

Public green spaces in the Nordic countries: Development of a new strategic management regime

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Abstract

Park authorities in the Nordic countries were studied for the first time in a combined survey. Major similarities were found between countries, but also interesting differences. These differences are believed to be essential in understanding how to share experiences between the countries. The results indicate the need for strategic green space management (SGSM), which operates on three levels within the organisation; operations, tactics, and policies. A theoretical description of SGSM is presented for future consideration and inspiration in practice as well as in research.

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Introduction

There is limited documentation of the implementation and actual impact of the introduction of New Public Management (NPM) doctrines (e.g., Hood, 1991) and the American-based program of reinventing government (Osborne and Gaebler, 1993; Wilson, 1994) in public park administrations within the five Nordic countries of Iceland, Norway, Finland, Sweden and Denmark. However, since the late 1980s, many public park administrations have been subjected to internal organisational changes (e.g., Hansson, 1997; Nilsson and Nuppenau, 2000). It seems that an internal division of purchasers and providers has been established in order to gain more insight into the daily maintenance routine tasks and costs, as well as prepare for a potential future outsourcing of maintenance tasks. As a result, many park administrations have been redefined and

re-organised into seemingly new, modern, and effective enterprises.

Generally, green spaces are not comprehensively addressed in legislation at the country level. However, on the local level there may be specific laws dealing with green spaces, e.g., those requiring permits for tree removal or providing for protection of trees in and around cities (Knuth et al., 2008). Since there are rarely any specific laws related to local green space management, local governments tend to have uncorrelated ways of organising and managing their green spaces. Due to this, it has previously proven difficult to compare green space management practices, e.g., area data and costs between municipalities within the same country (Juul, 1995; Persson et al., 2007). In order to qualify the discussion of green space management, an overview of current trends within green space management is needed.

Based on current organisational changes and lack of overview of how local governments manage green spaces, we wanted to focus on the local park authorities. The objective of the study was to create an overview of

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the current status of park authority activities in the Nordic countries and, based on this, to develop a model for current and modern park management. By the use of an unambiguous and coordinated questionnaire, we expected to create a basis for comparisons between countries. Furthermore, it was our ambition to use this overview as a background for the creation of a theoretical framework of park management activities in a Western democracy.

We assumed that this in turn would generate interest in a continuous and more profound exchange of experiences within the Nordic region, potentially leading to improved management of urban green spaces.

Materials and methods

Used terms and definitions

In this study, we used the term ‘park authority’ for those institutions having the overall responsibility of managing and maintaining public green spaces within a local government. The actual operations carried out by the park authority/unit are referred to as ‘park operations’, even though these may involve other areas in addition to parks, for example schoolgrounds, sports pitches and residential estate gardens.

Preparation of the survey

The work of devising a questionnaire was started in the summer of 2003 and led to a list of 15 questions, 12 of which were divided into a number of sub-questions. Many of the questions had a range of tick box options or asked for details of area, number, size and so forth. The entire questionnaire can be obtained from the corresponding author.

A pilot version of the questionnaire was first prepared in Swedish and Danish and then translated into English. The English questionnaire was sent to the municipal park administrations associations in Finland, Norway and Iceland for translation into their respective languages. The aim of the pilot study was to test the questionnaire for five to seven park authorities in each participating country, and to get feedback on the content and design. Many useful replies occurred, especially relating to sub-divisions of questions, and concept definitions.

After the test round, a revised final version was created during the winter of 2004/2005. Via the national municipal park administrations associations, the survey was again translated into English and distributed throughout the five Nordic countries. We used a sample consisting of those authorities that were members of the national park administration associations. It was

assumed that members of the national park administrations would serve as valid information sources in terms of habits and traditions related to park administrative questions (e.g., Babbie, 1990). In Finland and Iceland, the sample was not complete, since there are many very small local governments in these countries. For example, of the 431 municipalities in Finland, 222 have less than 5000 inhabitants, while in Sweden such low numbers are only found in 12 of 290 municipalities. The smallest municipality in Finland at the end of 2004 had only 131 inhabitants. Therefore, the total number of questionnaires included in the survey is not known, and data handling has been limited to exact numbers, and primarily qualitative interpretations. While the national park associations send out the questionnaires and obtained data, the authors coordinated the study and did all other data handling, including all spreadsheet handling.

