The role of the strategic environmental assessment (SEA) in local developments: some exploratory perspectives of the stakeholders

L. Lihtmaa & K. Sepp
Estonian University of Life Sciences, Tartu, Estonia

Abstract

During the last decades numerous tools have been developed and used to assist spatial planners in tackling the sustainability concept. In this article the strategic environmental assessment (SEA) is discussed in relation to local developments. The aim of the study was to explore the current understandings and practices of the role of SEA at the level of detail plans. The case study is based on the Tartu city region in Estonia. Analysis of research reports and interviews with key stakeholders were the study methods. The results show that SEA is not the expedient tool to address integrated sustainability at detail level. Indeed, if the SEA process is initiated, a relatively wide spectrum of impacts are assessed – even those that are not a part of the screening process at the first place. Different parties involved with the SEA process have various and even contradictory expectations that are frequently not met, thus dissatisfaction and low effectiveness of SEA are emerging.

Keywords: EIA, SEA, sustainability, dissatisfaction, expectations, local developments, detail planning, stakeholders, Estonia.

1 Introduction

Impact based planning has been agreed on Torremolinos Charter in 1983 [1] which lays the foundation to the planners in Europe. The most widely known definition of sustainable development (SD) is from 1987 by Burntland Commission [2]. The nature of both understandings is the distinction of natural and artificial environments. The difference between Torremolinos Charter and SD is the amount of special topics in the pillar of artificial environment. In Torremolinos Charter there are social, economic and cultural dimensions.
emphasised, while SD originally distinguished between social and economic aspects. During the last several decades SD conception has been interpreted in many ways by also altering the amount of pillars and its nature. In this article the three pillar approach is used by addressing the cultural aspects interactively in the social pillar.

The planning practice has changed and evolved significantly within the last couple of decades. Contemporary planning is more about collaboration than analytic rationale focusing on local context and public interest. The essence of spatial planning is to guide development towards sustainability by ultimately deciding on physical structures. Although Dixon and Therivel [3] argues that the success to manage for example cumulative impacts depends above all of ways to change the human behaviour, there is evidence of smart and green physical solutions that have reduced the cumulative impact. This physical determinism is clearly evident in the famous case of Curitiba, where for example the bus tubes have been introduced [4]. Thus the rational logic and smart design of physical structures can change the behaviours, thus lowering the negative impact and promoting sustainability. It is clear that spatial planning is not the only solution to answer all urban problems – still it is one critical way to address the issues related to the quality of life and sustainability of built environment.

This article focuses on urban development which is divided into two levels in Estonia. The first is the comprehensive level called the master planning. The second level which follows the guidelines of the first one is precise and legally bounding on land use and construction, therefore called the detail planning (DP). Detail planning is playing an important role in implementing the concept of sustainable development and mitigating climate change. The construction level belongs mostly to the domain of standards, norms and architecture. Although, buildings determine on large extent the impact on environment, green buildings are still voluntary to implement and seldom considered – mostly due to the lack of awareness and economic means. Thus, as the public is unable to influence the decision on the building level, detail planning is the final collaborative decision on the built environment that considers public interest.

Mostly due to the increase of population and consumers’ demand the pressure on resources and ecosystems is increasing. So it becomes more evident that more efforts have to be made to promote sustainability. Therefore a lot of concepts, tools and procedures have been introduced and some are practiced to support the decision making of planning practice. Those tools are not supposed to substitute spatial planning itself, although there is some ambiguity in this matter. In spatial planning the most widely used tools are SEA and its several development variations like cumulative impact assessment (CIA), social impact assessment (CIA), health impact assessment (HIA), etc. Recently metabolic impact assessment (MIA) has been further developed [5]. On the other hand there are commercial certification schemes like BREEAM Community, LEED for neighbourhood emerged [6]. In the U.S.A. the municipalities are using development impact assessment (DIA) to evaluate the development proposal.

