URBAN NATURE NAVIGATOR: SILVER LEVEL IMPLEMENTATION GUIDE

Sara Maia, Dora Almassy, Laszlo Pinter (CEU), Anja Werner, Kathrin Hörschelmann (IfL), Ed Dammers (PBL) and Harriet Bulkeley (DU)

Version of 07-11-2019

Executive Summary

The *Urban Nature Navigator* is an integrated assessment tool that aims to enable cities and communities to work with nature for sustainability. It is designed to help you **explore** or **examine** the contribution that *nature-based solutions* can make towards meeting urban sustainability challenges.

Developed by the NATURVATION team, the *Urban Nature Navigator* enables users to:

(1) ***Explore*** the potential of urban nature to meet different policy priorities and urban sustainability goals.

(2) ***Examine*** how urban nature can contribute to addressing multiple sustainability goals in specific places and communities.

Providing a means for comparing and benchmarking how nature-based solutions contribute to urban sustainability goals, you can use the *Urban Nature Navigator* at three levels - **bronze**, **silver** and **gold**.

This guide focuses on the ***silver level*** which allows for the assessment of nature-based solutions and the identification of priority goals, through the application of an *evaluation matrix* and through deliberation and participation.

What is the Urban Nature Navigator

The *Urban Nature Navigator* uses an ***indicator matrix*** to evaluate the contribution that six common types of nature-based solutions can make towards addressing twelve urban sustainability goals.

The tool can be used to create an estimate together with diverse stakeholders of how your urban development ideas contribute to addressing urban sustainability challenges, allowing you to identify which kinds of nature-based solutions can help you meet key priorities. You may use it with a group of colleagues and a wider group of stakeholders to create a vision, draft an urban development plan or do an assessment of the impacts of your nature-based solutions.

For more detailed, context-specific, and tailor-made assessments, the gold level of the *Urban Nature Navigator* should be used.

Completing the Silver Level of the Urban Nature Navigator

In order to complete the silver level of the *Urban Nature Navigator (UNN)* process, you will need to follow four steps:

1. Decide how you want to use the *UNN* – to explore or examine your work with urban nature;
2. Depending on the objective of your assessment, consult the instructions on how to use the UNN to either explore or examine. Here, use the online platform (insert link) and involve your stakeholders;
3. Use the *Urban Nature Navigator* online platform and its outputs (e.g. UNN matrix or radar diagrams) to communicate the results to your community.

How do I use the Urban Nature Navigator?

The *Urban Nature Navigator* is intended to support you in finding out about the contribution that working with urban nature can bring to your city. It is designed so that you can tailor it to your needs.

You might want to start with a set of priorities and see which kinds of nature-based solutions might be able to help you reach your goals (explore mode). Alternatively, if you already have a specific plan or project idea for working with nature, then the *Urban Nature Navigator* can help you identify the multiple benefits this could create (examine mode) – and perhaps some of the trade-offs as well.

Specific guidance on how to apply the *Urban Nature Navigator* for each of these objectives can be found in Section 3.

Stakeholder Involvement in the Assessment Process

The assessment at the silver level is planned to be implemented together with participants or stakeholders from diverse communities and interest groups. To involve stakeholders, a selection of participatory and deliberative processes is presented in section 4.

What will using the Urban Nature Navigator produce?

By using the *Urban Nature Navigator*, you will be able to build up a comprehensive picture of how nature-based solutions can contribute to your urban sustainability goals.

You will generate information on how different nature-based solutions perform against key environmental, social and cultural indicators. The *Urban Nature Navigator* will also produce an assessment of the economic benefits of working with nature in your city.

Introduction

More than half of the global population live in cities today. The decisions we take in cities are vital not only for the quality of life and economic development of our communities but for our natural world. Recognising the importance of urban responses for people and the planet, governments, businesses, investors and communities are increasingly turning to work *with nature* to meet sustainability goals.

The *Urban Nature Navigator* aims to support the use of nature-based solutions in cities. Nature-based solutions include green and blue infrastructure, urban green space, community gardens, nature-based adaptation and the restoration of natural systems in cities. The Urban Nature *Navigator* has been developed as part of the Horizon 2020 EU-funded NATURVATION project, which seeks to advance knowledge on nature-based solutions.

Naturvation sees nature-based solutions as deliberate solutions that seek to use the properties of nature to address emerging urban challenges.

Working with nature in the city generates multiple benefits, from health and well-being to climate resilience and economic regeneration. At the same time, using nature-based solutions involves trade-offs between different goals. Nature-based solutions are likely to affect different groups of the society in different ways, and will sometimes be contested. As cities seek to work with nature to address sustainability, it is important that their environmental, economic, social and cultural impacts are considered.

Green roof, Porto

Botanical garden, Münster

Lake, Budapest

Green Façade, Milan

Greened tram tracks, Budapest

Urban park, Bucharest

The *Urban Nature Navigator* developed by the NATURVATION team enables you to:

Explore

Assessing the contribution of **common types of nature-based solutions** to address **specific urban sustainability challenges.**

Examine

Assessing the contribution of **specific nature-based solutions** to address **different urban sustainability challenges** with the help of multiple indicators.