Results

We received a total of 198 replies, corresponding to 14% of all the municipalities in the Nordic countries. The questionnaire represented 38% of all the inhabitants in the Nordic countries (Table 1).

Municipalities with more than 50,000 inhabitants were represented by 55% of all municipalities of this size, and by 62% of all residents living within these municipalities. Based on this response rate, some questions and aspects were considered in relation to the larger municipalities only.

What types of green spaces are managed?

At the Nordic level, the majority of park authorities work with downtown parks, street trees, playgrounds, peri-urban forests, green areas in residential quarters and urban squares. This response was expected. To a varying degree, park authorities also manage beaches, green areas within industrial areas, cycle paths, sports pitches, and school grounds. According to the replies we received, management of churchyards is not a particularly common responsibility of park authorities in the Nordic countries.

Swedish park authorities are responsible for relatively few school grounds, but this is a common responsibility of park authorities in Iceland. Denmark has a relatively large proportion of municipalities that work with management of outdoor environments in residential areas, but this task is practically unheard for other Nordic municipalities. In Norway, park authorities do not work with green areas within industrial areas, but this is more common in the other countries. Swedish sports pitches are very seldom managed by park

Table 1. Response rates of the Nordic survey of local government park management

	Number of municipalities				Number of inhabitants (inhab.)			
	Municipalities with more than 50,000 inhab.		All municipalities		Municipalities with more than 50,000 inhab.		All municipalities	
	No. of replies	% of all municipalities	No. of replies	% of all municipalities	No. inhab. in reply	% of all inhab.	No. inhab. in reply	% of all inhab.
DK	12	71	57	21	1,232,228	62	2,203,995	41
SE	28	58	91	30	2,657,009	60	4,051,643	45
NO	7	58	37	11	1,253,293	81	1,687,147	37
FIN	3	21	6	1	989,450	48	1,074,462	21
ICE	1	100	7	7	114,000	100	164,798	61
Nordic region	51	55	198	14	6,245,980	62	9,182,045	38

DK = Denmark; SE = Sweden; No = Norway; FIN = Finland; ICE = Iceland

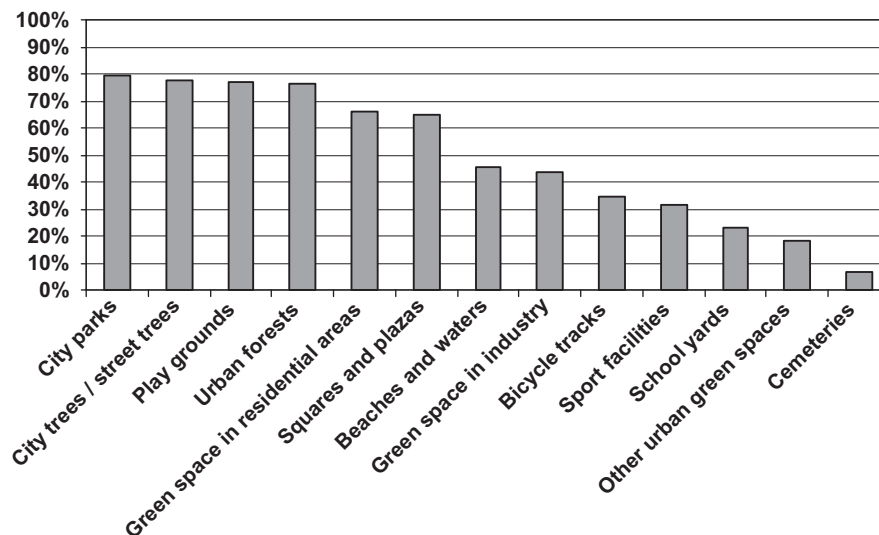


Fig. 1. Percentages of green space types being part of the park authority responsibility within the five Nordic countries (Iceland, Norway, Finland, Sweden and Denmark).

authorities but the opposite is true for Danish and Norwegian pitches (see Fig. 1).