Although there are several tools that are developed and used, SEA is still the only formal tool in the EU to manage the environmental impact of spatial plans.
Notwithstanding, SEA is not a tool per se. The purpose and the essence of the establishment of EIA at the first place was about environmental aspects that were neglected in decision processes [7]. SEA is supposed to be used in certain polices, plans and programs (PPP) (SEA Directive) [8]. Within PPP spatial planning is an exception. Based on Torremolinos Charter it is evident that managing impacts is the core issue of spatial planning. This means if the planning process is working perfectly by delivering sustainable solutions there is no need for special procedures like SEA. Unfortunately planning is not perfect, thus special efforts to assess environmental impact of the proposed development is sometimes required.

Some studies [9, 10], several workshops and private discussions have indicated that there is some disagreement and dissenting opinions about the means and ends of the SEA, especially in the context of detail plans.

One question is about the difference of SEA and planning. As the SEA directive defines SEA and its purpose comprehensively, covering all aspects of SD, this question becomes even more evident. Suppose the three pillar model is used to define sustainable development. Thus, SEA must integrate and address all the sustainability aspects of the planning proposal. On the other hand the task of spatial planning is quite similar – to deliver sustainable solutions. The difference between planning and SEA could be determined by the significance of the impact that are likely to emerge. Significant impacts should be addressed more explicitly by SEA, while other impacts should be at the domain of spatial planning.

There is a lot of debate in SEA literature about the extent which SEA should develop toward sustainability assessment by integrating socio-economic and natural environmental aspects. Some argue it is a favourable development [11]. Others are against it by arguing that SEA will lose its essence and fail to protect the natural environment due to the trade-offs between nature and socio-economics [7]. One aspect that is not widely discussed is the difference between polices, plans and programs which are addressed in the SEA directive. The integration of socio-economic aspects of sustainability in SEA might be more relevant to those PPPs that are not spatial plans. Considering the nature of spatial planning it can be argued that by promoting this integration, the capacity of spatial planning to deliver is seriously doubted. This situation hinders fruitful cooperation between SEA and planning.

Although detail plans are formally classified as strategic documents, most of them tend to be projects and therefore could have virtually none of the characteristics of strategic decisions. In practice this could result ambiguous decisions of assessment methods and procedures.

These and other dilemmas have resulted in various expectations to the SEA process by different stakeholders. It is quite clear that all, frequently contradictory, expectations cannot be met in practice. Furthermore, as the expectations are shattering, dissatisfaction with SEA process is emerging, thus it could explain some of the quantitative studies that report dissatisfaction or low effectiveness of the SEA [9]. Considering the previous, the aim of this article is to advance knowledge of various expectations considering the role of SEA in
current practice and to focus on the detail level of planning decisions. To address the main aim of the study, two research questions are proposed:

1. How is SEA addressed in detail planning practice and what are the expectations of the stakeholders participating in SEA process?

2. To what extent SEA is considered and addressed as an integrated sustainability tool; what kind of special efforts are used in evaluating and delivering sustainability in detail planning?

### 2 Methodology

Based on the nature of the research questions, the approach of inquiry can be categorized as exploratory with a distinct descriptive goal. Although an attempt is made to explain some quantitative studies, this study cannot be classified as explanatory. The appropriate research strategy to answer the proposed questions was case study. Although the case study is usually selected to tackle ‘how’ and ‘why’ type questions, it can also be used to answer ‘what’ type questions in exploratory approach [12].

The main focus of the research aim was on local planning authority (LPA) which in Estonia is local government that can be divided into rural and urban municipalities. Most of the detail planning occurs in urban areas, therefore Tartu city and its region as a case was selected. Tartu as the second largest city in Estonia and the size of around 100 thousand inhabitants provides a reasonable number of developments that require a number of officials to manage the planning activities, therefore enough material for the inquiry. To complement the experience form the city, three rural municipalities bordering Tartu city were also investigated. The municipalities of Ülenurme, Tartu and Tähtvere were selected due to the fact that during the period of 2004 - 2007 there was a lot of pressure on small as well as several hundred hectares of development. Within a case study a variety of methods can be used. Considering the questions and aims the qualitative approach was selected.

