AMSTERDAM, THE NETHERLANDS

Case Study City Portrait; part of a GREEN SURGE study on urban green infrastructure planning and governance in 20 European cities

In cooperation with:

Remco Daalder, Municipality of Amsterdam

Main Authors: Gilles Havik, Marleen Buizer
Wageningen Universiteit (WU), The Netherlands

1.0 • February 5th 2015
INTRODUCTION

This case study portrait is part of a series of 20 case studies on urban green infrastructure planning and governance in European cities, undertaken in the course of the GREEN SURGE project. GREEN SURGE is a trans-national research project funded through the European Union’s 7th Framework Programme. GREEN SURGE is an acronym for “Green Infrastructure and Urban Biodiversity for Sustainable Urban Development and the Green Economy”. The project is identifying, developing and testing ways of connecting green spaces, biodiversity, people and the green economy, in order to meet the major urban challenges related to, e.g., climate change adaptation, demographic changes, human health and well-being.

Each portraits has the following content:

- **INTRODUCTION** – which contains location and green structure maps as well as basic information on the city-region (core city and larger urban zone).
- **URBAN AND REGIONAL PLANNING CHARACTERISTICS** – which describes the main characteristics of the planning system including instruments for the protection and enhancement of green space and objectives, achievements and challenges in urban green space planning.
- **EXPERIENCES WITH INNOVATIVE GOVERNANCE PRACTICES** – which outlines how, in the views of selected actors, ‘traditional’ government-driven steering of green space planning and management on the one hand, and emerging forms of governance with a greater role for non-government actors on the other, play out in different cities.
- **URBAN GREEN INFRASTRUCTURE (UGI) THEMES AND STRATEGIES** – which considers the main themes about planning and how this relates to the concept of UGI as well as policy concepts. Furthermore, implementation and evaluation of planning instruments are discussed.
- **URBAN GREEN SPACES: LINKAGES BETWEEN BIODIVERSITY AND CULTURE** – which is about the linkages between cultural diversity and biological diversity and how these impact on urban green spaces and urban green structures. Urban biocultural diversity is a recent concept emphasizing the links between biological diversity and cultural diversity. Research and policy directed at biocultural diversity can focus on the roles of ethnic or other groups, the role of a great range of cultural practices (which may or may not be connected to certain groups), and to physical objects or species bearing a relationship with specific cultural-historical practices.
- **CONCLUSION** to wrap up the main findings.

A report with all case studies and more detailed background information can be found on the project’s website http://greensurge.eu.
### 1) Introduction: Facts and Figures

<table>
<thead>
<tr>
<th>Core city</th>
<th>Biogeographic region</th>
<th>Planning family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amsterdam</td>
<td>Atlantic</td>
<td>Central/Regional economic planning</td>
</tr>
<tr>
<td><strong>Region</strong></td>
<td>Metropolitan Region</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amsterdam, Province</td>
<td></td>
</tr>
<tr>
<td></td>
<td>of North Holland</td>
<td></td>
</tr>
<tr>
<td><strong>Area</strong></td>
<td><strong>Population (2012)</strong></td>
<td></td>
</tr>
<tr>
<td>• Core city</td>
<td>• Core city</td>
<td>790 110</td>
</tr>
<tr>
<td>• Larger urban zone</td>
<td>• Larger urban zone</td>
<td>2 485 103</td>
</tr>
<tr>
<td>21 872 ha</td>
<td>117 254 ha</td>
<td></td>
</tr>
<tr>
<td><strong>Average annual population change rate (1990-2012; Core city)</strong></td>
<td>0.62</td>
<td><strong>Public recreational green space per capita (2006; Core city; m² per inhabitants)</strong></td>
</tr>
</tbody>
</table>

Amsterdam, the capital and largest city of the Netherlands, lies embedded in one of the Dutch river deltas. Historically, trade by boats has been the most important driver behind the development of the city in this location. Today, Amsterdam is known for its creative and service-oriented industries and its popularity with tourists.

