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PARTICIPATORY GOVERNANCE OF URBAN GREEN SPACES: TRENDS AND PRACTICES IN THE EU

ALEXANDER P.N. VAN DER JAGT, BIRGIT H.M. ELANDS, BIANCA AMBROSE-OJI, ÉVA GERŐHÁZI, MAJA STEEN MØLLER AND MARLEEN BUIZER

Abstract

Green spaces provide a variety of benefits that contribute to more healthy and attractive cities. This paper, building upon results of the EU FP7 GREEN SURGE project, aims to identify, describe and categorize innovative participatory governance practices characterized by non-governmental actor involvement in the maintenance, decision-making or management of urban green spaces. A total of 20 cities in 14 EU-countries were studied and for each of these, information on participatory governance arrangements was acquired using a multi-method approach. This was a combination of: a) semi-structured interviews with green space planning city officials, b) desk studies, and c) analysis of planning documents with relevance to urban green space. We identified four broad trends influencing participatory governance policies and practices in the EU, and we categorized participatory governance practices relating to urban green spaces into seven clusters. To capture and compare between different cities and countries the different ways in which non-governmental actors are involved in urban green space governance, we introduced a participatory governance matrix. The matrix has two dimensions: "mode of governance" (ranging from government regulation to self-governance) and "means of participation" (ranging from more structural institutional influence to influence through hands-on activities). By considering participatory governance practices along with trends at a European level, practitioners are provided with an improved understanding of how to harness the potential of civil society in urban green space management, now and into the future.

Keywords:
participation, governance, urban green space, ecosystem services, typology

Introduction

Research on urban ecosystem services

Research has demonstrated that urban green spaces and infrastructure provide a broad range of benefits for people (Konijnendijk, et al., 2005; Tzoulas, et al., 2007), encompassing many important provisioning, regulating, habitat and cultural ecosystem services (Kumar, 2010).We define urban green spaces broadly to include building greens (e.g., green roofs, walls, atriums), small-scale "green" (e.g., street trees, gardens), riverbanks, parks and cemeteries, allotment-gardens, agricultural land, (semi-) natural areas (e.g., woodland or brownfield) and so-called blue spaces, dominated by water (Cvejić, et al., 2015). An awareness of these benefits is reflected in the EU's Europe2020 growth strategy, which strives for smart, sustainable and inclusive growth (European Commission, 2013).

It is widely recognised at strategic policy level that there is a need for research on urban green spaces, particularly because the majority of the EU population already live in towns and cities (European Commission, 2013) and the process of urbanisation is unlikely to halt (United Nations, 2014). To maximize the range of benefits, this should not just be targeted at describing or quantifying urban ecosystem services, but especially so on governance aspects of urban ecosystem services (Ernstson, et al., 2010; Lawrence, et al., 2013). That is, a wide range of actors with diverging interests have a stake in the urban environment; together they determine the provision and quality of urban green spaces.

Participatory governance of urban green spaces

Ever since the industrialization of Europe, it has primarily been the responsibility of local government units to plan and manage urban green space (Konijnendijk, et al., 2006). Whilst local, national and regional government still play an important role in the management and planning of green spaces (Hysing, 2009; Mattijssen, Behagel and Buijs, 2015), there is an array of pressures driving the greater involvement of other non-governmental stakeholders, including local communities, civil society organisations and enterprises. This switch to greater inclusion of non-state actors is often referred to as a "shift from government to governance".

In general terms, the concept of "governance" embodies the formal and informal institutions, rules, mechanisms and processes of collective decision-making that enable stakeholders to influence and coordinate their interdependent needs and interests and their interactions with the environment at different scales (Tacconi, 2011).

In this paper, we focus on *participatory governance* of urban green spaces, which we define as: "arrangements in which citizens, entrepreneurs, NGOs and other non-governmental parties develop and manage networks of urban green spaces at different levels, with or without the

involvement of formal authorities" (Buizer, et al., 2015, pp. 8). By concentrating on participatory governance, we confine our research to a study of those co-governance arrangements in which non-governmental actors are involved in decision-making and/or management. These arrangements vary from a) more passive forms of consultation about green space plans and co-operative arrangements that might involve governmental and non-governmental actors in the practical maintenance of green spaces, through b) forms of self-governance where non-governmental actors self-organise and intervene in order to play a major role in green space decision-making, to c) forms of management with government actors and institutions having more distant, facilitating or even absent roles. Finally, we also considered arrangements in which business actors actively engage in public green space creation and maintenance. It is important to note that all of these forms, in spite of the involvement by non-governmental actors, are unlikely to operate completely independent of the local government as it continues to be one of the major landowners in the urban context (Lawrence, et al., 2013).

A recent driver of change facilitating participatory governance has likely been the global financial crisis and its impact at the level of national and local government. The situation in the UK with regard to municipal budgets for park management, reflective of wider urban green space management, illustrates this point: local authority budgets were cut on average by 20 percent between 2010/11 and 2013/14 (Audit Commission, 2013). A recent survey revealed that 86 percent of parks saw very significant budget cuts during the same period, with 87 percent of park managers expecting this trend to continue over the coming years (Heritage Lottery Fund, 2014).

Declining inputs from government can influence the quality of the resource because any spending is limited to only essential risk management. For example, municipal green space budget squeezes in the UK have resulted in local authorities limiting their urban forest management to the minimum of what is legally required, prioritizing health and safety. This has resulted in reactive, as opposed to proactive, urban forest management (Lawrence, et al., 2015). To prevent urban green spaces from falling into a permanent state of neglect or degradation, some local authorities are exploring alternative means of managing green spaces, such as privatisation (i.e., handing over property rights to private individuals or for-profit enterprises) and commodification (i.e., transforming resources into goods to be traded on the market) (Foster, 2011; Roy, 2011). Another option increasingly being pursued is to engage in more "joined-up" working (Cowell and Martin, 2003), meaning the delegation of some aspects of urban green space management to non-governmental stakeholders such as community groups (Foster, 2011; Ostrom, 2000; Rosol, 2010; Roy, 2011). A variety of delivery mechanisms have been found to support involvement, overcome obstacles and ensure sustainability,

e.g., grant funding, skills training, knowledge exchange platforms and expert advice (Lawrence, et al., 2015, Foster, 2011; Frantzeskaki and Tilie, 2014). All of these strategies promote the gradual transfer of responsibility for urban green spaces away from government as the sole actor and towards non-governmental actors in order to maintain the public benefits of urban green spaces.

