



NATURVATION

cities – nature – innovation



ACHIEVING SUSTAINABLE DEVELOPMENT IN THE NETHERLANDS THROUGH NATURE-BASED SOLUTIONS



Picture reference: Oosterspoorbaan (Utrecht) by OKRA Landschapsarchitecten

KEY POINTS

- Cities have tremendous potential to create a step-change in how nature-based solutions (NBS) are understood and used for sustainable urbanisation.
- Utrecht frames urban developments in terms of reaching healthy urbanisation, offering innovative examples of nature-based solutions and new ways of co-governing.
- There remains a need to:
 - Strengthen nature-based solutions' integration in established and emerging policy discourses, such as climate adaptation and social cohesion.
 - Introduce a national urban greening strategy and knowledge repository.
 - Improve coordination across departments and organisations by taking a challenge-based rather than solution-specific approach to policy. development

THE NATURVATION PROJECT

NATURE-based URban inNOVATION is a 4-year project involving 14 institutions across Europe in the fields of urban development, geography, innovation studies and economics. We are creating a step-change in how we understand and use nature-based solutions for sustainable urbanisation.

This project has been funded by the European Union's Horizon 2020 research and innovation programme under grant agreement No. 730243

Fostering urban nature: The role of local, regional and national governments



Local and regional governments are increasingly recognised for their central role in protecting and restoring nature for sustainable urbanisation. Nature-based solutions (NBS) are at the forefront of such discussions. Nature-based solutions boast a multifunctional character which can simultaneously contribute to social, environmental and economic goals. These solutions can, for example, improve public health and wellbeing, reduce pollution, conserve biodiversity, decrease flood risk, increase resilience to technological risks and natural hazards, and regenerate urban spaces. Yet these benefits have not yet been realised to their full potential.

Wider implementation of nature-based solutions requires, amongst other factors, increasing the level of awareness about their benefits as compares to traditional grey infrastructure solutions, leveraging resources and finances for implementation, capacity building and pilot projects, and developing standards for urban nature (e.g. quality, quantity and access). National governments have an important role to play in creating these conditions and in developing a regulatory framework which supports local and subnational governments in mainstreaming nature-based solutions across planning and policy.

What are nature-based solutions?

Nature-based solutions are spatial interventions that use the natural properties of ecosystems to deliver multiple benefits. As such, they have the potential to limit impacts of climate change, enhance biodiversity and enhance the environmental qualities of the living environment while contributing to economic activities and social well-being

This brief outlines the activities promoted over the last four years within the Naturvation project in the municipality of Utrecht, which aimed to stimulate engagement with and support for nature-based solutions. It elaborates how involving national policy makers the pursuit of nature-based solutions to deliver multiple benefits in cities across the Netherlands can help urban decision-makers to overcome barriers to their implementation.

Where are we coming from? The revival of nature in Dutch national policy and the role of cities

Since the elaboration of the national *Natuurbeleidsplan* in 1990¹, urban green has been an important topic in the national policy agenda and an explicit area of policy of the Ministry of the Environment. The subsequent ‘Green-in-and-around cities’ (GIOS) regulation required municipalities to provide every dwelling with enough green in a given proximity. Soft standards were established for the green areas that should have been reachable by walking and cycling from residential blocks; furthermore, national funds were established for helping municipalities to secure enough green areas in their land use plans.

Following the decentralisation of the national spatial planning regulation under the Cabinet Balkenende I (2005-2008), these guiding principles and standards were abandoned. Under the cabinet Balkenende IV (2010-2012), the national ‘policy for nature’ was also decentralised and funds for nature protection and restoration were significantly reduced. Whilst national binding regulation was relaxed, the twelve Dutch provinces and the respective municipalities

