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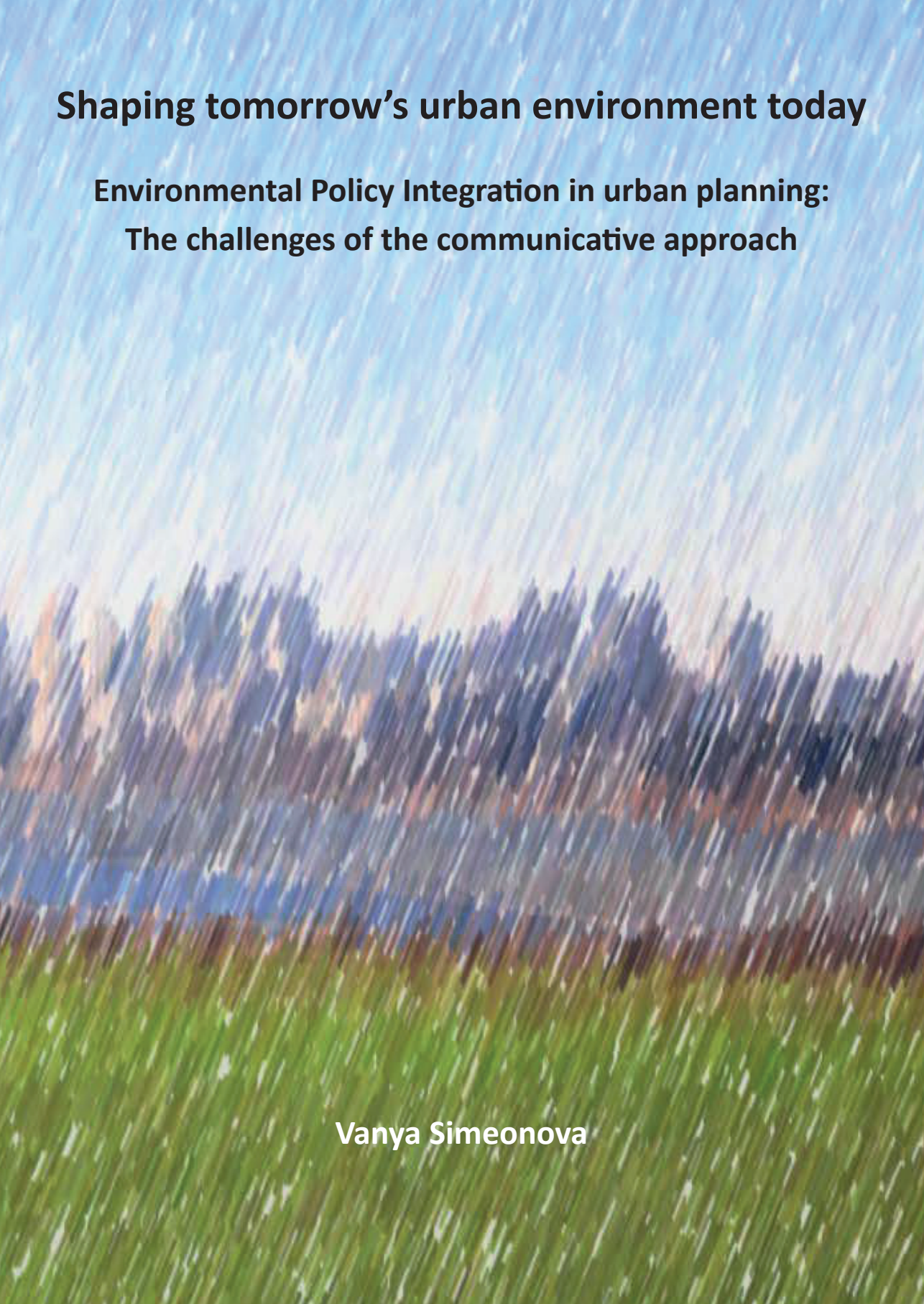
Environmental Policy Integration in urban planning: The challenges of the communicative approach



Vanya Simeonova

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Shaping tomorrow's urban environment today

Environmental Policy Integration in urban planning: The challenges of the communicative approach

Vanya Simeonova

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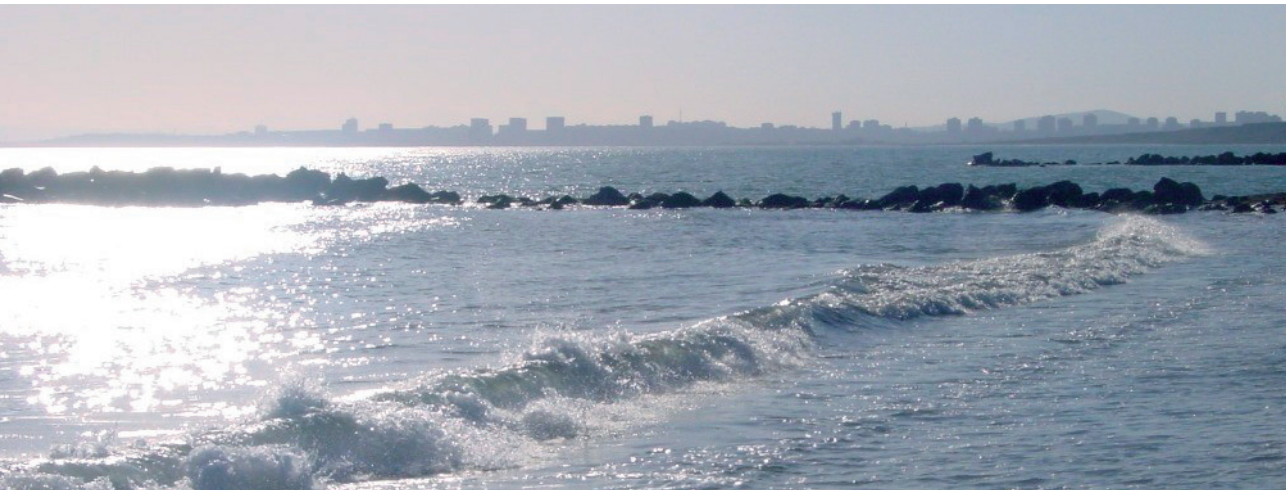

CHAPTER 1

Introduction

This thesis provides an insight into the challenging field of environmental policy integration (EPI) and its theoretical discourse. It sheds light on how EPI may or may not work, and explores its role in achieving urban sustainability while dealing with contemporary planning dilemmas that relate to the on-going process of urbanization.

1.1. Reconciling environmental policies and urban planning

The twenty-first century has been called the urban century, with more than half the world's population living in cities (United Nations, 2014). Cities around the world, however, are struggling to accommodate their rising populations and address the multidimensional challenges of urban development. If current trends continue, few countries stand to secure the benefits of sustainable urban development. Urban sustainability presents intertwined issues of environmental protection, economic viability and social equity, while its ultimate goal is cities that are organized as self-sustaining systems with the smallest possible ecological footprint (UN-Habitat, 2012; EEA, 2014). Hence, sustainable cities foresee efficient use of environmental resources such as land, energy and materials, while pollution and environmental degradation are kept to a minimum. However, cities cannot be sustainable over the longer term if their economic growth impairs the environment that they depend upon. In this regard urbanization has been considered a major obstacle in achieving urban sustainability, particularly in Europe (Coutard et al., 2014; EEA, 2014).

Urbanization often leads to inefficient land use, intensified consumption of natural resources and loss or fragmentation of valuable landscapes and natural areas (UN-Habitat, 2012). Rooted in profound socioeconomic development worldwide, urbanization is not expected to halt in the near future (UN-Habitat, 2012; United Nations, 2014). This applies also to Europe, where currently four of every five Europeans live in urban areas (United Nations, 2014; Coutard, 2014). In this regard questions are raised about the impact of urbanization on the quality of life in European cities and the pathways to achieve sustainable urban development (EEA, 2014). These concerns have already for a while been on the agenda of the European Member States which have agreed upon common principles and strategies for urban development policy, written down in the "Leipzig Charter on Sustainable European Cities" (Leipzig Charter, 2007). These agreements were subsequently encompassed in the European 2020 strategy for smart, sustainable and inclusive growth (CEC, 2014; see also Franke et al., 2012). This strategy addresses a number of highly needed actions which determine the course of contemporary urban development. Among these are actions for decoupling economic growth from resource use, supporting the shift towards a low-carbon economy, and preserving valuable landscapes and nature. This implies that managing urban growth in a sustainable way requires sound urban planning systems that integrate economic, social and environmental issues in order to allow a reduction of land-use footprints and environmental degradation. However, the integration of environmental protection in urban development activities that promote economic competitiveness represents a major challenge to policy makers (Franke et al., 2012; EEA, 2014). This challenge has been addressed by the Environmental Policy Integration principle, which was introduced in the European policy framework (EEB, 2003).

EPI implies that environmental considerations must be integrated into other policies, with a view to achieving sustainable development (EEA, 2005b). Lafferty & Hovden (2003) define EPI as *"The incorporation of the environmental objectives into all stages of policy making in non-environmental policy sectors, with recognition of this goal as a guiding principle for the planning and execution of policy"* (Lafferty & Hovden, 2003). EPI can be seen as an operational principle for implementing the sustainable development goal. It addresses the environmental consequences of economic activities that are not properly (if at all) accounted for by sectoral policies (Briassoulis, 2004). The recognition of the EPI principle among policy makers and planning scholars has led to a shift in focus from conceptualization to contextualization of the goals of urban sustainability in the urban planning practices (Berke & Conroy, 2007). The fundamental questions asked here concern the effectiveness of urban planning systems to deliver urban sustainability in different countries and within different socioeconomic perspectives. One of these is the dilemma that contemporary planning systems face in dealing with two different forms of urbanization, i.e. intensification of urban functions in compact inner cities and urban expansion ("urban sprawl") (Williams, 2000; EEA, 2009; EEA, 2014). One question that is often raised in this respect is whether it is wise to continue to build new houses in densely populated urban areas that lack the environmental quality and green amenities that urban residents desire. Another issue is which urban forms can ensure that environmental ambitions are being met in terms of for example resource efficiency, land use and pollution prevention (Williams, 2000; Guy & Marvin, 2000). While compact cities are challenged to prevent intensification of environmental problems, such as air pollution, creation of urban heat islands, traffic congestion, noise and lack of green areas, urban expansion raises such issues as loss of ecosystem services, land degradation, deterioration of nature areas and biodiversity loss (Williams, 2000; EEA, 2006; EEA, 2009). Hence, both forms of urbanization bring various environmental pressures which need to be integrated into urban land-use plans. The EPI principle provided a potentially suitable answer to this quest for integration while it has been evolving as a principle in the spatial planning policy.

While spatial planning has been already widely perceived as a cross-sectoral policy, its role in envisioning environmental consequences of urban land-use developments and preventing the rise of spatial-environmental conflicts has become more significant in the last decade (UNECE, 2008; CEC, 2011a). Compared with previous regulatory land-use planning approaches, spatial planning policy became distinctive for: encouraging long-term strategic visions on sustainable territorial development; providing the spatial dimension to improved integration across a range of sectoral policies and improving engagement with stakeholders and the public (Nadin, 2007). At the local scale, these contemporary features of spatial planning have been considered from the perspective of integrated planning solutions which may be helpful in designing more sustainable urban spaces e.g. by formulating environmental standards, such as thresholds for air

pollution in different urban zones, positioning urban functions in order to restrict sprawl into green open spaces or optimizing multiple land uses with a view to efficient use of resources. Although not widely spread, attempts to achieve EPI by integrating substantive environmental quality criteria into urban land-use planning processes have become an emergent practice (Miller & de Roo, 2005; CEC, 2007; EEA, 2009; Stigt, 2013). However, barriers such as the increasingly fragmented systems of governance still often impede the EPI process in urban planning (Franke et al., 2012). These include the fragmented institutional frameworks and organizational structures that are responsible for implementing spatial planning and environmental policies at national, regional and local level. As a result, the environmental and spatial policies are often isolated and not well coordinated across different governmental levels and jurisdictions. Moreover, a strongly procedural and often top-down attitude to urban land-use planning and environmental protection alone has proven to be inefficient in resolving a wide range of urban environmental challenges evident today (CEC, 2011a; CEC, 2011b; CEC, 2014). Meanwhile, in the spirit of the current neo-liberal and market-driven times, urban land-use plans still often remain dominated by vested economic interests, rather than aiming at achieving urban environmental quality as top priority (Allmendinger, 2011).

There seems to be no overarching scientifically based approach that provides answers to these challenges and sets out guidelines for achieving EPI. However, a broader scientific debate and political endeavours are underway and are enhancing the role of urban planning in achieving EPI (CEC, 2014; Coutard, 2014). A number of studies have addressed EPI in urban planning by defining cities as series of interlocking systems that include ecological and socioeconomic aspects (Termorshuizen & Opdam, 2009; EEA, 2009; Beatley, 2010; Stigt, 2013). However, to apply these ideas in routine planning practices requires planning approaches that address the multiplicity of such urban systems and the link between their physical environments and socioeconomic functions. An integrated environmental and spatial planning approach, therefore, should be aiming for planners to be able to envision the environmental capacity of their urban areas, while determining the possible kinds, levels and geographical distributions of development (Berke & Conroy, 2007). This task requires planners and other professionals to work across and beyond their disciplinary field and institutional frames. Moreover, the choices among environmental priorities in urban planning tend to depend on the ability of multiple actors to collaborate and achieve consensus, rather than on legal incentives or new technical solutions alone (Campbell & Fainstein, 2003; Healey, 2007).

Despite the fact that EPI has been an acknowledged need in urban planning, the reality is that it is currently not broadly addressed across Europe and its effective implementation remains problematic. This thesis represents a step further in the quest for EPI in urban planning. It explores the responses of planning systems to the current EPI challenges, with the goals of gaining insight into the role of EPI in integrating

environmental concerns in urban land-use planning processes and of identifying the most promising approaches for achieving EPI.

1.2. The urban sustainability discourse: back to the roots

The enduring debate on the ability of different urban development forms to provide a better environment has evolved into the imperative of urban sustainability and the concepts that followed, such as "sustainable cities", "resilient cities" and so forth (Franke et al., 2012; Jabareen, 2013). Yet, urban sustainability remains a fundamental goal of local officials and professionals among which planners and environmentalists. However, to achieve sustainability as embedded in the Brundtland Commission's report (UNWCED, 1987) requires considerably more ambitious policies than previously expected (CEC, 2011b). With the evolution of the EPI principle based on the concept of sustainable development, a key question arises: in what ways can urban sustainability be a useful concept for urban planners?

The goal of sustainable cities, after all, may be too hard to reach and too holistic to be operational, i.e. it may not easily break down into concrete, short-term actions (Berke, 2002; Campbell & Fainstein, 2003). Yet, urban sustainability serves as overarching and superlative notion in urban planning. It promotes an increase in local self-reliance regarding natural resources, and protection of the integrity and productivity of local areas in order to reduce environmental impacts (Campbell, 1996). In this regard, urban sustainability has been often illustrated as a "triangular structure" of relationships among three key interests: economic growth, fair distribution of this growth, and prevention of environmental degradation (Munasinghe, 1992; Campbell, 1996) (Figure 1.1). These relationships are characterized by opposing tensions and tendencies as well as by synergetic integration. Setting sustainability as a desired target can be used as a model against which to objectively judge the extent to which urban plans adhere to sustainability concerns, and to confront and evaluate urban sustainability. The closer a certain plan is to the centre of the target, the more sustainable it is deemed.