The respondents of LPAs were full-time planning or environmental specialists who had at least two years of work experience in the corresponding municipality. These criteria should ensure adequate professional expertise and knowledge of the local situation to satisfy the inquiry. As the city is more specialized and the amount of developments is larger than in rural municipalities, two specialists were selected. To reflect knowledge and experience from other side of LPAs an EIA-SEA expert with 12 years of track record and the scrutiny specialist (15 years of experience) of Tartu region were added to the list of respondents. Thus the total number of respondents was seven.

Empirical data was collected with expert interview method which belongs to a group of semi-structured interviews. The interview was chosen because of the direct and flexible nature that fits the selected qualitative and exploratory approach. Expert interview was used because it was necessary to collect data from certain (expert) groups. All the interviews were audio recorded to minimize
the distraction of taking notes during the discussion and to secure the accuracy of statements in further data analysis.

Although the main goal was to collect data with mostly open discussions with respondents, it is clear that an expert interview must be at least partially directed. This required a framework and structure with relevant questions to be worked out. Based on the research questions and using methodological guide [13], the interview structure was roughly divided into three parts. Although the objective and questions of each part of the structure had to be customized considering the role of the respondent in practice, the general framework stayed the same. In accordance with good practice the open-ended questions were asked first, to guide the respondents but not to lead them.

At the beginning, every respondent had the opportunity to describe the understanding and experience related to EIA and SEA as general activities. More leading questions regarding SEA performance, effectiveness, neutrality and independence of impact assessors were provided at the end of the first part. The respondent specific topics were as follows:

- LPA – function of scrutiny
- Impact assessor – relationship of impact assessment and planning; creativeness and effectiveness of SEA; cooperation with scrutiny
- Scrutiny – routine of scrutiny; quality control and general issues of environmental impact statements (EIS)

The second part of the interview was designed more explicitly to answer the proposed research questions. The objective was to get insight into how SEA is and should be addressed in detail planning. Topics like impact significance, screening, cumulative impacts, the nature of SEA in DP, strategic decisions in DP, alternative uses of screening statements were the basis of discussion. The respondent specific objectives were as follows:

- LPA – SEA as a tool in detail planning; SEA contribution on general planning outcome; the extent that SEA duplicates the planning process
- Impact assessor – quality of screening; criteria in screening
- Scrutiny – experience on screening process and quality

The main objective of the third part of the interview was to get insight into how sustainability is monitored during the planning process and to what extent the outcome (a confirmed detail plan) is evaluated if at all. The discussions with scrutiny specialist and impact assessor were about sustainability assessment; the responsibility to observe and act; performance and conformance; standardisation and certification.

Interviews were conducted by the author personally between October 2011 and January 2012. The first contact and the time of the interview and was agreed upon by e-mail. All the selected respondents agreed to participate in the study. No questions or materials were sent before the meetings. The interviews lasted from two to three hours and took place at the workplace of the respondent. The
interviewees gave oral permissions to record and store the recordings and to use for research purposes only. It was agreed that the research report does not provide direct quotes from the respondents.

All the recorded interviews were partially transcribed by the features relevant to the research questions. Considering the nature of the research, a complete transcription was abandoned. Mostly this approach was chosen due to the impersonal study, thus making the nuances of communication (exact word order, emphasis of language) irrelevant on the results. All the statements were compared by according to the interview structure. The distinctive differences and common elements of the transcriptions were analysed and the main results of the inquiry were synthesized.

Based on the methodology it is evident that the study results cannot be generalized to all municipalities, assessment experts and scrutiny specialist. Still, the results are in accordance with the evidence found in SEA literature and can be therefore used to explain some of the aspects presented in earlier quantitative studies.

3 Results

3.1 General comments on EIA and SEA

Clear distinction of the different nature between LPAs, impact assessor and scrutiny specialist became evident. Impact assessor and scrutiny specialist emphasised the analytical ‘EIA’ approach and natural environment pillar of sustainable development. The LPAs on the other hand considered the social and economic aspects more important to tackle in SEA.