The shift from government to governance has alternatively been explained by neo-communitarianism; a political philosophy aimed at strengthening the civil society (Fyfe, 2005). Investing in participatory governance fits in with such an approach as it is expected to empower citizens through social learning (Bendt, Barthel and Colding, 2013). This in turn can extend local expertise and promote the tendency for communities to experiment with, and innovate, green space management (Ostrom, 2000). For example, community groups have increased the quantity of available urban green space in a number of European cities, including Berlin and Glasgow, by transforming brownfield sites into spaces for community food growing and urban agriculture (e.g., Rosol, 2010).

Research as part of the GREEN SURGE project

Urbanization is a transnational phenomenon. It poses similar challenges to the effective planning, protection and management of urban green spaces across different countries and regions. However, the potential of participatory governance structures and processes to meet these challenges varies by context and, more importantly, by the opportunities afforded by different institutional arrangements. A recent review of the current understanding of socio-ecological processes in urban green spaces concluded that multi-city comparative case studies would make an important contribution to extending knowledge in this direction (Kabisch, Qureshi and Haase, 2015).

This exploratory study meets this challenge through a between-city, transnational analysis of the role of different state and non-state actors in urban green space governance. It was undertaken as part of the EU FP7 GREEN SURGE project (http://www.greensurge.eu), which aims to find innovative solutions to urban challenges relating to demographic change, land use conflicts, climate change and human health.

The questions this research aims to answer are:

1. What societal developments influence participatory governance of urban green spaces across the EU?
2. What participatory governance practices in relation to the delivery of urban green space can be identified across the EU?

The following sections present the analytical approach used to organise the research, moving onward to the methods employed, before describing the results.

Analytical approach

In this research, we report on the variety of approaches to participatory governance taken by local governments in EU-countries and trends in participatory practices. A governance framework described by Kooiman (2003), and further developed by Arnouts, van der Zouwen and Arts (2012), served as the starting point of our analysis. It distinguishes between four modes of governance: hierarchical regulation, closed co-governance, open co-governance and self-governance. These modes vary in dominant actor(s) and distribution of power and constitute a spectrum – from government having a leading role at one end, to an enabling role at the other. The influence of non-governmental actors on urban green space decision-making is non-existent in hierarchical regulation, pooled and restricted to some types of actors in closed co-governance, diffused and open to a large, mixed group of actors in open co-governance and strong in self-governance.

A similar approach is sketched by Ambrose-Oji, et al. (2011), who described different approaches to non-governmental actor engagement by the local government in a natural resource and forestry context. Inspired by Arnstein's (1969) ladder of participation, their approach covered five different forms of governmental and non-governmental actor involvement. The spectrum ranged between participatory governance practices with high governmental actor involvement to forms of participatory governance where non-state actors have the most active role and the government actors have an enabling role (see figure 1).

Figure 1
Illustration different levels of non-governmental actor engagement in decision-making within a natural resource and forestry context (derived from Ambrose-Oji, et al., 2011, p. 6). The figure shows different forms of participation on a spectrum ranging from high governmental (and low non-governmental) actor involvement to high non-governmental actor (and low governmental actor) involvement.

GOVERNMENT ACTOR ROLE	LEADING ←					→ ENABLING		
Form of participation	Inform	Consult	Involve			Partnership	Empower	
Non-government actor role	Provide information and views about plans for decision making processes		Involved in care and maintenance	Involved in planning decisions	Involved in management	Collaborative management	Lease of public land	Purchase of public land

A novel component of the framework by Ambrose-Oji, et al. (2011) was that it distinguished between various roles by *non-governmental* actors (e.g., involvement in care and maintenance, involvement in management) that were positioned along a parallel continuum ranging from a leading role by governmental actors at the one end, to an enabling role by governments at the other end. This dimension related to specific roles that citizens play in green space management. A drawback of this model for the purpose of this research is, however, that it is very much focused on participation in land-based management and does not take into account participation in political decision-making, in which citizens and stakeholders negotiate decision-making power (Elands and van Koppen, 2012).

Others have reported on this second dimension, distinguishing between different means of participation. For example, van der Steen, et al. (2013), argued that the specific roles citizens can take upon themselves in relation to green space can vary between the formulation of ambitions and goals for policy development on the one hand, and the production and delivery of the intended performance on the other. Whereas the former is related to the strategic phase of planning, in which policy goals need to be formulated and negotiated, the latter is related to the implementation phase of planning, in which green spaces are being accurately managed according to these objectives.

Our analytical framework of participatory governance practices builds upon and extends the theoretical frameworks sketched above by distinguishing between two dimensions of participatory governance (see figure 3):

(i) the mode of governance, i.e. the role of local government units along the spectrum of leading or enabling, and of non-governmental actors being more or less empowered as central actors.
(ii) the means of participation, i.e. whether engagement is through "hands-on" activities, implying involvement in nature protection activities, or through political activities, implying involvement in political, advocacy and information-based activities connected with urban green spaces.

These two dimensions allow for a) distinguishing between participatory governance practices in relation to urban green space maintenance, decision-making or management, b) illustrating the various levels of involvement by governmental *and* non-governmental actors in this. This is likely to be of interest to governmental and non-governmental actors that are faced with the challenge of making the most of the dynamic modes of governance and means of participation in society, and are looking to learn from experiences elsewhere.