A significant part of the city’s cultural and natural heritage lies below sea level. The vegetation in the region is therefore reliant on water, harbouring many bird species including duck and geese. Several measures have been taken in the region to avoid water-related hazards. Generally, confidence in the Dutch water defence system is high.
2) URBAN AND REGIONAL PLANNING CHARACTERISTICS

General description of the planning system

“Centralized what has to be, decentralized what can be” is the main guideline for planning in the Province of North-Holland. The levels of government most relevant for (peri-)urban planning in Amsterdam from the highest to the lowest are: the Province, the Metropole Region Amsterdam (a collaboration between municipalities in the Amsterdam Region), the municipality of Amsterdam and seven city districts which are each divided into neighbourhoods. There are numerous forms of horizontal and vertical collaboration among the different levels. For the Metropole Region level, three advisory committees support the integration of green space development projects in the area. For the municipal level, the Department of Physical Planning is the most important body.

As in other cities in the Netherlands, the main binding planning instrument at the municipal level is the land use plan (bestemmingsplan). The land use plans are based on structure visions that each city in the Netherlands is mandated to formulate according to law. Amsterdam’s Structure Vision from 2011 “Amsterdam 2040: economically strong and sustainable” provides a fairly detailed picture of the development plans for the 30 years ahead.

As in Utrecht, the main (ongoing) change in the planning system of the Netherlands is summarized as a shift from restrictive planning towards development planning, meaning that the focus on restrictions and legality has moved towards development and facilitation, involving less quantitative norms and more qualitative guidelines. This also implies a shift from an evaluating, testing role afterwards, towards a co-generating, cooperative role in the early stages of decision-making. According to the municipal official, urban and regional planning in Amsterdam are likely to be significantly impacted by a decrease of (central) government funding and the elimination of the level of city districts, which will theoretically bring powers back to the municipal level.

Instruments for the protection and enhancement of urban green space

One key element of the Structure Vision is the idea of ‘green wedges’ going into the city, enhancing quality of life and accessibility of green spaces and allowing densification in the city centre. Because green spaces and biodiversity are considered to play an important role in how people experience their quality of life, urban planners in Amsterdam prioritise its improvement as a key element for economic development. Attracting skilled people is an important motivation for this prioritisation. So the current Structure Vision explicitly considers green structure as an economic factor. In addition to the Structure Vision, the Ecological Vision is the main guideline for enhancement of the green network at the municipal level. By motion of the municipal council, the Ecological Vision elaborates the Ecological Structure that complements the Provincial Ecological Main Structure and represents the ‘biodiversity dimension’ of the Structure Vision. The Department of Physical Planning of the Municipality is the responsible department for the Ecological Vision.

On the regional level, the most important bodies for green space protection and enhancement are the Province’s Commission Space and Environment and the deputy council members with responsibility for either spatial planning and environment, flora and fauna, or specific protected areas. The Provincial Structure Vision is the most important planning document. Municipal partnerships of the Metropole Region Amsterdam govern major elements of green space including the Bufferzone Haarlem-Amsterdam and the Amstelscheg.

Every proposed development plan is evaluated for environmental impact by the ‘Advisory Committee Spatial Development’ of the Province of North-Holland that was installed in 2010.
Challenges, objectives and achievements in urban green space planning

As expressed in the title of the Structure Vision “Amsterdam 2040: economically strong and sustainable”, the main political goal of the municipal council is to enhance the urban environment to make it attractive for its range of different inhabitants and businesses. According to the municipal official, two recent achievements are the expansion of the island of IJburg, where housing development and nature development are integrated, and the “Gardens of West” project which integrates recreation with wildlife corridors and city farming. Recently, the general recreational value of parks has increased. The protection and enhancement of biodiversity is also considered as an important objective of green space planning, yet the implementation of this objective is less well articulated in the Structure Vision.

Appreciation for Amsterdam’s city parks is generally lower at the urban fringes, where less well-educated people from lower socio-economic backgrounds live. Moreover, these parks are less often visited, and the municipality actively tries to find out why this is the case.

