A framework for evaluating and designing collaborative planning

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A R T I C L E   I N F O

Article history:
Received 8 November 2012
Received in revised form 13 March 2013
Accepted 10 April 2013

Keywords:
Green space
Local knowledge
Urban planning
Participatory planning
Public participation

A B S T R A C T

Collaborative planning processes have been criticized for inefficiency, but attempts to improve them in planning of urban nature have been limited by lack of usable evaluation methodologies. This paper presents a framework for evaluating and designing collaborative processes in strategic planning of land use and nature areas. A framework with four key perspectives and their success criteria was developed with the help of literature and data from interviews and focus groups in two case areas in the Helsinki metropolitan area, Finland. Planning organizations can use the framework as a tool and source of inspiration in designing collaborative processes and their evaluation, and in shifting their practices towards the organizations’ own specified goals. A conscious design of more efficient and holistic collaborative planning can be achieved with case-specific operationalization of this framework.

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Introduction

Involving residents and other stakeholders in planning of public land has been considered promising in, for example, achieving better outcomes and increasing adaptability of social-ecological systems (Healey, 1997; Innes and Booher, 1999; Olsson et al., 2004). In planning of urban nature areas such as meadows, forests, parks and shores, participatory approaches are seen as necessary e.g. because residents’ local knowledge is seen to enable better decisions and thereby shaping of better urban environment (Van Herzele et al., 2005). In collaborative or participatory planning, residents and other stakeholders are invited to participate in planning or decision making processes with methods such as questionnaires, web forums, public meetings and field trips, with the idea that participation can influence the content of planning (see Healey, 1997; Innes, 1998; Innes and Booher, 1999). However, in a range of settings in which participatory activities have flourished, they have failed to deliver significant changes in prevailing practices of local governments (Bickerstaff and Walker, 2005; Connelly, 2006). Residents are disappointed with the lack of opportunities to really have an influence, while planners can remain uninformed about residents’ concerns and experiences (Reed, 2008; Grönholm, 2009). Some planners do not debate the need for or value of residents’ participation (Crawford et al., 2008), while others see it as a burdensome obligation that does not contribute to planning (Puustinen, 2006; Wesselink et al., 2011). Planning of urban nature is not free from these problems (Sipilä and Tyrväinen, 2005; Van Herzele et al., 2005; Janse and Konijnenbijk, 2007).

To improve practices, it is necessary to evaluate them taking into account of what constitutes usefulness of collaboration for different parties (e.g. Rowe and Frewer, 2004). Evaluation of collaborative planning processes is necessary also e.g. because it helps to avoid wasting resources of planners, decision-makers, participants and local taxpayers, supports the accountability of administration (Mickwitz, 2006; Abelson and Gauvin, 2006) and enables enhanced learning capacities among various stakeholders (Muñoz-Erickson et al., 2010). The growing literature on evaluating collaboration (Webler and Tuler, 2006) has not yet provided agreed on principles and methods for evaluating collaborative planning (Rowe and Frewer, 2004; Laurian and Shaw, 2009). As contextual factors, such as local social relations and systems of meaning and acting, are influential for applicability of any particular governance approach (Rein and Schön, 1993; Healey, 1997, 2003), it is useful to build evaluation criteria as sensitive to the governance contexts they are aimed to serve. Evaluation frameworks have been developed in fields such as forest planning (Buchy and Hoverman, 2000; McCool and Guthrie, 2001), other environmental planning (Innes and Booher, 1999; Beierle and Cayford, 2002; Mandarano, 2008) and urban planning (Laurian and Shaw, 2009), but to our knowledge not in the context of urban nature in particular. The absence of success criteria complicates not only evaluation but also design of collaborative planning processes in this context.

In this paper, our aim is to contribute to filling this gap by presenting a framework for evaluation and design of
collaborative planning for urban nature in the context of strategic planning of land use and nature areas. The strategic phase of planning concretizes the value-based goals set in normative policies and addresses their implementation further in operational planning (Schulman, 1990; Faehnle et al., 2011, p. 49). After describing the methods, we present a framework, including evaluation and design perspectives and their success criteria, and address their use in evaluation and design. We discuss the strengths and weaknesses of this approach and finally present recommendations for future work in developing and using evaluation and design frameworks.

Material and methods

Our study was conducted in Finland, where urban planning processes commonly include resident participation due to the legislation that obliges authorities to guarantee residents the possibility to influence the future of their living environment and defines the process of participation in land use planning. Due to the complexity of collaborative planning for urban nature areas, we designed case studies that would elucidate it from several dimensions. In 2007, we chose two case areas in the Helsinki metropolitan area: Mäetöa–Mäetöjoki located in two cities, Helsinki and Vantaa, and a cross-border area between three municipalities, Kerava, Vantaa and Sipoo (Fig. 1). In both of these study case areas, residents use nature areas regardless of municipal borders, but their planning is the responsibility of several authorities, each operating with their own rhythms and practices of public involvement. Both areas had several ongoing and recently finished land use planning and/or nature area planning processes. This complexity around collaborative planning in the areas makes them useful for learning for the purpose of the study (e.g. Stake, 1995). The case areas counterbalance each other in characteristics such as location in the urban form, type of nature areas, type of ongoing planning processes and size of municipalities involved (Table 1).