¹The *Natuurbeleidsplan* – in English, *Nature Policy Plan* – was one of the most important overarching policy frameworks on nature conservation and valorisation in The Netherlands. After decades of policy orientated toward the conservation of natural sites, the NBP recognised the value of nature in agricultural and inhabited areas, establishing the principle of “development of natural and landscape values” (*“het ontwikkeling van natuurlijke en landschappelijke waarden”*). For an overview of this national policy and its further evolution, refer to PBL, Een korte hstorie – het Natuurbeleidsplan 1990, online at: <https://themasites.pbl.nl/natuurverkenning/over-de-natuurverkenning/uitdagingen-voor-natuur/bouwstenen-van-natuurbeleid/een-korte-historie-natuurbeleid-splan-1990> (last visited: June 2020).



have acquired more freedom to set their own policies and standards about nature and urban green. After years of insufficient progress in meeting European biodiversity targets, the role of nature in the national debate and policy agenda has made a comeback. Next to the revival of the National Ecological Infrastructure (*Ecologische Hoofdstructuur, EHS*) and the commitment of cabinet-Rutte to realise it by 2018 (PBL, 2020)², the notion of ‘nature-inclusive development’ became central in the *Implementation Agenda for the National Adaptation Strategy for Climate Change* (Ministry for Infrastructure and Water Management, March 2018). This idea also appears in the recent brief to the Parliament *Green in the Urban Environment* (Ministry of Agriculture, Nature and Fishery, September 2019), the *National Brief on Health Policy* (Ministry for Health, Wellbeing and Sports, June 2020) and in the *National Strategy on Spatial Planning and the Environment* (Ministry of the Interior, May 2020). The latter strategic document consists of an overarching policy framework for orientating the national, regional, and local approaches towards spatial development which is consistent with environmental quality objectives and strives to realise a green and healthy environment as one of its major priorities.

In virtue of the multi-level governance structure that characterises The Netherlands, there is clear recognition of the important role of local governments in implementing this national strategic vision by integrating the outlined policy objectives with the *visie van de toekomst* (‘*vision of the future*’) of localities. In fact, coordination and consistency among national, regional and local governments are necessary to reach sustainability objectives in relation to complex issues like the sustainable energy transition, greening of the housing stock, promotion of the circular economy, adaptation to climate change and reversing the trend of biodiversity loss. In relation to the nature-based solutions that contribute to these objectives, support for and cooperation between intermediate and intertwined levels of government is necessary, as well as the development and dissemination of knowledge.

Cities clearly play an important role in focusing the attention of Dutch national policy makers on nature. Dutch cities have been shown to provide the suitable scale at which public bodies, citizens and entrepreneurs can come together around nature-inclusive urban development. Next to the ‘big 4’ frontrunners – i.e. Amsterdam, Rotterdam, The Hague and Utrecht – several smaller cities have been shown to be even more innovative and successful in this area³. While this multiscale recognition of the value of nature for human well-being, sustainable development and flourishing local economies is the first step toward concrete implementation, securing an effective interplay between the various tiers of government as well as with non-state actors is an endeavour that cannot be ‘designed’ upfront. It is rather a learning process that develops *in time* and *in place* within site-specific spatial, economic and human contexts. The following section provides insights on the interplay of such factors in the city of Utrecht, highlighting elements of inspiration that may ignite comparable nature-inclusive development processes in other European cities.

² TBL, *Bouwstenen van natuurbeleid* (Eng. *Milestones of the nature’s policy*), online, at: <https://themasites.pbl.nl/natuurverkenning/over-de-natuurverkenning/uitdagingen-voor-natuur/bouwstenen-van-natuurbeleid> (last visited: June 2020).

³ For example, the Dutch cities that have joined the international Cittaslow network – a network of cities below 50.000 inhabitants committed to landscape valorisation and nature-inclusive development. These cities provide an interesting portfolio of experiences in the promotion of nature-sensitive planning and infrastructural design and their integration with local economies. Refer to Cittaslow International Network, online, at: https://www.cittaslow.org/network/search?field_country_tid=19&field_network_target_id=All&title=-+Any+- (last visited: June 2020).