Position of the park authority in the municipal organisation

Within the Nordic countries 10% of municipalities have only one organisational step between the park authorities and the political authority (named Level 1). These authorities act as their own authority, with no intermediate organisational steps between the park authority and the political decision makers; the park authority is organised directly under its own political council, e.g., a Park Council. Sixty percent of the park authorities were found to be on Level 2, with the park authority organised as a unit or division within another

authority. These may be a technical authority, a leisure authority or equivalent. Just over 25% of park units are on Level 3. In practice, these may be, for example, a group within a roads maintenance division of a technical authority. In relation to the responsible for the green spaces, there are two layers of decision makers/-takers above the park unit. Organisations in Level 3 are often primarily related to maintenance operations.

The replies from Finland and Iceland differ somewhat from the others in that more of the Finnish park authorities are on Level 1 and fewer are on Level 2 compared with the Nordic average. The Icelandic park authorities are almost exclusively on Level 2. Sweden, Norway and Denmark have rather similar conditions. An exception for the Swedish municipalities responding is that almost twice as many (37%) have their park authorities positioned on Level 3 compared with the

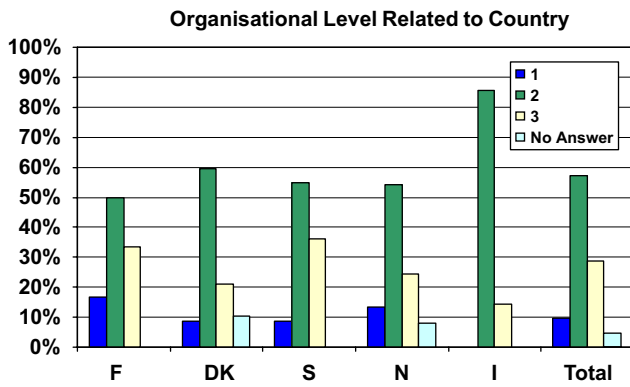


Fig. 2. Organisational level related to country ($N = 198$).

case in e.g., Denmark with only 21%. The explanation may lie in the higher percentage of Swedish responses overall, with a greater relative proportion of small municipalities being represented in the replies (see Fig. 2).

Management, maintenance and control

In the survey, management of green spaces included overall planning, development of detailed sector-oriented plans, building permit inspection, marketing, tree plans, park policy making, environmental education work, Agenda 21 related work and so forth. In general, these tasks constitute an integral part of the park authority tasks within the Nordic municipalities (52% of the responses). However, the variation between countries is large, since 83% of the Finnish park authorities carry out planning, whereas only 30% of the Danish park authorities have planning of green spaces as an integral part of their duties.

The work of maintaining green spaces was defined as weeding, mowing, hedge cutting, etc., but also the organisation of outsourcing procedures, making maintenance quality descriptions, cleaning and tidying and snow clearing. The maintenance tasks are regarded as central by all Nordic park authorities. Of all replies received, on average 90% of the respondents said they were responsible for these tasks, with little variation between countries. Thus, not all park authorities carry out maintenance work, as few park authorities actually are only concerned with planning operations. However, there may also be a technical error related to the fact that not all park authorities are responsible for the actual maintenance, meaning that the questionnaire was not filled out by the right person within the organisation.

