare the Urban Nature Plan

Before substantive work on the Urban Nature Plan can begin, the conditions must be checked.

Clarify financing

Keep an eye on the overall financing throughout implementation. Apply for funding if required.

Secure political support

Position the Urban Nature Plan as an important municipal project and involve local politicians.



Develop work structures

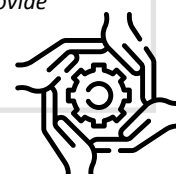
Define clear responsibilities and create working structures for interdisciplinary cooperation.

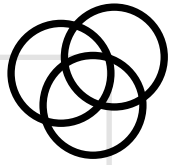
Identify stakeholders and design co-creation process

Identify relevant local groups. Select suitable participation and involvement formats.

Co-creation

Allow for the participation of the urban community in the planning, implementation and maintenance of urban nature. Keep an eye on the expectations of those involved and provide transparent information about the opportunities for co-design.





Develop the Urban Nature Plan

An Urban Nature Plan is ambitious and implementation orientated. Relevant stakeholder groups should be involved in the development of the plan.

Set topics and develop a vision

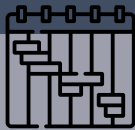
Develop a positive vision for the future that brings together the different themes of an Urban Nature Plan.

Collect data and set targets

*Which spatial areas are included in the Urban Nature Plan? What data is available for these areas? What data still needs to be collected?
→ Derive ambitious goals and targets.*

Clarify implementation and responsibilities

The objectives of the Urban Nature Plan are implemented via an action plan. Responsibilities, timeframes and funding must be considered.



Action plan

If there are already plans in place that fulfil many aspects of Urban Nature Plans, an action plan can set priorities and support the realisation of the existing plans.

Develop a communication strategy

Raise awareness of the importance of urban nature and the Urban Nature Plan in urban society through a communication strategy.



Communication

Provide regular information about the Urban Nature Plan and its implementation.

Adopt and publish the plan

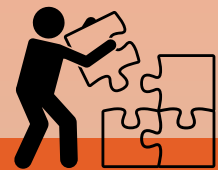
Create a political resolution and keep the plan in the public and political consciousness.

Combining quality of life, biodiversity, climate protection and adaptation

Urban Nature Plans consider urban nature from an integrated perspective and address important goals around sustainable urban and open space development. As there are only limited areas available for more urban nature, these spaces must be designed to be multifunctional.

Implement the Urban Nature Plan

In order for the Urban Nature Plan to make a noticeable contribution to quality of life, biodiversity, climate protection and adaptation in the municipality, it must be implemented quickly.



Implement measures

Continuously implement the Urban Nature Plan. Realise simple and highly visible measures quickly to demonstrate success

Maintain urban nature

Establish measures and strategies for ecological green space management and the long-term maintenance of urban nature.

Review and communicate implementation

Track implementation via monitoring and, if necessary, make adjustments and further develop the Urban Nature Plan.

Further information and supporting services

The following pages contain references to international information on Urban Nature Plans as well as links to German-language information on the topics of the Urban Nature Plan. In addition, guidelines on certain topics are provided for in-depth study. (Information status: April 2024)

International initiatives and projects

Urban Nature Platform of the European Commission

In the future, information on all aspects of Urban Nature Plans will be brought together on the “Urban Nature Platform”. This includes a guideline from the Commission and a toolkit. The website also contains further information on other thematically relevant information services and EU funding programmes. **More at:** https://environment.ec.europa.eu/topics/urban-environment/urban-nature-platform_en

Green City Accord

In the Green City Accord, mayors commit to working towards healthier and cleaner living conditions in their city. It is a voluntary commitment to take action in the areas of air, water, nature and biodiversity, recycling, waste and noise. **More at:** https://environment.ec.europa.eu/topics/urban-environment/green-city-accord_en

LIFE project “Urban Greening Plans”

As part of the LIFE project, the digital database “Greening Plans Knowledge Hub” was developed for European cities. Municipalities can use it to access information and instructions for creating their own Urban Nature Plans. **More at:** <https://europarc.org/greening-plans/>

Initiatives and projects in Germany

Werkzeugkasten Stadtnatur

The “Werkzeugkasten Stadtnatur” is a website of the German Federal Agency for Nature Conservation. It provides information on the development of urban green infrastructure and the promotion of biodiversity in municipalities. The toolbox offers concrete recommendations for municipal planning practice and contains a large number of practical examples as well as references to specialised brochures and other information services. **More at:** <https://www.bfn.de/werkzeugkasten-stadtnatur>

Kommunen für biologische Vielfalt e. V.