The urban sustainability concept provides a pathway to a desirable and appropriate outcome. The current challenges of planning towards the sustainable development goal are to accommodate different developmental interests and to envision spatial-environmental pressures. These processes are embedded in the EPI principle. This means directing the quest of sustaining the interests of actors across scales and policy sectors, addressing and resolving conflicts, and promoting a better quality of life for all (Campbell, 1996). For this planners need both technical and institutional approaches that integrate different aspects of urban sustainability. As Campbell (1996) suggests, combining process-oriented and substantive elements in urban planning can result in the use of both collaborative practices and technical mechanisms for integrating

environmental and economic goals. The role of EPI principle in this process is to provide the operational approaches towards this integration and make it possible for planners and other actors to envision needed trade-offs and the potential win-win solutions towards urban sustainability (Figure 1.1.).

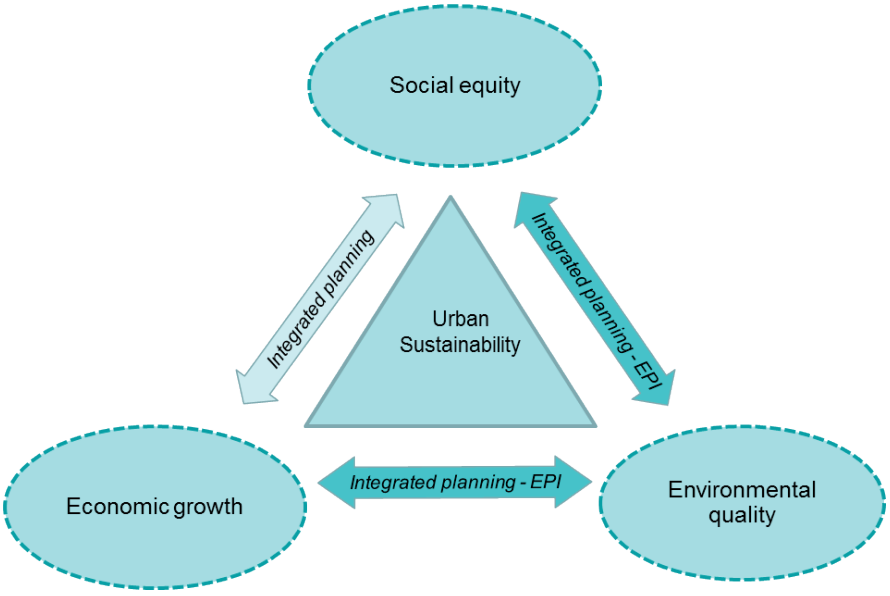

Figure 1.1. *Urban sustainability triangle and EPI (after Munasinghe, 1992)*

1.3. The quest for Environmental Policy Integration (EPI)

The contemporary urban sustainability discourse highlights one of the enduring problems in classical sociological theory: how various sectors of society are interrelated and how these can be integrated in order to meet societal needs (Parsons, 1971; Abercrombie et al., 2000). Against the background of socio-economic globalization and the associated environmental challenges, some political commitments have arisen that include the need for policy integration and have led to a quest for EPI (OECD, 2001; Lafferty, 2002; Lenschow, 2002). These commitments reflect the need for more dissolved political and institutional boundaries as well as multi-level interdependencies among institutions, environmental media, social and economic issues, and policies. Furthermore, they point to a multi-level governance perspective and an inter-organizational scale at which problems can be effectively addressed. For example, national and subnational governments are often not able to provide effective responses to environmental challenges (Healey, 2003; Hertin & Berkhout, 2003; Gualini, 2006). At the same time, it has become evident that sectoral, uni-dimensional, uni-disciplinary and uncoordinated policies

do not serve well the cause of sustainable development (Nilsson & Eckerberg, 2007; Jordan & Lenschow, 2010). Historically, relatively autonomous policy sectors have dealt with distinct policy issues, leading to sectoral specialization and vertical organization of administrations at both EU and national level (Hertin & Berkhout, 2003). The result is a well-documented general lack of coherence, coordination and cooperation among policies, generating inefficiency in implementing sustainable development measures at different levels of governance (Persson, 2004; Nilsson & Eckerberg, 2007).

The principal problem is that the traditional policy frameworks do not provide a satisfactory supply of institutional arrangements to meet the demand for policy making generated by complex environmental policy issues (Briassiulis, 2004; Jordan & Lenschow, 2010). This is particularly the case when solutions need to be found to specific environmental problems across multiple policy sectors and governance scales. During the last twenty years, EPI has proliferated as a key policy principle of modern environmental governance (Lenschow, 2002; EEB, 2003; CEC, 2004; Nilsson & Eckerberg, 2007; Mullally & Dunphy, 2015). EPI has been endorsed through international political commitments, such as the 1992 Earth Summit in Rio de Janeiro (Brazil), which adopted Chapter 8 of Agenda 21 (UNCED, 1992) i.e., the EU 6th Environmental Action Programme (CEC, 2002). The efforts to fulfil EPI requirements, however, have had little success so far (EEA, 2005a; Nilsson & Eckerberg, 2007; Jordan & Lenschow, 2010). The main reason is that EPI is one of a number of general principles and it has not been considered as a legitimately binding rule, but an objective whose attainment depends on the voluntary support of the institutions involved.

Since the establishment of the so-called "Cardiff process" in 1998, EPI has been assigned an institutional impetus (CEC, 2004; Persson, 2004; Lenschow, 2010; ESPON, 2012). Within this process, questions regarding the challenges of achieving EPI in different policy sectors and scales have been placed on the agenda of policy makers, (Lenschow, 2002; Persson, 2004; Briassoulis, 2004; Nilsson & Eckerberg, 2007; Jakob et al., 2008). Assuming that general political commitment is in place, however, EPI should be reflected in the sectoral policy strategies as well as in the instruments through which these strategies are implemented.

During the last decade, while EPI has attracted the attention of scholars in the fields of environmental, social and economic sciences, few analytical reviews have yet provided much in the way of explanation of the process or an indication of possible means towards achieving EPI (Lafferty & Hovden, 2003; Persson, 2004, Nilsson & Eckerberg, 2007; Jordan & Lenschow, 2010; Stigt et al., 2013; Runhaar et al., 2014; see also this thesis, Chapter 2). Meanwhile, the EPI discourse has met with the problem of differences in the meaning and multiple interpretations of "policy integration" in various institutional contexts, which has led to different operational expressions and approaches. Systematic knowledge on how to address and achieve EPI, in different policy sectors and scales and regarding different environmental issues, is still in development

(EEA, 2005a, b; Nilsson & Eckerberg, 2007; Jacob et al., 2008; Jordan & Lenschow, 2010; Mullally & Dunphy, 2015). Particularly, more knowledge is needed on the available EPI approaches and their suitability for producing desirable environmental outcomes in different policy sectors. Furthermore, questions have been raised with regard to the institutionalization of EPI in policy development and decision-making practices (Persson, 2004; EEA, 2005b; Nilsson & Eckerberg, 2007; Jacob et al., 2008). Environmental policy scholars suggest that EPI can take place at different stages of policy making on the issue concerned, across both the intra- and inter-sectoral levels (Lafferty & Hovden, 2003). The critical question is how one chooses the correct means for realizing EPI, while overcoming common difficulties encountered in coordinating the environmental responsibilities across different policy sectors and across different governmental levels (Hertin & Berkhout, 2003; Nilsson & Eckerberg, 2007; Jacob et al., 2008). A number of EPI assessment studies emphasize that institutional and organizational factors may hinder the progress of EPI and that public policies do not easily accommodate environmental concerns (Hertin & Berkhout, 2003; EEA, 2005b; Von Homeyer, 2007; Stead & Meijers, 2009; Jordan & Lenschow, 2010).

Within the urban sustainability debate, EPI has been gaining importance for local authorities in Europe since the rise of the Local Agenda 21 (UNCED, 1992) and the quest for an integrated environmental management approach, promoted by the Thematic Strategy on the Urban Environment (CEC, 2006; CEC, 2007a), developed by the European Commission. A particular challenge in this respect is the achievement of EPI in tandem with the spurred decentralization and devolution of decision-making power to lower levels of government (Liefferink & Jordan, 2002). As EPI is seen as a multi-level form of governance, where policy making and implementation are shared across sectors and levels, it has significance for the administrative practices of not only national, but also regional and local governments (Berke & Conroy, 2007; Stead & Meijers, 2009; Scholz, 2012; ESPON, 2012).

As illustrated by the brief review above, the ambitions and commitment to achieve EPI have fluctuated over time and it has not been a one-way process of ever improving performance; rather EPI has been fiercely debated. Just as with sustainable development, the idea of EPI has largely remained at the rhetorical level. So how do we really address EPI in context-specific policy actions and regarding specific environmental issues? What are the barriers and challenges that need to be overcome? What experiences can be drawn upon to enhance the potential of EPI? While the theoretical debate on these questions is evolving, further empirical evidence on suitable approaches to achieve EPI in different sectoral policy activities needs to be generated.

1.4. The scope of EPI in the light of communicative planning

In this thesis EPI is seen as a dynamic and interactive process that demands institutional changes, based on the political, organizational and procedural processes of environmental policy making. These institutional changes are needed to embed environmental thinking in governmental departments, activities and mind-sets, and to receive coordinated responses from many different quarters (Jordan, 2012).

EPI has been described as a "wicked problem", not in the least because of the need to reconcile competing policy objectives involving a multiplicity of actors (Von Homeyer, 2006; Jordan & Lenschow, 2010). Urban planning is seen as a complex policy arena with a governance process rooted in several different scientific disciplines and social practices. In prioritizing different planning objectives and accepting EPI in the planning practice, the variety of perceptions and relations among actors play a role. These often determine the collective capacities of actors to utilize multifaceted knowledge and deliver sustainable solutions that are the essence of EPI, i.e. having environmental concerns dealt with in the urban planning process. Based on these critical issues, this thesis builds upon the need to find promising institutional mechanisms to communicate interests and share knowledge in order to make more environmentally sustainable choices in planning. The following paragraphs elaborate key theoretical ideas and concerns regarding communicative processes in urban planning which might be relevant to EPI.

1.4.1. The idea of communicative planning

The process of communicating diversity of interests, sharing of knowledge and arguing over the "right" way forward in urban planning has long been at the heart of the on-going scientific debate on planning theory (Innes, 1995; Innes & Booher, 2010). In this regard, the communicative school of planning has provided the most essential discourse that seeks to theorize the inter-personal relationships between actors in the planning arena. The *communicative approach*, which emerged within planning theory during the 1990s, was inspired by Habermas' ideas on communicative action and the ideal dialogue (Habermas, 1984; Forester, 1989; Sager, 1994; Healey, 1997).

The communicative approach has had great relevance to the actual requirements of planning practice for managing new forms of co-operation across sectors, negotiations and partnerships with private actors and demands for broader citizen participation in urban planning and decision-making processes (Booher & Innes, 2002). Based on these ideas, a *communicative planning theory* has emerged which focuses on using communication to help address different interests in planning based on rational knowledge (Harris, 2002). Grounded in the creation of shared goals and understanding, the communicative paradigm seeks to include a broad range of voices to enhance the debate and negotiation

that is supposed to form the core of actual plan making. Participation and involvement of different actors is considered a fundamental element of communicative planning. In addition, the communicative approach addresses the use of competence in planning where rational knowledge and arguments are to be sought in the communication process.

A key characteristic of the communicative approach is the practical, intersubjective rationality (*communicative rationality*), based on which the argumentation and dialogue takes place. Habermas (1984) provides preconditions for the communicative rationality to take place, namely that the actors engaged in the dialogue should provide justifiable arguments and reasons which are considered to be true, correct and authentic. The communicative action, therefore, is a social interaction which is both deeply consensual and reasonable: actors sincerely agree that their modes of cooperation can be justified as good, right and free of empirical error. In this process actors "mobilize the potential for rationality" and rationally motivated agreements are reached (Alexander, 2000). This communicative rationality is not so much based on the possession of particular knowledge, but rather on how speaking and acting actors acquire and use knowledge across institutional borders. The key proponents of communicative rationality have generated a number of discourses on the communicative approach, from which communicative planning theory has been further advanced. One of its pioneers, Forester (1989), asserts that through communicative strategies, completing their technical work, planners can encourage community-based planning and alert citizens to the issues of the day. He elaborates on the deliberative role of planners and suggests that in order to maximize the effectiveness of planning, planners need to improve their skills to become better communicators and negotiators. Another forerunner has been Sager (1994) who defined communicative planning as *"…an open and participatory process involving a broad range of affected groups in socially oriented and fairness seeking developments of land, infrastructure, or public services guided by a consensus building process..."* The main issue in this process is to eliminate distortions, to foster open and authentic communication, and to make true dialogue possible. He emphasizes that in communicative planning mutual understanding is encouraged, which can result in finding solutions based on arguments founded on facts rather than on power relations. A communicative approach opts for planning outcomes that are reached through collaborative processes involving all stakeholders, and conforming to particular rules which ensure that participation is fair, equal and empowering. In support of this notion, Healey (1997) has designed an institutionalist approach to communicative planning based on the concept of social learning for sharing and making better urban places. She uses the term *"collaborative planning"* to describe the process by which participants arrive at an agreement or action that expresses their mutual interests. Healey (1997) reveals the use of social sciences concepts about social dynamics and institutions, in designing placed-based planning efforts that transcend the traditionally narrow approach to urban master planning. Healey (2007) elaborates on the institutional and organizational context of urban planning as a dynamic, fluid mix of ideas

and knowledge about what places are and could be. She highlights that the policy focus around the planning of an urban area challenges the institutional frames and meanings evolved in other policy sectors, such as in the environmental policy domain. Healey's collaborative planning, therefore, highlights the wide range of urban development issues that can be addressed by the communicative approach, including: systems of governance, expertise and knowledge, institutional design, actors' relations etc.

In addition, the work of Innes (1995) builds on the role of communication as a socially constructed process where learning, deciding and acting cannot be distinguished. Subsequent work by Booher and Innes (2002) presents the idea of a network society where collaborative frameworks of coalitions of actors are established to promote participation and where the flow of ideas and information through the network will determine the planning process and outcomes. Booher and Innes (2002) refer to three preconditions for communicative planning: 1) involvement of diverse actors, 2) recognition of mutual interdependencies between the actors, and 3) consensus building. Communicative or collaborative planning has been the subject of continuous debate among planning scholars in the theoretical realm. But with its ideas for open deliberations, consensus building and proactive engagement of actors, it has now also drawn the attention of practitioners concerning its potential benefits for the urban sustainability agenda (Sager, 2013).