We first discussed the study plan with some of the planners involved in the local planning processes. They supported the idea of an evaluation framework and raised points that we took into account in the plan for obtaining data. During the research project we developed our understanding of the cases by studying planning material (e.g. official decision-making documents, drafts, background material available for stakeholders, survey summaries, meeting documents, letters from stakeholders), by participating in public meetings and meetings of the administrative Mäetöa planning group and by following up local newspapers and websites.

An evaluation can be conducted (1) based on criteria derived empirically from people or (2) from theory, or (3) without any stated goals (Chess, 2000). In this study, we combined empirical and theoretical approaches (see e.g. Laurian and Shaw, 2009). In 2007, we interviewed 33 persons with semi-structured expert interviews: 16 public officials (planners, other experts and a consultant), 6 decision-makers and 11 stakeholders (8 active members of resident or nature associations, 3 land property owners). Some of the interviewees had several of these roles. All of the interviewees were or had earlier been involved in at least some of the ongoing planning processes in the case areas. The themes discussed in the interviews included views and experiences of collaborative planning, nature relation, successful collaboration, role of ecological and experiential values in decision-making and learning of participation skills.

The interviews lasted from 30 min to 2 h 15 min. The interview material was transcribed word by word and analysed with the help of the qualitative research software NVivo 7. Based on the empirical data and literature, a draft for an evaluation framework was developed, including criteria for evaluating a collaborative planning and decision-making process. A draft of this framework was sent to the interviewees and they were invited to discuss it in a group meeting. Five focus group meetings were organized, each of which contained 5–7 participants. Thirty of the 33 interviewees joined these discussions. The discussions were recorded and used in further development of the framework.

As planning of urban land use and nature areas is messy, characterized by conflicting values and interests, approaches to quality of participation in it have to be studied multidimensionally (McCool and Guthrie, 2001). To address this complexity, we included in the framework four key perspectives of evaluation. The framework was constructed by combining the interview data and most relevant literature on quality of participation. The literature included empirically oriented studies on cases of collaborative urban and environmental planning and management and transport planning in mainly in European (e.g. Janse and Konijnendijk, 2007; Ernstson et al., 2010) and North American (e.g. McCool and Guthrie, 2001; Halvorsen, 2003) contexts, but also cases in Australia (Human and Davies, 2010) and New Zealand (Scott and Liew, 2012). Moreover, literature on planning practices (Carp, 2004; Laurian and Shaw, 2009) as well as generalized norms and quality aspects for collaborative planning and governance in more theory-oriented literature (e.g. Healey, 1997; Lockwood, 2010) were used. By reading the interview transcripts while going through the literature, we first searched for general similarities in aspects of quality of collaborative planning identified in the interviews and in both types of literature. Four broad themes of these similarities were identified, forming the four main evaluation perspectives used in this study. With these perspectives as a general frame, we applied the suggestion by Stake (1995, p. 79) that the most important data are analysed with pre-established codes, but it is also studied searching for new ones. We analysed the data by identifying topics that mattered to the interviewees as criteria for quality of collaborative planning processes and classified these under the four main categories. This produced 41 criteria. These were combined and simplified with the help of results and recommendation linked to quality of collaboration found in the empirically oriented literature as well as arguments in the theory-oriented literature. This resulted in 13 final criteria, each derived from 1–7 of the criteria in the first criteria set. The literature was also used as a support in formulating a description of each criterion. All the final criteria thus are rooted on both the empirical data and literature. To support design of effective collaborative processes, we also summarized the
criteria descriptions into a design frame as aspects worth consideration in process design.

Results

In our approach, a collaborative process as the object of evaluation and design includes both formal collaboration and all the other interactions, activities and information sources that play a role in plan-making. Our interest is in the process, its output and outcomes; outputs are understood as plans and their implementation, and outcomes as consequences in social and environmental conditions (see also Mandarano, 2008, p. 457). The necessary first step for conducting an evaluation is to define the quality that is to be measured in the specific case (Rowe and Frewer, 2004). Our framework focuses on this step as the basis for preparing the evaluation methodology, and for design of collaborative processes. The framework is targeted for evaluating or designing one planning case at a time, in the context of other plans and local conditions. It provides planning organizations a tool and source of inspiration for both specifying their own goals for collaborative planning, and helping them to develop and design collaborative processes and their evaluation. These steps would help the organizations in gradually shifting their practices towards more holistic and comprehensive collaboration.

The analysis based on interviews and literature resulted in success criteria with four interlinked main perspectives: a collaborative process should (1) improve the knowledge and value base of planning, (2) support involvement that is meaningful for residents, (3) be operational in the governance system and (4) help in guiding the area development in a sustainable direction. The criteria are presented in Table 2 and described below.