This alliance is as an association of German municipalities in favour of more biodiversity in urban areas and open landscapes. Participation serves the exchange of information, public relations work and further training for municipal employees. Joint projects are also realised. The association’s homepage provides numerous good practice cases. **More at:** <https://kommbio.de/>

Label “Stadtgrün naturnah”

The “Kommunen für biologische Vielfalt” alliance awards municipalities that participate in this labelling process a nationwide certificate for their special commitment to ecological green space management. In addition to initiating their own green space enhancement projects, the multi-stage process also includes an expertly supervised exchange of experiences among the participants. Another important component is the free provision of materials for public relations work. **More at:** <https://kommbio.de/label/>

Urban NBS project

The joint science-practice project “UrbanNBS” offers a series of detailed working aids for the creation of municipal biodiversity strategies. A guideline summarises the key steps – from analysing the initial situation to creating, implementing and monitoring – and contains numerous practical examples. **More at:** <http://urban-nbs.de/> und <https://www.ioer.de/projekte/urban-nbs/>

“Stadt trifft Natur” project (BUND)

The BUND project “Stadt trifft Natur”, funded by the BfN, focussed on the transfer of the EU Biodiversity Strategy to the municipal level. In this context, a brochure on the development of municipal biodiversity strategies was produced. Further material on urban nature is also available on the topic page. **More at:** <https://www.bund.net/stadtnatur>

Biodiversity network of the town of Bad Saulgau

The town of Bad Saulgau maintains the “Praxisnetzwerk für biologische Vielfalt” to disseminate its implemented biodiversity concept as a source of inspiration with the aim of using this as a basis for initiating further measures to promote biodiversity throughout Germany. Membership of this informal organisation enables interested individuals and groups to exchange ideas and contribute new ones. **More at:** <https://www.bad-saulgau.de/tourismus/natur/praxisnetzwerk/>

“Klimalotse” of the Federal Environment Agency

The Federal Environment Agency’s online “Klimalotse” supports local authorities in adapting to the consequences of climate change and contains relevant knowledge in five consecutive modules. The “Vorgehen vorbereiten” module also provides information on which data sources on current and future impacts of climate change are required in order to develop an adaptation strategy. The “Klimarisiken erkennen und bewerten” module explains how the necessary data can be analysed and evaluated. **More at:** <https://www.umweltbundesamt.de/themen/klima-energie/klimafolgen-anpassung/werkzeuge-der-anpassung/klimalotse>

Chapter 3.4 - Co-creation processes

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Appendix: Self-evaluation checklist

Do you already have an Urban Nature Plan? What is the need for action in your municipality?

This checklist will help you to assess municipal plans and strategies relating to urban nature¹. You can use the checklist for completed plans as well as for those that are still in the draft stage. Open space concepts, landscape plans, municipal biodiversity strategies or climate adaptation concepts are particularly suitable. If urban nature plays a role, urban development plans and specialised thematic concepts such as cemetery or allotment garden concepts and green space maintenance strategies may also be relevant.

Assessment of the plans

Look at each individual plan that is relevant to urban nature and assess the aspects listed in the checklist.