The most important future challenge, according to the municipal official, is the decrease of funding for all municipalities by the Dutch state. This will continue to decrease the municipalities’ capacity for active nature protection, and require a transition towards a greater involvement of citizens from all levels of society in the management and maintenance of green spaces.

Amsterdam’s major challenges (from left to right): A challenge for Amsterdam is the presence of many bottlenecks preventing connectivity of the green structure (the red crosses in the left figure; photo: Koos van Zanen). -- The canal next to a road illustrates a challenge in combining transport infrastructure with ecological requirements (photo: Koos van Zanen).

Amsterdam’s major achievements: Cooking in a neighbour-bood park in Amsterdam Oost is an example of using green space as a meeting place for diverse cultural groups (photo: Frans Boom).
3) EXPERIENCES WITH GOVERNANCE PRACTICES

Government ideas and practices regarding participation

The municipality of Amsterdam encourages the involvement of a wide range of stakeholders. During the drafting phase of the Structure Vision, there have been meetings and conversations with numerous stakeholder groups. This way they could be involved from an early stage of the decision-making process and share important local expertise. When the first draft of the Structure Vision was completed, citizens had the opportunity to comment on it, including an internet-based opportunity to respond. This procedure is more or less in line with Amsterdam’s general consultation procedure. However, public engagement is not aimed for at all times and for every task. According to the municipal official, strategic decision-making at city-level, for example, is ultimately done by the aldermen who act as guardians of public interest and the quality of the decision-making process. On a local scale, for example, citizens are given the opportunity to participate in decision-making about the types of plants to be rooted in particular green spaces. They are also asked to assist in the maintenance of some parks.

The interviewee points out that full participation encompassing all societal layers is difficult to achieve for various reasons. First of all, some citizens know how to find their way in local politics much better than others. Secondly, there are no approved protocols for how to achieve broad engagement, since much depends on the will and capacity of the government officials. In some policy documents government officials are called upon to work in a more participatory manner. At the local level, government officials called “neighbourhood networkers” are employed to engage with citizens and with representatives of housing corporations to solve local problems. Some neighbourhood networkers encourage people to take initiatives to improve their local green areas.

Local initiatives

The interviewee mentioned examples of initiatives that are supportive of municipal policies as well as initiatives that are more resistant to such policies. Local initiatives concentrate on the maintenance of green areas, green roofing, and on turning abandoned patches into high-quality nature. Generally, four main types of participation can be found in Amsterdam. First, there are the self-started citizen initiatives where a small group initiates a project for which they subsequently acquire funding. Some of them develop into the second type: businesses, foundations or NGOs. Third, there are other citizen initiatives serving to protect a certain park or green space against profit-driven development. If well organized, these can sometimes interfere with government plans. Fourthly, there are entrepreneurs trying to generate income from a green space-related business, for example bars in parks. By doing so, they are attracting more visitors to the park. An important initiative that was finally mentioned by the interviewee is the development of platforms where experts come together with artists and entrepreneurs and present their visions to each other. Through dialogues and workshops they find innovative answers to diverse problems, and sometimes develop into vital movements.

Supporting and hindering factors in participation as perceived by city officials

The interviewee in Amsterdam is of the opinion that there no longer is a real top-down attitude of the government towards citizens, which is expressed, for example, in the open planning process. He argues that a first beneficial factor that stimulates public engagement is such an open attitude of the municipality and the government. In relation to this, the government provides digital information that should invite people from all societal layers to find answers to their questions. Finally, it is expected that the innovative entrepreneurial platforms mentioned above encourage frontrunners to inspire others to pioneer in setting up innovative projects.
In spite of the current emphasis on ‘opening up planning processes’, the following aspects are mentioned as challenging for increased participation. First, rules and regulations continue to have a strong influence on planning in Amsterdam and these are not a topic for deliberation, at least not in the short run. Second, in spite of a trend towards more openness, not all officials as yet have translated that ambition into their own practices and some may be sceptical of a stronger position for citizens. Third, at the civil society end of the participation issue, not everyone is equally able or tempted to be engaged by which some social groups may be excluded from these processes. The younger and middle-aged, highly educated, well-off people living around the city centre are better represented than older people, those with less education, and citizens with a lower economic status. This expresses the importance of the governments’ role as guardian of the public interest and the process.