The overall necessity of SEA was much criticized by the rural LPAs. For example the contribution of the SEA process was not evident in the comprehensive planning of a municipality. The SEA process is considered expensive, time consuming and complex to administer for the small LPAs. Assessors reflected that there are plenty of unnecessary assessments carried out that have not justified the purpose of SEA. SEA is sometimes initiated if the planning process has been stuck and SEA is seen as a solution to move forward. Another common reason for SEA initiation is uncertainty and the pressure of the public interest. Clearly, in those cases the contribution to the different environments could be minimal. On the other hand, as the impact assessor has mentioned, sustainability in the form of equity and cooperation is indeed promoted.

As expected, impact assessors consider themselves independent and neutral although they are financed by the developer. Arguably there is no reason to favour their contractor in proposing environmental solutions which sometimes are expensive to implement. Professional developers understand why EIA / SEA is required and therefore expect clear and professional results. In difficult cases, if the outcome of the planning and impacts assessment could result in a negative decision, there is always a prepayment. LPAs find the assessor to be carrying out the agenda of the developer. Assessors agree that in detail planning it is true,
because the site alternatives are not considered on this level. If the planning proposition is compliant to the comprehensive plan, assessors just try to mitigate the impacts.

Scrutiny function was criticised by the assessors for exceeding their authority. The respondent of this study argued that within the last three years he had never succeeded to submit the environmental impact statement (EIS) at the first time due to the deficiencies pointed out by scrutiny. If the deficiencies are not relevant to the context, as it sometimes is, assessor’s professionalism is compromised and the planning decision is postponed. The scrutiny specialist of Tartu city region could not confirm this criticism. LPAs argued in favour of scrutiny by praising their professionalism and the contribution to the impact of the assessment process and therefore to the decision.

Usually the SEA is quite a standardised activity and the creativity depends on the context and the amount of opposition of the case. This means that assessors mostly use a checklist that fits the particular case and context. The EIS is structurally much standardised, which arguably helps to implement the quality control as the peers expect to find certain parts in certain places in statements. Scrutiny had a quality checklist which is not used in practice any more. The system was abandoned due to the failure of system design – data collection was not based on digital database, the results were not processed and decided upon.

3.2 The role of SEA on DP

Scrutiny has no noteworthy experience of screening process and quality screening statements. The interviewed impact assessor has not witnessed a screening statement that was prepared by LPA as exhaustively as impacts assessors are used to composing those themselves. Therefore they recommend outsourcing screening services to ensure the quality of justification whether or not to indicate the SEA.

As expected, the size of the area as criteria to initiate the SEA is not uniform and depends on the propositions of development and local context. Indeed, an impact assessor argued that by the increase of the area there is higher probability that due to the complexity of development SEA is required. Opposing the previous statement, one respondent of a rural LPA argued that they do not see the necessity of SEA even on recent initiation of the 700 hectare development which had clear distinction of dense urban structures to be built. Scrutiny has no clear view on this issue, but is rather confirming the assessor’s statement.

Among the interviewed LPAs the SEA process is rarely initiated due to the lack of awareness of mitigation possibilities on the detail level. The second reason why SEA is seldom carried out was the value for time and money that were not considered proportional to use on most detail plans. The average effectiveness of SEA process is considered low.

To describe the nature of the SEA it is needed to emphasise the framework in which the SEA operates. The approach and methods of impact assessors are mainly analytical and have evolved and therefore based on EIA methodology. Screening criteria which are outlined in SEA legislation are biased in favour of the natural environment. The scrutiny is subject to the Ministry of the
Environment, thus has the authority only in the environmental aspects of EIS. At the same time the expectations of LPA are more socio-economical in nature. The respondents of LPAs have argued that social impact assessment and economic considerations are weak in SEA practice. All the respondents agreed that the nature of SEA is to address only significant impacts that are too complex to be solved only with spatial planning. The second emphasis was about the holistic and integrative principle of SEA which was described as the considerations of different sustainability aspects within one (or few) significant impact(s). To put it in another way, SEA is not supposed to be a sustainability assessment tool that could be used to evaluate the sustainability of an entire proposal. Furthermore, all the LPAs argued against the idea to use SEA in every planning proposal. On one hand SEA was not considered a proportional tool to this task and on the other hand the effectiveness or value-added aspects of SEA were doubted.