The first three perspectives are bound together in a process that includes back and forth reflecting between knowledge building, identifying relevant knowledge, organizing ways to obtain information and making the collaborative process feasible from the administrative point of view. Achieving good outcomes is supported by designing collaborative planning processes with knowledge building as the priority, because it is peoples’ interest in particular issues that is the basic element of public participation, rather than methodological or philosophical aspects (Leino and Laine, 2012). Design of a collaborative process can proceed once the targets for collaboration have been set and there is an idea about whose knowledge is needed for defining the desired future of the planning area. The administrative system, in turn, needs to be functioning sufficiently well to enable collaborative process. Thus, design or an evaluation of a collaborative process should (1) set knowledge building as the priority and take into account (2) stakeholders’ perspectives and (3) the administrative setting, enabling

### Table 2
Framework for evaluating and designing collaborative processes of land use and nature area planning: perspectives and evaluation criteria. Key criteria are bolded. Criteria applicable in formative evaluation are marked with (F).

<table>
<thead>
<tr>
<th>Evaluation/design perspectives</th>
<th>Success criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowledge integration</td>
<td>Adequacy of high-quality information (F)</td>
</tr>
<tr>
<td>Collaboration improves the knowledge and value base of planning</td>
<td>Improvement of the knowledge and value base because of the use of experiential information (F)</td>
</tr>
<tr>
<td>2. Meaningful involvement</td>
<td>Participatory process worth the effort</td>
</tr>
<tr>
<td>Collaboration is meaningful for stakeholders</td>
<td>Accessibility of information (F)</td>
</tr>
<tr>
<td></td>
<td>Adequacy of opportunities to participate (F)</td>
</tr>
<tr>
<td>3. Functioning governance</td>
<td>Well-working cross-border collaboration (F)</td>
</tr>
<tr>
<td>Collaboration is operational in the governance system</td>
<td>Cost-effectiveness of collaboration</td>
</tr>
<tr>
<td></td>
<td>Organizational learning</td>
</tr>
<tr>
<td>4. Sustainable use of the area (outcomes)</td>
<td>Better plan</td>
</tr>
<tr>
<td>Collaboration helps in guiding the area development into a sustainable direction</td>
<td>Better quality of environment</td>
</tr>
<tr>
<td></td>
<td>Enhanced collaboration and decision-making capacity</td>
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<td></td>
<td>Follow-up</td>
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</tbody>
</table>

### Table 1
Case areas.

<table>
<thead>
<tr>
<th>Area description</th>
<th>Määtäjoki–Mätäjoki</th>
<th>Kerava–Vantaa–Sipoo</th>
</tr>
</thead>
<tbody>
<tr>
<td>The area includes a popular nature area between built areas in the relatively dense urban form; a river valley with forests, fields and parks in the surroundings. The river crosses the border of the cities of Helsinki and Vantaa and is called Määtäjoki in Vantaa and Mätäjoki in Helsinki.</td>
<td>This corner of the three municipalities has a recreation forest continuing from Kerava to a wider forest entity in Sipoo. There is sparse population in single-family houses in a rural-like area in Kerava, next to which is a dense district with single-family houses, Korso, on the Vantaa side of the municipality border.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Municipalities governing the area</th>
<th>Ongoing and recent planning processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vantaa, Helsinki</td>
<td>Vantaa master plan 2007</td>
</tr>
<tr>
<td></td>
<td>Detailed plan for a part of Kaivoksela district (Vantaa)</td>
</tr>
<tr>
<td></td>
<td>Partial master plan for Kuninkaantammi district (Helsinki)</td>
</tr>
<tr>
<td></td>
<td>Area plan for Kaarela district 2009–2017 (Helsinki)</td>
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<tr>
<td></td>
<td>Management plan for Määtäjoki river and surroundings (Vantaa)</td>
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<tr>
<td></td>
<td>Ring road II (Road Administration)</td>
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<tr>
<td></td>
<td>Vantaa master plan 2007</td>
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<tr>
<td></td>
<td>Sipoo master plan 2020</td>
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<tr>
<td></td>
<td>Detailed plan for Bastukääg logistics area (Sipoo)</td>
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<tr>
<td></td>
<td>Detailed plan for Jokitie district (Kerava)</td>
</tr>
<tr>
<td></td>
<td>Detailed plan for KerCa logistics area (Kerava)</td>
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<tr>
<td></td>
<td>Forest management plan for Korso district 2017 (Vantaa)</td>
</tr>
<tr>
<td></td>
<td>Nature management plan for Sipoonkorpi forest 2008–2017 (Helsinki)</td>
</tr>
</tbody>
</table>
the outcomes (4) to be achieved and evaluated. Seen this way, quality of collaborative planning depends especially on the contribution of participation to the area development, resulting from knowledge building in a process that is meaningful for participants. This makes four of the criteria, bolded in Table 2, the core of the design and evaluation. In the following, we present the four perspectives and their respective criteria in more detail.

Improving the knowledge and value base of planning

The input obtained from residents essentially consists of experiential information, which is information based on personal, culture-dependent experiences. Although not clearly separable, experiential information differs from professional and scientific information, which emerge from professional and scientific expertise, usually gained with the help of a purposeful education.

Experiential information is also discussed under the related concepts of tacit, local and lay knowledge (e.g. Nonaka, 1991; Van Herzele and van Woerkum, 2008; see Raymond et al., 2010 for a review). In planning for nature areas, building a thorough knowledge base necessitates the use of experiential information along with other forms of information (e.g. Schifferjes et al., 2005; Lockwood, 2010), varying from ecological ecosystem service indicators to economic assessments. Consistent with Jensen (2005), we understand knowledge as being built in processes of learning, re-framing and understanding, and information as the transformable source of knowledge. In participation, residents use their experience-based knowledge to produce information that can then be shared and used in knowledge building for planning. The first category of the evaluation criteria, ‘knowledge integration,’ focuses on the treatment of this input in the overall knowledge management of the planning and decision-making processes.