Method

Case study research

The study relied on empirical material collected as part of case study research, undertaken as part of the GREEN SURGE project. A total of 20 cities across 14 European Union countries were selected based on three considerations: i) inclusion in the European Urban Atlas (European Environment Agency, 2010) and Urban Audit datasets (Eurostat, 2012), providing access to comparable data on land use, socio-demographics and economic development; ii) cities representative of the various European planning families (i.e. planning systems and cultures), distinguished by degree of strategic spatial planning and efficiency of regulation, as well as level of centralisation in spatial planning (Davies, et al., 2015); and iii) pragmatic factors such as the availability of project partner networks

with relevant stakeholders, enabling field work. Table 1 describes the selected case study cities along with key indicators.

Table 1
The total of 20 GREEN SURGE cities across 14 countries divided by planning family in this study (table derived from Davies, et al., 2015, p. 23). This shows that cities vary considerably in socio-demographic characteristics and available green space per capita, although such variation was not always apparent within planning families as a result of pragmatic considerations, such as capacity of research institutions and pre-existing working relationship with municipalities (e.g., British planning family).

City name	Country	Population (core city, 2012 or latest)	Average annual population change rate (core city, 1990–2012)	Public recreational green space per capita (core, city, m^2 per inhabitants, 2006)◆
Nordic planning family				
Aarhus	Denmark	319,094	0.99+	31.34
Malmö	Sweden	307,758	1.46	35.01
Helsinki	Finland	595,384	0.95	25.51
British planning family				
Edinburgh	UK	482,640	0.48	32.69
Bristol	UK	432,451	0.49+	27.30
New Member States planning family				
Lodz	Poland	718,960	-0.75+	11.81
Poznan	Poland	550,742	-0.30+	36.39
Ljubljana	Slovenia	280,607	0.14+	9.29
Szeged	Hungary	162,183	-0.34	33.38
Oradea	Romania	196,367*	-0.74+	4.46
Central planning family				
Berlin	Germany	3,501,872	0.05++	16.82
Halle (Saale)	Germany	233,705	-1.10++	25.16
Linz	Austria	191,501**	-0.26+	27.14
Amsterdam	The Netherlands	790,110	0.62	17.62
Utrecht	The Netherlands	316,275	1.70	21.04
Mediterranean planning family				
Bari	Italy	313,213	-0.40+	5.57
Milan	Italy	1,262,101	-0.37+	8.98
Barcelona	Spain	1,621,537	-0.23	2.96
Lisbon	Portugal	696,488	0.24+	23.36
Almada	Portugal	174,030	No data	No data

* = data from 2011; ** = data from 2013; + = data from 1991; ++ = Data from 1992

◆ 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 m^2 are not mapped. This leads to deviation with per capita green space values used by city officials.

Data collection

A broad and shallow approach to data collection was taken in order to explore the current situation across different regions and countries. The multi-method approach to data collection was consistent across each of the 20 cities. This comprised i) a semi-structured interview with one or more city official(s) (i.e. government actor) involved in green space planning, ii) a document analysis of the two municipal policy plans most relevant to urban green space, and iii) a wider contextual secondary literature review. Each of the local GREEN SURGE researchers was asked to interview the director or manager of the department most relevant for strategic, citywide green space planning (e.g., head of urban planning/ green space planning department or head of office for sustainability – depending on the structure of administration in the city). If this proved infeasible, an alternative contact person with a good overview of (green space) planning was approached.

The interviews[1] with the city officials covered the following topics concerning urban green space governance arrangements:

- types of actors involved (e.g., NGOs, businesses, community groups)
- levels and types of involvement by non-governmental actors (mode of governance)
- factors contributing to and hindering participatory governance of urban green spaces (trends affecting participation)
- examples of initiatives with the highest degree of non-governmental actor involvement in the governance of urban green spaces, and actors involved in these (trends affecting participation; mode and means of participation)

The policy and planning document content analysis was carried out by the local researcher on the basis of the municipal plans suggested to be most relevant to urban green space governance by the city official. The analysis focused on the extent to which, and the way in which, different types of actors were involved in the process of plan development.

The desk study was undertaken by the local researcher and involved studying documents, web pages and other grey literature relevant to the case. This served to reflect upon the findings of the interview and to provide additional background information where necessary. Local researchers were asked to provide a description of the following information:

- notable, recurring terms used in the documents with regard to the governance of urban green spaces
- examples of participatory governance of urban green spaces, which were placed along the governance framework continuum from hierarchical to self-governance.
- the responsibilities granted to non-governmental actors (e.g. consultation, collaborative resource management)

1 The interviews were a combination of open-ended questions and questionnaire-style Likert scale items. Only the former have been analysed for the present study. Both the interviews and desk studies included additional items on green space planning and biocultural diversity that were of interest to the wider research consortium, which have not been part of the analysis presented here.

- activities undertaken by the local government to enable participatory governance (e.g., providing advice, organizing knowledge exchange events)
- approaches to monitoring of success
- any legislation or policies at different spatial levels that was of relevance to the participatory governance of urban green spaces

Interview transcripts, and summary research notes of documentary analysis, were all recorded in, or translated to, English. Copies of the materials used for data collection can be found in Buizer, et al. (2015, pp. 71–92).

To identify the trends influencing participatory governance, we mainly relied on recent examples of participatory governance practices provided in the desk studies, as well as in the interviews with city officials. However, responses to other items within the questionnaire section on participatory governance were also taken into account. For example, trends were sometimes implicit in the list of factors contributing to participation provided by interviewees. The identification of trends was an iterative process, starting from identifying elements within the materials that could hint at trends and then looking across case studies to find commonalities, and renaming or combining trends to capture common developments across cities in response (see figure 2).

Figure 2
Screenshot showing part of the matrix used by researchers to capture trends in participatory governance of urban green spaces. Direct, as well as indirect, references to possible trends were recorded in the "trends" and "description" columns. Possible keywords to refer to trends were identified and colour coded to make comparisons across cities. Note: keywords have been adjusted at a later stage after renaming and combining different trends with a strong overlap.