The UNI is useful *for deciding whether to implement a specific nature-based solution project by examining the impacts of that project for different sustainability challenges.*

Providing a means for comparing and benchmarking how nature-based solutions contribute to urban sustainability goals, you can use the *Urban Nature Navigator* at three levels:

Bronze

The Bronze level provides a snapshot of how different nature-based solutions can contribute to addressing urban sustainability challenges. The benefits of different nature-based solutions can be explored generally or examined in more detail with the help of multiple indicators.

Silver

Enables the identification of the benefits and the trade-offs of different nature-based solutions together with a set of decision-processes. This level is suitable for participatory processes in which diverse groups of stakeholders can prioritize urban sustainability challenges and chose one or more types of nature-based solutions.

Gold

Delivers a set of tools that can be used in local contexts to generate values of nature-based solutions in high resolution or across cities. The outcomes make it possible for practitioners to generate data about the specific form of urban nature initiative under consideration.

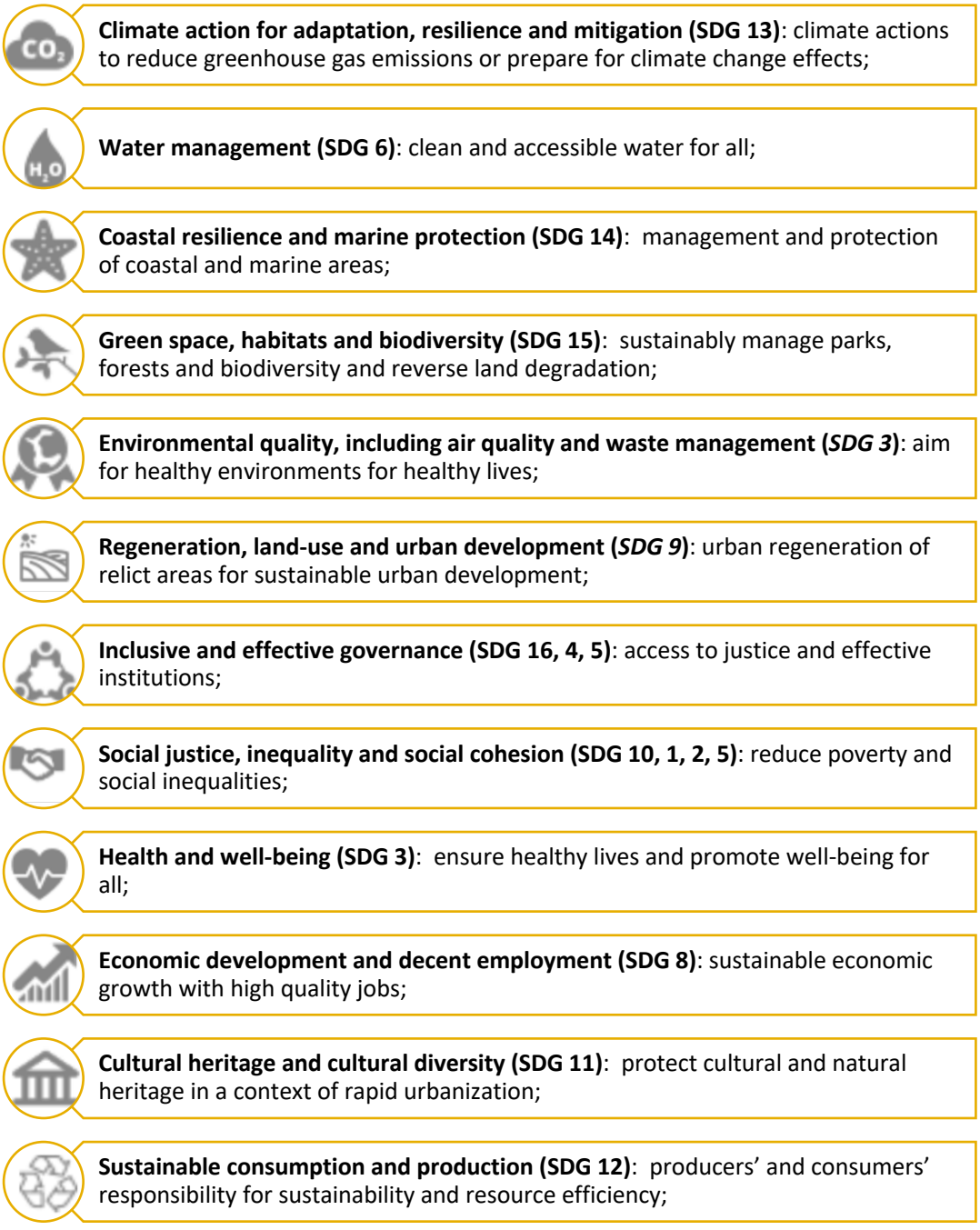
This document provides you with guidance on how to apply the Urban Nature *Navigator* at **silver level**. It is suitable for use with diverse groups of stakeholders. This guide is structured around five main sections:

1. Overview of the Urban Nature Navigator
2. Completing the Silver Level of the the Urban Nature Navigator
3. How to use the the Urban Nature Navigator
4. Stakeholder Involvement in the use of the Urban Nature Navigator
5. The outputs of the Urban Nature Navigator