Adequate high-quality information

The first criterion concerns the availability of experiential information, both quality and quantity. The experiential information obtained during the process should cover diverse themes defined as essential in the case in question, for example local history, desirable futures and sites in need of improvement. At the same time, it should reveal the voices of diverse groups of the potentially affected population and ideally be representative in demographic terms (e.g. Halvorsen, 2003; Reed, 2008). Representativeness is hard to achieve, but at least the information produced in participation should help in recognizing and understanding the variety of views, as emphasized by one of the interviewed residents:

[In a successful process, the results of questionnaires] help in defining the scale on which the individual views are bound, and bring out concrete issues that can be taken into account (stakeholder, regional nature association).

Opportunities to obtain experiential information strongly depend on the ways of collaboration. In spatial planning, information linked to specific locations is more usable than general descriptive information. Residents’ values and meanings can be studied systematically with the help of GIS-based methods (e.g. Tyrväinen et al., 2007; Kytätä et al., 2011), but no single method works with all groups. It is also necessary to try to find ways to get information from those groups that cannot be reached with conventional methods:

Alcoholics and discriminated people, they don’t join any planning groups. They may have their own needs as well and their lives could be improved if they had places that the others would approve and which they somehow could influence (official, Helsinki).

In evaluation it is essential to pay attention to how the communicative conditions of the process shape the knowledge that participants bring to the planning table, including the styles and tools of participation (Van Herzele and van Woerkum, 2008). For example, maps used to encourage public discussion always set limits for what can be meaningfully said, and may set aside e.g. arguments on processes operating in a spatial scale differing from that of the maps, aspects that are not spatial in nature, and meanings not fitting with planners’ interpretation of the graphical icons used (Van Herzele and van Woerkum, 2011; Bamberg, 2012; Hauck et al., 2012). Residents can reflect on usability of participation tools in communicating their own concerns and ideas, and thereby help in improving them (Van Herzele and van Woerkum, 2011) – thought this depends on how open setting of participation is for this kind of information.

Nature areas provide specific challenges for knowledge construction in planning, among others, because residents are often emotionally attached to nature areas and their management or potential land use changes may raise strong feelings (Tyrväinen et al., 2005). Based on our data, characteristic for planning of nature areas is also the presence of nature associations with enthusiasts who seek to influence planning actively, using their extensive knowledge on nature. In a nature management planning case discussed by two interviewees, the collaborative process ended up in conflict at least partly because a group of environmental enthusiasts was highly dissatisfied with the quality of the baseline studies conducted. Referring to that, a representative of a regional nature association described how in a similar type of planning process a few years later, the city had learned from the experience and adopted a different and in his view better way to conduct the baseline studies. The case was complex but, in all, it reflects the importance of reflecting on the choices directing the obtaining of information, and being prepared to revise them as the participatory process may bring in missing issues (stakeholder, regional nature association).

Improvement of the knowledge and value base because of the use of experiential information

Success of a participatory process essentially depends on whether it improved the quality of the decisions and on the ways this was achieved by resolving conflicts between competing interests (Beierle and Cayford, 2002). Ideally, experiential information obtained from participants improves the knowledge and value base actually used in planning and thus enables more profound treatment of competing interests and finally more well-grounded planning solutions. Values and knowledge are not separate from each other, and knowledge base here includes also value base. By mentioning both knowledge and values we emphasize that both are important dimensions for planning and decision-making. Participation should produce new information that planners would not get if someone didn’t tell them (official, Kerava) and ideally new thoughts that are not invented or developed by the government or planners nor decision-makers (official, Sipoo). Use of the obtained information requires favourable conditions, including the government’s interest in it and right timing of the participation (Dekker, 2011). The accepted plan can be analysed in terms of influence of the experiential information and expression of grounds for the planning solutions. For understanding the process of sense-making and knowledge construction, it can be useful to try to identify which parts or types of the obtained information mattered for at least some of the planning solutions and how, which of the residents’ viewpoints and arguments were effective and which not, and how the meanings important for residents were communicated in transforming the obtained information in planning (see Bamberg, 2012; Demszy and Nasseri, 2012). The practices should be designed to produce usable information only:
We have tried to continuously improve the resident questionnaire so that there would not be stupid and pointless questions, such that are nice to know but so what. We try to avoid those (official, Helsinki).

Meaningful involvement

Besides serving planning and decision-making, collaboration should be meaningful for stakeholders, i.e. people and institutions potentially affected by the planning, and fit into their own frames of reference (Janse and Konijnendijk, 2007, p. 37). A collaborative process needs to recognize these potentially affected actors (Reed, 2008), also outside administrative bounds when needed. Successful collaboration with diverse stakeholders requires complementing use of experiential information with inclusiveness of practices (Quick and Feldman, 2011, p. 14), not only in how specific collaboration methods serve specific purposes but also in the process as a whole (Reed, 2008). The dimension of involvement shifts the perspective from the organization to the diverse stakeholders. The following criteria concentrate on experiences and views of communication and collaboration as well as the distribution of information and participation opportunities in the community.