**Examples of initiatives coming from local stakeholders**

**Pocket Parks (Postzegelparken)**

“Stamp parks” (postzegelparken) is a foundation that establishes tiny parks on abandoned sites, which are to be maintained by surrounding inhabitants and organisations. The park initiators claim that the main benefits of such parks are the increased social cohesion and well-being resulting from building these parks in collaboration. They design the tiny parks, raise funds for their establishment and advise during the process of establishment. From the start, they facilitate the involvement of surrounding inhabitants. Their funding comes from different governments and from the involved entrepreneurs. Citizens help in the maintenance and design of the stamp parks.

Pocket parks each have their own identity. One may contain a squash field, another a trading point, and yet another a little pond. Present plant species are never the same. It all depends on the preferences of the involved people, and on what is possible to grow or build in the available space. The first pocket park is located in the “Indische buurt”. Inhabitants asked for a foldable terrace, mini-gardens for children, a chessboard, a kiosk, and house equipment for public workshops.

**1 Hectare “Roof nature”**

Inspired by the Austrian architect Hundertwasser, the Dakdokters (the Roof Doctors) have so far turned over 500 Amsterdam rooftops into green spaces for leisure and gardening. This has caught the attention of the municipality, and with other local stakeholders the Roof Doctors have initiated the project 1 Hectare Daknatuur (“1 Hectare of Roof Nature”). Together they lobby, look for subsidies and use social media to upscale green roofing to a new green space type in the form of 100 green rooftops of 500 m². Their main case for this activity is the creation of social value, biodiversity and a healthy environment.
4) URBAN GREEN INFRASTRUCTURE (UGI) THEMES AND STRATEGIES

Main themes related to urban green space
The centrally conveyed issue is the character of Amsterdam as a metropolitan landscape, where every patch of land is used in as many ways as possible. This increases the attractiveness of the city as a whole. Recreation, urban farming and biodiversity are central themes, with upcoming themes being water retention and air pollution. The “green network” character of the city is an important planning theme. The Ecological Vision describes biodiversity values of the green network and presents how these values can be protected. It contains a detailed map of the Ecological Structure showing the connections between green spaces and, importantly, bottlenecks.

Understanding of UGI and representation of UGI principles
The concept of UGI does not explicitly occur in the analysed documents from Amsterdam, but it can be attained by fusing the concepts of ‘Ecological Main Structure’ (EMS), and ‘Metropolitan Landscape’, both present in the Structure Vision. The EMS concept is widely used in the Netherlands and is planned as a nation-wide network of large green spaces interconnected by green corridors. Connected green spaces are considered as promoting biodiversity. The concept of EMS relates to the UGI principle of connectivity.

The Structure Vision also acknowledges several landscape functions. Ecosystem functions, such as cleaning local water, supporting agriculture, providing medicine and experiencing value, are mentioned in the Ecological Vision. Increasing multifunctionality is not explicitly pursued in either document; however, the Ecological Vision places emphasis on the benefit of the structural network for biodiversity, while the Structure Vision aims at increasing the quality of green space, in general.

The Structure Vision contains some links between green space and other infrastructures mainly in regard to roads or rivers. A green space network is considered to reduce the pressure of bike traffic on roads and high water pressure on rivers during extreme rainfall. The Ecological Vision considers traffic routes on one hand as potential hindrances, but on the other hand also as potential corridors between ecosystems if designed accordingly.