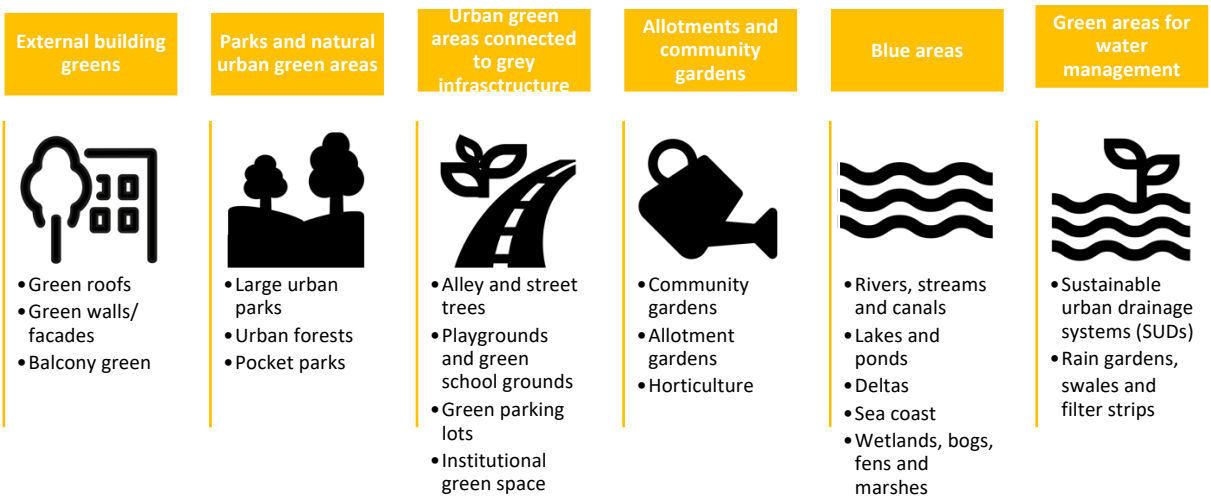
1. Overview of the Urban Nature Navigator

The silver level of the Urban Nature Navigator allows for the assessment of nature-based solutions and identification of priority goals through the application of an evaluation matrix and through processes of deliberation and participation. At the silver level, a set of decision-making processes is suggested as approaches that can guide users to apply the Urban Nature Navigator

The Urban Nature Navigator uses indicators to evaluate the contribution that six common types of nature-based solutions can make towards twelve sustainability challenges for cities. Our twelve challenges have been selected from the *Sustainable Development Goals* developed by the United Nations, focusing on those that are particularly relevant for achieving urban sustainability by working with nature. The Naturvation sustainability challenges are:

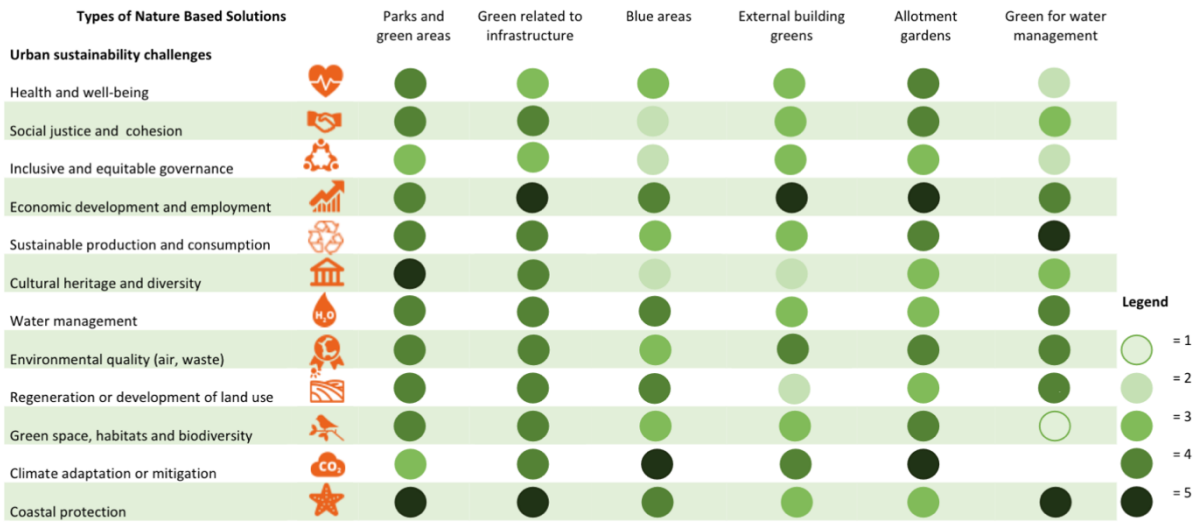


The *Urban Nature Navigator* is designed to be used for six standardised nature-based solutions. These are:



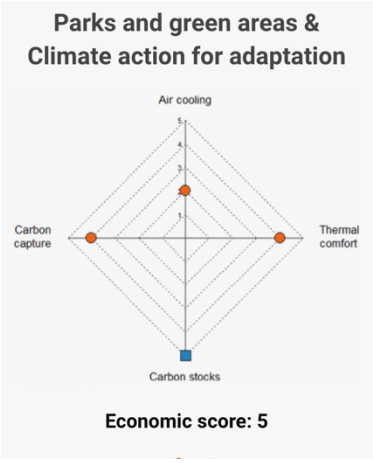
The web tool of the UNN provides impact scores (biophysical, social, cultural and economic) of nature-based solutions to address urban sustainability challenges, both in the explore and in the examine mode:

- In the explore mode, the results are given in the form of a matrix with scores ranging from 1 (very low contribution) to 5 (very high contribution), and these scores represent the averages of normalised indicator scores, which evaluate the benefits of nature-based solutions for urban sustainability challenges.