Participatory process worth the effort

Collaboration should not waste public resources, nor those of stakeholders. Stakeholders should benefit from the collaborative process efficiently with respect to the time and effort required (Reed, 2008; Bailey and Grossardt, 2010). One way to evaluate the benefit is to compare the levels of the desired and actual impact of participation on the planning process and its outcomes, using the ladder of participation (e.g. IAP2, 2007). As benefits of participation can, however, be diverse (e.g. McCool and Guthrie, 2001), an evaluation needs to study them and their efficiency from stakeholders’ diverse perspectives. Participants’ experiences with participation can provide understanding of, for instance, how welcoming a participation event was and how authorities’ discourses and attitudes affected these experiences (Halvorsen, 2003; Maginn, 2007).

[In a successful collaborative process is about] the result. So if people feel that they as a group or as an individual are involved, so that you see that what we worked with is a part of the result (stakeholder, resident association, Sipoo).

Accessibility of information

In a successful participatory planning process, stakeholders are actively informed about essential issues and their opportunities to find necessary information are ensured. Active informing can be evaluated in terms of how appropriate the forms of information are for stakeholders (Lockwood, 2010) and how successfully the essential information is delivered at the right time; at an early stage, for instance, it is necessary to inform the stakeholders about the procedure, their opportunities to participate and the role of the participation. To be able to contribute meaningfully, participants may need some education on the issues concerned, for example, on questions that are highly technical or require specific understanding of local ecological processes (Tuler and Webler, 2006; Reed, 2008). The background information available to stakeholders at the beginning of a process should help everyone to get the same idea of the planning situation and the freedom of actions within it:

[A successful collaborative process is about] how the process has been launched, how information has been delivered about what is to be done, how widely the background papers are presented; all the people should be provided with the same abilities to contemplate and think about the issue (stakeholder, neighbourhood association, Kerava).

Adequacy of opportunities to participate

Choosing appropriate methods of participation becomes possible only after the objectives of the participatory process have been clearly articulated and the relevant stakeholders selected (Reed, 2008, p. 2424; Dekker, 2011). Besides providing participation opportunities for all stakeholders, authorities should make particular efforts to engage those who are unable to participate on an equal footing with the others (Healey, 1997; Lockwood, 2010, p. 760). Preconditions of participation for different stakeholder groups can be evaluated by studying how they are informed about their opportunities to participate, whether they really can use the participation methods applied and whether they are given the necessary background information enabling them to contribute meaningfully. Participants’ views on these preconditions can be compared with actual participation: who actually participated and whose interests were represented and whose were not.

Issues that do not come up should be remembered as well. There are socially excluded or exclusion-prone people [...] we are like advocates for nature, so these people should have [advocates] as well, if they cannot [participate] themselves (official, Helsinki).

Learning in the community

A collaborative planning process should give stakeholders opportunities to learn about the planning issues and diverse interests, about the planning and governance systems and about collaboration. As participants have varying skills and abilities (Tuler and Webler, 2006; Maginn, 2007), participatory processes should be educative, especially for those with limited opportunities to gain knowledge of these issues elsewhere. Participants such as NGO activists can play an important role by delivering information to non-participants (Hanna, 2000). Learning can be analysed in terms of how stakeholders became knowledgeable about the rules of the game, contexts and nuances of policy processes (Maginn, 2007) and ways to work together with others, with appreciation and tolerance of those with different views (Halvorsen, 2003; Fischer, 2006). Collaboration skills are best built in social situations (Healey, 1997, p. 257), especially in interaction with those who think differently:

It is actually quite interesting when you familiarize yourself with the issue, write some kind of comment or opinion and discuss it with the others. It is actually quite exciting to see [...] how differently it is possible to think about the issue. In a way you have learned that the task of decision makers is not necessarily so easy as the demands on a certain area can be very contradictory (stakeholder, neighbourhood association, Kerava).

Functioning governance

While serving the planning process and stakeholders, collaborative planning should be justified and managed appropriately as a part of the governance system as a whole. Taxpayers’ money should not be wasted on obtaining information that is already available. Collaborative activities in normative, strategic and operational planning should be coordinated across diverse governance units within and between city departments and, if necessary, different municipalities (Ernstson et al., 2010; see Schulman, 1990).

Well-working cross-border collaboration

Horizontal collaboration between different departments, their units and individual actors is needed to address sustainable use of scarce resources, to avoid mutual blocking and incapability of functioning and to realize synergy potentials among different sectors (Bickerstaff and Walker, 2005, p. 2135; Wiek and Walter, 2009, p. 361). This collaboration is necessary in equipping each planning process with an understanding of the other plans and activities affecting the planning area, a precondition for coherent area
development. With practices such as mediation, shared databases and cross-sectoral networks, different departments can help each other gain relevant information at the right time and update understanding of local developments.

Such sectoral approaches are so common. We [in strategic street and green area planning] are acting a bit like everywhere. We could have more the role as a mediator, especially because we have quite a lot of practical information and skills in participation and collaboration (official, Helsinki).