Controlling as a part of green space management

Controlling was in this survey separated from the planning and maintenance tasks. We believed that

Table 2. Amount of municipal park authorities being responsible for planning, maintenance and control functions

	Planning (%)	Maintenance (%)	Control (%)
DK	30	79	91
SE	63	93	60
NO	57	92	43
FIN	83	83	67
ICE	29	100	100
Avg.	52	90	72

controlling internal or external contractors is an integral part of today's park authority responsibilities, primarily related to the general trend of NPM, which has led to an increased focus on outputs and budgets. As expected, a large majority of all park authorities have controlling duties (average 72%). However, notable differences were found between countries. In Norway only 43% of park authorities carry out control functions, whereas in Denmark and Finland almost all park authorities do this (93% and 100%, respectively). In Sweden, 60% of the park authorities carry out control functions (see Table 2).

Budget distributions

Maintenance costs related to green spaces were distributed to different types of agencies, as shown in Table 3. Denmark has the greatest proportion of the maintenance work carried out by a public unit other than a park authority (63%). This means that almost two-thirds of the park budget is distributed to another unit than the one with the formal budget responsibility. This indicates that an internal division between purchasers and providers is a common organisational feature in relation to Danish park authorities. Table 3 also shows that 8% of the Danish park authority budget is distributed to private companies, while in Swedish municipalities 26% of green maintenance costs goes to private companies. However, only 21% of the Swedish budget is distributed to another public unit. This may indicate that the outsourcing of green space maintenance task is more profound in Sweden than in Denmark and the other Nordic countries.

The distribution of budgets in relation to management and maintenance (as defined above) shows that on a Nordic level, approximately 70–85% of all resources (time and money) are used in relation to maintenance tasks.

No correlation was found between the numbers of inhabitants (municipality), and the overall park authority budget. There was also no pattern distinguishing the different countries.

Cross-comparisons of budget average per inhabitant showed that the average for the Swedish municipalities

Table 3. Distribution of budgets between park authorities and other organisations (only including municipalities > 50,000 inhabitants)

Budget, average distribution (unweighted) municipalities > 50,000 inhab.	Park authorities (%)	Other public organisations (%)	Private (%)	Other (%)
DK (<i>n</i> = 12)	29	63	8	1
SE (<i>n</i> = 24)	53	21	26	0
NO (<i>n</i> = 6)	64	33	3	0
FIN (<i>n</i> = 3)	95	0	5	0
ICE (<i>n</i> = 1)	70	27	3	0
Avg. (<i>n</i> = 46)	62	29	9	0

replying was 29 EUR/inhabitant, a finding similar to that a study carried out by the Swedish Statistics Bureau (SCB, 2004). This implies that the responses we found are representative of Sweden as a whole.

The Danish average was found to be 41 EUR/inhabitant, which was 41% higher than in Sweden and highest in the Nordic region. With 7 EUR/inhabitant on average, the Icelandic municipalities appear to have a very slim park budget compared to the other Nordic countries.

Budget changes

Fifty-five percent of the Nordic municipalities have had their financial resources cut back during the past 5 years. However, only half of these municipalities expected decreasing resources in the coming five years. A clear majority expected that funding would remain unchanged, or in certain cases increase.

Discussion

Due to the high amount of small municipalities with no or very limited formal park authorities, the response rate was moderate. However, the response rate representing larger municipalities (> 50,000 inhabitants) is considered to be good compared to other studies carried out within the Nordic countries (Stal and Rosenlof, 1995; Randrup and Pedersen, 1998; Randrup, 2000).

The replies gave an indication of the distance between politicians and administrative organisations for green spaces. Nilsson and Nuppenau (2000) discussed that since the 1980s, it was common in Denmark to have an independent park authority (which we call Level 1) in direct contact with politicians. We have reason to believe that this was also the case in e.g., Sweden. Since then, the park authorities have ‘slid down’ the organisation, towards Level 2 or 3. This is a result of the major structural changes and re-organisations that have in general taken place in local governments in the western

world (e.g., Hansson, 1997), and can perhaps be taken as a sign of decreased political interest in green space issues. Independent park authorities within Nordic municipalities are now uncommon, and the trend is that park authorities are included as part of a technical authority, leisure authority or equivalent.