The dots in the matrix represent average scores, i.e. averages of normalised indicator scores. For the blank space no score is available.

- In the examine mode, the scores of the selected types of NBS on the selected indicators are presented by a set of bar diagrams, and these scores represent the relative contribution of a specific NBS towards a specific challenge, where each indicator is scored again from 1 to 5.



Before using the silver level of the *Urban Nature Navigator,* you may wish to apply the bronze level first to obtain a rough estimation of how your urban development ideas will address urban challenges. The silver level can then be used jointly with a group of stakeholders, to create a vision, draft an urban development plan or do a quick scan of the impacts of your nature-based solutions. For more detailed, context-specific, location specific, and tailor-made assessments, the gold level of the *Urban Nature Navigator* should be used.

Whether you are working in a municipal government, urban development, or the investment sector, as part of a community group or in a non-governmental organisation, the *Urban Nature Navigator* can support your work.

1. **Municipal governments and planers**
2. **Community groups**
3. **Investors**
4. **Private urban development**
5. **NGOs or not-for-profit consultancies**

Depending on whether you want to explore or examine how nature-based solutions contribute towards sustainability goals, different options for using the *Urban Nature Navigator* are available at the silver level.

You can use the *Urban Nature Navigator* to…

	Bronze	Silver
Explore	… how different nature-based solutions can contribute to your goals or policy priorities.	… how the benefits and trade-offs of using different nature-based solutions can contribute and be optimised to the specific goals or policy priorities of your stakeholders and/or community.
Examine	… how a specific nature-based solution project or plan will contribute to different sustainability goals.	… how generic benefits and trade-offs created by a specific nature-based solution project or plan will contribute to different sustainability goals, and how these solutions can be compared and prioritised by your stakeholders and/or community.

2. Completing the Silver Level of the Urban Nature Navigator

In order to complete the Silver Level of the *Urban Nature Navigator* process, you will need to:

1. Decide how you want to use the *Urban Nature Navigator.*

- *Do you want to explore how urban nature solutions can contribute to your goals or examine a specific project or plan?*
- Please follow **section 1** for the description of the explore and examine modes.

2. Depending on the objective of your assessment, *consult the instructions on how to use the UNN depending if you would like to explore or examine.*

- *Do you want to know how to use the UNN online platform?*
  - Please follow **section 3.**
- Do you want to know how you can involve different stakeholders in the assessment process?
  - Please follow **section 4.**

3. Use the *Urban Nature Navigator* online platform to inform your decision and ensure that you communicate the results effectively to your stakeholders and communities.

- *What are the outputs of the UNN at the silver level?*
  - Please follow **section 5**.

3. How to use the Urban Nature Navigator

The *Urban Nature Navigator* is designed to assess the multiple impacts of nature-based solutions and inform decisions on how these initiatives can solve various urban sustainability challenges. If you either want to ***explore*** the potential of nature-based solutions to address certain goals and priorities, or ***examine*** how a nature-based solution project contributes to sustainability goals, the *Urban Nature Navigator* offers these different options for various user groups.

To understand how to apply the UNN, please select the approach that you would like to use:

- **Explore**
- **Examine**

3.1 Explore

Would you like to explore how **nature-based solutions can contribute to your sustainability goals or policy priorities**? Then follow this step-by-step guidance:

1. Organise a meeting with your colleagues and stakeholders and collect ideas for developing potential nature-based solutions for your selected urban area.
2. Select the purpose of your assessment process:
   - Do you want to define and explore a specific challenge related to urban development?
   - Do you want to develop scenarios for dealing with a specific challenge your city or district is facing?
   - Do you want to build an NBS vision for your city/district or for your community/ neighbourhood?
   - Do you want to make a decision about a specific NBS?
3. Based on the selected objective choose a stakeholder involvement process (see section 4.1) to apply during the process;
4. With your stakeholder group, start by identifying urban sustainability challenges that your community/ neighbourhood or city is currently facing or policy priorities that you aim to reach or solve in your urban area.
5. Using the UNN in the explore mode, use the UNN matrix to understand which types of nature-based solutions have higher contributions (darker green bubbles) to the identified sustainability challenges, and which represent the highest positive outcome for reaching that goal.
6. The UNN matrix allows you to easily compare how different nature-based solutions score against each other in terms of their impacts and contribution towards specific sustainability goals.
7. Present and discuss the results with your stakeholders, municipality or city dwellers.
8. Agree on and select the most feasible project for nature-based solutions that represents the best potential impacts for your goals and policy priorities.
9. Present the results to your stakeholders and decide on next steps.

- In Newcastle, the UNN was applied to two local projects as part of the Tyne estuary: Forth Yard and Walker Tech Park. Both projects aim at the redevelopment of a local area and improvement of the quality of the local living environment.
- Here, the UNN was used to explore the potential of NBS to meet different policy priorities and urban sustainability goals.
- Identified sustainability challenges relevant for this analysis were: Health and well-being, water management and regeneration.