1.4.2. The critical concerns in communicative planning

While communicative planning has not been undermined in the planning theory it has raised a number of critical concerns among certain planning scholars (Tewdwr-Jones & Allmendinger, 2002). Communicative planning has above all been criticized for being naive concerning actual power relations in society and that it is too constrained by what are often seen as impossible conditions for ideal dialogue promoted by proponents of Habermas (1984). The communicative approach is therefore criticized for its quest to escape from power and for avoiding conflicts based on dominance of actors in planning (Flyvbjerg & Richardson, 2002). This critical issue has been addressed by an alternative to the communicative approach view of planning theory, which incorporates Foucault's (1972) concepts on power in society. These concepts highlight the crucial importance of power in shaping debates, knowledge generation and the social structure of urban spaces. As Flyvbjerg (1998) argues, there is always some kind of rationality behind power, and in policy and planning rationality and power are interrelated. Actors may be rational, but have no power, or they have power, but lack rationality. Tewdwr-Jones and Allmendinger (1998; 2002) have suggested that communicative planning theory fails to incorporate adequately the peculiar political and professional nuances that exist in planning practice and how these nuances infiltrate planning deliberations. As Allmendinger (2011) highlights, while planning is currently

dominated by neoliberalism it may not only pursue private interests over public good and economic growth over other societal objectives, but political practices may be embedded in planning, which may mask the role of economic power. Such planning may contribute to legitimising the claim that economic growth is compatible with a narrowly prescribed set of environmental and social objectives politically inscribed as "sustainable development". Fainstein (2000) and Bengs (2005) express similar concerns, questioning the ability of communicative planning to safeguard public benefits while resisting dominant economic interests of investors and developers. These views reflect Foucault's proposition to better understand how planning may or may not work in practice, while acknowledging the presence of power and its relation to rationality and knowledge. Other critics have emphasized that communicative theorists seem to have overlooked issues such as systematic distortion of consensus-building by powerful actors who restrict rational argumentation by excluding other actors and thereby manipulate opinion formation (Forester, 1989; Hillier, 1993; Huxley & Yiftachel, 2000). These critics stress that potential limitations in the process of participation will not yield the desired results in planning. The key challenge, therefore, as referred to by the critics of the communicative approach lies in meeting normative expectations in real-life planning practice where planning contexts, actors, knowledge and organizations interact and where vested interests and hegemony occur (Allmendinger, 2011).

1.4.3. Adopting a communicative approach to EPI in urban planning

Despite the aforementioned criticisms, communicative planning theory still appeals to many scholars and it dominates urban planning theory (Healey, 2010; Allmendinger, 2011). With the rise of more complex societal problems, such as urban sustainability, the demand for communicative planning practices seems to gain prominence. Aims, such as making more voices heard and achieving greater social, economic and environmental benefits, make the communicative approach inevitable. The communicative planning debate and the viewpoints of its key proponents and critics have been necessary for a better understanding of the challenges of planning where power relations and communicative action may play a role in shaping urban environments (Hillier, 2002). Whereas the theoretical debate of the late 1990s can be characterized by the struggle between the proponents and critics of communicative planning, the current discourses are searching for practical solutions to make the communicative approach credible in the planning practice (Allmendinger, 2011). In this regard, Healy (2007) suggests that if communicative action is to transcend dominant forces in knowledge and rationality with actors' involvement without superimposition, its concern should be to develop understandings and practices of inter-discursive communication, i.e. a way of *"living together differently through struggling to make sense together..."*. This communication is based on reasoning and arguments with an understanding of the institutional and organizational determinations

of specific planning practices so that communicative planning does not lose its edge. In Healy's view, planning should be based on learning processes through which knowledge is accessed, interpreted and re-assembled in institutional and organizational contexts. This thought is in line with the previously developed conceptions of Friedmann (1987), who argued that planning priorities emerge, not just from the codified knowledge of science, but also from experiences. Rather than being logical, building a relationship between knowledge and action in planning is a complex, interactive activity, in which diverse forms and a range of knowledge are "called up", generated and given meanings.

Furthermore, in reviving the communicative planning debate, Sager (2013) analyses its critics' viewpoints and presents possible solutions. He develops counterarguments to the main criticisms against communicative planning theory by raising three key issues. First, the need to further strengthen the rationale of communicative planning, referring to a planning process led not by a single authority but by many actors who can create plans as a common good by working in alliances. Second, the need to find new ways for planners to resist pressure from predominant actors by engaging with stakeholders in building stronger positions against neo-liberal interests at the costs of public benefits. And third, the need to provide substantive criteria in planning in order to check whether the elements of the plan are being well communicated and can safeguard urban sustainability. Sager (2013) reflects on the trade-offs that need to be addressed in planning to achieve more sustainable urban areas and emphasizes the potential role of communicative planning to strengthen this process. He highlights that communicative planning may be beneficial in coping with the tendency in many countries towards urban development being dominated by private actors at the cost of public interests, such as environmental protection.

In their current discourses, planning scholars are seeking to resolve the critiques of communicative planning by relating the Foucauldian power awareness with the Habermasian communicative rationality. The key goals are to achieve a mutual understanding to prevent vested interests from prevailing, remove the effects of domination and allow the empowerment of disadvantaged policy issues in urban planning.

Based on the communicative planning debate, this thesis elaborates on a *communicative approach towards* EPI in urban planning. It places EPI within the light of communicative planning, while exploring the role of a communicative approach as a social learning process where knowledge and action are interlinked and where the institutional and organizational context of planning are taken into consideration. The thesis explores whether EPI can be considered stronger when planning takes place within a communicative process and in a collaborative fashion or not. It reviews organizational capacities of local governments for communication and knowledge exchange in urban planning with a view to fostering inter-dependencies between actors in both the planning and environmental disciplines and to addressing EPI. The communicative perspective of EPI adopted here empathizes with the collaborative planning idea (Healey, 2003, Sager, 2013) focusing on three institutional aspects of planning, i.e. 1) planning

process, 2) organizational structures and 3) multifaceted knowledge (Figure 1.2.). As presented in figure 1.2. this communicative perspective is intertwined with elements from communicative planning, organizational and policy integration theories.

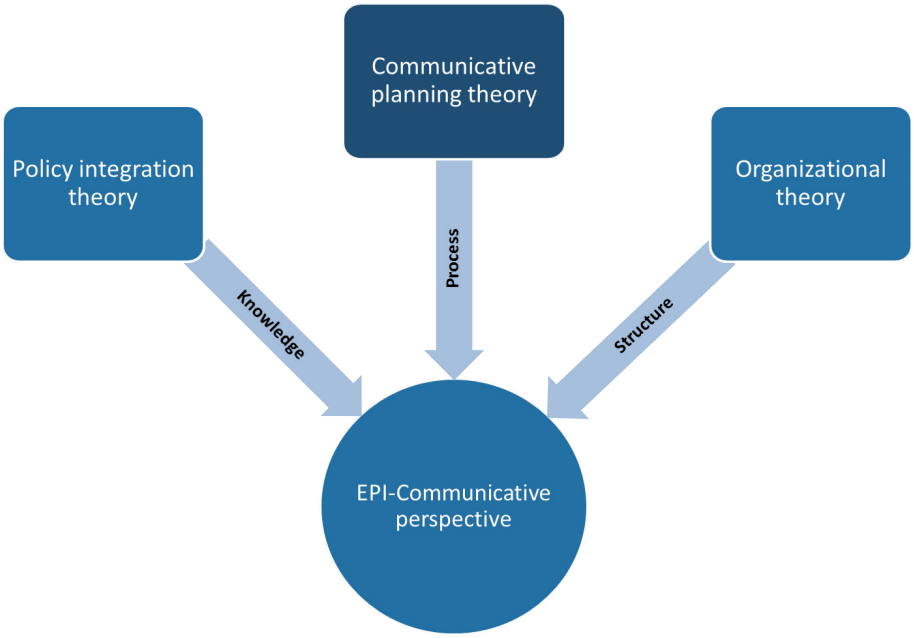

Figure 1.2. *Schematic view of the communicative perspective of EPI*

1.5. Research questions

This thesis addresses the scientific premises of EPI and the current knowledge gaps in formulating and applying it as a principle in the context of contemporary urban governance. It combines a theoretical and an empirical dimension. The theoretical dimension aims to reflect on the current knowledge gap regarding integration of environmental aspects into urban planning and the emergence of EPI as a promising perspective in urban sustainability research. EPI is conceptualized as a communicative planning process, and a communicative approach to EPI is delineated. The empirical dimension explores evidence regarding the EPI process in actual planning practices. It identifies key challenges and barriers to achieving EPI with a focus on among others the potential benefits of a communicative approach towards EPI. Based on the theoretical and empirical parts of the research, key success factors in the application of EPI by local governments have been identified. In line with the key goal of the research, a *central research question* has been formulated, namely:

- *What are the potential benefits of a communicative approach to achieve EPI in urban land-use planning practice in order to safeguard the environmental sustainability of urban developments?*

To answer the central research question four specific sub-questions have been defined:

- *What theoretical considerations are fundamental for understanding the concept of EPI in the urban planning domain?*
- *Is EPI embedded in the institutional frameworks of urban planning and what are the most commonly used approaches towards EPI?*
- *What approaches have been used to achieve EPI in urban planning in Western and Eastern Europe and does a communicative approach towards EPI offer potential benefits?*
- *What are the key success factors and lessons learned for achieving EPI in urban land-use planning and for the communicative approach to EPI?*

Each sub-question addresses a specific aspect of EPI in a systematic way. The first question helps to address conceptual issues about the EPI rationale and its interpretations in the urban planning domain. Answering the second question will throw light on the currently known EPI approaches at an aggregated level. It helps to inform the research about the embedment of EPI in current institutional frameworks of urban planning and to describe its currently deployed key approaches. The third question helps to assess which of these key approaches might deliver inevitable benefits for achieving greater EPI in urban land-use planning practice in different contexts of planning, namely in Western and Eastern Europe. The focus is particularly on collecting evidence and analysing the potential benefits of the communicative approach for EPI in urban planning practice. And the last question aims to identify the success factors for EPI, as derived from actual planning experiences, and which of these success factors are key for using a communicative approach to EPI in urban planning practice.

1.6. Research approach

1.6.1. Qualitative research approach

This study is based on a qualitative, exploratory research approach (Creswell, 2007). This approach was suitable for gaining both theoretical and empirical insights into EPI in the urban planning domain, because EPI is still a concept that is unfolding.

The subject of EPI was reviewed in the literature and case studies were analysed in which EPI was, explicitly or implicitly, the aim. This approach entailed an iterative process by which the research questions were refined, and the data collection process was adapted as more insights were gained and new data sources were discovered (see also Saunders et al., 2007). Hence, the selected qualitative approach can be best characterized as an "emerging, unfolding process that aims to understand a particular social process, situation, role, group, or interaction" (Creswell, 2007).

The exploratory research approach allowed for detailed descriptions of the socially constructed settings of the EPI process, while exploring its understandings and its role in addressing environmental challenges in urban planning. This approach also allowed for detailed descriptions of the role and functioning of EPI in selected real-world institutional settings of urban planning. The case studies provided insights into how EPI is applied and what challenges are encountered. The exploratory research approach used was not intended to provide final conclusive evidence, but conducted in order to gain a better understanding of the problem. This approach invites a variety of meanings, interpretations and implications in real life situations. The research sought to provide insight into EPI by exploring current developments in relevant social theories, including planning theory, policy integration theory and organizational theory, as well as to reflect on participants' experiences. Therefore, the key goal of exploratory research was followed, i.e. to formulate the problem, clarify and revisit concepts, and form and rationalize assumptions about the EPI phenomenon in urban planning.

Among the potential philosophical paradigms that frame a research inquiry (Creswell, 2003), this study is consistent with the *constructivist perspective* of gaining knowledge by qualitative exploratory research. Knowledge was generated from interpretations of and experiences with the researched phenomenon in different contexts (see also Guba & Lincoln, 1994). The basic assumption guiding the research inquiry was that knowledge is socially constructed by people active in the researched process, and that researchers should attempt to understand the complex world of lived experiences from the point of view of those who live it (Schwandt, 2000). The constructivist perspective, therefore, allowed a view of the relationships between understandings, meanings and values of participants regarding EPI in urban planning practice. By using the open-ended inquiries of the constructivist perspective, it was possible to consider the specific social contexts in which EPI occurs, the interpretations and definitions of the problems regarding real-world approaches towards EPI, and to formulate assumptions about the potential consequences and solutions to the EPI challenges in planning in practical terms. The overall research approach therefore is based on three consecutive elements of qualitative research methodology, namely: constructivist knowledge claims, qualitative exploratory research, and qualitative data collection and analysis (Figure 1.3.).

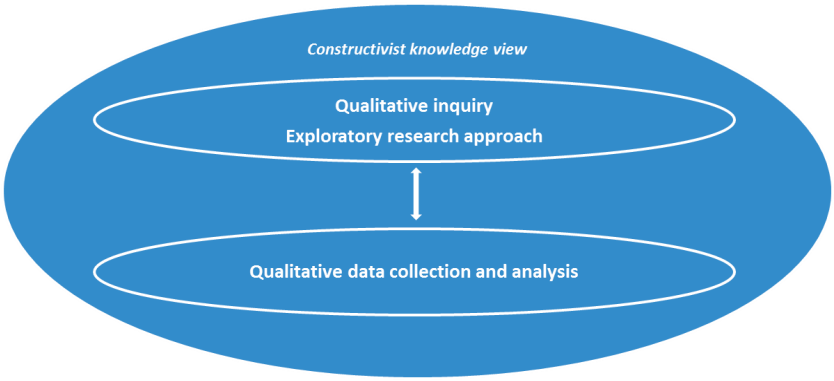

Figure 1.3. *Schematic view of the exploratory research*

1.6.2. Description of the exploratory research process

This study used a four-step approach (see Figure 1.4.): *1) Formulating exploratory research inquiry and research questions; 2) Conceptualization of EPI; 3) Exploratory case-study analysis; 4) General synthesis and conclusions.*

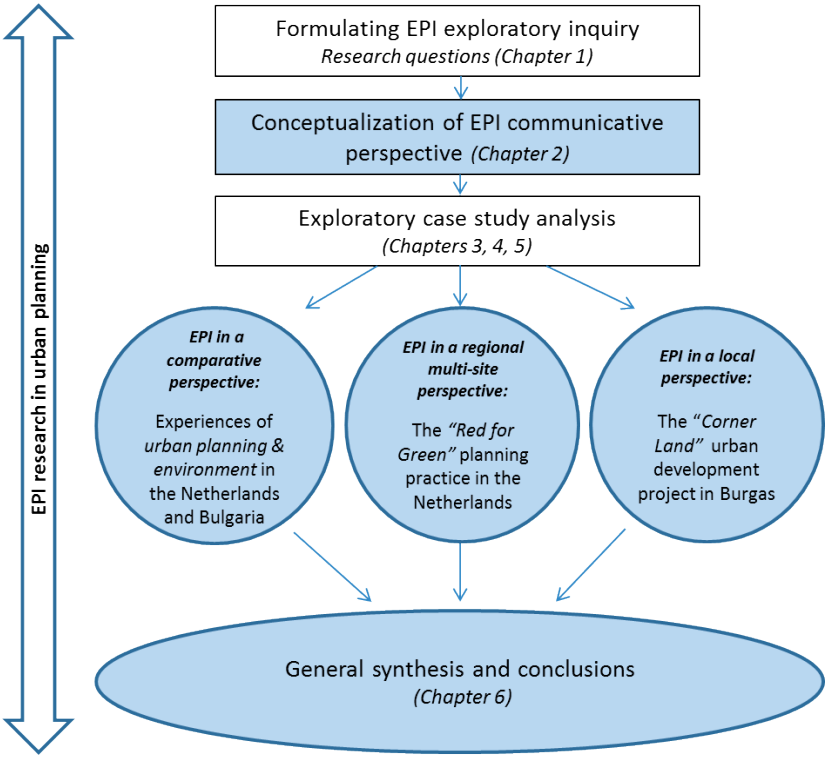

Figure 1.4. *Schematic overview of the research approach*

Step 1: Formulating exploratory research inquiry and research questions
This first step consisted of the formulation of the overall goal of the research and the research approach. An exploratory research design was developed and the research questions of the study were formulated as described in the preceding sections 2 and 3 of this Chapter.