However, hierarchical positioning is not the only question, or even the most interesting one, about the organisation. New methods of working and other types of organisational changes play a large role too. Project organisation, process organisation, decentralised management models and other overarching management flows create new methods of working and new opportunities. It is questionable if ‘a best model for park management’ can be defined. Required are modern park authorities who are able to constantly adapt and to find sufficient methods of working within the framework of different organisational models.

Park management budgets

The budget for the park authorities was one of the aspects for which it was most difficult to obtain comparative data. There are practically as many ways to report costs as there are municipalities. This relates to the fact that the different park authorities have different types of green spaces to manage.

According to our study, the resources for park operations are not likely to be significantly increased in the future, in any case not automatically. However, we were able to detect a certain optimism – the belief is that resources will at least remain unchanged. Cutbacks in resources can easily lead to paralysis of operations and lack of an offensive to improve and advertise the importance of park authorities’ responsibilities and work. The municipalities that have managed to expand their operations in recent years have worked aggressively and sought public support. They have shown that it is possible to increase resources in a shrinking financial climate.

It may be assumed that there is a relationship between park authorities, which have a high degree of controlling tasks, and a high degree of the budgets being related to ‘other organisations’. E.g., in Denmark outsourcing of green space maintenance has been an integral part of the park authorities for almost 20 years, whereas in Norway this trend has just begun. An increase in control functions may then be expected in Norway in the future, as outsourcing gets more and more common. In Sweden, outsourcing has been going on even longer than in Denmark, and interesting, the percentage of Swedish municipalities carrying out control functions is 60%. More than a quarter of park activities in Sweden are carried out by contractors, while in the other countries the corresponding proportion is considerably lower. This again may indicate that Swedish park authorities in general have a longer experience of outsourcing green space maintenance task; they outsource more, and carry out less control. This indicates a sort of an evolutionary process in relation to re-organisation of park authorities, leading to increased outsourcing of maintenance tasks and related control functions. However, at one point the amount of control functions apparently decrease, while outsourcing still increases, which may indicate that national cultural differences also influence this trend.

Less control may be a result of the recognition of an increased need for a formalised dialogue related the maintenance process, and not only the products. This trend is known as partnering, and is increasingly discussed and described in the literature (Boviard, 2004) – also in relation to green space management (Randrup et al., 2006).

This is in line with the findings of this study, indicating that the majority of resources are related to operations, and only 15–25% of all resources are devoted to planning and management. It remains a question whether 75% for maintenance is a high figure. We are convinced that the proportion of strategic work will have to increase in the future to ensure that park issues gain a reasonably strong position in municipalities.

The park management model

Randrup et al. (2005) defined the concept of Urban Forestry in order to grasp the many different academic disciplines and expertises involved in relation to urban forestry. Urban forestry is in this paper redefined as ‘green space management’. Thus, urban green spaces may be defined as individual trees, smaller designed areas, and larger nature-like areas. The Park Management model (the PM model; see Fig. 3) explains the relations associated to green spaces. On one side, the actors, stakeholders or human interests are defined, and on the other side the aspects are defined.

Fig. 3 expresses and summarises what has previously been described in international literature related to urban green space management. E.g., Miller (1996) describes the management of urban forests as a process of integrating economic, environmental, political and social values of the community, to develop a comprehensive management plan. Grey (1996) also uses the term ‘comprehensive management’ in relation to management of the urban forest. He defines six requirements