Cost-effectiveness of collaboration

Collaboration should be efficient in light of the costs of organizing it (Human and Davies, 2010). Even though benefits of collaboration are not easily measurable in monetary terms, it is useful to attempt to compare alternative combinations of collaboration methods regarding the costs involved and the benefits gained. The quality sought generally determines whether a collaborative process is cost-effective. For example, if a single planner can come to the same decision that would have been the result of collaboration with a stakeholder group, having the quality of the decision as the only criterion of success would lead to the conclusion that involving stakeholders is a waste of resources (see Irvin and Stansbury, 2004, p. 62).

Ten years ago […] we tried all kinds of this collaborative planning […] you can say that it never caused any harm but it means work. […] with the current efficient working culture you cannot really go back to that. It was a bit so that a lot of work, little output maybe, to say it badly (official, Vantaa).

Organizational learning

Learning is the process enabling knowledge integration for improved planning solutions but also for reframing the setting in which issue definition and problem solving take place (Healey, 1997; Innes and Booher, 1999). A collaborative planning process should help the planning organization to learn about the substance of planning and practices of collaboration (Tuler and Webler, 2006; Reed, 2008). Attention should be paid to the coordination of information-sharing within the organization (Jensen, 2005). In evaluating a collaborative process, it is useful to study how the organizers used their knowledge in planning and implementing collaboration, how they learned during the process and how this affected the process and how the new knowledge was shared in the organization. As stated by a decision-maker in Vantaa, it would be good […] after practicing certain collaboration, to document a little who was there, how did it go and how has argumentation been improved. By learning in a process, planners are able to improve their argumentation, which also contributes to their ability to share new information with colleagues.

Sustainable use of the area

While the three categories above have focused on the quality of the collaborative planning as a process, the fourth category focuses on the main output – the plan and its implementation – and outcomes of this process in the social-ecological systems concerned. The key relations between the process and outcome perspectives are shown in Fig. 2. The outcomes of collaboration need to be evaluated in the context of the outcomes of planning in general. The outcome evaluation criteria are described with the idea of applying them in a follow-up study evaluating the implementation of a strategic land use or nature area plan when 1–10 years have passed since plan approval.

![Key links between the success criteria for a collaborative planning process and its outcomes. As a result of collaborative knowledge building, a qualified plan is produced and its implementation contributes to the quality of the environment.](image)

**Fig. 2.** Key links between the success criteria for a collaborative planning process and its outcomes. As a result of collaborative knowledge building, a qualified plan is produced and its implementation contributes to the quality of the environment. A well-functioning governance system and its collaborative process sustain or increase the capacity for collaboration and coordinated development of the area in the future (see also Mandarano, 2008, p. 459).

Better plan

Besides enhancing the process, participation should aim at realizing better planning (Hanna, 2000) through a plan that presents a way to steer local development in a sustainable direction, in a way that would not have been possible without the participation. The quality of the plan can be evaluated in relation to the goals that the planning organization and stakeholders had for the project, and more generally in relation to local sustainability goals set in normative policies. Stakeholders’ views on the quality of the plan make it possible to determine how relevant and up-to-date the official goals set for planning and public involvement are from stakeholders’ points of view. In a good plan, all solutions are well grounded (Healey, 1997) and ways to produce compensation for the interests suffering as a result of the solutions are identified. Ideally, all of the actors have a shared view on the central issues guiding future development:

It is of course important that there would be such a decision by which we, residents, decision-makers and the authorities responsible for the city development, would have a shared view on the development that can be sought (decision-maker, Helsinki).

Better quality of environment

A successful planning process produces a plan that contributes to the quality of the environment and leads to implementation in which this contribution is put into practice. The outcomes of a collaborative planning process can be evaluated in the context of the overall implications of the plan on the environment. Following the Lefebvrian thinking of Carp (2004), it is useful to see how the environment is presented in the plan, how the plan is made real in the physical environment and how people experience this environment. Here, the quality of participation in planning can be studied by analysing how it affected the distribution of environmental costs and benefits as a result of the planning (see Rawls, 1971). One way to do this is to distinguish areas as high-quality or low-quality areas and to investigate how the implementation of the plan affects the distribution of these areas in the urban region and how this is experienced by residents. Success can be indicated by access of vulnerable groups, those most dependent on the quality of their near environment, to high-quality areas before and after the implementation, and by assessing the effects for different groups of forthcoming generations.

The result is probably seen in that it is something that works […] it is good to live in that environment in the future as well (stakeholder, resident association, Sipoo).
[A collaborative process is successful] if it is visible as the end result, good environment. It's enough if residents and nature activists and even officials think that it was a nice thing that it was done. And it becomes kind of self-evident, you don’t have to say it, you just feel that this environment is good [...]. And if everybody agrees that not a single group feels excluded from this (official, Helsinki).

Enhanced collaboration and decision-making capacity

As a result of a collaborative planning process, the capacity of different actors to collaborate for sustainable development should be maintained or enhanced. The collaborative process should contribute to planning organization’s capacity to interrelate concerns of different actors (Healey, 1997, p. 310) and nurture their capacity to mobilize specific networks (Scott and Liew, 2012, p. 13) to contribute to sustainability. As collaborative capacity requires mutual trust between the actors (e.g. Halvorsen, 2003), the quality of a planning process partly emerges from its ability to contribute to residents’ trust in the governance system:

If [residents] have been involved in the planning in their near forest and something happens according to what was planned there, so it increases their trust in general that they can affect things. And then they also are more ready to contribute to it themselves (decision-maker, Vantaa).