Step 2: Conceptualization of EPI communicative perspective
This step consisted of a review of the scientific and policy-oriented literature on EPI. The focus was on reviewing definitions, understandings and interpretations of and approaches towards EPI, and formulating a conceptual view of EPI that forms the focus of this research. The scope of the literature review was the European policy arena and the most recent developments within the urban sustainability debate related to the subject of EPI. The literature review included, therefore, a wide range of publications in the fields of EPI and urban planning, as well as social theories that reflect the EPI principles and process. Data on the existing knowledge and analytical frameworks on EPI was collected from the scientific literature. Policy-related literature was used to gain insight into the policy debate on EPI and into the policy measures and institutional mechanisms available to implement EPI in urban planning.

The interpretation of the results of the initial literature review prompted a more detailed examination of the data and, where needed, additional information was sought. During this phase of data collection and analysis, the initial theoretical data was assessed and grouped into three categories: *1) EPI definitions and theoretical assumptions, 2) EPI approaches, and 3) EPI embedment in the urban planning process.* This step sought to understand what the literature showed on the implementation of EPI and which challenges facing EPI can be considered significant. While interpreting the data, similarities and differences within the three categories mentioned above were identified. This step allowed us to narrow down the ideas and trends regarding EPI, observed in the literature, and to define issues and criteria for gathering empirical evidence on the formulated assumptions within selected cases. A communicative perspective on EPI was developed based on the communicative approach in planning theory, and assumptions were formulated for the potential role of a communicative approach to EPI in urban planning. The exploration went back and forth through the data in an iterative manner, with the aim of reconfirming the initial assumptions recorded during the analysis. Subsequently a simple typology of EPI approaches was formulated, including a communicative approach to EPI. Empirical evidence regarding the relevance and the benefits of the different approaches towards EPI, including the communicative approach, was consequently collected within the case studies. EPI assessment criteria were formulated to assess the degree of EPI and review the use of different approaches.

Step 3: Exploratory case-study analysis

In this step a multiple case-study analysis was applied (see Stake, 2000) to illustrate different perspectives of the EPI process, and its challenges and approaches within different societal contexts. The case-study method was chosen in order to investigate the distinct phenomena of EPI by gaining more empirical evidence and reconfirming the not yet fully tested assumptions about the institutional process towards EPI and the most suitable approaches for EPI in urban planning. The case-study analysis followed the exploratory review of the scientific literature and policy documents on EPI and was used subsequently to study whether current theoretical insights into the EPI process, including expected factors for success, are supported by empirical data. The primary focus of the case study analysis was to provide an in-depth exploration of the EPI process within different institutional settings and socio-economic contexts. Hence the case-study approach was used to enhance the theoretical level of the research findings through analytic generalization of the case study results (see also Yin, 2003).

Selection of cases

The selection of the case studies was guided by a consideration of the institutional challenges regarding EPI, as identified in the literature review. Consequently, cases were examined to identify which might best illustrate these challenges. The cases selected were intended to reveal the key tendencies and perspectives regarding the real-life experiences with EPI in urban planning processes. Therefore, in order to identify which cases to portray, the research made use of Yin's (2003) "purposeful sampling" of cases, with the focus on illustrating the issue of EPI across multiple cases and contexts. In a number of studies which have explored similarities and differences in how countries are facing the challenge of urban sustainability and EPI in urban planning, indications have been found that EPI may be addressed differently within the planning practices of different countries depending on their planning traditions, promoted values, political priorities and socio-economic development (e.g. Miller & De Roo, 2005; Creedy et al., 2007). Exploring the EPI process in more depth, and where possible comparing experiences among urban planning practices, is essential for identifying success factors and exploring the transferability of best practices from one European city to another. With this in mind, cases were selected which represent different geographical, social and problem-specific scopes. The choice was made to examine the experiences of EPI in urban planning generated within the context of both the Western and Eastern European planning systems. The aim was to identify the challenges of EPI in both planning contexts while generating lessons learned from EPI practices in the Western European democratic system of planning and whether these lessons can be useful to meet the needs of EPI in urban planning in the countries of Eastern Europe. Hence, three types of case-study analysis were conducted (see also Figure 1.4.): 1) a comparative case-study analysis of national and local planning systems in the Netherlands and Bulgaria; 2) a within-

a-site case-study analysis of a local case in Bulgaria, presenting a specific urbanization project in the city of Burgas; and 3) a multi-site case-study analysis of regional planning practices based on the Red for Green Approach (RGA) in the Netherlands.

All cases illustrate to a greater or lesser degree how EPI is or can be embedded in the urban planning process. While the first case-study analysis addresses general approaches to EPI currently used in the Netherlands and Bulgaria, the second and the third case studies explore EPI within specific urban land-use planning processes in these countries, where conflicting priorities are at stake regarding land-use developments and nature conservation.

While the Netherlands and Bulgaria represent different socio-economic and political contexts, they were considered to provide potentially beneficial contextual issues and experiences regarding EPI in urban planning practice. An Eastern European country like Bulgaria is still searching for suitable implementation mechanisms for its environmental and spatial development policies. The main drivers in this process are EU membership requirements and Western European experiences that are considered good examples to follow for Eastern Europe's post-socialist developments. In their transition from a centralized socio-economic and political system towards a democratic, market-oriented and decentralized one, the local governments in Bulgaria are being given responsibility to deal with a multitude of priorities, ranging between economic reforms, redevelopment of public land, suburbanization, preservation of natural resources and environmental quality. However, traditional planning practices have not been fully reformed to accommodate these new urban development needs, and little research has been done regarding these aspects (Stanilov, 2007; Stanilov & Sykora, 2014). The current on-going intensive suburbanization and inner-city developments based on a market-oriented style of urban planning present a number of challenges to EPI. In contrast, the Netherlands has already developed and applied a variety of innovative approaches in an effort to integrate environmental issues in urban land-use plans (De Roo, 2003).

In the Netherlands the government authorities have been operating for longer in a democratic, more decentralized and market-oriented economic system. Moreover, because land is scarce and urban functions are intense in the Netherlands, regional and local governments have sought to achieve better environmental quality through integrated urban environmental planning. Gaining insight into these existing approaches to EPI allows lessons to be drawn about the success factors of EPI in urban planning and whether these approaches could be useful to local governments in Bulgaria.

Collection of case-study data

Based on the initial theoretical considerations and preliminary screening of data about the cases, combined with a subsequent in-depth analysis of each case, an understanding was gained of the context of the cases with regard to EPI. This process was based on the methodology of *within-case analysis* and *cross-case analysis* (Yin, 2003). In each of

the cases the following data was sought: 1) the institutional settings of EPI, 2) the approaches used to achieve EPI, and 3) the actors' involvement and capacities to employ EPI. The design of the case studies was based on the following elements: 1) selection of specific cases; 2) description of the cases; 3) focused data collection for each case; 4) in-depth analysis of the data and formulation of key findings; 5) definition results, challenges and how they were met within the cases; and 6) definition of implications and lessons learned from the cases. The data for the cases were collected from multiple sources via exploration, interviews, observation and literature reviews (Figure 1.5.). The research drew upon the researcher's reflections on the local context of the cases, thus enhancing the relevant information gathering regarding understandings, meanings and perceptions of multiple actors regarding EPI in urban planning practices. This was achieved by means of open-ended and semi-structured interviews with key informants, planning and environmental professionals from a variety of agencies, local administrations, and research institutions.

Step 4: General synthesis, conclusions and recommendations

In this step the research findings were assembled and synthesized from the theoretical and empirical parts of the research. This step also included the theoretical reflection on EPI and the lessons learned from each case study. Based on this general synthesis, the conceptual framework on EPI was revisited with a view to illustrating the communicative perspective on EPI developed by this research, including the relevant approaches and key success factors of EPI in urban planning. In line with the generalized research findings each research question was answered and final conclusions formulated.

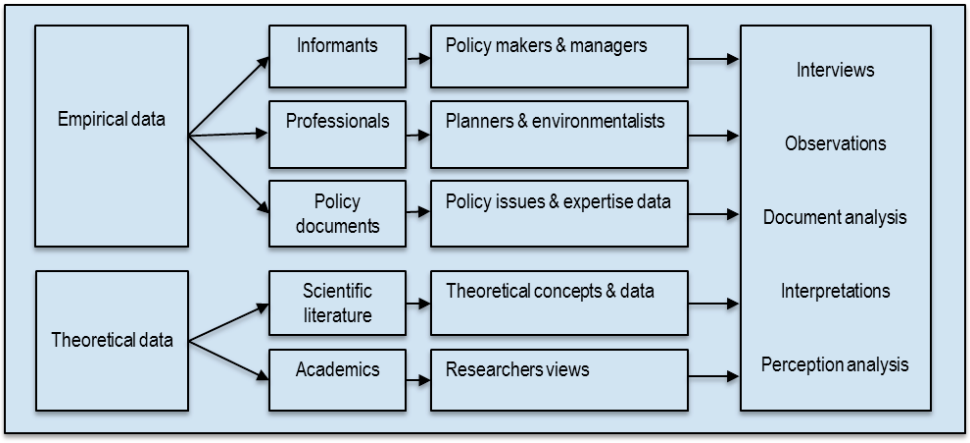

Figure 1.5. *Data sources*

1.7. Structure of the thesis

The research is presented in six chapters (Figure 1.6.). Chapter 2 presents fundamental theoretical considerations on the EPI concept, discusses its interpretations and relevance for urban land-use planning, and provides the conceptual framework of EPI that is further employed in this research. Furthermore, this chapter includes an identification of a simple typology of EPI approaches and compares these approaches in terms of their relevance for urban land-use planning.

Chapter 3 provides an assessment of the general planning processes of the local governments of Rotterdam, the Netherlands, and Burgas, Bulgaria, with the focus on how these processes institutionalize and address EPI. It discusses the relevance of the *area-oriented planning approach*, developed and applied in Rotterdam, and identifies the key success factors and lessons learned for this approach to achieve EPI. Furthermore, the potential applicability of this urban-planning approach in Burgas is discussed.

Chapter 4 presents a multi-site case study of the *Red for Green* planning practice, an EPI-related approach developed in the Netherlands and used by local and regional governments. The rationale of the *Red for Green* approach is reviewed along with its key elements and its relevance in fostering a greater degree of EPI in solving environmental challenges, such as preventing or decreasing fragmentation of nature areas by urban developments. This chapter also identifies the key success factors of this planning approach.

In Chapter 5 the main urban planning constraints and opportunities are discussed for achieving EPI and resisting the pressure of suburbanization in order to protect a nature area in city of Burgas. The chapter presents an in-depth case-study analysis of the challenges that a local government in Bulgaria is facing in the urban planning process against the background of the post-socialist institutional reforms.

In Chapter 6 the research findings are synthesized and generalized and the implications of both the theoretical and empirical findings on EPI for urban planning practice are discussed. The chapter presents conclusions regarding the key success factors to EPI and the benefits of the communicative approach to EPI, and elaborates a collaborative framework of EPI in urban planning.

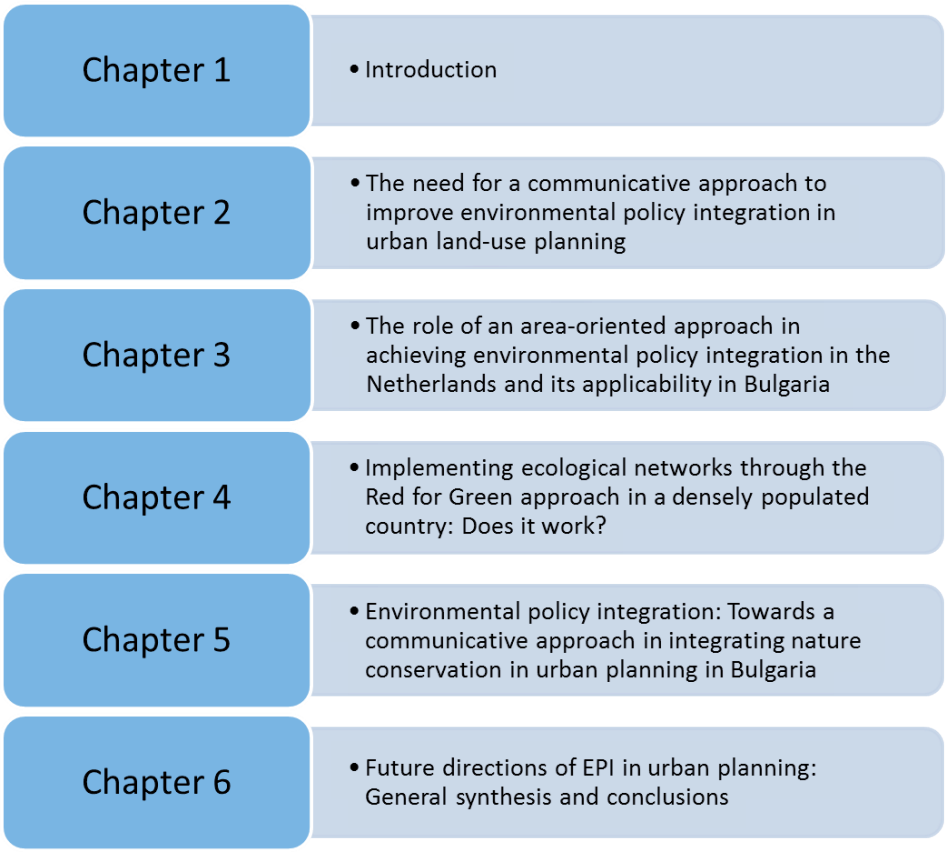

Figure 1.6. *Structure of the thesis*

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CHAPTER 2

The need for a communicative approach to improve Environmental Policy Integration in urban land-use planning

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Abstract

The debate on sustainable development emphasizes the importance of integrating environmental policy into all policy sectors. It is increasingly recognized that this integration is needed at both the national and the local levels of governance. The Environmental Policy Integration (EPI) principle agreed upon in a number of international and EU commitments is receiving the attention of more urban planning scholars. The EPI phenomenon is under-researched, and in many countries, its implementation, particularly sub-nationally as in urban planning, is hindered by organizational and administrative weaknesses. This article seeks to show how a communicative approach can be used to improve EPI in the urban planning context, based on a literature review of organization theory and communicative planning. The review sheds light on the relevance of the communicative approach to EPI by comparing it with existing EPI approaches. The authors conclude that a communicative approach to EPI is potentially illuminating in changing organizational structures and how individual actors interact in urban planning processes.

2.1. Introduction

The current debate on sustainable urban development stresses that environmental policies alone are not sufficient to prevent or solve environmental problems in urban areas. To reduce environmental pressures caused by economic activities and to ensure a high quality of life in the cities, environmental policy must be integrated into other policy sectors. Until recently, however, urban environments have mainly been managed through regulations to protect air, water, and soil quality and to limit economic activities (e.g., transport and industries) within residential areas. Yet earlier studies indicate that this type of command and control policy, using only top-down legal instruments and set of environmental standards, is not entirely effective in avoiding urban environmental problems (Campbell, 1996; Carley & Christie, 2000; Lenschow, 2002; De Roo, 2003). It has become clear that for environmental policies to be effective at national or local levels, the policies' objectives must be robustly reflected in all other socio-economic activities (Lenschow, 2002; EEB, 2003; EEA, 2005a; 2005b). Moreover, policy makers have become aware that environmental problems in urban areas are strongly interrelated and cannot be located in a single policy sector, because they usually concern a number of fields within local governance. This means that environmental issues must become a constituent part of all relevant aspects of urban development (CEC, 2006), for example, human health, transportation, energy, and industry. Currently, greater recognition can be observed among environmental policy makers that urban land-use planning can contribute to mitigation or prevention of urban environmental problems (Leibenath & Pallagst, 2003).