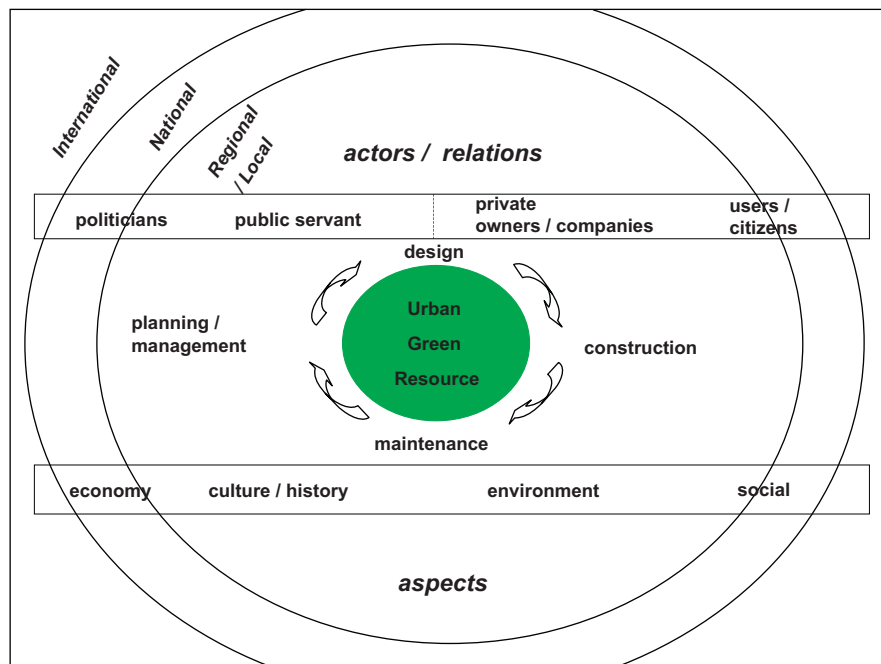


Fig. 3. The park management model.

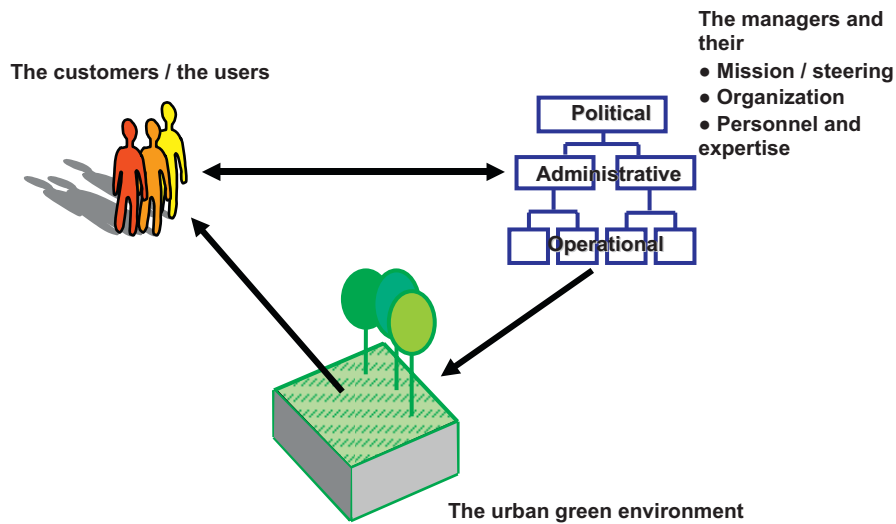


Fig. 4. The park-organisation-user model.

for such action: (i) a central organisation with responsibility and authority, (ii) knowledge of the total urban forest environment – biological, institutional/social and legal, (iii) knowledge of what the urban forest needs, (iv) plans for meeting the needs, (v) adequate budgets and (vi) effective implementation.

Hitchmough (1994) presents a comprehensive introduction to urban landscape management, often using the term ‘management’ in a technical form, referring to ‘maintenance’, thus focusing on the technical operations, more than on the long-term strategies related to management. Steidle-Schwahn (2006) also has a primary focus on the actual maintenance of green spaces, but similar to most sources describes the influence in relation to green space management as being economy, functions (e.g., social, cultural, aesthetic, ecological), users and knowledge derived from various types of research (biology, forestry, history, medicine, etc.). Basically, there is little if any disagreement about who would be actors and what would be relevant aspects to include in modern green space management.