By managing to engage diverse stakeholders in envisioning and problem-solving effectively, the planning organization gets access to their particular knowledge, which may extend beyond planners’ imagination (Carp, 2004, p. 253), making the organization more able to adapt its policies to changing conditions (Olsisson et al., 2004, p. 87). Future collaboration is supported by information-sharing practices emerging from a collaborative process, such as in the example relayed by a stakeholder:

[Collaboration in the making of] the management plan for Seurasaari has brought such contacts that we can for example ask for mammal data and all such from the officials. We have a contract that whenever we make a project we get the data from the nature information system, also the so called secret things that understandably cannot be shared with everyone (stakeholder, local nature association, Helsinki).

Follow-up

Implementing a plan and monitoring its implementation can be seen as the most fundamental dimension of success across all planning settings (McCool and Guthrie, 2001). Follow-up should support the coordination of the implementation with different planned and unexpected developments affecting the area. This calls for the capacity to engage in self-reflection (Muñoz-Erickson et al., 2010, p. 142) and to make arrangements linking formal and informal institutions and processes across different scales and geographic regions (Lockwood, 2010, p. 761). Follow-up practices can be evaluated with attention paid to their ability to reveal mismatches as well as benefits of the implementation. As a part of accountability, this includes the necessary possibility of residents to challenge the implementation if they consider it to conflict with what was planned or to be in need of updating (see Bengston et al., 2004, p. 282).

It is a point for residents’ activity with this woodland [... where the kids at daycare have been playing for 15 years. [As the plan to change the land use] has not been implemented during 15 years, it may be that there is no need for the implementation anymore (official, Kerava).

Use of the framework for evaluation and process design

For organizations taking their first steps in collaborative planning, evaluations address ways to improve processes efficiently, preventing problems recognized in the more rooted practices elsewhere. For organizations with long experience in collaborative ways of working, evaluations help to uncover reasons for inefficiencies and provide a means for comparing quality of collaborative planning projects implemented in different areas and time-frames. In evaluating a process afterwards, both the process and outcome criteria can be applied, with the limitation that better quality of environment is applicable only if the plan has been implemented to the extent that its impacts on the environment can be studied. This summative evaluation can help the planning organization to decide if the kind of collaborative process is worth replicating in other cases (Patton, 2002, p. 435). A planning organization could use summative evaluation as a quality check conducted, for example, once or twice each decade – obviously not as a burdensome continuous practice. The framework can also inspire formative evaluations aimed to improve an ongoing planning process (Patton, 2002, p. 220). Formative evaluation can take place, for example, in a point when stakeholders have been involved in obtaining background material but planning solutions have not yet been drafted. In such a case, five criteria, marked with (F) in Table 2, can be used to identify needs for improvement. The rest of the process criteria are most useful in summative evaluation.

Moreover, the framework can be used as a source of inspiration for setting the goals for collaboration in different types of planning processes, and thereby as guidelines for process design (Table 3). As far as an organization aims to involve stakeholders in influencing the content of planning, it should focus on knowledge building as the starting point for a successful process. This makes it realistic to strive for a future in which there is a widely shared view on appropriate ways to seek sustainability and different actors are committed to their implementation. If participation no longer improves the knowledge and value base of planning, the quality of collaborative planning is likely to decrease also in some other criteria, including cost-efficiency and usefulness of participation for participants. In such cases, it would be reasonable to consider alternative process designs, starting with experiments in some projects. The quality of communication is important even when stakeholders do not have a say in how their environment will be developed. A high-quality communicative process applies the criteria starting from meaningful involvement: forms of informing and discussion should in any case be relevant for stakeholders and dispel any illusions about having a marked impact.

Discussion

Involving residents in planning is justified only if attention is paid to the quality of the participation (Fischer, 2006, p. 22). Consistent with previous research (Webler et al., 2001; Rauschmayer et al., 2009), our results indicate that people think differently about the role of residents’ participation in planning, meaning that its quality needs to be defined from a variety of perspectives. This emphasizes the need for process designers to be clear about why they are involving stakeholders (Human and Davies, 2010), and for all parties involved to reflect upon their experiences in order to improve the process (Webler et al., 2001). The evaluation and design framework presented above suggests a structured approach for implementing such a reflection and improvement. By guiding evaluation, it can support shifting ongoing processes into a more successful direction, and strengthen future processes by well-informed process design. The framework is not meant to be imposed to any organization and process directly as such, but as a
Adequacy of high-quality information | Stakeholder analysis, definition of necessary information, feedback from participants to identify gaps, conscious mix of collaborative methods to welcome different stakeholders, ways to learn about views of non-participants
---|---
Improvement of the knowledge and value base because of experiential information | Timing of collaboration early enough before decisions will be made, identification of potentials for producing up-to-date information, participants’ input in a usable form
Participatory process worth the effort | Learning about stakeholders’ expectations, clarification of the role of collaboration, timing of collaboration early enough before decisions will be made
Accessibility of information | Stakeholder analysis, customizing information content and communication methods for stakeholders’ differing capacities and frames of reference
Adequacy of opportunities to participate | Stakeholder analysis, timing of collaboration early enough before decisions will be made, conscious mix of collaborative methods to welcome different stakeholders
Learning in the community | Social interaction between different actors, attracting participants with contacts to non-participants, clear documentation including grounds for decisions
Well-working cross-border collaboration | Mediators linking different actors, information sharing across institutional bounds
Cost-effectiveness of collaboration | Focus on obtaining only new information and in a usable form
Organizational learning | Reflection on success of collaboration, information sharing in the organization

The success criteria of collaborative planning as goals in design of a collaborative planning process.