Although detail planning is formally considered to be an activity of strategic nature, it might not be the case in practice. Impact assessors considered the detail plan a project level that has little in common with strategic decision making. The respondents argued that on the detail level there is no option to propose the location alternative. In the practice of detail planning there are frequently cases that impact assessors have a task to carry out project based EIA within SEA process. Usually the impact assessor is selected with the procurement process. The assessors, as expected, shape the price and allocate the time taking into account for the purpose of the planning proposal, in context of the area and the nature of the SEA. During the scoping process, as it is rational to avoid the double assessment, they are insisted to also carry out the project level EIA.

The interviews revealed that cumulative impacts assessment in practice is a poorly understood issue. There were little to no experience on assessing those impacts, therefore mostly theoretical implications were discussed. The general conception of cumulative impacts was understood similarly between respondents. Indeed, only Tartu city among LPAs had a clearer point of view that reflected the purpose of a local government to manage the built environment. Mostly traffic problems, lack of schools and lack of kindergarten places were mentioned in relation to cumulative impacts. The synergic impact was predominantly an unknown category of impact to the respondents.

### 3.3 Monitoring and evaluation of sustainability

In practice, LPAs are neither monitoring nor evaluating the sustainability of any plans in any special way. There are no official procedures or indicators developed and used to assess the impact of the plan in relation to governance and management. Yet, the respondents consider the existing plans to be sustainable. In the same way, the respondents of Tartu City admitted their lack the competence in some aspects of economic and social implications while coordinating the detail plan. It is evident that mostly the described deficiencies are related to those aspects that are addressed by local governments of the US within a process called development impacts assessments (DIA).
4 Discussion

As expected, some of the dilemmas that are widely debated in SEA literature also emerged during the study. The results clearly show two dilemmas that can be related to the proposed research questions.

The first is the debate whether SEA is and should be more strategic or more project level assessment in the context of detail planning. The ambiguity of this issue has led to a situation in practice that within a single detail planning process it is sometimes required to carry out both SEA and EIA. In this case the impact assessor has to address the strategic decision of a comprehensive plan and at the same time mitigate the externalities of the detail project.

Peterson’s study [9] showed that all studied stakeholders, even LPAs, are considering EIA in general to be an unimportant tool. Partly this can be explained by the different expectations that are not met within impact assessment procedure. Peterson’s earlier paper [10] indicated that expectations of the stakeholders vary among SEA objectives’ and SEA effects. Based on this study, the planners of LPA of Tartu city are expecting from SEA 1) solid arguments against the proposal of the development and 2) creative influence on improving the decision. Unfortunately those expectations are frequently not met due to the lack of skills or, moreover, due to the nature of detail plans. The interviewed impact assessor argued that is not the exercise of SEA to suggest neither the alternative site nor the alternative activity if the proposal is conformal to the comprehensive master plan. Therefore, assessors see their role in assisting the developer to achieve their goals mostly by proposing solutions of mitigation that are in accordance with standards and norms. It is clear that in this situation there is virtually no evidence of strategic decision and SEA exercise and methodology is more similar to the project level EIA.

It is evident that assessors’ arguments are based on the conception of perfect hierarchy of planning, thus making consideration and discussion of already agreed upon decisions quite vain. LPAs on the other hand have admitted that their comprehensive plans are not that perfect and moreover not so precise. Therefore, one aspect of unrealisable expectations lies in the development plurality that a comprehensive plan legitimates through zoning. This leads to fragmentation of opinions and brings out a contradiction between the LPA planners and politicians. Politicians have quite liberal views on this issue due to relying to market superiority, while the planners emphasise the duty to react in a more regulative way.

The second debate that emerged and therefore must be emphasised is the relation between SEA and the concept of sustainable development. Obviously SEA must contribute to the SD and it is clear that it does, because of the essence of SEA to aspire for the low impact solutions. Therefore the proposed research question was formulated rather to what extent sustainability should be integrated to SEA process.