CITY	TRENDS	DESCRIPTION	KEYWORDS	OTHER COMMENTS
Malmoe	1. Urban farming. Bottom up turning into PPP 2. Handing over (part of) the planning responsibility to young stakeholders	1. The Streets and Parks Department gave the group access to the site and they began to construct the garden. Gradually the department got more involved and did important investments. Interesting: the process: governance, planning, execution, maintenance, collaboration btw. Parties. 2. The planning of a new square which was facilitated by a group of teenage girls who got commissioned to lead the dialogue with the residents in the area. Handing over responsibility.	Urban farming Formal collaboration between citizen groups and government Participatory planning process Social integration perspective Derelict and temporary land use Conflicts in participation processes	Hindering factors were that it can sometimes be hard to reach consensus, that participation can be in conflict with existing detailed plans and that budget is often limited. City officials do not always have the means to give citizens what they demand.
Helsinki	1. social integration via green space 2.Internet based surveys 3.Use of soft-GIS method as a key participatory tool. 4.Urban food production 5.Through the Good things grow in Helsinki movement citizens take care of their local green spaces.	1.'Your Neighbourhood Path', Kotikaupunkipolut, is a project organized by local citizen organizations. The key idea is support new residents and immigrants to attach to the area. Internet based surveys have been developed. Use of soft-GIS method as a key participatory tool. Urban food production "The harvest map", updated internet map of Helsinki's publicly accessible edible trees and shrubs. open edible garden that support multicultural use and welcome all citizens to try food production. The open edible garden will be open to the public in 2015. Through the Good things grow in Helsinki movement citizens take care of their local green spaces.	Social integration perspective Internet tools Participatory planning process Urban farming Formal collaboration between citizen groups and government Conflicts in participation processes	mentioned few bottom-up initiatives, and felt that they are not necessarily supporting the city's official policies important determinant for public participation is active and continuous collection of opinions by authorities through modern, internet based methods of data collection such as online questionnaires.

To identify the participatory governance practices, we scanned the desk studies for references made to the governance of urban green spaces and, once more, examples of participatory governance provided. We also looked at the role of the city/regional government in these. It should be noted that the data provided: i) a broad brush picture of the situation in the EU from an "official" government point of view and, ii) no "hard" evidence is provided and therefore, iii) we relied on creating an overview rather than a strict comparison between cities.

Results

Trends affecting participatory governance practices

Participatory governance practices are not isolated phenomena; they occur in a policy arena influenced by society and (supra-)national government bodies. Consequently, the extent to which governments embrace participatory governance practices is subject to political philosophies such as neo-communitarianism described previously. In the first step of our analysis, we explored whether our data included any evidence of societal developments, reported across multiple cities, which influence participatory governance of urban green spaces. We discerned the following four trends:

1. Linking up green space management with social-cultural objectives
2. Using electronic internet-based media in green space management and evaluation (here referred to as e-governance)
3. esponding to resource constraints by fostering public-private partnerships
4. Promoting and engaging in urban agriculture and food production

Although these trends could be considered participatory governance practices in their own right (see the section "Participatory governance practices" below), we listed them separately as they are examples of particular activities that could fit within more than one cluster. They are also different from political philosophies, such as neo-communitarianism and neoliberalism, which influence the strength of civil society (Fyfe, 2005; Rosol, 2010; Roy, 2011). That is, our list of trends reflect societal developments driving how, and to what extent, participatory governance practices pan out in relation to urban green space management *given* existing political debates in the EU.

Linking up green space management with social-cultural objectives

Urban populations are becoming increasingly diverse in their socio-cultural composition. Different socio-cultural groups can be expected to have different aspirations as to how they prefer to interact with nature in cities and, related to that, how they prefer their natural environments to look and function like. The concept of biocultural diversity, applied by

scientists and practitioners in an urban context only since recently, gives expression to that process (Elands, et al., 2015). In over half of our case study cities, we found examples of green spaces that acted to improve social cohesion or to facilitate the integration of immigrants in a given community. Urban green spaces, in particular parks, have traditionally acted as meeting places for people from a variety of cultural and social backgrounds. However, the idea of actively designing green spaces in such ways as to reflect the requirements of a variety of user groups, or organizing activities appealing to different user groups, is relatively new.

An example of such governmental regulation aimed at accommodating socio-cultural practices was reported in the case study of Malmö (Sweden). As part of their policy to provide socially inclusive open spaces, the municipality of Malmö took an active role in engaging a group of local teenage girls in the planning of a new square "Rosens Röda Matta" (Rosen's Red Carpet) in the Rosengård district. This group, in turn, initiated a dialogue around planning of the square with local residents. By now, this approach has gained national recognition for its inclusiveness.

E-governance

Technological developments have led to the introduction of new, internet-based communication tools that facilitate participatory governance of green spaces. These tools were typically used for governance activities such as sharing of ideas, gaining feedback on ideas, mapping green space issues and participatory budgeting (i.e. citizens voting for their favourite green space proposal). They allowed local governments to involve a wide group of stakeholders (incl. citizens), with limited expenditure of resources. E-tools also reduced barriers that stakeholders face in terms of the time and money involved with bridging a physical distance, because they do no longer need to visit the local authority or green space to get a first impression of the relevant policy or the site. An example of e-governance used by the local authority of Linz (Austria) is a web application ("Schau auf Linz" – Look at Linz, http://schau.auf.linz.at), allowing citizens to report on green space issues such as neglect or damage, by tagging them on a map. The city administration provides a response to every report and, depending on relevance, acts upon any suggestions that are made for improvement by the user of the application.

A few other relevant examples were found in Helsinki (Finland), where strong government support (Planning Act 2010) has led to the development and implementation of diverse e-tools related to urban planning, including urban green spaces. Rather than just reporting problems, the Helsinki tools were generally focused on collecting ideas and opinions from local citizens (e.g., Maptionaire, http://maptionnaire.com or Kerrokartalla, http://kerrokartalla.hel.fi).