The growing concerns are that if environmental protection and land-use planning measures are not coordinated with one another, they may even conflict in practice. Environmental and land-use planning policies differ significantly in both policy objectives and approaches to implementation (Miller & De Roo, 2005). While environmental policy seeks to avoid or mitigate environmental problems by preventive and controlling measures, urban land-use planning seeks to make optimal use of land, socially and economically (Berke, 2002; Miller & De Roo, 2005). It is obvious that a sectoral approach to implementation of environmental policy and urban land-use planning simply fails to reflect the priorities and constraints related to land-use changes and environmental protection and to ensure sufficient consultation of actors from both sectors in decision-making in each other's field (Beately, 1995; Cambell, 1996; UNCHS, 1996). As a number of authors argue, to achieve the aims of environmental policy at a national or local level, it is important to integrate knowledge about environmental impact of other policy fields, including land use and zoning activities, into decision-making (Theobald & Thompson, 2002; EEB, 2003; Miller & De Roo, 2005; Daniels & Lapping, 2005).

The generic concept of integrating environmental concerns in other sectoral policies is embedded in the Environmental Policy Integration (EPI) principle that has

been part of a number of international agreements such as the Earth Summit in Rio 1992, Chapter 8 of Agenda 21, the European Union's Fifth Environmental Action Program and the European Community Treaty (UN, 1994; EEB, 2003; Nilsson & Persson, 2003). According to Lafferty & Hovden (2003), EPI can be best defined as the incorporation of the environmental objectives into all stages of policy-making in non-environmental policy sectors, with recognition of this goal as a guiding principle for the planning and execution of policy; accompanied by an attempt to aggregate presumed environmental consequences into overall evaluation of policy, and a commitment to minimize contradictions between environmental and sectoral policies by giving principled priority to the former over the latter.

EPI has been addressed in a variety of sectoral policies, such as agriculture, energy, and transport (EEB, 2003). In the works of Lafferty & Hovden (2003) and Lenschow (2002), EPI is implied as an operational principle for implementing and institutionalizing the concept of sustainable development. Like most forms of policy integration, EPI is seen as an important part of "good governance": the more integrated and mutually reinforcing the policies are, the easier their effective delivery will be (Margerum, 1999; Lenschow, 2002; EEB, 2003). To be implemented in practice, however, such an integration process calls for changes in the institutional frameworks, organizational structures, administrative practices, and communication strategies so that environmental issues are considered both fully and early in decision-making (Underdaal, 1980; Lenschow, 2002; EEB, 2003; EEA, 2005a). EPI entails a move from traditional "end of pipe" environmental regulations that seek to "clean up" environmental damage to proactive strategies to prevent such damage and simultaneously increase the scope for economic activities.

Although the debate on the EPI principle has been primarily a part of the EU policy and its definition is put forward within a number of European documents, the integration of environmental concerns in planning is also part of the sustainable development debate outside Europe such as within the American planning school (Margerum, 1999; Conroy & Berke, 2004; Conroy, 2006). What is common within these debates is that the integration principle is particularly gaining prominence in the context of the local planning practice and urban governance (Berke, 2002; Riddel, 2004; EEA, 2005a; Von Homeyer, 2006). It is believed that the benefits of using the integration principle in the context of urban sustainability may be considerable. This is evident from a number of studies that analyse the incorporation of the sustainability concept into the urban land-use planning practice (Campbell, 1996; Jepson, 2001; Berke, 2002). The majority of planning scholars claim that in planning, it is the integration of the conflicting socioeconomic and environmental goals that is essential for sustainability (Campbell, 1996; Roseland, 2000; Jepson, 2001; Conroy & Berke, 2004; Miller & De Roo, 2005). It is assumed that integration of environmental concerns in urban land-use planning activities is likely to provide a more streamlined planning process,

thus helping to prevent conflicts of interest in urban development and contributing to mutual reinforcement of the effectiveness of the planning measures (Van Staalduine & Simonis, 1999; Beatley, 1995; Jepson, 2001; Leibenath & Pallagst, 2003). Achieving this integration, however, is a critical task for planners. While EPI appears appealing in rhetoric, it is more complex and politically difficult to attain in reality. There are inevitable trade-offs and conflicts between environmental and developmental goals of planning and urban competitiveness. This means that environmental protection of urban areas becomes dependent not so much on the mandates of a higher governmental authority as on building relationships among distinct specialties of urban development, such as land use, transportation and housing, and on the collaboration among the actors within local authorities, industries, non-profit organizations and landowners seeking to protect the environment while pursuing economic and social objectives (Yli-Pelkonen & Niemela, 2005; CEC, 2006).

Addressing EPI in urban land-use planning implies that central governments must anchor environmental policy within routine land-use activities of municipalities. Municipalities, on the other hand, should be able to maintain a high-quality urban environment and simultaneously provide conditions and facilities for economic prosperity. In this respect, one of the main difficulties observed with EPI is dealing with the resistance among governmental actors within diverse professional fields to developing and applying policy integration approaches (Lenschow, 2002; EEB, 2003). This resistance is often a result of poor relationships and/or a lack of efficient communication among different levels of governance, leading to differences in goals and interests. The EPI-related literature highlights that other important barriers to achieving EPI is the lack of coordination among sectors due to specialization and incoherence in governmental organizations, agencies, and departments (Wondolleck & Yaffee, 2000; Lenschow, 2002; EEB, 2003; Nilsson & Persson, 2003). Yet there is a continuous discussion about what changes are needed within and among public organizations to overcome the above-mentioned problems and to ensure the achievement of EPI in general and in the context of urban land-use planning. More knowledge is required about the most promising modes of governance, administrative practice and organizational communication for addressing EPI at the earliest stages of decision-making.

This article seeks to show, based on a literature review on organization theory and emerging concepts of communicative planning, how a communicative mode of governance can be used to improve EPI in the field of planning and help address existing organizational interdependences among and within fragmented organizations. We shed light on the role and relevance of a communicative approach to EPI by comparing it with some existing approaches for policy integration.

The remainder of the article is organized as follows. The next section explains the relevance of the EPI principle in the context of urban land-use planning. This is followed by a section discussing a number of views on the implementation of EPI and

the approaches used to address it in practice. The following two sections analyse the EPI process as a communicative mode of governance and discuss prominent theoretical considerations. We then address the relationship between theoretical perspectives of communicative planning and organization theory and their relevance to the EPI process. Therefore, we describe different forms of communicative planning as part of a communicative approach to EPI. In the final two sections, we first compare the communicative approach to EPI with alternative approaches and, second, assess the relevance of such a communicative approach. Finally, we formulate a number of conclusions and recommendations.

2.2. Understanding EPI in the context of urban land-use planning

In spite of numerous recent policy initiatives to address EPI in the urban land-use planning context, no comprehensible guidelines for its implementation have yet been fully developed. There are still ongoing studies exploring the most beneficial modes of governance that support the EPI process at national and local levels of policy-making (Margerum, 1999; Lenschow, 2002; Von Homeyer, 2006). Following the extended debate on the relevance of sustainable development in urban planning, it seems difficult to achieve general agreement on how the concept should be translated in the planning practice by integrating its diverse objectives (Margerum, 1997; 1999; Jepson, 2001). Meanwhile, the principle of integration has become commonly used in the literature to describe possible interrelated approaches to urban environmental problems and urban sustainability as a whole (Healey, 1997; Margerum, 1999; Berke, 2002; Roosa, 2004). In addition to the more recent definitions of EPI in the European context, the initial ideas of such an integration principle in the urban land-use planning field can be traced back to a broader scientific debate within physical planning discipline (Berke, 2002). One of the first indications of this is the shift of ideas from the traditional urban design toward long-range planning and toward planning that does not focus solely on economic and social development but also on the natural environment (Berke, 2002). A significant contribution to this new way of planning was made by McHarg (1969), who emphasizes the primacy of natural landscape features and shows how to incorporate these features into urban designs. McHarg's ideas of integrated planning have been frequently used in the United States to develop visions for urban growth and to integrate landscape features into more comprehensive urban plans (Berke, 2002). However, during the 1980s and 1990s, when the principles of New Urbanism were promoted to frame urban places by both architecture and landscape design, the ideas of the integration of environmental protection into development of spatial concepts had not yet been fully asserted. Until recently, the United States and many countries in Europe coped with urban land-use planning, struggling with dominant economic interests while trying to

establish plans that specified a desired pattern of urban development fifteen to twenty years in the future (Faludi & Van der Valk, 1994; Graute, 1998; Van Staalduine & Simonis, 1999; Conroy & Berke, 2004). Earlier, the preparation of such plans was a rational process reflecting the traditional concerns of urban planners with allocating land use and delineating the development of the built-up environment, while paying little or no attention to environmental conditions in urban areas. Prominence was given to developing new urban forms such as compact city planning. The compact city was promoted worldwide but more increasingly in Europe in the Green Paper on the Urban Environment (CEC, 1990) as a possible solution to environmental problems in cities, limiting urban sprawl, reducing the need for travel, and concentrating several urban functions. However, it became evident that if not attentive, using this planning concept can also add to the impoverishment of inner city areas by increasing some environmental problems such as congestion, noise, air pollution, and the disappearance of urban green areas (Breheny, 2002; Thomas & Cousins, 1996; De Roo, 2003). Because of the increasing pressure to meet environmental obligations, there has been a growing demand in political debates for answers to these urban planning dilemmas (Barnes & Barnes, 1999; Breheny, 2002; De Roo, 2003).

Today, urban planners endeavour to apply the principles of sustainability in their land-use plans (Graute, 1998; Wellbank, 2002; Berke, 2002; Leibenath & Pallagst, 2003; Conroy 2006). Consequently, elaboration of urban land-use development schemes is increasingly seen as having a coordinating role that aims to improve the quality of life rather than just to develop spatial blueprints. This significant shift in urban planning in the past two decades has made planners realize that land-use allocation, design, and architectural decisions alone are not sufficient to achieve needed quality of urban life (CEC, 1996; Breheny, 2002; Wellbank, 2002). As protection of the environment currently becomes more politically and economically important, planners are more and more focused on finding comprehensive approaches to urban land-use planning, taking into account the socioeconomic and environmental perspectives of the urban development (Beatley, 1995; Leibenath & Pallagst 2003; Conroy & Berke, 2004).

However, a new perspective in planning requires new planning approaches. The approaches previously available to planners seemed too limited to achieve full coordination and integration of different and often conflicting aspects of urban development. Existing planning procedures do not fully meet the requirements for a more integrated approach, because there is no legal ruling that can conveniently resolve this matter. And in a sectorally organized local government, any bid made by a planning division for a larger coordinating role tended to be resented by other departments. Although there is currently enough evidence about the intertwining of planning and sustainability, and land-use policies have become somewhat more transparent and multidisciplinary, at a professional level, they still tend not to pay enough attention to sustainability and environmental concerns (Eggenberger & Partidario, 2000; Garreth &

Wood, 2000; Jepson, 2001; CEC, 2004b; UNECE, 2003). Obviously, a comprehensive and environmentally compatible development of urban areas is difficult to achieve, partly due to the slow transformation of planning systems and to the traditional administrative culture within which they function. The need for organizational changes to introduce an integrated approach to urban land-use planning and to apply the EPI principle is becoming a prominent issue within the political and scientific debates on planning. As a result, long-term strategies and visions with international, national, or local significance are being developed, aiming to achieve urban sustainability through an integrated management of the urban environments (Nilsson & Persson, 2003; Conroy & Berke, 2004). A good example of such an overarching strategy is the Local Agenda 21, the framework document for local sustainability signed by most of the world's nations at the Rio Earth Summit in 1992 (UNCED, 1992). Local Agenda 21 plans are primarily focused on increasing the capacity of local governments to deal with sustainability by integrating environmental concerns with other sectoral issues (ICLEI, 1998). With regard to the implementation of Local Agenda 21 plans and other similar strategic plans, the question remains as to how to achieve the desired integration of all relevant policy objectives (Steurer & Martinuzzi, 2005). The focus so far has been mostly on how to develop such strategic plans, with less attention to the planning process, implementation, and outcomes (Evans & Theobald, 2003).

The main failure factor for this is considered to be the lack of cross-sectoral coordination and collaboration among governmental organizations and their departments at different levels of governance. It is nowadays asserted that integrated and environmentally friendly urban development requires tangible mechanisms for inter-organizational collaboration in decision-making, both among national, regional and local levels of governance and among the different organizational units within the local government (Steurer & Martinuzzi, 2005; UNECE, 2003; CEC, 2004b, 2006). Despite these obstacles, some initiatives are testing new approaches for improving collaboration and communication among different actors at different policy levels. Numerous examples of such initiatives have been presented in the planning literature. One such an example is the Netherlands, where environmental policy has shifted during the past two decades toward a more decentralized and multi-actor, consensus-based policy. This shift has broadened the planners' view with respect to environmental issues, formerly seen as technical problems but in fact closely related to decision-making at different hierarchical levels of the planning process (Van der Valk, 2002; De Roo, 2003; Miller & De Roo, 2005). Another example is the growing number of policy documents addressing EPI in the urban planning context such as the European Thematic Strategy on the Urban Environment (CEE, 2006).

2.3. Views on the implementation of EPI

2.3.1. What is needed to achieve EPI?

During the past decade, the principle of EPI has been well documented in a European context within a number of European studies and political commitments (Lenschow, 2002; Nilsson & Persson, 2003; EEB, 2003; EEA, 2005a, 2005b). The main idea behind EPI is setting up a decision-making process that ensures that environmental issues are reflected in all sectoral policies (Lenschow, 2002; EEB, 2003; EEA, 2005b). However, EPI is an element of a much broader political and scientific debate about sustainability and the development of the concept of integration that advances the discussion of how specific elements of the society do or do not hold together (Parsons, 1968; 1971).

The need for integration can be seen as a result of transformations in social order in which governance is not an action of specified social groups, such as the state, but is flexible and open to wider groups of social networks and institutions (Foucault, 1979). In the discipline of environmental policy, some authors refer to integration processes such as the EPI principle being integrated environmental management, defining it as a more holistic and interconnectivity approach to environmental management (Margerum, 1999). The integration of this type refers to is meant for a cross-cutting decision-making process for which substantial changes are needed in both the political, organizational and procedural settings of policy making and the administrative practice of government institutions involved (Underdaal, 1980; Alexander, 1995; Margerum, 1999; Lenschow, 2002; EEB, 2003; EEA, 2005a; Knill & Lenschow, 2005). As such, this process transcends the boundaries of established policy fields within and between different governmental levels and demands clear political choices and coordination of these choices. According to Underdal (1980), policy integration is generally successful when the effects of policy decisions are assessed in advance and when different policy elements are consistent with each other. Whereas standard models of policy integration aim at combining different policies without prioritizing one policy over another, EPI aims to integrate environmental requirements into all other policy-making processes (EEA, 2005b). However, this does not mean that environmental policy should dictate, or set the boundaries for, the policies of all other sectors. EPI implies that environmental constraints are considered and weighted in policymaking, with the objective of improving the decision-making so as to develop sectoral policies that correspond with sustainable development principles.