3.2 Examine

Would you like to examine how ***specific nature-based solution plans can contribute to a range of sustainability goals?*** Then follow this step-by-step guidance:

1. Organise a meeting with your colleagues and stakeholders and collect ideas for how specific urban nature projects or nature-based solution plans can contribute to a range of urban sustainability goals.
2. Select the purpose of your assessment process:
   - Do you want to define and explore a specific challenge related to urban development?
   - Do you want to develop scenarios for dealing with a specific challenge your city or district is facing?
   - Do you want to build an NBS vision for your city/district or for your community/ neighbourhood?
   - Do you want to make a decision about a specific NBS?
3. Based on the selected objective choose a stakeholder involvement process (see section 4.1) to apply during the process;
4. Using the UNN in the examine mode, select the type of nature-based solution that you aim to examine from the six types of nature-based solutions included in the UNI. If you have any questions about the terminology used for the types of nature-based solutions click on the question mark bubble (orange), right after the title "1.Select one or more nature-based solution types".
5. As a second step, select multiple urban sustainability challenges that you might be interested in examining (therefore linking them to the previously selected nature-based solution). Again, if some of the terminology is not clear, click on the question mark bubble (orange), right after the title "2.Select one or more urban sustainability challenges".
6. Once the types of nature-based solution and challenges are selected (check the corresponding boxes), click on the button "Apply" to proceed.
7. Based on your selected nature-based solution and sustainability challenge(s), use the UNN bar diagrams to understand which urban sustainability goals represent a higher contribution to the nature-based solution that you are examining. The diagram allows you to obtain insight into the positive impacts of your nature-based solution in relation to a diverse range of sustainability goals. If you are interested in knowing more about the indicators included in the UNI, please click "All indicators explained".
8. Present and discuss the results with your stakeholders, municipality or city dwellers.

9. Agree on and select the most feasible scenario with the best potential benefits.
10. Present the results to your stakeholders and decide on next steps.

- In Leipzig, the UNN was applied to a local NBS, the Clara-Zetkin- and Johanna-Park.
- Here, the UNN was used to examine how the park contributes to urban sustainability goals.
- The stakeholders identified the sustainability challenges relevant for this analysis: Health and well-being; Green space, habitats and biodiversity and Cultural heritage and cultural diversity.
- From the results it was possible to draw the following conclusions: the creation of a park has an overall high contribution to health and well-being as well as engagement in the community and historical, biodiversity and cultural meaning (average score of 5).

4. Stakeholder Involvement in the use of the Urban Nature Navigator

The assessment at the silver level is planned to be implemented together with various participants or stakeholders. People often hold different views over how important the different impacts of nature are for them. It has been proven to be helpful to include these multiple perspectives in the process.

At what stages can you involve stakeholders?

Preparation

- Identify and invite relevant stakeholders for a UNN exploring meeting;
- Identify a set of urban sustainability goals or policy priorities relevant for your stakeholders and/or community *(explore mode),* or identify a specific urban nature initiative or development plan or project to be implemented in your community/urban area *(examine mode)*;
- Scope the sustainability goals or policy priority to be addressed *(explore mode),* or scope the type of urban nature to be addressed *(examine mode).*

Assessment

- Together with your stakeholders, compare different types of urban nature initiatives and how these contribute to your prioritised sustainability goals or policy priorities *(explore mode),* or identify how your urban nature initiative or development plan contributes to multiple urban sustainability goals *(examine mode).*
- Through the use of deliberative and participatory processes (please see section 4.1) with your stakeholder group:
  - Explore mode: weight the benefits and trade-offs against one another and consider whether or not such urban nature initiatives are politically and economically feasible.
  - Examine mode: examine how the possible benefits and trade-offs created by your urban nature initiative or development plan can be compared and prioritised by your stakeholders or community.

Reporting, communication and use of results

- Discuss the results with the stakeholders to see whether they are correctly interpreted and whether the local context is sufficiently considered.
- Assess the satisfaction of the stakeholders and address their needs.

Depending on your own expertise and organisation you can select co-workers or a team to go through the steps together. You can also involve more stakeholders and find out about their interests, knowledge, preferences and concerns. Different methods can involve diverse stakeholder groups, so an important question is: How to identify and find key stakeholders?

In order to be inclusive, ask yourself: ***Which stakeholder groups may impact or be impacted (by) the* nature-based solution *positively and negatively, directly or indirectly?***

- Find stakeholders concerned with a specific nature-based solution or area (e.g. a specific park).
- Ask the stakeholders who they think should be included.
- Consider whether advocates for certain marginalised groups should be included.

Potential stakeholder groups to keep in mind:

- Policy-makers
- Project developers
- Biodiversity protection agencies
- Businesses
- Civil servants
- Conservation agencies/ organisations
- Investors
- Landscape architects and urban planners
- Municipal or provincial governmental departments
- Different groups of residents and users
- Neighbourhood groups
- NGOs
- Park managers and rangers
- Researchers and ecologists
- Utility companies

4.1 Stakeholder Involvement

The *Urban Nature Navigator* can be applied in different processes of urban development, such as building visions, scenario development, defining challenges and decision-making, related to the strategic planning of nature-based solutions.

The different methods for involving stakeholders included here have quite specific merits and limitations. Below, we give a more detailed overview of the ways in which different deliberative and participatory processes can be applied, depending on the objective of your assessment. Choose the processes that suits your assessment purpose best.

Do you want to define and explore a specific challenge related to urban development?	Do you want to develop scenarios for dealing with a specific challenge your city or district is facing?	Do you want to build an NBS vision for your city/district or for your community/ neighbourhood?	Do you want to make a decision about a specific NBS?