The actors in relation to public urban green spaces are the formal decision makers, the politicians, and their administrative staff. The green space manager belongs to the staff. Outside the public administrative system are private companies, represented by contractors, consultants, planners and designers, as well as the citizens at large, and users who have a close relation to the actual green space.

The aspects in relation to public urban green spaces are the three aspects mentioned in a traditional sustainable approach to green space management; economy, ecology and social aspects. Since we are dealing with urban green spaces, a fourth aspect of history/culture has been added to the model.

The model presented in Fig. 3 puts the green space at the centre of any discussion. This requires that in

principle all actors and all aspects are equal. However, this is rarely the case in practice, where formal decision makers and economic aspects tend to have priority in most planning and management decisions. This study has a primary focus on the public green spaces, the public organisation and the economical aspect.

The park-organisation-user model

Work of managing public green spaces can be described in simplified terms as described in the park-organisation-user (the POU – model; Fig. 4), as developed from Persson (2005). The POU-model indicates the relationships between the existing physical outdoor environment (e.g., public green spaces), the public organisation (the managers) and the users of the green spaces. Often these relationships are explained in pairs (Persson, 2005), as e.g., in environmental psychology the relationship between users and green space is in focus (e.g., Ulrich, 1984; Grahn and Stigsdotter, 2003).

Strategic park management

We concluded that most current activities in Nordic park administrations are concentrated on direct operations, e.g., organising maintenance activities, and limited focus seems to be on long-term planning activities. If too much attention and resources are devoted to maintenance work, there is a risk of green spaces fading away and having a low priority in relation to other operations that are more well-formulated and pressing. As proven in the UK (DTLGR, 2002; Beer, 2002), park organisations need to do more than just operate. If dynamic systems such as parks and green spaces are just maintained, they will gradually de-generate. Management literature has long described that in order to

survive in competition with other organisations (e.g., other departments within the public organisation), efficient action is vital, or at least action that is more efficient than that of the least efficient competitor (e.g. Brunsson, 2003).

Often public park organisations are divided according to project-planning functions and actual maintenance functions. These organisational and operational changes require new skills among both park managers (purchasers) as well as the private industry, which operate within this domain (providers). The question seems to be if these organisational changes are sufficient in order to secure the future development of green spaces.

Bryson (2004, p. 4) generally argues for strategic planning among public and non-profit organisations, simply in order to “survive, prosper and do good and important work”. In *CABE Space* (2006, p. 3) it is stated that it requires a strategy to “reinvigorate parks and green spaces with features and facilities and with activity and community support that will put them in the centre of an urban renaissance, as well as at the centre of the life of communities.” In other words, long-term planning or strategic thinking is important even for public organisations. Ironically, the trend of NPM apparently has not stimulated long-term planning or strategic thinking among Nordic park managers in relation to development of parks and green spaces.

In the primary literature (in terms of books) dealing with urban tree management, urban forestry and green space management, there is a strong focus on maintenance aspects and limited focus on long term, planning- related management. This includes the works of e.g., Hitchmough (1994), Miller (1996), Grey (1996), and Steidle-Schwahn (2006). In the UK, the Commission for Architecture and the Built Environment (CABE) has a division dealing with green spaces (CABE Space). This organisation has developed and published a number of relevant and strategically oriented publications (e.g., *CABE Space*, 2004, 2006) for public park administrations. However, it still remains to be explained what strategic green space (or park) management includes.