Structure Vision Amsterdam 2040: Economically Strong and Sustainable
Original title: Structuurvisie Amsterdam 2040. Economisch Sterk en Duurzaam
Date: 2011
Responsible department(s): Department of Physical Planning
Spatial scale: City region
Legal status: Non-binding, but approved by politics

Main themes related to urban green space
- Creation of high quality green space accessibility

Parallels with GREEN-SURGE policy concepts
- Adaptation to climate change
- Health
- Social cohesion
Implementation and evaluation

Management, maintenance, monitoring and evaluation are considered the weaker elements of plan implementation. Supporting factors for plan implementation mentioned by city officials are the increase of the city’s economic value, improvement of the ‘experience quality’ and quality of life in the city, and the contribution of plan implementation to social cohesion in the city.

Hindrances to plan implementation are the resistance of conservation-oriented activists against a plan, dogmatic party politics and attempts to appropriate certain successes when greater support is required, and lack of money for scientific evaluation and monitoring of projects.

It is for the last two reasons that the municipality actively seeks collaboration with the business community and non-governmental branches to elaborate on the earlier initiatives and intensify and broaden collaboration to include other green spaces.

Ecological Vision: Ecology, biodiversity and green connections in Amsterdam

Original title: Ecologische Visie. Ecologie, biodiversiteit en groene verbindingen in Amsterdam

Date: 2012

Responsible department(s): Department of Physical Planning

Spatial scale: City region

Legal status: Non-binding, but approved by politics

Main themes

- Improvement of the ecological network

Parallels with GREEN-SURGE policy concepts

- Biodiversity
5) URBAN GREEN SPACES: LINKAGES BETWEEN BIODIVERSITY AND CULTURE

Views of what Biocultural Diversity is referring to and how it is addressed in policy
The planning of biocultural diversity in Amsterdam is based on a dual approach of strategic planning for an overall green structure linking the city to its surrounding environment and location-specific urban green spaces. The strategic structure comprises both natural elements and a cultural heritage belt of historic fortifications. The location-specific urban green spaces range from ancient parks to recently integrated assemblages of biodiversity as well as local green initiatives developed and maintained by local people in newly established housing areas.

Biodiversity is an important issue considered in green space management, as illustrated by the appointment of an urban ecologist. However, biodiversity in itself is not an imperative, and it is accepted that there can be diversity in the amount of diversity. Attention is given to both native species and adapted urban assemblages of biodiversity as well as to the demands of local people. For instance, depending on community interests at local level there may be a focus on bee and butterfly friendly plant material.

Regarding cultural diversity, much attention is given to the variable recreational demands of different groups of people, e.g. with respect to age, mobility, education and recreational activities. The recreational activities range from passive ones, such as lounging and barbecuing, to more active ones, such as jogging and music playing. To a great extent, the requirements and needs of neighbourhood inhabitants determine the nature of the recreational infrastructure. Several parks are characterised by their multicultural use. The presence of playgrounds and of coffee shops increases multicultural use. Commissioned by the city, research is conducted on the specific demands for green space use by immigrants.

Bioculturally significant places
The variety of bioculturally significant places can be illustrated by the following examples: Cultural heritage sites combining historic urban spaces with related assemblages of biodiversity such as Amsterdam’s tree-lined 17th century canal system and the 19th century Defence Line of Amsterdam encircling the city featuring water management and control. Both sites are included in the UNESCO World Heritage system. An example of an historic park in the old part of the city is Vondelpark. The park was established by a community group and is still owned by members. The city hosts many other parks, such as the Sloterpark and Westerpark.

Other examples include newly developed urban living quarters such as IJburg with associated green spaces, including green housing and green rooftops, and redeveloped industrial sites with new green spaces such as the Docks of Amsterdam.

Examples of local and private initiatives in maintaining urban assemblages of biodiversity are a privately developed floating garden on a boat and Baanakkerspark, which is maintained by volunteers from a neighbouring care flat for elderly people.
Citizens on a beach in IJburg, a recently developed neighbourhood on artificial islands (photo: Mirjam Koevoet).