Objective 1: Do you want to define and explore a specific challenge related to urban development?

Method 1. Deliberative valuation

- **Which stakeholders could I involve?** Municipal governments and planners, community groups, private urban development companies, and NGOs.

- **What is this method?** Deliberative valuation provides a framework that includes various techniques with the capacity to bridge different sciences, citizens and academia. It is a good tool to discuss local issues and needs in order to address local urban sustainability goals. It can also be used as a framework for other methods (e.g. participatory mapping). When applying deliberative valuation, the UNAT may help to identify the urban sustainability challenges to which NBS may contribute, to assess which types of nature-based solutions (NBS) contribute most to dealing with these challenges and to discuss at which locations these NBS may be most effective or feasible.

- **What are the key steps?** Involvement of local stakeholders, suggested steps:
    1. Problem framing: In this step, you aim to understand issues related to ecosystem management;
    2. Knowledge co-generation: Here, you gather perceptions related to ecosystem services and decide which NBS(s) you want to study. Using the UNN in the explore mode, select the challenges the group wants to study and identify the NBS that contribute most to solving these challenges;
    3. Decision support: In this final step, you aim to democratize your decision-making process.

- **In what modes of the Urban Nature Assessment Tool could I apply this method?** Explore mode.

- **Where can I find more information?** For more information, please click here.

Method 2. Focus-group discussion

- **Which stakeholders could I involve?** Municipal governments and planners, community groups and NGOs.

- **What is this method?** A focus group discussion brings together participants from similar backgrounds to discuss subjects of interest in a semi-structured discussion. It is led by a moderator who presents the focus topics and guides the group through questions that elicit feedback, diverse perceptions and values in a natural and lively manner. The purpose of this method is to bring different viewpoints to the fore and to consider alternative perspectives. It is a good tool to understand expectations, perceptions, feelings and needs of various stakeholders, e.g. of a local community. The method can be applied to gain information on particular challenges faced by that community that could be addressed by nature-based solutions. The UNN may help to identify the urban sustainability challenges to which nature-based solutions (NBS) may contribute, to assess which types of NBS contribute most to dealing with these challenges and to discuss at which locations these NBS may be most effective or feasible.

- **What are the key steps?**
    1. Define the subject and purpose of the discussion and develop key questions;
    2. Select a trained moderator who will lead the discussion, and possibly a second facilitator who will take notes for the group;
    3. Develop an interview guide which gives the moderator a basis on which they lead the discussion;

4. Select the participants (2-8 participants on average);
5. Conduct the focus group. Normally, they take 60-90 minutes. Using the UNN in the explore mode, select the challenges the group wants to study and identify the NBS that contribute most to solving these challenges;
6. You can use the workshop atmosphere of the small focus group to use the UNN for a more specific perspective in the examine mode and select the identified NBS and sustainability challenges in the previous stage. Discuss the results;
7. Analyse the collected data and write a report for your further thinking about the issue at hand;
8. While most focus group discussions are facilitated in person, in some cases this method can also be done online, in order to overcome distance barriers.

- **In what modes of the Urban Nature Assessment Tool could I apply this method?** Explore and examine modes.

- **Where can I find more information?** For more information, please click here.

Method 3. Participatory mapping

- **Which stakeholders could I involve?** Municipal governments and planners, community groups, private urban development companies, and NGOs.

- **What is this method?** Participatory mapping includes a set of approaches such as Participatory Geographical Information Systems (PGIS) and Public Participation GIS (PPGIS) that aim at creating maps. This may be done, for instance, for assessing the spatial distribution of ecosystem services (ES) based on context-specific knowledge and perceptions of stakeholders. It is a good tool to get a first overview of where the largest problems regarding land-use planning and resource management are. It can be incorporated in a greater framework method like "deliberative valuation". The UNN can be used to identify urban sustainability challenges to which nature-based solutions (NBS) may contribute, to assess which types of NBS contribute most to dealing with these challenges and to discuss at which locations these NBS may be most effective or feasible. It allows both local stakeholders and external planners to explore a current situation in a simple, but comprehensive way.

- **What are the key steps?** You can choose between several measures. ES-prompting may be combined with one of the mapping methods:
  - Hands-on mapping: Your stakeholders sketch maps from their own perceptions without relying on exact spatial measurements and technical equipment. They sketch key features on the map, e.g. land-use details or resource availability, in order to visualize any issues in the studied area and to understand different views from different stakeholders. Here, you can use the UNN in the explore mode: Select the NBS(s) the group wants to study and identify the urban sustainability challenges for which a specific NBS has a higher contribution;
  - Map prompting: Your stakeholders use a map of the municipality and locate those ecosystem services that are important to them on it. Use the UNN in the explore mode.
  - ES-based prompting: This can be done in addition to the mapping process. Ecosystem services are listed and evenly separated in three themes (production, regulation and cultural services). For each listed ES, you ask your participants to indicate the extent to which they find a service important and to justify their choices. Here, you can use the UNN for a more specific perspective in the examine mode and select the studied NBS and the sustainability challenges

identified in the mapping stage. The examine mode may help to identify why a specific type of NBS contributes more to a challenge than other types of NBS.

- **In what modes of the Urban Nature Assessment Tool could I apply this method?** Explore and examine modes.