Based on our findings, and inspired by ‘traditional’ management literature (e.g., Fitzroy and Hulbert, 2005; Warren, 2008), we suggest that park management is redefined as Strategic Park Management, based on the definition made by Chandler (1962). He defined Strategy as a term as “the determination of the basic long-term goals and objectives of an enterprise, and the adaptation of courses of action and the allocation of resources necessary for carrying out these goals” (Chandler, 1962, p. 13). Considering the tasks to be fulfilled within a public park organisation, we recommend three levels of activities to be included in the concept of Strategic Park Management, as shown in Fig. 5. The model is based on a 3 × 2 division. On the vertical level, there are two

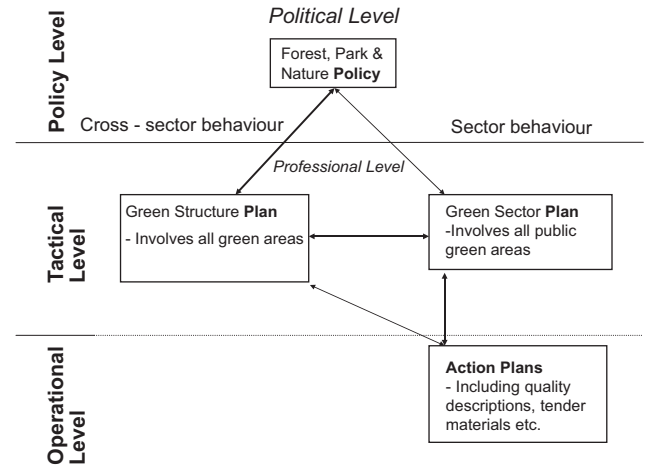


Fig. 5. The Strategic Park Management model.

columns. They represent to the left side, a cross-sectorial approach, while the right hand side represents a strictly (park) sectorial approach. On the horizontal level, three rows illustrate the three levels of activities to be included in Strategic Park Management; Operations, Tactics and Policies.

As shown in this study, most Nordic park authorities will have the majority of their expertise and resources placed in the lower right section of the model. This will relate to tasks concerning operations of public green spaces, e.g., organisation of the actual maintenance as described by, for example, Juul et al. (1998) and Steidle-Schwahn (2006). At the Tactical level, plans for public green spaces may be produced. These include green space inventories, street tree inventories, etc. aimed at management routines carried out within the public green space organisation, and strictly at public green spaces. But at this level there will also be a great need for a relationship between the public green spaces, other urban spaces and other public administrative authorities, such as those dealing with health, recreation and culture. This is the cross-sectorial green structure planning as described by e.g., Sandström (2002), Tjallingii (2003) and Halvorsen Thorén (2000).

At the Policy level, specific strategies, or long-term visions for green spaces, public as well as private and semi-private should be formulated. These visions should preferably be based on thorough analysis and plans produced at the tactic level. Thus, it is clear that park authorities with a primary focus on the Operational level will have a major task in describing long-term visions for their green spaces. They simply do not have a sufficient overview. On the other hand, most Nordic park authorities are expected to have a very detailed amount of information available on the operational level, with comprehensive maintenance descriptions of all the public green spaces. We expect that this detailed, but fragmented information would

form a comprehensive basis for sectorised or even cross-sectorised plans, which could ultimately lead into long-term visions for the entire green spaces. Strategic Park Management includes all three levels of activities, and is cross-sectorial at both the tactic and the policy level.

Will the big challenge be improvement of actual parks?

What then about the actual development of parks, which should be the main task of the park authority? Has this question been forgotten among budget figures, organisational changes and customer surveys? When we asked the Nordic park authorities about the most important challenges for the future, the most common Swedish response was gratifyingly ‘improvement of green areas’. In the other countries, organisational and budget issues came in first place, although park improvement was also included on the list.

Our interpretation is that Swedish park authorities have come so far in organisational changes and operational effectiveness that they are once again finding resources to work with the more long-term planning and development of green spaces. However, the improvement of parks cannot be carried out just by park authorities themselves, but requires more intensive interaction with users and good advertising of the efforts made, so that politicians, the public and colleagues within other authorities can be clear about what an important and appreciated resource urban green spaces are.

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