Resource constraints fostering public-private partnerships

The data we collected reinforced understanding that national and local level budget cuts are pushing local governments units to tender out green space maintenance activities on a competitive basis. In addition, we found evidence of increasing numbers of public-private partnerships across European cities, particularly in the arena of urban green space creation and maintenance. This included practices such as green space "revamps" and regeneration projects, or private sponsorships of green space development and management. This trend was explained, in part, by a growing number of businesses across Europe developing environmental policies linked with corporate responsibility. Whilst some examples were illustrative of businesses actively seeking opportunities to support environmental projects, other examples demonstrated that local governments are actively advertising opportunities for public-private partnerships. For example, Bristol (England) has introduced the Meadow Bristol project to convert some of the existing urban green spaces into wildflower meadows, making them more attractive for pollinators, increasing biodiversity and landscape variety within the city's green spaces. In addition, flower rich meadows have low associated maintenance costs compared to traditional municipal lawns or flowerbeds. The local authority was actively seeking businesses to sponsor these meadows. To this end, it prepared a leaflet, marketing materials for businesses to use to communicate support of the project, and a sponsorship form that allowed interested parties to sponsor a meadow at a cost of £ 2.50 per m^2 for one year.

Urban agriculture and food production

Nearly a third of the cities in our sample had observed urban agriculture or farming practices by non-governmental actors. This practice brings about unique urban green spaces, such as allotment gardens, urban orchards and urban vineyards. A relatively new type of activity in most European cities was that of temporary (or mobile) gardening in which a former industrial or infrastructural area is used for short-term food production. This was typically done to foster social cohesion and sense of community. Although allotment gardening was well-established in most cities, a combination of factors, such as increased awareness of health benefits of gardening, and an upsurge in interest in tracing the origins of food, reducing carbon emissions and encountering biodiversity seemingly have led to a snowballing of urban agriculture initiatives in recent times. This applied especially strongly to Western European countries in our sample.

Participatory governance practices

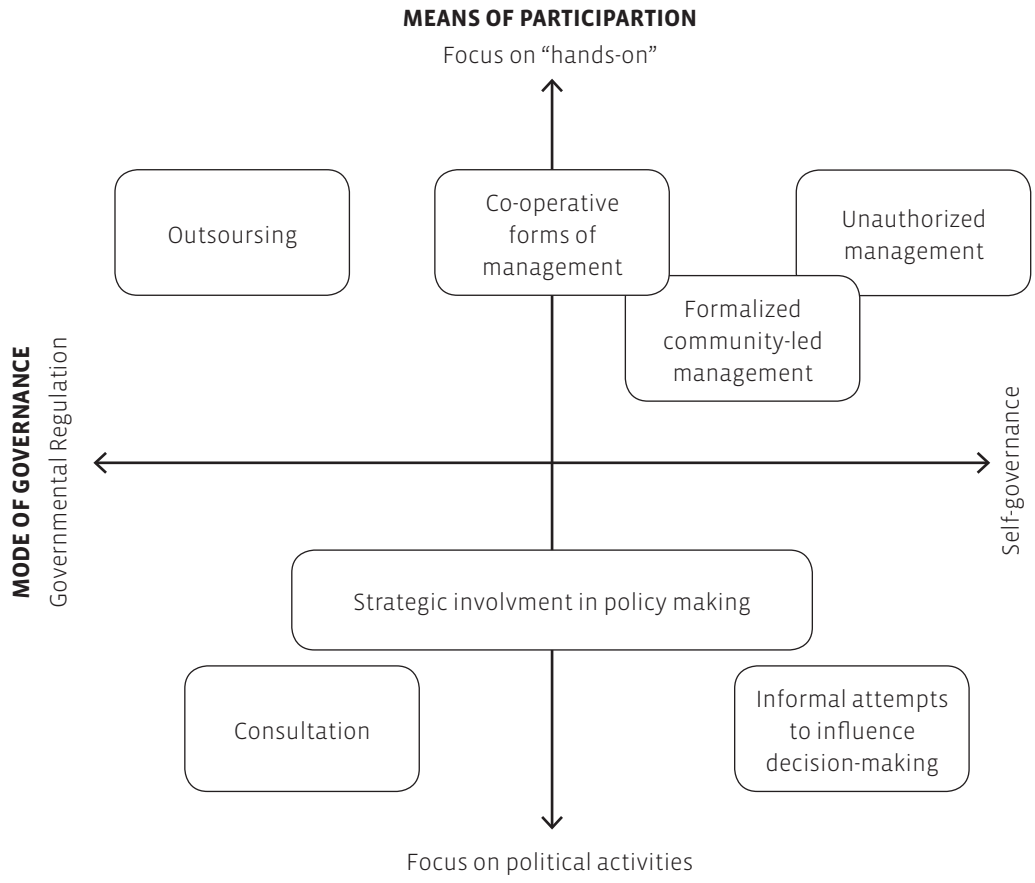
We found indications for an uneven spatial distribution of particular types of participatory governance practices across the EU. Local governments of cities within the Nordic, British and Central planning families (North West Europe) tended to have a range of policy tools and instru-

ments at their disposal (e.g., legal frameworks, support staff, grants, technical guidance) that were aimed at enabling participatory governance. This was unlike the cities within the Mediterranean and New Member States planning families (South East Europe), in which the local government appeared to play a rather marginal role in promoting participatory governance.

Seven clusters of participatory governance practices were found and placed onto the matrix of participatory governance of urban green spaces depicted in figure 3. Below, they are listed and described in order of their position on the horizontal axis of this spectrum, starting with the practices with the highest level of involvement by local government. By way of illustration, we describe examples from one or a few of the cities that were considered in our exploration. This of course does not mean that similar examples cannot be found in other cities.

1. Outsourcing
2. onsultation
3. Strategic involvement in policy making
4. Co-operative forms of management
5. Formalized community-led management
6. Informal attempts to influence decision-making
7. Unauthorized management

Figure 3
Two-dimensional matrix depicting clusters of participatory governance practices by mode of governance and means of participation. By organizing practices along these two dimensions, a better idea is gained of the extents to which non-governmental actors are empowered to engage in different ways of contributing to the development, improvement and protection of urban green space in countries across the EU.