Utrecht: Paving the way towards sustainable urbanisation



As part of the Horizon 2020 Naturvation project, the municipality of Utrecht has engaged over the last four years in a process of learning and change regarding nature-based solutions and their contribution to sustainable development goals. In particular, the analysis of and the reflection on how nature-based solutions are understood at the city level and integrated in local plans for sustainable urbanisation have been conducted and promoted. Together with Utrecht University and Utrecht's local authorities, the process – which was led by the planning and policy professionals of the municipal urban sector – aimed to bridge the gap between research, policy and local actors to advance a shared vision and roadmap to address critical sustainability challenges with nature-based solutions.

The main challenges identified in the city of Utrecht relate to climate adaptation and governance, green infrastructure, urban densification, and urban health. Identified themes and goals also include stimulating social inclusiveness in districts with a high concentration of low-income residents with an immigration background. To address these challenges, a series of interactive events, workshops, awareness raising campaigns and meetings were held. The process included drafting environmental and planning visions for different districts, which was undertaken at the local level as part of the new national Environment and Planning Act. The process triggered “Food for Good” as a real-life example, which is documented in the Handbook for Citizen Engagement together with community greenspace initiatives. In addition, the process involved the co-development of tools that support decisions and evaluations relevant to the implementation of nature-based solutions that could be applied in other cities. These include the Urban Nature Atlas (the world's largest database of nature-based solutions with over 1,000 cases worldwide) and the Urban Nature Navigator, which helps to evaluate the impacts of nature-based solutions and identify how they contribute to sustainability goals at the end of selecting the most adapt ones for the specific context and goals under consideration.

In line with the general focus of the project's outreach and impact, Utrecht aims to focus in 2020 on virtual exhibition activities, engage the urban development sector and support nature-based solutions beyond the project while linking to other activities and engagements and increasing policy support by engaging politicians to promote further nature-based solutions development in the Netherlands.

Nature-based solutions in action: Roerplein Pocket Park

Utrecht's population is rapidly growing, with 400,000 inhabitants expected by 2030. The in-fill trend underlying this growth puts pressure on urban green spaces, while also jeopardising local biodiversity. Moreover, the rapid population growth may create new social and spatial challenges, such as undermining social cohesion or lowering the attractiveness of densely populated neighbourhoods. Increased congestion and higher heat stress may also render local environments less healthy.

In view of these future scenarios, the municipality is increasingly supportive of local initiatives that engage residents in promoting nature-based solutions and co-governing transformations in their direct living environment. It has supported, amongst others, the recent initiative of a group of residents in the Rivierenwijk district by providing funds to turn a paved public square into a green square. The idea was developed through a participatory process

orchestrated by a social entrepreneur who promoted the engagement of local residents with the shaping of their daily living environment. The so-called pocket park is maintained by citizens, which creates positive effects for social cohesion and the liveability of the local public space. The garden also diminishes the heat-island effect which has been caused by the prevalence of paved surfaces.

This experience shows how supporting proactive individuals to act as ‘connectors’ between localities and municipal actors is a key-factor for promoting durable spatial transformations. Not only does it reverse traditional top-down approaches to the greening of public spaces by securing the engagement of local residents, but it also engages them during the entire life-cycle of the adopted nature-based solutions. This fosters a sense of belonging and responsibility that the implementation and maintenance of urban nature requires.

Citizen engagement in urban greening - which is increasingly frequent in Dutch municipalities - is relevant to current and future national policies aiming to prioritise nature-based solutions to address the challenges of our time. There is a need to create more opportunities for transformative initiatives and engaging local residents, NGOs and the private sector in taking them up. These aspects are discussed in the following section.

How can the Dutch national government support the up-scaling of NBS across the country?