Evaluation categories: 0 Not applicable 1 Partially applicable 2 Fully applicable

Plan / Strategy:	Evaluation			Notes
	0	1	2	
Process design				
Political commitment The plan was supported by high-ranking representatives of local politics (e.g. through a foreword by the mayor or participation in the planning process).				
Integrated working structure The plan was drawn up in co-operation between various specialist departments, such as urban planning, green spaces, nature conservation and climate protection. <i>Partial: other specialist departments were involved in phases;</i> <i>Comprehensive: interdepartmental working group or similar</i>				
Co-creation process Representatives of urban society such as clubs and associations as well as individuals and companies helped to shape the plan. <i>Partial: Participation (information and consultation);</i> <i>Comprehensive: Co-organisation of civil society, companies and science</i>				
Adoption and publication The plan was politically approved by resolution and is publicly accessible, e.g. via the municipal website.				
Communication strategy The plan includes a communication strategy or corresponding measures to communicate the value of urban nature to the urban population (including environmental education measures). <i>Partial: individual communication measures;</i> <i>Comprehensive: detailed communication strategy</i>				

¹ Urban nature is used in this context as a broad umbrella term and refers to all green and open spaces that have vegetation, water or soil and from which natural processes such as evaporation or infiltration originate, or which represent habitats. Urban nature includes “all living things”, i.e. also animals and other organisms.

Plan / Strategy:	Evaluation			Notes
	0	1	2	
Plan contents				
Topic 1: Quality of life The plan aims to create diverse, attractive and usable urban nature in an appropriate quantity and quality that is fairly distributed throughout the urban area.				
Topic 2: Biodiversity The plan aims to preserve the diversity of urban nature throughout the city, protect and restore near-natural biotopes and promote the populations of animal and plant species.				
Topic 3: Climate mitigation and adaptation The aim of the plan is to adapt the municipality to the consequences of climate change through urban nature so that, for example, damage caused by heavy rainfall can be minimised and heat stress can be reduced. Urban nature should also contribute to climate protection through higher quality cycle and footpaths as well as through energy and resource-saving new construction and maintenance.				
Integrated consideration of the three topic areas The plan addresses interfaces and synergies between the topics described above and, where applicable, other topics relating to open space planning or sustainable urban development.				
Ambitious vision and goals The plan contains an ambitious mission statement or vision for urban nature. It contains goals that would mean a significant improvement in relation to the above-mentioned topics; e.g. increasing the proportion of greenery and street trees or the improved accessibility of green spaces.				
Current state of urban nature and biodiversity The plan is based on current data on urban nature as well as current and qualified data on biodiversity. The data includes the outdoor area as well as the settlement areas.				
Action plan/implementation strategy The plan contains an action plan or an implementation strategy that translates the objectives into concrete measures. Responsibilities and funding channels are also identified.				
Implementation				
Implementation of measures The plan or subsequent documents contain concrete measures that are continuously implemented and noticeably improve the quantity or quality of urban nature.				
Ecological green space management The plan includes strategies or measures for biodiversity-promoting maintenance of green and open spaces. This includes the avoidance of pesticides.				
Evaluation and updating The implementation of the plan is reviewed using a monitoring system. Based on the evaluation of the monitoring results, the plan is regularly updated and adjusted if necessary.				

Summarised assessment

If different plans have been evaluated, these assessments should be summarised in the table below. If an aspect has not been adequately considered in any plan and there is no other strategy in the municipality that addresses it, a recommendation for action should be noted.

Evaluation categories: ☐ 0 Not applicable ☒ 1 Partially applicable ☐ 2 Fully applicable

	Plan 1	Plan 2	Plan 3	Plan 4	Need for action (if aspect is not sufficiently covered)
Process design					
Political commitment					
Intergrated working structure					
Co-creation process					
Adoption and publication					
Communication strategy					
Plan contents					
Topic 1: Quality of life					
Topic 2: Biodiversity					
Topic 3: Climate mitigation and adaptation					
Integrated consideration of the three topic areas					
Ambitious vision and goals					
Current state of urban nature and biodiversity					
Action plan/implementation strategy					
Implementation					
Implementation of measures					
Ecological green space management					
Evaluation and updating					

The EU Biodiversity Strategy 2030 calls on cities to promote urban nature in the form of 'Urban Nature Plans' for the protection of biodiversity, for climate change mitigation and adaptation and for the quality of life in cities, and to set ambitious targets for this. This brochure transfers the approach of Urban Nature Plans to the German context and offers concrete tips for implementation. This includes a checklist to determine the extent to which a municipality's existing plans already correspond to Urban Nature Plans.

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