Outsourcing

Faced with budget cuts and, associated with that, smaller workforces, a number of city officials indicated partially to rely on contractors for green space creation and maintenance. The activities by non-governmental actors engaging in outsourced work were usually regulated by the local government; they did not decide upon the management approach themselves. For example, in Oradea (Romania), businesses sponsored the creation or refurbishment of 20 green roundabouts and 10 other green spaces, in return for the opportunity to advertise their companies at those green spaces. They were also asked to take on three years of maintenance responsibility for these green spaces.

Consultation

A government commitment to *consultation* was observed in the majority of cities in our sample. Whilst seeking the views of the non-governmental actors was most commonly done in relation to the main planning documents, the examples we discuss below illustrate that consultation was not limited to this document type. However, the degree to which green space featured in planning documents varied widely between cities, meaning that, in practice, consultation around green space issues within these processes remained rather limited. Our data also revealed that opportunities for consultation were not always communicated in a timely manner, or reached only an educated elite rather than the wider population.

In some countries, national policies and guidance have been developed to promote public consultation practices. In some cases, this has led urban authorities to develop advanced methods for citizen consultation. In other places, EU Structural Funds and Cohesion Funds had been important drivers increasing the transparency of decision-making to citizens. For example, the municipality of Poznan (Poland) set up a Commission for Social Dialogue on environmental issues based on national guidelines. The objective of the initiative was to have a more intensive dialogue between the Department of Environmental Protection and the different non-governmental stakeholders interested in this topic. The commission, which had the initial representation of 20 NGOs, was set up in 2011. It acted to support informed decision-making by the local government on topics such as spatial planning, green non-motorised transport corridors, nature reserves, protection of bird habitats, mapping of green areas and cooperation with other institutions.

Strategic involvement in policy making

Whilst consultations provide non-governmental actors with an opportunity to influence decision-making, all decision-making powers are retained by the local government. Unlike consultation, *strategic involvement in policymaking* is characterized by a delegation of powers to non-governmental actors. Some countries had implemented policies

and instruments to promote participation at this level, although not to the same degree as for consultation. In England for example, the Localism Act 2011 gave communities the power to make neighbourhood development plans and orders, and granted them with a Community Right to Build. Through the neighbourhood development plan, communities could decide upon locations for development of homes and offices, as well as their design. The Act also empowered them to decide upon certain types of planning proposals. Furthermore, communities had been granted the opportunity to develop small-scale sites within the local area using their Community Right to Build. It was reported that Bristol (UK) currently has an agreement with five neighbourhoods around community input in managing their green spaces through their own development plans.

Sometimes cities developed their own approaches to strategic involvement of non-governmental actors. For example in Utrecht (The Netherlands), citizens were actively involved in preparing neighbourhood green plans. At a neighbourhood level, citizens were invited to submit their ideas for green spaces to one of the 10 plans relevant to their local area. Suggestions needed to comply with a few key criteria: the project needed to fit in with existing green space policies, be supported by at least five people and the proposed green space needed to be publicly accessible. Ideas meeting the criteria were incorporated into the neighbourhood plan. The municipality made available a budget of €420,000 for each plan.

Strategic involvement was not always limited to the development of plans. This is illustrated by the participatory budgeting approach in Lisbon, which allowed non-governmental stakeholders to influence funding decisions concerning public resources such as green spaces. In this example, the policy was introduced in 2008, making Lisbon the first European capital to implement such an approach. In the first stage of the participatory budgeting process, non-governmental actors were invited to submit proposals to the city online. Next, the local government made a selection of the most interesting and legitimate proposals upon which the citizens were invited to vote for their favourite project. The local government then implemented the winning project. Usually, a substantial proportion of proposals were of direct relevance to urban green space (30 % in 2012). The budget for participatory budgeting varied between €0.8–1.25 million.

Co-operative forms of management

This cluster – *co-operative forms of management* – involves joint decision-making, and sharing of rights, responsibilities and power between city officials and non-governmental actors regarding the management of urban green space. The division of these rights and responsibilities varied between projects, with some public green spaces almost inde-

pendently managed by non-governmental actors. The majority of co-operative management projects identified within our research were projects initiated by the local government, who subsequently called upon non-governmental actors to support quality improvements of the green space. They also included partnerships between community groups and NGOs or enterprises.

We found that Edinburgh (Scotland) has been very successful in the setting up of Friends of Parks groups. These are networks of local people contributing to decision-making around, and care and maintenance of, their local green space. The local authority played an active role in mobilizing citizens. It had been distributing a start-up pack that contains information on topics varying from preparing a constitution to promoting the group and its projects, provides advice on topics such as funding and relevant activities, and organized network events and training. At the moment of writing, there were about 40 Friends of Parks groups in the city. This has likely contributed to Edinburgh having the highest number of parks with a Green Flag award, the national standard of high quality parks, of any city within the UK.

An example of a co-operative management project that was initiated by non-governmental actors was reported in the Helsinki case study. In 2006, the municipality of Helsinki (Finland) received a proposal from a local resident, Norio Tomida. The proposal reflected a desire by the local Japanese community to donate cherry trees as a sign of gratitude towards Helsinki as a good place to live. Inspired by Norio Tomida, other Japanese residents living across Finland joined in to donate trees. Helsinki's "Good things grow" movement then managed to find a number of corporate sponsors to cover the costs of establishing and maintaining the cherry orchard. The trees were planted between 2007 and 2009.

Co-operative forms of management sometimes concerned vast areas of land within the urban context. For example, the nature park "Boscoincittà" in Milan, Italy, was established on 120 ha of farmland in the city's green belt by an NGO working in partnership with the municipality. A varied group of volunteers were engaged in different aspects of park management. This included a "Leisure Forests" group organizing educational activities for children and a "Garden Violets" group managing allotment gardens. The park authority was able to self-generate funds for management through sponsorships and donations in return for activities and events, and was co-funded by the municipality.