The success criteria of collaborative planning as goals in design of a collaborative planning process. In designing the evaluation methodology, it is essential to consider values and concerns of planners, residents and other relevant actors, as methods lacking this sensitivity can foster expert control and patronize people as objects of evaluation (Cooke and Kothari, 2001). Evaluation of collaborative planning should be collaborative itself, conducted with the people (Patton, 2002, p. 183), but consciously designed to avoid using their involvement just as a way to justify predefined results (e.g. Cleaver, 2001).

Unlike many current frameworks (Abelson and Gauvin, 2006), the proposed framework suggests priorities, making it easier to decide how improvement of collaboration could start. It highlights participants’ experiences with participation events and how features of these events condition the knowledge construction, aspects that current evaluation frameworks have addressed insufficiently (Harvey, 2009). Formative evaluation can be used to study participants’ experiences with particular events during the process when they still have features of these events in mind. The framework can also direct attention to power relations that evaluation frameworks often hide (Bickerstaff and Walker, 2005). Analysing what knowledge is obtained and actually used can help revealing powerful actors and the effective ways of having an impact. Participants’ experiences can help to determine if the planning organization is open enough about the power setting and to shed light on how power is utilized in collaborative events.

**Limitations of the framework approach**

The usability of any evaluation methodology depends on its ability to direct attention to issues essential for meeting the goals of a particular project. Use of predefined evaluation criteria is questionable if their grounds do not correspond to the interests for conducting an evaluation, thus applying the framework without tailoring it first with the people concerned would be risky. Moreover, choice of indicators for measuring the criteria needs to be based on understanding essential causal linkages, but these are not easily known, which complicates especially the evaluation of outcomes (Beierle and Cayford, 2002; Rauschmayer et al., 2009). Quantitative indicators may be necessary especially for evaluation summaries and comparisons, but their capacity to support understanding of problems and needs for improvement remains limited. Both quantitative and qualitative indicators would be needed to be developed, as well as their effective combinations for measuring each criterion in each particular case.

Evaluation results need to be presented with guidelines for their interpretation. The apparent non-existence of participants’ input in the final plan, for example, does not necessarily mean that the process has failed to consider this; it may be embedded in other information sources (Hanna, 2000, p. 400). Use of evaluation results can also be challenged by differing interpretations that arise from underlying expectations and attitudes towards participation. Typologies of ways to perceive the role of participation in planning (e.g. Wesselink et al., 2011) could provide a means of understanding diverse interpretations, also encouraging discussion about the appropriateness of the goals of participation in the case concerned. Guidelines are needed also for supporting the use of the framework for process design. They should address linking of the success criteria with local goals, and consideration of limitations of each criterion as a goal.

**Next steps**

The methodological guidance presented here needs to be operationalized into concrete interview questions, performance measures, document analysis templates and other methods that will serve the case to be evaluated. The usability of the framework
needs to be tested in real-life cases, preferably in a variety of urban contexts. Once tested, recommendations on its use can be specified, including its applicability to different governance contexts. It may help in developing local processes especially if the criteria are tailored and performance measures are designed to take into account local interests. For example, in cities with well-developed systems of open data, it may be useful to include indicators on how the attempts to democratize data practices (see e.g. IBM, 2012) served stakeholders’ opportunities to produce usable input for planning. In applying the framework, it is important to focus on identifying and developing actions that lead to practical improvements and not to reduce the discussion to criteria and perspectives only. Discussing the quality and efficiency of collaboration will hopefully stimulate ideas for learning by experimenting with quality-oriented processes that also make use of residents’ capacities to improve the knowledge base of planning through such methods as crowdsourcing and virtual galleries of social visualizations, raising alternative framings of background data and planning solutions (Brabham, 2009; IBM, 2012).

Practitioners, residents and researchers should collaborate in developing the necessary skills for conducting evaluation projects. Research can facilitate the development of evaluation practices by producing theoretically and empirically based methods and analyses for specific perspectives, such as those of different silent groups. By analysing and learning from the experiences in applying the framework, evaluation methods and design approaches could also be refined to targeted toolsets for different types of strategic planning, such as those focusing on green infrastructure, nature management or public space. In the future, comparative studies on different evaluation and process design projects using the framework as well as other frameworks will enable advancements in theories and practices of collaborative planning and its evaluation. We hope our framework inspires such development and, by time, helps cities in building collaborative capacities to maintain local nature as a sustainable source of well-being for diverse people.

Acknowledgements

The research was funded by the Academy of Finland (project 110388) and the University of Helsinki Centre for Environment HENVI and Finnish Environment Institute (project Ensure – Enhancing Sustainable Urban Development through Ecosystem Services).

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