The empirical evidence of this study shows that in practice the focus of SEA is on significant impacts and that is in accordance with legislation. There is no evidence that practitioners are using any theoretical concept for screening and
scoping. The decision of impact significance and its extent is decided upon the proposal and context. This means that the sustainability itself is not the explicit reason to initiate SEA. Furthermore, the alternatives are also worked out without any conceptual indicator in mind. SEA in detail planning is more an EIA exercise that is busy mitigating the externalities of the projects to the level of norms and quantitative requirements.

The sustainability integration in SEA process depends first of all on how sustainability is conceptualised and addressed. Although the three pillar sustainability model is much criticised and there are several different integrative approaches developed especially in relation to SEA [14], it is clear that within SEA all three pillars can be addressed. Although, it shows that in practice this conception is not the basis of screening and scoping of impacts, but rather an ad hoc analysis of significance in relation to context is used.

Based on this study, it can be claimed that SEA is not considered an expedient tool to address the integrated sustainability in detail level. The main arguments to support this conclusion are twofold: 1) SEA is focused (in theory and practice) on significant impacts, not on integrative sustainability assessment; 2) considering time, management efforts and expenses of the SEA process, it is not a proportional measure to address a wider range of impacts of the detail level.

In detail planning SEA is initiated mostly for four reasons: 1) environmental impact significance is determined in legislation; 2) environmental impact is significant, but initiation is not required by legislation; 3) pressure of public interest, although impact might not be significant; 4) planning process is stuck, although impact might not be significant. Frequently the nature of detail plans is more similar to project level than strategic level, thus making the SEA less suitable for the purpose.

Two broad categories can be suggested to classify the dissatisfaction or the unimportance of SEA by stakeholders. In the first category stakeholders have expectations which are not met. This means: SEA is initiated needlessly; no significant impact to assess; assessors’ contribution is weak; SEA is not stating the argument against the developer; SEA is not protecting the public (neighbourhood) interest; SEA prescribes expensive mitigation measures; SEA is not delivering the detail and precision of EIA; SEA is not delivering socio-economic solutions; 

In second category stakeholders have no expectations to SEA. This means: SEA is considered an unnecessary tool: impact assessment is the domain and natural part of spatial planning; SEA is not a proportional (time and expenses) measure.

A somewhat surprising aspect that emerged during the interviews is that none of the parties studied saw the possibilities of using the screening statements in further activities. LPAs have not used it to assess the plans; the planners are not using it as a starting point for their planning. The screening was considered a formal procedure only to motivate the decision of EIA initiation. Furthermore, it is evident that there are strong similarities between screening statements and LPAs planning precondition statements (the starting position of a local
government in detail planning). The interviews confirmed the assumption that the rationale of planning precondition statements are worked out analogously to the screening statements. Therefore it is quite unexpected that the LPAs are not integrating those activities.

5 Conclusion

The starting point of this study was the question of variance between different practitioners about the role that SEA should and could play in detail plans. Some interest to this question has emerged during professional seminars, private talks and studies. Several dilemmas that are reflected through SEA literature emerged during the interviews. This outcome confirmed the assumption that the ambiguity about the SEA in detail level witnessed is similar to other inquiries.

Impact assessors and scrutiny are more qualified in using project based impacts assessment approach and methods while LPAs emphasise the need to address mostly the socio-economic aspects in strategic environmental assessment of detail planning. Within detail planning the assessor is sometimes required to carry out both SEA and EIA. None of the respondents did consider SEA as sustainability assessment tool, although they agreed that SEA promotes sustainability. There is little evidence that LPAs are concentrating their efforts especially on sustainability at the detail level, but there is strong belief that the planning is delivering it.

As SEA is not initiated with every development, and as the aspects of natural environment prevailing in SEA program and methods, the question of spatial planning effectiveness to promote and manage the integrated sustainability is raised. It might be asked how ‘non-significant’ – especially cumulative and synergetic – impacts should be managed with spatial planning; what is the sustainable performance of local (detail) plans; are the actual developments in conformance with the higher tier plans and polices. These issues are for the subject of further inquiry.

References