Formalized community-led management

A category of community involvement in the management of green spaces that was gaining in popularity is that of formalized community-led management. It is characterized by non-governmental actor management of public green spaces for recreational, educational, health/

inclusion and/or biodiversity/conservation purposes through a formal agreement with the local authority. Unlike the co-operative management cluster, groups falling within this cluster were granted the power to engage in decision-making about a public space independent of local government. In addition, projects tended to be bottom-up in nature; they were community-led from the outset. An example typical of those we found in our set of case studies is "De Ruige Hof" (The Rugged Garden). It is a society with around 1,200 members and 60 regular volunteers, who actively manage 13 hectares of public green space in two areas in the southeast of Amsterdam (The Netherlands). Management activities were mainly focused on promoting biodiversity. The group also strived to provide environmental education through the provision of activities such as a beekeeping course and facilities such as a bird watching hut. De Ruige Hof reported to rely on a variety of income sources, including grant funding, membership fees, sale of forest products and venue hire.

Informal attempts to influence decision-making

The category of informal attempts to influence decision-making covers those initiatives in which non-governmental actors seek to resist existing urban green space management approaches or spontaneously suggest alternatives to this. This involves activities such as organised protests against project proposals that are under scrutiny of the planning authority, unsolicited visits to councillors, and other forms of protest. One of the most well known recent examples of a civic movement campaigning against a proposed urban development project on a green space is that of the Tempelhofer Feld in Berlin (Germany). After falling into disuse, the grounds of the Tempelhofer Feld airport were gradually transformed into a 300 ha urban park with a variety of uses. A planning proposal by the local government to build-up a quarter of this open space with housing (4,700 homes) was met with large-scale protest and a campaign to save the existing space. This 100 % Tempelhofer Feld initiative was successful in gathering a sufficient amount of signatures to prompt a referendum on the issue. After a long campaign, the referendum vote resulted in a resounding win for the 100 % Tempelhofer Feld initiative, which halted all plans for development.

Not all informal attempts to influence urban green space policies or practices are acts of resistance or protest. Some groups of non-governmental stakeholders strived to promote alternative views on, or use of, public green spaces using an approach that is complementary to that of the local government. For example, the Bristol Food for Free project in Bristol (England) had been mapping the edible plants available in the city's public spaces since 2004. This was done to educate and increase environmental awareness. In addition, the project aimed at protecting the wide variety of edible plants within the city. Another example is the preparation of alternative land use planning by citizen experts, which was observed in Helsinki (Finland). It required the voluntary efforts by citizen experts in land use planning or green space management to produce (an alternative to) a municipal land use plan.

Unauthorized management

Finally, our case studies also included some examples of groups spontaneously engaging in *unauthorized management* of green spaces. An example of such an activity is "guerrilla gardening" in which green spaces are "occupied" for urban agriculture purposes. Responses to such practices by local government varied depending on local context. In some cases, the local government eventually formalised community management. For example, in Malmö (Sweden) the network of urban farmers, "*Mykorrhiza*", started with guerrilla gardening in order to connect more people with urban agriculture. The group initially grew plants in small vacant lots and even cracks in the pavement. Eventually, the municipal Street and Parks Department offered Mykorrhiza access to a large plot in a public park. This brought the guerrilla gardening approach of the group to a close.

Discussion

Trends and practices in urban Europe

The present research aimed to explore the different ways in which non-governmental actors are involved in contributing to the development, improvement and protection of urban green space in countries across the EU. For this, we developed a matrix, based upon the participatory governance models described by Ambrose-Oji, et al. (2011) and Arnouts, et al. (2012) and the descriptions of specific roles citizens can take upon themselves in relation to green space as provided by Elands and van Koppen (2012) and van der Steen, et al. (2013). The horizontal axis of the matrix distinguishes between governmental regulation and self-governance (modes of governance). The vertical axis distinguishes between means of participation with a focus on "hands-on" activities (e.g. planting trees or building raised beds for urban food growing) and a focus on political activities (e.g., lobbying with pressure groups or writing alternative land management plans). In practice, many examples of initiatives adopted a mixed approach; e.g., managing a green space in partnership with the local government. It should be noted that practical activities, such as guerilla gardening, are sometimes politically motivated and can engender profound political impacts (e.g., Rosol, 2010).. However, this axis for means of participation distinguishes initiatives solely based on observable, direct actions, not on effects. Therefore, guerilla gardening would be listed at the "hands-on" activities end of this spectrum, despite its potential to have significant political effects.

We used a multi-method approach to researching participatory governance practices in a range of European cities. In each of the cities in our sample, we found at least some level of participation by non-governmental actors in creating or managing public urban green spaces. We observed considerable variability between cities in the number and diversity of urban green space initiatives involving non-governmental

stakeholders, activities aimed at enabling participatory governance and level of decision-making responsibilities delegated to non-governmental actors. Seven distinct clusters of participatory governance practices were found, varying from consultation and outsourcing to formalized community-led management and informal attempts to influence decision-making.

We found a tendency for countries in the North West of Europe to have a stronger civil society in relation to urban green space creation and maintenance than countries in the South East. A variety of factors may explain this division in participatory governance practices. Firstly, the political climate in North West Europe might be relatively corporatist, embracing neo-liberalism to a higher extent, which leads to inclusive states, defined here as displaying a relatively high degree of openness to engagement by non-government actors (Dryzek, et al., 2002). Secondly, planning traditions vary between European regions, with countries in the Mediterranean traditionally having a more regulatory, as opposed to strategic, approach to (green space) planning (Rivolin and Faludi, 2005), and New Member States often prioritizing the allocation of resources to issues such as high unemployment and economic development over strategic urban green space management (Davies, et al., 2015). Thirdly, availability of policy tools and instruments aimed at promoting participatory governance of urban green spaces is influenced by a range of socio-demographic, cultural and economic factors. For example, many New Member State cities are faced with population decline, bringing about relatively low pressure on open space (Davies, et al., 2015). Moreover, patterns of use of, and expectations around, urban green space vary between North and South Europe (Kabisch, Qureshi and Haase, 2015). Cultural trends also affect participatory governance practices. In the UK, for example, the number of households growing some of their food doubled between 2003 and 2007. This is likely to have put considerable pressure on the local government to create more allotments and community gardens. Similar trends applied to Belgium, Germany, Denmark, Sweden and The Netherlands, but less so to countries in southern Europe (Church, et al., 2015).