Building on the lessons learnt from Utrecht’s activities within the NATURVATION project, several opportunities were identified for the national government to better support local and regional governments regarding nature-based solutions. The example provided in the previous section shows that the conception, implementation and maintenance of nature-based solutions can be supported by the local government. The national government could support this process through the following actions:

- a) Make national funds available to support the emergence of innovative ideas at the local level, e.g. through local competitions sponsored by the Ministries and national agencies responsible for promoting sustainable development and healthy living across the country;
- b) Make national funds available and / or develop R&D programmes to support inclusive and transparent engagement platforms that can secure the active involvement of potential participants in the conception and realisation of nature-based solutions, e.g. via user-friendly online portals and social events;
- c) Monitor the processes and outcomes of local experiences as a basis for identifying the success factors and lessons learnt, collect socially-relevant research questions to inform the agendas of national ministries, the National Environmental Assessment Agency (PBL) and the Institute for Health and the Environment (RIVM);
- d) Provide funds and further support for creating local capacities to maintain nature-based solutions in the long-term and foster a sense of responsibility in local populations that foster collaboration and inclusiveness among different cultural and age groups.

⁴ Local competitions for obtaining funds and logistic support for implementing nature-based initiatives at neighbourhood scale are knowing momentum in several Dutch cities. In The Hague, for example, most districts allocate part of their yearly budget to support the winners of ‘competition of ideas’ aimed in improving the district’s living environment by solving questions of green, accessibility and healthy living. Residents are invited to formulate ideas and / or to vote for those most adapt to meet the goals set. During the last such competition in the district of Duinoord, in the north-western part of the city laying between the historical centre and the coast, in 2019, of the 6000 residents circa more than 1400 have participated in the voting, showing an impressive degree of participation. 30.000 euro were then allocated to four projects, each of which aimed at enhancing the green infrastructure in the area by augmenting the accessibility for and parking areas at disposal of cyclers up to creating ‘honey island’ in the neighbourhood by planting flowers and plants in local gardens suitable for the activities and reproduction of bees. More information is available here (in Dutch): Gemeente Den Haag (2019), Duinoord Begroot, online, available at: <https://www.duinoordbegroot.nl/uitleg> (last visited: June 2020).

Moving beyond its established role of coordinating research and development efforts, the national government can make significant contributions to all of the outlined conditions. However, given the complexity of the national-to-local stakeholder landscape and the decentralised governance structure, specific attention is needed for the efficacy and difficulties of multilevel, multidisciplinary and interactive governance. There is scope, for example, for improving communication by municipalities with citizens/communities and business actors around the opportunities for and potential values of urban nature. Alternative organisational forms, awareness raising tools and different apps for citizens' consulting can also support the reinforcement of networks important to urban nature, while informing policy change. Cultural drivers should also be considered, such as the search for consensus-building ('draagvlak') and the periodic manifestations of resistance from the side of local communities to top-down interventions that may impact local landscapes and environments.⁵

A challenge-focused approach is also needed for nature-based solutions as their development and implementation take place in different ways depending on place-specific urban challenges. A devolution of natural environment policy to regional and local levels provides a potential path to adopt a more area-specific challenge-based approach, while a national policy on urban nature is likely to inspire a more coordinated effort. Experimentation using, for example, living labs, city deals, and green deals offers great potential to develop new business models, more integrated working and better alignment between the policy and practice of nature-based solutions' development. However, there is a need for overcoming challenges around limited government commitment and/or policy learning from these experiments.

Finally, there is scope for developing product or building certifications that include (more) nature-based indicators and are used as part of procurement/tendering processes. Given the need for urban densification, developers need to be encouraged to integrate nature with buildings. Development contracts in which developers are responsible for maintaining the developed project can also support investment in sustainability measures. The design of urban development plans can also be improved using big data and computer (3D) modelling, taking into account a range of variables. Alongside these aspects, there is also still a need to create visions about urban nature and narratives to engage a broader diversity of stakeholders.

Through the outlined opportunities for action, the national government and its decision-makers can play an important role in realising the development of a regulatory framework and creating the enabling conditions to support local and regional governments in mainstreaming nature-based solutions across planning and policy.

⁵ Whilst these episodes of resistances have been mostly directed at technology-based solutions to the energy transition – like wind parks and underground CO2 storages, the need for engaging local communities in processes of transformation of their living environment has long been discussed in literature.