- **Where can I find more information?** For more information, please click here.

Objective 2: Do you want to develop scenarios for dealing with a specific challenge your city or district is facing?

Method 1. Developing scenarios

- **Which stakeholders could I involve?** Municipal governments and planners, investors, private urban development companies, and NGOs

- **What is this method?** Scenarios are developed in order to understand how the future may develop and to discuss long term planning as well as possible project developments. Developing scenarios can be effective for reflecting on alternative future prospects, e.g. changes in ecosystem services provision as a result of different nature-based initiatives.
  Scenario approaches can be either qualitative or quantitative, exploratory or anticipatory. They can be baseline or policy scenarios and different tools can be used simultaneously to develop alternative ideas of possible or desirable futures. Thus, scenario approaches can differ in levels, from highly exploratory to decision-oriented or from intuitive to analytical.
  Scenario development approaches could be useful to discuss potential scenarios for the implementation of nature-based solutions in response to a need to address a particular challenge or to identify needs for planning future actions to minimize potential conflicts, e.g. communities affected by negative effects.
  The UNN tool could be used to develop policy scenarios, for instance by helping to make the different ambitions of stakeholders regarding urban nature explicit and by indicating which types of nature-based solutions (NBS) may contribute most to these ambitions (explore mode). As well as to help making explicit and to discuss to what extent the selected NBS contribute to the chosen ambitions (examine mode).

- **What are the key steps?** Scenario approaches usually involve a common group of steps for scenario development. To apply this methods, please follow the suggestions presented below:
  1. Start by establishing a working group;
  2. Identify the sustainability challenge(s) that your city, district or community is facing and the most appropriate for the objectives of your scenario exercise;
  3. Choose with your group how you would like to draft narratives, to visualize or to quantify scenarios related to nature-based solutions implementation;
  4. Using the UNI, select the explore mode to understand what types of NBS can have a bigger impact on the selected challenge. These are represented by darker coloured bubbles in the UNI matrix;
  5. Once you know which NBS types represent a higher contribution towards your selected challenge, using the UNI apply the examine mode. In the examine mode, tick the boxes for the selected challenge and identified NBS and press “apply”, you will be presented with diagrams with the specific indicator values for each NBS type;
  6. Identify and develop alternative scenarios by choosing different types of NBS that might help to address your selected sustainability challenge. The bar diagrams showcased at the end of

the examine mode may help you understand which benefits might be prioritised, by comparing the individual values of different NBS types;
7. Take the opportunity to identify any uncertainties as well as potential drivers of change;
8. Analyse the scenario outcomes with your work group.

- **In what modes of the Urban Nature Assessment Tool could I apply this method?** Explore and examine modes.

- **Where can I find more information?** For more information, please click here.

Objective 3: Do you want to build an NBS vision for your city/district or for your community/ neighbourhood?

Method 1. Building visions

- **Which stakeholders could I involve?** Municipal governments and planners, community groups, private urban development companies, and NGOs.

- **What is this method?** It is a co-design process that aims at ensuring that the final plan or vision reflects the needs for the plan. The participants interact with new concepts and ideas through prototypes and sketches. It is a good tool to identify relevant sustainability challenges for a particular urban area and to develop a strategy or plan for the implementation of nature-based solutions. The UNN can be used to identify urban sustainability challenges to which nature-based solutions (NBS) may contribute, to assess which types of NBS contribute most to dealing with these challenges and to discuss at which locations these NBS may be most effective or feasible.

- **What are the key steps?**
  1. Identify the main urban sustainability challenges that your city, district or neighbourhood are currently facing;
  2. Identify the objectives of your assessment (e.g. build a vision for nature-based solution (NBS) implementation in your neighbourhood in order to solve the challenge of social cohesion);
  3. Identify potential synergies and conflicts;
  9. Develop a vision for NBS implementation: Using the UNN in the explore mode, select the sustainability challenges the group identified in the first step and explore, which NBS types are more likely to help addressing them. As a prompt, envision how in the next x years (multiple) NBS can be implemented in the studied area;
  4. Refine the vision if needed: You can use the UNN for a more specific perspective in the examine mode and select the studied NBS and the sustainability challenges identified in the previous stage;
  5. Consider how governance can support NBS implementation;
  6. Present the results to your community and evaluate.

- **In what modes of the Urban Nature Assessment Tool could I apply this method?** Explore and examine modes.

- **Where can I find more information?** For more information, please click here.

Objective 4: Do you want to make a decision about a specific NBS?

Method 1. Cost-benefit analysis

- **Which stakeholders could I involve?** Investors, municipal governments and planners, and private urban development companies

- **What is this method?** Cost-benefit analysis (CBA) provides an overview of the effects, risks and uncertainties of a measure and the resulting costs and benefits to society as a whole. CBA provides insights in the welfare effects of the measure and shows its pros and cons in order to answer the question whether the economic and social costs outweigh the economic and social benefits. This includes those aspects of wellbeing for which there are no market prices, such as nature, landscape or cultural heritage.
  In urban development processes, and more concretely in processes related to formulate a decision of NBS implementation, CBA can be used to evaluate concrete plans (baseline)and compare them with other alternatives or with a business-as-usual alternative (alternative scenario). It is used for judging whether a decision to proceed with a policy measure or not can be justified on the basis of the balance of benefits and costs. CBA is useful earlier in the decision process, when plans are being created.
  The UNN tool could be used in a cost-benefit analysis process to help to identifying alternative measures or projects that can be subjected to a CBA in terms of different types of NBS and different sustainability challenges they may address (explore mode). As well as it may be helpful to identify the various effects that different types of nature-based solutions (NBS) may generate, indicate the economic value of NBS, i.e. their impact on house prices (examine mode).