As argued in the scientific debate on social integration, the implementation of integration principles such as EPI foresees a high degree of interdependence among governmental organizations. In addition, the implementation requires an increasing awareness within these organizations of the need for transparency, a high level of inter- and intra-organizational collaboration, and sharing of information and responsibilities (Alter & Hage, 1993; Kickert et al., 1997; Alexander, 1995; Kooiman, 2003). This

means that EPI requires a shift from policy making by independent, single organizations or organizational units toward policy making at an inter-organizational level (EEA, 2005a). Such a shift demands new means of coordination and information exchange during decision-making. To achieve such policy integration, structural changes are often made by merging organizational units within one governmental level. It is assumed that such mergers enable organizations to take advantage of complementarities, improve interdivisional communication, prevent antagonistic policy development, and eliminate redundant duplication of administrative responsibilities and tasks (Alexander, 1995). Yet they can also increase the complexity and the number of intra-divisional problems faced by the organizational management. Furthermore, EPI is not only a matter of horizontal integration; rather it is integration of environmental considerations across sectors of the same governance level. Vertical integration of environmental policy across all levels of government is just as much a prerequisite for the effective implementation of EPI (EEAC, 1998; Lafferty & Hovden, 2003; EEB, 2003; EEA, 2005b; Mickwitz, 2006). Lafferty & Hovden (2003) state that the vertical dimension of EPI can be supported by defining qualitative and quantitative indicators to assess a given governmental level aim to integrate environmental concerns into other sectoral activities. This includes, for example, the mapping of major environmental challenges relevant to the sector and the formulation of a sectoral environmental action plan. The horizontal dimension of EPI may be achieved by the development of cross-sectoral strategies and the establishment of an authority to coordinate and supervise horizontal policy integration (Lafferty & Hovden, 2003).

Besides clear political choices and organizational changes, adjustments to policy-making procedures are also needed to better address integration of environmental issues in planning. Clear legal procedures address the number of considerations for the potential environmental impacts and interests of affected stakeholders. This may simultaneously reduce the risk of unbalanced decision-making due to the political preferences of certain actors and/or differences in power between actors. Lastly, changes in administrative practices and organizational cultures are indispensable in supporting implementation of EPI in land-use planning (Daniels, 1999; Wondolleck & Yaffee, 2000; EEA, 2005a). To achieve policy integration, public organizations have to push forward their boundaries and not only enlarge the scale and scope of their activities but also adapt their approach to their objectives (Tuite et al., 1972; Rogers & Whetten, 1982; McPhee & Poole, 2001). If decision makers act independently in situations in which interdependencies exist, the decisions of one may create constraints for the other. If, on the other hand, the decision makers coordinate their actions, an increase in joint rewards, or a "collective good," can be obtained (Tuite et al., 1972). Nilsson and Persson (2003) conceptualize EPI from a network perspective, in which actors and actors' coalitions (decision makers) are positioned according to their social values and EPI is seen as a learning process that occurs across the network. The success of such a learning process depends mainly on the

way the formal relations between actors from separate organizations are arranged. It is not clear yet, however, whether the institutionalization of EPI can be best achieved by making changes in the organizational structures, by facilitating behavioural (cultural) changes among (groups of) actors, or by both these means (Nillson & Persson, 2003).

2.3.2. Approaches to address EPI

To meet the challenges of achieving EPI, it is important to gain better understanding of which policy-making approaches favour or hinder EPI (Gerger & Nilsson, 2007). The current scientific literature on EPI does not yet show unanimity concerning specific EPI approaches and how they support the implementation of EPI in practice. However, the discussion concerning approaches in integrating environmental issues in decision-making in different policy sectors and in planning is still in progress (Jepson, 2001; Berke, 2002; Von Homeyer, 2006; Gerger & Nilsson, 2007). Some authors, such as Von Homeyer (2006), use basic modes of governance such as hierarchical, market-oriented, network, and communicative governance to identify possible approaches to EPI and to analyse their relevance to EPI. Within other literature sources, such as the framework of the United Nations Environmental Program, more specific differentiation has been made between four main approaches to integrate environmental concerns in other sectoral policies. These approaches have been defined as (1) strategic, (2) coordinative, (3) structural, and (4) procedural (UNECE & UNEP, 2002). Key characteristics of each approach: basic principles, the process needed, the products they deliver, and the challenges they face are described in Table 2.1. The approaches constitute some of the potential mechanisms that may help in implementing EPI at both vertical and horizontal levels of governance.

Table 2.1. *Approaches to Environmental Policy Integration (EPI)*

Key characteristics	**Approach to EPI**			
	Strategic	*Coordinative*	*Structural*	*Procedural*
Principle	Devising and employing a set of multiple policy objectives and long- term measures in such a way that these rein- force each other in different sectors.	Establishment of coordinative bodies to guide EPI among political and administrative layers of government.	Formalization of relationships, roles and responsibilities among sectoral governmental structures.	Complying with legal provisions and use of obligatory mechanisms that integrate different policy aspects.
Process	Raising political awareness and achieving commitment between different groups of decision makers.	Implementing a coordination style for decision-making: hierarchical or decentralized process.	Adapting organizational structures, helping to integrate environmental objectives in the administrative practices.	Enforcement of environmental appraisal procedures by the governments during policy implementation.
Products	Integrated policy documents: strategic plans, sustainable development plans, environmental action plans, and comprehensive urban land-use plans.	Supervision authorities, inter-organizational committees, advisory bodies, temporary operational groups and ad-hoc teams.	Merged organizations and/ or spread of responsibilities among various organizations and units.	Environmental assessment, strategic impact assessment, economic interventions such as charges and taxes for use of natural resources and land (see also EEB, 2003).
Challenges	Linking strategic plans to problem-driven governance and transferring them into a set of actions and outcomes (see also Steurer & Martinuzzi, 2005; Bruff & Wood, 2000; Von Homeyer, 2006).	Achieving coordination in a decentralized manner to share practices between policy sectors (see also EEA, 2005a,b; Von Homeyer, 2006).	Choosing a suitable structural change for each organization and level of government (see also EEA, 2005a,b; Von Homeyer, 2006).	Using legal procedures in changing institutional settings (see also EEA, 2005b; Von Homeyer, 2006).

While the strategic approach is based on integrating diverse policy objectives into integrated policy documents, the coordinative approach focuses on the coordination of these objectives between sectoral policy-making organizations by the establishment of coordinating and supervision bodies to direct EPI. The structural approach integrates specific administrative tasks and responsibilities by restructuring organizations and merging units or responsibilities. The procedural approach is based on regulating the EPI process by legal and economic interventions. While the strategic and procedural approaches have been widely used in different policy sectors, including the urban land-use planning practice, the relevance and applicability of the coordinative and structural approaches have been recognized only recently (Daniels, 1999; EEA, 2005a; Miller & De Roo, 2005; Von Homeyer, 2006). Quite often, a combination of approaches might be used. After all, different aspects of policy integration may demand different approaches. In this respect, it must be said that none of these approaches can be identified as the ultimate tool for achieving EPI. Each approach has obvious strong and weak points, and its applicability should further be assessed. Moreover, the effectiveness of one approach or another will also depend on factors that influence policy-making, such as commitment of decision makers to EPI in all relevant policy sectors.

2.4. EPI as a communicative mode of governance

The implementation of EPI demands inevitable trade-offs between environmental and other sectoral policy goals. It encounters conflicts of interests held by actors that strive to become influential in policy making (Hertin & Berkhout, 2003). For that reason, the integration of environmental considerations in the governance process of other policy sectors and, particularly, in the field of land-use planning can take place only through efficient collaboration and communication among relevant organizations within these fields (Margerum, 1999; Jepson, 2001; Wondolleck & Yaffee, 2000; Lenschow, 2002; EEA, 2005a). Therefore, besides the approaches described above, the implementation of EPI will also require a mechanism for the communication and the "calibration" of views and values of actors among developmental and environmental sectors (Steurer & Martinuzzi, 2005). It is widely accepted that communication is one of the most critical factors influencing governance processes involving diverse policy interests among decision makers (Wondolleck & Yaffee, 2000; Nilsson & Persson, 2003; Hertin & Berkhout, 2003; Lafferty & Hovden, 2003; Lenschow, 2002; EEA, 2005a; Kooiman, 2003). However, it has also been documented in the literature that the practice of inter-organizational collaboration and communication among environmental agencies and other specialized governmental organizations is often difficult to achieve because of complexities of managing such interactive processes (Margerum, 1999; Wondolleck & Yaffee, 2000; Hertin & Berkhout, 2003; Lenschow, 2002; Steurer & Martinuzzi, 2005; UNECE, 2003; Lafferty & Hovden, 2003; CEC, 2004a, 2006). In earlier studies, Walton (1972) has stated that governmental organizations often show a certain degree of "avoidance," failing to conduct or improve such communication for fear that it may complicate decision-making or affect their independence in the choice of actions.

Changing organizational practice regarding EPI will also require an adaptation of views and values by individual actors (i.e. decision makers). That is why EPI can be seen as a continuous process of transformation and learning, in terms of both organizations and individual actors influencing the making and the execution of environmental policies. Such a transformation can take place when professionals and decision makers within these organizations agree to optimize the integration of environmental policy by expanding its scope to other related policy issues. In the increasingly complex and dynamic organizations responsible for urban development and environmental protection, a communicative mechanism of governance is indispensable to this transformation process. It results in a better mutual understanding of sectoral interests and a proactive attitude toward environmental issues, instead of a reactive or defensive one. Hence, alongside the existing EPI approaches, an assessment of the role and significance of a communicative approach to achieving EPI in urban land-use planning can be considered pertinent. As referred to in the planning literature, communicative practices focus on the facilitation of the exchange of information and opinions between organizations and their sectoral

divisions and on building better understanding between individual actors within them (Innes & Booher, 1999; Wondolleck & Yaffee, 2000; Campbell & Fainstein, 2003). Such an approach may significantly contribute to the establishment of communication as a continuous practice so that planners and environmental experts can more easily reach a common understanding about sustainable urban development. In the urban land-use planning field, a communicative approach has a role in gaining the support not only of the decision makers within governmental organizations but also of broader groups of professionals and the local community. As with the other approaches, the communicative approach will probably not be appropriate for every aspect of EPI but can be used in combination with one or more of the other approaches. However, as planning research indicates, it is likely that the success of EPI cannot be guaranteed without the establishment of a mechanism for inter- and intra-organizational communication and that such a mechanism must not only be ideologically and theoretically substantiated but also be firmly grounded in the daily planning practice and decision-making (Jepson, 2001; Campbell & Fainstein, 2003).

2.4.1. Theoretical considerations for the communicative approach to EPI

In the current scientific debate about policy integration in general and the integration of environmental considerations in urban land-use planning in particular, questions are raised about the role and efficiency of the policy integration process within modern governance principles (Mickwitz & Kivimaa, 2007). Is policy integration really essential for good governance? Does policy integration result in better consideration of decisions and policies? Is policy integration workable and manageable, and does it call for increased communication between actors? What uncertainties does it introduce into the organizational environment of policy-making processes? The answers may be found by looking at the reasons for the increasing demand for policy integration, such as the expansion of the tasks of governmental agencies, the spread of decision-making and responsibilities for certain issues over different governmental agencies, the need for knowledge sharing within and among governmental levels, and the shift from single-sector policy issues to more complex, multi-sector policy issues (Peters, 1998). These developments demand a higher degree of coordination and, therefore, lead to calls for policy integration and EPI (Mickwitz & Kivimaa, 2007). Hertin & Berkhout (2003) argue that the traditionally divisional governmental structures are characterized by an antagonistic relationship, while the implementation of EPI will cause a shift toward a more cooperative model of policy making that offers better communication among and within sectoral governmental structures. The scientific pursuit for finding most appropriate communicative forms of governance, also referred to as "co-governance" or "collaborative planning," has gained prominence during the past decade (Alexander, 1995; Healey, 1997; Wondolleck & Yaffee, 2000; Allmendinger et al., 2000; Innes

& Booher, 2003; Innes, 2004; De Roo, 2003; Kooiman, 2006). As some scientists emphasize, such a communicative approach suits governing situations where those involved in governing interplays are willing to reach an inter-subjective understanding for co-governing purposes (Wondolleck & Yaffee, 2000; Kooiman, 2006).

Different theories and concepts have been developed that focus on the strengths and weaknesses of both communicative forms of governance and modes of inter-organizational collaboration. The main ideas promoted by these theories are discussed in the next section to underpin the relevance of communicative and collaborative organizational behaviour to EPI.

2.4.2. The perspective of organization theory and its relevance to EPI

The literature on EPI highlights that one of the major challenges in establishing EPI is defining the most appropriate structural setting of governmental organizations: it is not easy to embed policy integration processes in these organizations (Lenschow, 2002; EEB, 2003; EEA ,2005a; Mickwitz & Kivimaa, 2007). Nowadays, decisions on future policies can rarely be taken by actors within a single organization in one specialized policy sector. Policies are becoming more and more complex and interdependent, the borders between policy sectors are becoming blurred, and bureaucratic organizational structures are becoming less efficient. According to Kooiman (2003), this also means that "there is a need to increase organisations' potential for finding joint solutions to meet these diverse policy objectives."

The literature on collaborative planning and EPI inevitably emphasizes that environmental tasks are usually assigned to environmental agencies at various governmental levels, and these alone are not always best placed and equipped to push for cross-sectoral policy making. Implementing policy integration principles, such as EPI, requires breaking through organizational structures and administrative cultures that currently tend to work on relatively narrow mandates with little coordination and communication (Healey, 1997; Wondolleck & Yaffee, 2000; Lenschow, 2002; EEB, 2003; EEA, 2005a).

The theoretical discussion on organizational communication suggests different forms of organizational structure and offers a variety of transformations to deal with such an organizational fragmentation (McPhee & Poole, 2001). For example, the traditional forms of organization often fit well in Weber's (1978) rational model of "bureaucratic" social structures. In Weber's view, such bureaucratic structures are characterized by a comprehensive specification of tasks, strictly divided work, dispersed responsibilities, and centralized authority. These structures cannot cope with the increasingly complex and dynamic nature of organizations and the need for policy integration. As a number of authors argue, limiting the focus to this bureaucratic organizational model, characterized by rules and regulations, may result in the loss of organizational effectiveness and,

eventually, a total displacement of the organization's interests and policies (Rogers & Whetten, 1982; Mintzberg et al., 2003; Sycamnias, 2004). In contrast with such bureaucratic organization forms, organizational theorists explain that a communicative approach to cross-organizational issues, such as EPI, requires a more dynamic organizational environment characterized by a limited number of rules and standardized processes (Rogers & Whetten, 1982; Alexander, 1995; Mintzberg, 1983; McPhee & Poole, 2001; Mintzberg et al., 2003). This means that the power of decision-making is based more on expertise than on authority (McPhee & Poole, 2001; Mintzberg et al., 2003). Such an organizational environment focuses on establishing relations and exchange of knowledge between professionals within specialized departments. This may help for policy objectives to be defined in interaction. Such interaction is embedded in the concept of organizational learning and innovation and foresees continuous communication between actors within and across governmental organizations (Van de Ven et al., 1975; Alexander, 1995; Mintzberg et al., 2003). Literature on organizational communication shows that the structural characteristics of organizations strongly influence the initiation and maintenance of communicative processes within and between organizations (Van de Ven, et al., 1975; Rogers & Whetten, 1982; Alexander, 1995; McPhee & Poole, 2001; Mintzberg et al., 2003). Especially in recent years, the relation between organization structure and communicative phenomenon has been gaining prominence (McPhee and Poole 2001). Communication is emphasized as an integral part of the configuration-organization theories, such as in Mintzberg's (1983) theory. As interpreted in the organizational literature, Mintzberg's theory describes organizations as whole types, and communication is a critical aspect of each type, an inherent part of its description (McPhee & Poole, 2001). A number of new forms of organization have become particularly interesting nowadays in regard to communication issues, such as flexible (organic) forms. These forms imply decentralization, a shift to communication networks, and setting down the rules to allow greater amounts of informal communication across formal borders. Accordingly, the most promising organizations for integrated policy making are those whose configurations allow for the formation of smoothly functioning ad hoc teams with experts from different disciplines (Mintzberg 1983). Such organizational configurations create less formalization of actors' behaviour and procedures and fewer hierarchical relations (Mintzberg, 1983; Mintzberg et al., 2003). These are good starting points for a communicative approach to achieving the objectives of policy integration.