An example of how modern art can contribute to biocultural diversity in the Sloterpark (photo: Mirjam Koevoet).
6) CONCLUSION

The region of Amsterdam consists of five operational government levels, ranging from the provincial level down to neighbourhoods. Within the coming years, the level of city districts will be abolished, which is expected to have consequences for green space planning and the potential of city officials to link up with local realities and with different actors in the city region. Another challenge is to enhance the maintenance, monitoring and evaluation systems of the city.

A key strength of Amsterdam’s planning strategy is the inclusive way of communication. Regional stakeholders as well as citizens are actively involved in different elements of the planning process, facilitated by highly accessible documentation on the internet. There is a strong ambition to actively reach out to all layers of society and involve everyone in at least a part of the process. However, there are difficulties in obtaining participation from all, and the city official has emphasised the role of government as the guardian of public interest and the process.

Actors jointly acknowledge that preserving and enhancing urban green space is beneficial for all stakeholders. The recreation, experience value and social cohesion provided by green space are considered to benefit citizens’ quality of life and the city’s economic value as a whole.

Amsterdam hosts a variety of green space initiatives, ranging from community parks to city-wide projects aiming at a considerable increase of green space on rooftops. These projects are often funded by the government, either directly or through citizen foundations or other non-governmental organisations.
**LINKS AND REFERENCES**

**Websites of municipality and core organizations**
- De Dakdokters (Roof Doctors): [http://dakdokters.nl/](http://dakdokters.nl/)
- Dienst Ruimtelijke Ordening Amsterdam: [http://www.dro.amsterdam.nl](http://www.dro.amsterdam.nl)
- Gemeente Amsterdam: [http://www.amsterdam.nl](http://www.amsterdam.nl)
- Postzegelparken (Stamp parks): [http://www.postzegelparken.nl/](http://www.postzegelparken.nl/)
- 1 Hectare daknatuur: [http://www.degroenegrachten.nl/1- hectare-daknatuur/](http://www.degroenegrachten.nl/1- hectare-daknatuur/)

**References**

*For facts in Introduction:*
- **Area core city and larger urban zone:** Urban Atlas.
- **Population core city and larger urban zone** (2012 or latest): mainly Urban Audit. Note: in a few cases the population numbers have been provided by researchers based on statistical data.
- **Average annual population change rate** (Core city; 1990-2012 or similar): calculated \[ \frac{(100 \times \text{population number last year} \div \text{population number first year}) - 100}{\text{last year} - \text{first year}} \] based on Urban Audit.
- **Public recreational green space** (Core city; m² per inhabitants; 2006): based on Urban Audit and Urban Atlas. Urban Atlas defines urban green space as “public green areas for predominantly recreational use”. Peri-urban natural areas, such as forests and agricultural land, are mapped as green urban areas only in certain cases. In general, peri-urban green areas are not counted. Private green and blue areas are also not included. Further, green spaces with less than 250 m² are not mapped as well. This leads to deviation with per capita green space values used by city officials.
- **Map of Larger Urban Zone:** based Urban Atlas.


*For the rest:*
- **Interview** with Remco Daalder, City of Amsterdam, Department on Spatial Planning, interviewed by Gilles Havik and Marleen Buizer on July 9th 2014.
- **De Gezonde Stad:** [http://www.degezondestad.org/](http://www.degezondestad.org/); accessed 4-7-2014
- **Port of Amsterdam Green Space:** [http://www.portofamsterdam.nl/Ned/duurzaamheid/Natuur-in-de-haven.html](http://www.portofamsterdam.nl/Ned/duurzaamheid/Natuur-in-de-haven.html); accessed 9-7-2014
- **http://maps.amsterdam.nl/ecopassages**
Planning and policy documents


Acknowledgements

We thank Remco Daalder for sharing with us his experienced and lively stories about the many urban green space developments in Amsterdam and Koos van Zanen for commenting on a draft version of this portrait.

Authors and contributors

**Main Author(s):** Gilles Havik, Marleen Buizer

Wageningen Universiteit (WU), The Netherlands

**GREEN SURGE Partner(s) involved:** Gilles Havik

**Researcher(s):** WU

**In cooperation with:** Remco Daalder, Municipality of Amsterdam