- **What are the key steps?**
  1. Problem analysis: With your stakeholder group, understand what is the problem or opportunity related to urban nature implementation, and how is it expected to develop. What is the sustainability problem that you aim to address?
  2. Establish a baseline: the most likely scenario in absence of a policy or nature-based solution (NBS) implementation.
  3. Define alternative scenario: What are the most probable measures to be taken, which packages of measures can be distinguished, which alternatives or variants can be defined? For this, use the UNAT on the explore mode to identify other types of NBS that could be implemented.
  4. Determine effects and benefits: Identify the effects, quantify effects, and value (monetise). With the UNN, select the specific NBS type that you are making decisions on, and understand in which urban sustainability challenges that specific NBS can have a greater contribution. Repeat this step of the NBS identified for the alternative scenario.
  5. Determine costs: What are the resources consumed to implement the solution, and what are the fixed and variable costs both in the baseline and the policy alternatives.
  6. Analyse the alternatives and risks: Identify main uncertainties and risks and analyse the consequences for the outcomes.
  7. Provide an overview of the costs and benefits: Calculate all costs and benefits discounted to the same base year and calculate the balance, present all effects including non-quantified and/or non-monetised effects.
  8. Present the results: Present them in a relevant, understandable and clear presentation, explain transparency and reproducibility and interpret what the decision-maker can learn from the CBA.

- **In what modes of the Urban Nature Assessment Tool could I apply this method?** Explore and examine modes.
- **Where can I find more information?** For more information, please click here.

Method 2. Multi-criteria decision analysis

- **Which stakeholders could I involve?** Municipal governments and planners, investors, and private urban development companies.

- **What is this method?** Multi-criteria decision analysis (MCDA) provides a systematic methodology to support complex decisions (e.g. deciding on what type of urban nature to implement in a specific area) and evaluate alternative actions (e.g. what different types of NBS bring more favourable benefits). This happens by bringing together environmental information with cost-benefit assessments and stakeholder preferences. MCDA is used to discover and quantify decision maker and stakeholder considerations about various non-monetary factors in order to compare alternative courses of action.
  MCDA can be applied for the preparation of plans, for ex-ante or ex-post revisions of plans and for prioritizing development steps in existing plans in accordance with sustainability criteria.
  The UNN tool could be used in a multi-criteria decision process to help identifying alternative measures or compare between planned NBS projects and NBS alternatives that can be subjected to a MCA, in terms of different types of NBS and different sustainability challenges they may address (explore mode). And it may also be helpful to identify the various effects that different types of nature-based solutions (NBS) may generate.

- **What are the key steps?** This method can be applied to the UNI through five main steps:
  1. Start by defining the context of your assessment: What is exactly the nature-based solution (NBS) that you want to study (planned NBS)?
  2. Identify the options available: Are there any other similar NBS that might be applicable to your context (NBS alternatives)?
  3. Decide the objectives and select the appropriate criteria or benefits aimed to produce by implementing NBS: What can be the benefits of the initial selected NBS type and the identified alternatives?
  4. Using the UNN in the explore mode, select the NBS(s) that you are studying and identify the urban sustainability challenges for which that specific NBS has a higher contribution. Repeat this step for the identified NBS alternatives;
  5. Measure each criteria in order to discern their relative contribution: Does the initial planned NBS have more benefits in comparison to the alternatives? For a more specific analysis, use the examine mode and select the studied NBS and the sustainability challenges identified in the previous stage. Analyse the benefits of the studied NBS by taking into account the individual indicators presented in the results;
  6. Define the results of your analysis.

- **In what modes of the Urban Nature Assessment Tool could I apply this method?** Explore and examine modes.
- **Where can I find more information?** For more information, please click here.

5. The outputs of the Urban Nature Navigator

The *Urban Nature Navigator* is designed to be used for six standardised types of nature-based solutions (e.g. urban parks, green roofs, rain gardens). At the bronze and silver levels, it is represented as a *standard evaluation matrix* that includes scores of different indicators for 12 sustainability challenges in relation to six types of nature-based solutions. At the silver level the evaluation matrix is complemented by a set of deliberative and participatory processes that should be used jointly with stakeholders.

The *Urban Nature Navigator* is available via an online interface which produces graphical representations of the results based on user selection (e.g. selection of types of nature-based solutions). It is also available as an offline document (PDF format).

Through the *Urban Nature Navigator* interface, users will have the possibility to generate different types of outputs, based on users' preferences.

The *Urban Nature Navigator:*

- Generates diagrams, which show you the overall contribution of a type of nature-based solution towards a range of sustainability challenges (multiple benefits of nature-based solutions). Explanations of the scores, units and minimum and maximum scores will also be provided.
- Shows the economic value of the overall benefits provided by types of nature-based solutions.
- Gives you access to a matrix which shows the scores of different indicators for different urban sustainability goals and for different types of nature-based solutions.
- Provides suggestions of participatory and deliberative processes that can be applied jointly with stakeholders during the assessment process.