2.4.3. The perspective of communicative planning and its relevance to EPI

The body of literature discussing communicative processes in planning and governance has been growing in the past two decades. However, the point of departure for this discussion has been the Habermas (1984) communicative theory. Habermas interprets

the rise of the communicative paradigm in policy making as a response to Weber's (1978) bureaucratic structure of organizations. However, the current tendencies toward more communicative approaches, as opposed to command and control approaches, do not so much replace such rational approaches as adapt them to create structures that allow for more social interaction and communication to take place. Bohm (1996) defines communication as "to make something common." He argues that communication should be an equal process that enables actors to exchange arguments and visions. Similarly, Habermas (1984) sees reaching a "shared understanding" as the key element in communication. The concern in such communication is not to "win the argument" but to advance common interests and understanding (Brand, 1990).

As visibly noted in the planning literature, communication processes in any policy field are often threatened by differences in power among individual actors. Because of such differences, decisions on policies often seem to be based on dependency relations among actors rather than on rational arguments (Flyvbjerg, 1998). The intention of a communicative paradigm, however, is not to abandon differences in power altogether but to achieve situations with minimum domination (Flyvbjerg, 1998; Hillier, 2002). In this regard, Alexander (1996) and Faludi (1996) discuss the need for a combination of rational decision-making situations with communicative models of governance. Such a combination is assumed to ensure that a governance process is not based on reasoned argument alone but also on a communicative manner of working and sharing understandings and creativity. Hillier (2002) also describes it as a compromise between communicative planning and rational power relations. Wissink (2000) warns that by itself, the interactive style of government promoted by communicative theory might not be efficient enough to provide solutions to specific societal problems. He argues instead that a reflexive debate is needed, which starts by establishing a common understanding of the nature of the problem, pays attention to its political consequences, and clarifies the specific role of the government in society. The communicative paradigm has nowadays become an indispensable part of the societal integration process by promoting better understanding of the communication constraints impeding contemporary governance. As underlined by Margerum (1999) and Wondolleck and Yaffe (2000), collaboration and communication practices play major roles in achieving integration of environmental concerns into planning and development sectors. Healey (1997) exemplifies the idea of the communicative paradigm by addressing the relevance of collaborative processes for communication between political communities, helping them to exchange ideas, make valid choices, set priorities, and assess proposed courses of action. Healey (1997) agrees with Alexander (1996) in seeing communication as an interactive process of collective reasoning. It is argued in the planning literature that policies made by governmental organizations should not be seen as the outcome of a technical rational process but as products of a dynamic process of social interaction and learning in which communication is crucial (Healey, 1997; Wondolleck and Yaffee 2000). In the

planning domain, planning itself is often perceived as a process of learning (Forester, 1989; Friedman, 1996). Based on the discussion presented in the previous two sections, we can summarize that the use of a communicative approach to EPI requires careful consideration of (1) the form of organization and (2) the interrelations of all actors involved. To increase the chances of success with EPI, both the organizational form one chooses and the actor interrelations one encourages should allow for close collaboration and enhanced communication among cross-sectoral actors.

2.4.4. Identifying a conceptual link between communicative planning and organizational structure

Organizational Structure

Organizations are a major force in contemporary policy making (Mintzberg et al., 2003). Organizations provide strategies for achieving certain societal goals and are a framework within which responsibilities are distributed and decisions are made (Mintzberg, 1983; Maarveld, 2003). By restructuring organizations, new strategies for achieving the organizations' goals can be chosen. Thus, organizational structures can be tailor made according to the intentional interactions among actors and the institutional settings in which the organization is embedded (Scharpf, 1997). Thus, an organizational structure may predefine the division of tasks and responsibilities, the coordination mechanisms between hierarchical levels, the grouping of departments, the expertise needed, the degree of specialization, and the kind of integrative mechanism for communication and decision-making (Kickert, 1979; Mintzberg, 1983; Sycamnias, 2004). EPI is associated with changes in organizational structures that comply with the objectives of policy integration and provide mechanisms for effective communication among actors from different organizations or from different units in one organization. The focus should, therefore, be on organizations as the players who enforce the institutionalization of policy integration principles in the routine governance practice.

The question is to what extent, and how, the structural form of organization can improve the communication between actors within and among organizations. As described in the literature, the main failure of the sectoral form of organization into compartmentalized domains is its lack of mechanisms for efficient coordination and communication (Rogers and Whetten, 1982; Alexander, 1995; Carley & Christie, 2000). A sectoral form of organization often results in fragmented and poorly communicating departments pursuing divergent and sometimes even competing objectives. Moreover, the primary role of experts and politicians within these departments is to work for specialized sectors in which the main concern is not an integral plan or policy but specific sectorally defined outcomes (Rogers & Whetten, 1982; Tjallingii, 1996). This inhibits policy integration, reduces the chances of optimizing the governance process, and may cause conflict between organizational goals and policy objectives they are working for.

Organizational structures, in other words, influence behaviour and, hence, matter. As argued above, they may determine the type of interrelations in the organization and help overcome the cognitive limitations of individual actors (Mintzberg, 1983; Scharpf, 1997). Actors themselves depend on socially constructed "rules" to orient their actions and perceptions (Scharpf, 1997). The form of organization provides such a system of rules and can thus create the right administrative conditions to facilitate departments to exchange their differences and find common values. It may increase the actors' willingness and ability to communicate with other actors (Scharpf, 1997). As Walton (1972) pointed out, communication blocks are behavioural rather than physical in nature.

Thomas et al. (1972) assumed that more knowledge about the work situation in another department or organization would facilitate communication and exchange of information, make actors more responsive to others' requests, and develop greater mutual cooperation through a reciprocal process. Such knowledge can, therefore, be seen as an essential precondition for productive inter- and intra-organizational communication. Consequently, to achieve EPI, a form of organization should be chosen that enhances the development and spread of such knowledge and information.

As the literature on organizational theory claims, the transformation from an organizational form that is formal, closed and inflexible to one that is more informal, open and flexible will provide more favourable conditions for intra- and inter-organizational communication and will facilitate joint decision-making on complex policy issues (Tuite et al., 1972; Walton, 1972; Alexander, 1995; Mintzberg et al., 2003). The justification for this is that actors within organizations with a more open interactive structure will feel part of a network involving trade-offs between various sectoral interests rather than part of a single well-delineated division focused on the interests of one sector. The idea of such a flexible form of organization can best be explained by Mintzberg's (1983) concept of "adhocracy" organization. In adhocracy, interaction and exchange of information between actors is defined as a process of mutual adjustment via informal communication and the establishment of actors' constellations. These constellations may be located at the level of hierarchy appropriate to the kinds of functional decisions to be taken. In this organizational form, tasks and responsibilities are selectively decentralized. Decision-making power may, therefore, be vested at lower levels of the hierarchy, while horizontal decentralization can be established through the involvement of actors from a number of divisions and sectors. Adhocracy, as Mintzberg (1983) explains, is a flexible organizational form because it is transformative, responding to ever changing social needs, demands, and goals. The use of mutual adjustment as a coordination strategy leads to a focus on interaction and information exchange rather than on the development of a system for delivering standard outcomes. The emphasis is on ensuring organizational learning and innovation, enhanced by a climate of openness, free from political coercion. Such a structural

setting makes it possible to bring about functional changes within dynamic organizations based on a mutual understanding of values and interests among actors.

As a decision-making process involving interdependencies, EPI requires these kinds of mutual understanding and communication among diverse organizational units. A more open, adaptive and flexible form of organization can pave the way to joint decision-making processes and predetermine the conditions and techniques for coordination and communication between experts along both the horizontal and the vertical axes in government structures. In summary, to facilitate EPI, government organizations need to make changes.

The main outcome of these changes should be the establishment of a more continuous practice of intra- and inter-organizational communication and joint learning, known as a mutual adjustment process. Organization theorists continue to elaborate on the relationship between the organizational form and the communicational aspects of organizational structuring, while arguing that an organization that adopts a more flexible (organic) form is likely to foster such a continuous communication practice and information exchange and is able to function as a "learning organization" (McPhee & Poole, 2001; Yeo, 2005).

The understanding about the close relation between organization theory and the idea of communicative planning helps provide insight into the need for recognition of interdependencies between actors within fragmented policy sectors and their organizations. For example, more open and flexible forms of organization within local or regional authorities and their specialized divisions on environmental and land-use planning may increase the awareness of their specific interdependencies where environmental and urban land use problems interweave (see Figure 2.1.). They may enable proactive behaviour that helps to detect conflicting issues early in the policy-making process, thereby facilitating EPI. It may also help them cope better with new and often unexpected situations arising from changes in social values and the complex and dynamic nature of the decision-making process. Nowadays, such situations tend to occur more often in urban development projects where environmental objectives clash with those of economic development. It is important to consider the perspective of inter- and intra-organizational communication in promoting EPI in the field of urban land-use planning, taking into account the possible structural transformations within organizations to maintain complex cross-sectoral objectives while remaining operational in the daily administrative practice.

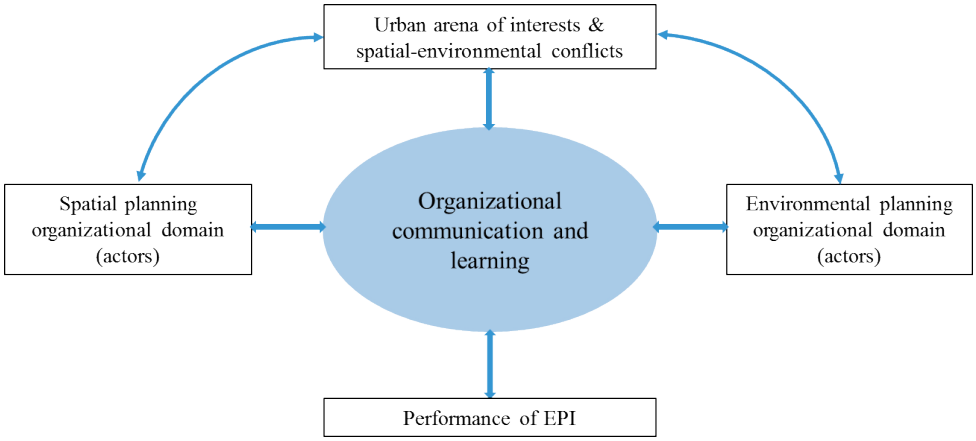

Figure 2.1. *Schematic view of a communicative approach to EPI in urban land-use planning*

Communication and Actors' Relations

Successful communication is primarily dependent on the individual actors involved. No matter what communication protocols or organizational forms have been developed, if the actors are not convinced of the benefits of communication, attempts to impose it will fail. In most situations involving interdependency issues (such as status and political power), differences in professionalism can impede joint decision-making and agreement. In a communicative approach to EPI, it is, therefore, crucial that the interrelations, behaviour, culture, and values of all actors involved in the EPI process be taken into account. There has been much theoretical debate on the nature of interactions among actors. In the literature on communicative planning theory and communicative governance, we find three modes of interactions that seem indispensable to enhancing communication among various actors: (1) collaborative planning practice, (2) networking, and (3) consensus-building dialogues. These modes are presented in the planning literature as ways to improve multi-organizational and multifactor interaction in decision-making (Healey, 1997; Innes, 2004; Wondolleck & Yaffee, 2000). Each mode represents a different perspective on the communicative process and has its pros and cons in achieving EPI.

Collaborative Planning Practices

A number of publications refer to collaborative planning practices as a key factor in enhancing communication between actors in policy and decision-making (Healey, 1997; Wondolleck & Yaffee, 2000; Forester, 2000; Innes & Booher, 2003). In terms of addressing EPI in urban land-use planning, the described challenges are to build a collective concern for the urban environments, to enforce improvements in the quality of such environments, and to develop ideas about the forms and processes of governance through which local actors can work together (Healey, 1997; Wondolleck

& Yaffee, 2000). Thus, Healey (1997) describes the collaborative planning practice as a process of defining policies and making strategic choices for "collective concerns about shared spaces". Collaborative planning practices are expected to be a considerable help in implementing a communicative approach to EPI because they examine the flow of social relations and the processes involved. These relations aim to establish links across organizational divisions that differ in objectives, culture and power. Collaborative planning practices enhance the team-building process and focus on the development of a common vision on how to reach sustainability of the communities' development (Healey, 1997; Wondolleck & Yaffee, 2000; Tewdwr-Jones & Allmendinger, 2002; Kooiman, 2003). Instead of conforming to rules and hierarchical relations, when actors share a common vision and sense of direction, they will challenge themselves and others to pursue their goals. According to Kooiman (2003), a collaboration process is a wider form of co-governing with a highly diverse and complex character, which represents societal diversity, dynamics and complexity, and addresses multiple policy issues.

The role given to the collaborative planning practices is in promoting a social learning process via better social interaction, whether in households, where members share common spaces and resources, or in formal organizations focused on the production and delivery of particular goods or services, for example, firms, agencies or government departments (Healey, 1997). Wondolleck & Yaffee (2000) emphasize the importance of finding common interests shared by individuals who seem to be on opposite sides of debating an environmental problem. According to the authors' findings, a dialogue between groups involved in solving an environmental problem and being open to listening to alternative perspectives is one of the most important steps in resolving disputes and making progress toward collaboration among all actors who have an interest in it. Healey (1997) specifies that to simultaneously deal with planning for land-use changes and environmental problems, there is a need to broaden actors' perspectives and address common concerns at the level of neighbourhoods, towns or entire urban areas. An example of a promising collaborative practice in land-use planning is the formation of public-private partnerships. The need for such collaboration arises because of the growing interdependence between private and public interests for both socioeconomic development and environmental protection. Private and public actors are often forced to interact about issues of land ownership, land use, and use or protection of environmental resources. As a form of collaboration, public-private partnerships may allow private actors' investments to be combined with developments of public use to their mutual benefit.

Networking

Another important mode of interaction revealed in the literature that is relevant to addressing EPI through a communicative approach is networking. As Scharpf (1997) states, the network concept may serve a range of purposes such as the forming of "policy

networks" based on resource exchange and the joint efforts by organizational actors to influence decisions within a given policy domain. According to Van Assche (2004), in the field of land-use planning policy, a networking process is essential. This process involves a network of actors who differ in expertise, objectives and responsibilities but who depend on one another to successfully accomplish their tasks. Networking at organization level or so-called network organization refers to relationships among the formal boundaries of several different organizations or units (Alexander, 1995; Scharpf, 1997; McPhee & Poole, 2001). Building such relationships can be voluntary, or may be based on resource, or knowledge dependency, or mandates. It can also be the result of institutional transformations such as political settings and rules that affect the relations between organizations involved. In practice, inter- and intra-organizational networks are usually seen as non-hierarchical social systems that constitute the basic social form that allows different types of coalitions to develop (Carley & Christie, 2000; Kooiman, 2003). Forming or re-establishing such networks can impose a shift from more centralized government action, with a hierarchical decision-making process, to more decentralized action such as co-governance, with more open and transparent decision-making. This shift implies a diffusion of power and demands close communication among actors.