We would like to stress that the division between North West and South East is likely a substantial simplification of reality. For example, we found the South East group to include some pioneer cities that were relatively innovative at a European level in implementing policy tools and instruments aimed at participatory governance (e.g., participatory budgeting in Lisbon). Likewise, some cities in North West Europe appeared to have relatively few policies and instruments in place aimed at increasing participation in urban green space management. Additional research is needed, focusing on a wider range of stakeholders within cities, further to explore the issue of geographical spread in participatory governance of urban green spaces.

Our results further showed that participatory governance practices do not occur in a vacuum and therefore are best understood in relation to their context. Hence, we identified a set of trends reflecting societal developments influencing the direction into which participatory governance practices in urban green space decision-making is moving across the EU.

Four trends could be discerned in our data: i) linking up green space management with socio-cultural objectives, ii) using electronic internet-based media in green space management and evaluation (i.e. e-governance), iii) responding to resource constraints by fostering public-private partnerships, and iv) promoting and engaging in urban agriculture and food production. Each of the trends that we identified applied to cities in more than one of the sampled countries. However, it is important not to lose sight of the contextual variability between countries. What is innovative in one country or city might be considered a traditional approach in another. Besides, these trends must be seen in relation to broader political philosophies such as neo-liberalism and neo-communitarianism influencing (local) governments' openness to participatory governance (Fyfe, 2005; Rosol, 2010; Roy, 2011).

We argue that describing practices, current and potential, along with trends improves understanding of civil society by policymakers. It also enables the development of tools to better harness the potential support by non-governmental actors in urban green space management for delivering a range of ecosystem services. Concepts of governance have developed through time with classical models of hierarchical governance involving citizens for reasons of consultation at the start followed by New Public Management, involving citizens for reasons of optimizing performance, to co-production and networking models approaching citizens as partners, to self-governance models in which citizens are governing themselves (van der Steen, et al., 2013). Our results showed that, in practice, the more recent governance modes have supplemented rather than replaced more traditional modes of participatory governance.

Although the growing popularity of participation in the management of urban green spaces offers great potential for improving the status quo, we should not close or eyes for possible risks that the activating society poses for urban green space management. In addition to the risk of declining quality of management by local government, other less obvious risks may be at play as well. One such concern that needs to be given serious consideration is whether difficult-to-reach groups (e.g. ethnic minority groups) are involved to the same extent as the more educated layers of society by the municipality. If state retrenchment from urban green space management leads to an imbalanced increase of power of the more affluent or educated segments of society, this could seriously jeopardize democratic decision-making. This applies especially strongly

to examples of practices at the self-governance end of the (modes of) participatory governance spectrum as this involves non-governmental actors making decisions independently of the local government. For that reason, we consider it hopeful that some cities engage in activities aimed at increasing bio cultural diversity (Elands, et al., 2015). The scope and frequency of such activities, and their degree of success in counteracting inequality, warrants further investigation.

Limitations and directions for future research

This study presents a first, important step towards obtaining an overview of participatory governance practices relevant to urban green space, and the trends affecting these, for Europe. There are, however, a number of methodological limitations that could have compromised the validity of the findings reported here. Firstly, despite applying a multi-method approach to data collection, there has been a strong focus on assessing the viewpoints of city officials and documents produced by the municipality. This decision to take a "broad and shallow" rather than a "narrow and deep" research approach was taken to gain the best possible overview of participatory urban green space governance in different EU member states, given available resources. A downside of this broad-brush approach is that the study has likely been somewhat biased towards capturing the present discourse, or "official" view, supported by government institutions. Moreover, we could have missed out on partnerships around management of privately owned urban green spaces that did not involve the local government.

Additional research is needed to explore the views of non-governmental actors in order to better understand how initiatives interact with local contextss. Secondly, not all EU member states and core cities were included in this study; leaving open the possibility of having missed out on some practices or trends. Thirdly, given the variety of local researchers involved, there has likely been some inconsistency in recording or translating data. We have aimed to minimize this risk to the best of our ability through providing a template with clear instructions, relying on multiple sources of data and reviewing of outputs by the lead researchers and the city official.

More research is also needed to explore how initiatives interact with their socio-cultural, economic and institutional context in predicting success. Such information could play an important role in facilitating cross-fertilisation of ideas on participatory governance between cities. To this end, planned research in GREEN SURGE will provide in-depth analyses of innovative case studies associated with some of the trends highlighted in this paper.

Conclusion

This pan-European study provides an insight into the participatory governance of urban green spaces in the EU, and recent developments in this area. Examples of participation by non-governmental actors in this area could be provided in all 20 cities that were part of this study, although the uptake of different types of practices varied. On the basis of these insights, we developed and presented a two-dimensional matrix for conceptualizing stakeholder participation in urban green maintenance, decision-making or management. The horizontal dimension of the matrix describes practices based on mode of governance, varying from initiatives regulated by government to those initiated and led by non-governmental actors. The vertical dimension covers the specific roles citizens can take upon themselves in relation to green space, varying from "hands-on", physical activities to activities aimed to influence the institutional environment. Seven clusters of participatory governance practices in countries across the EU emerged from our research and were placed onto the matrix. We also highlighted relevant trends affecting the types of activities undertaken by non-governmental actors. This provided a snapshot of the current situation and an idea of the directions into which participation in urban green space governance is likely to move into the future. The extent to which governance arrangements associated with a variety of innovative practices are influenced by contextual factors warrants further exploration.

Whilst participation by non-governmental stakeholders brings about the risk of undemocratic decision-making, as only a selected group of citizens may feel sufficiently empowered to take part, we also observed a growing awareness, and sensitivity to, the green space needs and requirements of a diverse range of groups in society by public authorities. Provided that issues such as unequal access to decision-making processes are addressed, participatory governance of urban green spaces may lead to more effective ways of financing, planning and living with green space in cities. This offers potential in realizing urban green spaces with high biocultural diversity, which deliver upon a broad range of ecosystem services.

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