Networks may differ in form and character and can be classified in different ways. For example, they may differ in configuration (Evan, 1972), in the nature of interactions (formal vs informal), in scale (Alexander, 1995), or in function (Carley & Christie, 2000). In the context of EPI in urban land-use planning, networking will allow for a functional or structural transformation toward establishing inter- and intra-organizational relationships between environmental experts and urban planners as a way to integrate environmental and planning objectives and values. Such networks can be classified as issue-oriented networks (Scharpf, 1997; Carley & Christie, 2000). An issue-oriented network is based on the need to share specific information or to form an ad hoc group dealing with a specific problem. Issue-oriented networks involve building interdependence on more specific problems or fields of policy making among a large number of actors.

Policy networks are another possible form of networking. These are networks based on the major functional interests of governmental sectors and characterized by stable inter-organizational relationships and shared responsibilities for services (Carley & Christie, 2000). A policy network would give the potential to transform the EPI process from one of the difficult issues that are often only reluctantly dealt with to integrated policy making in its own right. Such transformation may result in more coherent and predictable policy and decision-making, even in times of political turbulence and despite the emergence of complex organizational environments. Furthermore, the promotion of cross-cutting networks is indispensable to dealing with more dynamic policy processes, such as EPI, in urban land-use planning. This underlines the need for professional networks: networks of experts that cut across existing institutions by lobbying and, thus,

influence decision-making on each specific issue and across policy networks (Carley & Christie, 2000). In the domain of making land-use planning strategies, the formation of networks can be considered as a form of collaborative local governance in which the approach of the planners and environmental experts shifts from reactive problem solving to proactive problem avoiding. In this shift, the communication between actors changes from an involuntary action as part of "damage control" to a voluntary action that is believed to be essential to the actors' interests.

Consensus-Building Dialogue

Next to collaborative practice and networking, consensus building has been a broadly discussed phenomenon in the literature on communicative planning (Innes & Booher, 1999; Innes, 2004). Consensus building can be defined as a decision-making process in which actors use communication as a primary tool for reaching an agreement that may gain the support of all actors (Innes & Booher, 1999; Woltjer, 2000). However, consensus building is dependent on the development of a "common language" among actors and a mutual understanding and acceptance of the importance of certain communicative actions (Habermas, 1984). Therefore, consensus building can be seen as a continuous process able not only to achieve concrete agreements but also to provide a social order within which the differences are addressed and joint action can be taken (Innes & Booher, 1999). This adaptive role of consensus-building dialogues helps to grasp the dynamics of the organizations' systems and their performance in changing situations where mutual adjustment takes place and new partnership structures are needed (Innes & Booher, 1999). Consensus building is an important communicative instrument that helps to deal with conflict and complex situations provoked by processes such as EPI. Consensus building is particularly relevant for EPI because, as described by Innes and Booher (1999), it helps to understand the need for decisions that emerge from inclusive and open dialogues among equal partners rather than from top-down expertise or majority rule. For example, to address EPI and deal with confrontations on meeting environmental objectives within land-use planning activities, local governments will need to voluntarily enter into consensus-building processes with other actors, such as private parties or the local community. To do that, however, all actors will need the assurance that their interests and resources will be preserved (Warren, 1972). They must be equally informed, listened to, and respected (Innes & Booher, 1999). That is why, as explained in the literature, consensus building should take place under specific conditions, such as equal participation of all actors in the dialogue, equal access to and sharing of information, equal exploration of all interests, and serious efforts to satisfy all interests (Innes, 2004).

Factors that, according to Innes (2004), induce conflict situations at inter- and intra-organizational levels may include conflicts of interests between organizational units when the boundaries of responsibilities are not clear, the presence of obstacles to

interdepartmental (or inter-organizational) communication, or the presence of social friction within any or all organizational subunits. These are also the most recognized constraints related to the process of EPI for the resolution of which consensus-building dialogues may have significant role. As argued by Innes and Booher (1999), both the tangible (policies, plans and agreements) and intangible (shared understanding, relationships and social interaction) outcomes of consensus building may have positive effects on resolving conflicts and helping actors and organizations to improve their communication and to better integrate and interrelate their governing objectives and interests.

2.5. Comparing approaches to EPI

Introducing the EPI principle into the daily administrative practice of sector specialized organizations depends on what specific approaches are used to achieve EPI. Yet there is not much literature drawing on typologies and comparative assessments of EPI approaches. In this section, however, an attempt is made to compare the coordinative, strategic, structural and procedural approaches to EPI with the communicative approach.

Other approaches to the communicative approach, as elaborated in this article, could be used to enable actors from fragmented organizations and units to deal with policy integration and adequately handle issues outside the traditional agenda of their policy sectors. Earlier in this article, it has been indicated that the communicative approach is highly suitable for EPI due to its emphasis on both structural changes in the organizations and collaboration among actors engaged in a learning process that allows for continuous adaptations during policy making. A question that remains in this debate on communicative planning and EPI is whether a communicative approach can replace all other approaches or whether a combination of approaches will work better? And, if a combination of approaches seems necessary, which combination will work best?

Studying different approaches to EPI and evaluating the EPI process is important to assess how well it resolves specific environmental issues within sectoral policies (Mickwitz and Kivimaa 2007). The EEA (2005b) has developed one of the first evaluation frameworks for EPI that incorporates administrative culture and practices among its main categories. For the evaluation of EPI with regard to administrative practices, four main variables can be distinguished: (1) the incentive to develop integrated strategic plans and strategic committees that support EPI, (2) the presence of a mechanism for inter- and intra-organizational sharing of responsibilities, (3) the existence of regulatory procedures that reflect EPI priorities, and (4) the presence of mechanisms for communication between departments and between levels of governance

(vertically and horizontally). The variables indicate the extent to which organizations might reflect EPI in their day-to-day practice. We used these variables to qualitatively compare the benefits and weaknesses of different approaches to EPI (Table 2.2.; see also the above descriptions of the approaches in this article).

As noted above, this evaluation framework is one of the few attempts to evaluate EPI, as this kind of policy integration is still in its infancy. Furthermore, differences in administrative practices and government cultures make it difficult to develop universal evaluation criteria to measure the success of EPI. Nevertheless, we believe that the variables used cover the key factors in successful EPI; all the variables are strongly associated with the changes required to embed environmental considerations in the policy practice of other sectors and to engage sectoral actors in inter-organizational decision-making. These variables help us to compare the EPI approaches in current use with the communicative approach suggested in this article. Table 2.2. shows clearly that none of the approaches, including the communicative approach, attains high ratings for all variables. Hence, to optimize outcomes of EPI process, a combination of approaches should always be used. Compared with the other approaches, the communicative approach has the highest score if the scores for all variables are added up and, therefore, seems to provide the best starting point for exploring appropriate combinations. For example, combining the communicative approach with the procedural approach may have the advantage that the latter fully compensates for the lack of regulatory procedures in the communicative approach. Combining the communicative approach with the strategic approach may also improve EPI because, although the strategic approach has a moderate score, it facilitates the development of integrated policy plans or strategies that support EPI. Combining the communicative approach with either the coordinative or the structural approach is likely to be of little use because the communicative approach scores the same or better for the tested variables. This does not imply that the instruments of a coordinative or structural approach are not useful for achieving EPI but rather that the benefits of these instruments can also be gained through a communicative approach. Based on this comparison of approaches, emphasis can be made that none of the currently used approaches can be classified as strong in providing communicative mechanisms between departments and between levels of governance (Table 2.2.). The choice of a communicative approach therefore seems not only practical but also indispensable to the full implementation of EPI.

Table 2.2. *Comparing Strengths and Weaknesses of Approaches to Environmental Policy Integration (EPI) in Urban Land-use planning*

Variables characterizing EPI	***Approaches to EPI***				
	Coordinative	*Strategic*	*Structural*	*Procedural*	*Communicative*
Incentive to develop integrated strategic plans and committees that support and guide EPI	✓	✓✓✓	_	_	✓✓
Presence of a mechanism for inter-and intra-organizational sharing of responsibilities	✓✓✓	✓	✓✓✓	✓✓	✓✓✓
Existence of regulatory procedures that reflect EPI priorities	_	✓	_	✓✓✓	_
Presence of communicative mechanisms for actors among levels of governance and organizational units	✓✓	✓	✓✓	_	✓✓✓

Note: ✓✓✓= strong; ✓✓= moderate; ✓= weak; −= lacking.

2.6. Implications of the communicative approach to improve EPI in planning

How can we make a communicative approach to EPI work in different fields of policy making such as in the field of urban land-use planning? As argued above, it demands a decision-making process based on strong social interaction and learning between actors and a shift from a traditional to a more flexible structure of organization. It offers a way of moving from a sectoral approach to a more integrated approach to planning issues, and it is one that implies changes within the local authorities and interaction among local actors involved in urban development projects (Randolph, 2004). Through this review and analysis oF EPI, it becomes evident that actor relations in local decision-making cannot simply be based on a procedural or strategic approach where interrelationships among actors are limited to procedures or instruments prescribed by a hierarchically higher governmental body. Instead, these relations must be contextualized within locally established inter-organizational networks in which mutual understanding can be developed and collaboration and consensus building become a manner of policy making. Ideologically, intra- and inter-organizational communication should be an intrinsic part of the daily practices of both environmental and land-use planning professionals (Randolph, 2004). To achieve such situations, organizations such as local authorities should actively encourage and facilitate their professionals to build both formal and informal relationships, to facilitate joint learning by sharing knowledge, to increase their mutual understanding of each other's values and interests, and to improve current practices of both urban design and planning and development of environmental measures.

As illustrated in Table 2.3., the key factor influencing this process is increasing the awareness and consideration of the existing interdependencies between organizational structures and individual actors, as well as of the benefits of an intensified communication. To facilitate the increase of this awareness, changes towards a more flexible form of organization are of great value. A communicative approach to EPI can be best achieved by setting up organizational forms that minimize the focus on formal rules, regulations and standardized procedures, and that maximize informal relationships between individual actors. Actors can join forces in multidisciplinary ad hoc teams or actor networks that offer the conditions for a mutual adjustment process to take place (Table 2.3.). In such organizational settings, there is probably less emphasis on hierarchical relations among actors. Ideally, more power and responsibility are handed over to the professionals whose knowledge and skills form the keystone in the policy-making process and the basis for joint decision-making at the political level. One disadvantage of the communicative approach that must be considered is that it makes the policy-making process less predictable, more complex, and thus harder to manage (Glasbergen & Driessen, 2005). In a more traditional approach, solutions are developed more systematically, using predetermined rules and guidelines. A communicative approach, by contrast, challenges problems from a variety of angles, with no limitations on how a solution might be reached. However, when faced with complex organizational changes related to the implementation of EPI in urban land-use planning projects, a communicative approach is probably more adaptable, while traditional bureaucracies will need more time to adjust their rules and procedures to the changed situation. It seems that in recent years, environmental and planning organizations or departments both at national and at local levels of governance tend to opt for an intermediate form of organization. This enables them both to preserve the solid predictability of traditional organizational forms and to adopt the flexibility of more open and dynamic organizations, such as adhocracy-like models (Carley & Christie, 2004; Steurer & Martinuzzi, 2005; Sycamnias, 2004). In such intermediate organizational forms, actors at all levels receive clear directions as to what is expected from them from a sectoral point of view, while smaller units within each organization deal with issues requiring a high degree of policy integration. Consequently, the organizational structure is likely to provide a certain stability and predictability and still be able to deal successfully with new and complex policy issues while achieving EPI.

Table 2.3. *The role of the communicative approach to improving Environmental Policy Integration in the field of urban land-use planning*

	Form of Organization	**Actors' Relations**
High awareness of organizational interdependencies in local planning process	Open organization with transfer of information among departments, mutual adjustment, and learning between actors	Joint decision-making in inter- and intra-organizational networks, communication between individual or groups of actors, and consensus building
Low consideration of organizational interdependencies in local planning process	Fragmented organizational structures with lack of organizational communication	Lack of common vision and shared interests and values between individual or groups of actors

2.7. Conclusions

Governments at all levels are facing serious challenges in their efforts to realize sustainable urban development and to find a balance between often contradictory environmental and economic development objectives. This review has shown that a growing literature on governance and policy integration portrays the EPI principle as a determinant factor in meeting these challenges. However, EPI still needs to be made visible in practice by developing and testing new approaches that integrate environmental objectives into planning in a complementary manner. While few scientific studies have focused on identifying systematic approaches to EPI, more recent literature has addressed the potential relationship between communicative governance and EPI process. As this article has illustrated, EPI itself can be seen as a communicative process. EPI demands that various actors adapt to new circumstances and acquire knowledge from different sectors in setting objectives and making decisions so that they address environmental concerns. The comparison of the communicative approach to EPI with other potential approaches has clearly indicated its relevance for achieving EPI. One of the conclusions is that a communicative approach is likely to provide conditions for improving EPI in the field of urban land-use planning because it is concerned with the establishment of joint decision-making between specialized governmental structures.

A communicative approach to EPI may be favoured because of the conceptual view it promotes that efficient communication and learning between diverse sectoral actors is needed together with a shift from traditional bureaucratic organizational culture in governance to more interactive ones. As the fragmentation of organizations in policy making appears to be a major impediment to EPI, a communicative approach helps to address EPI as part of the administrative practices of these organizations on various scales and levels.

However, as this research also shows, the communicative approach to achieve EPI is not all-inclusive and cannot simply replace all other approaches currently in use. Each approach addresses different aspects of the policy integration process and translates it differently into reality. It can also be concluded that in specific fields of governance, such as urban land-use planning, a communicative approach to EPI is likely to work best in combination with one or more other approaches. The combination with a procedural and strategic approach seems especially beneficial because the instruments used in these approaches are highly complementary to those of the communicative approach. Such a combination may strengthen the effectiveness of EPI by balancing between the more rigid and formalized aspects of policy integration and the dynamic character of the communicative processes. The main benefit of the communicative approach to EPI is that it supports the establishment of a higher degree of consideration of the actors' interdependences and of informal inter- and intra-organizational relations. Thus, both the actors' relations and the structural aspects of organizational processes have a key role in the communicative approach to EPI. The concepts from communicative planning and organization theories that were juxtaposed in this research allowed us to underline some elements of the communicative approach, such as collaborative practices, networking and willingness of actors to take part in consensus-building dialogues.

The communicative approach may have a significant role for addressing the EPI principle within the environmental and land-use planning departments and agencies. It can be used to enable actors within these departments to develop a broader view on problems and solutions that may better accommodate environmental and land-use planning concerns and help to understand their impacts on urban development. This conclusion is also supported by the fact that complex decisions about the sustainability of urban development are to be based not only on rational factors influencing planning but also on sharing knowledge and building interpersonal relations between professionals and decision makers. One unresolved yet critical issue that demands more scientific research is the effectiveness of the communicative approach in general and with regard to EPI in particular. More knowledge not yet available in the literature is needed about possible ways to assess the outcomes of communicative modes to EPI. It can be recommended to test and evaluate the communicative approach in several practical cases on different levels of governance. After all, only with such testing in the routine planning practice can the strengths and expected benefits of a communicative approach to EPI be proven.

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CHAPTER 3

The role of an area-oriented approach in achieving Environmental Policy Integration in the Netherlands, and its applicability in Bulgaria

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Abstract

An integrated approach to environmental policy and urban spatial planning has not yet been adopted by many local administrations in Europe. However, such integration is likely to provide a more streamlined planning process that incorporates environmental measures in the physical development of urban areas. In this paper, we argue that among many local governments there is already a growing wish to apply environmental policy integration (EPI) principles in spatial planning in an effort to achieve better quality of life in the cities and to preserve natural resources. Within Europe, most attempts to develop EPI approaches can be found in western countries, while efforts to find integrated approaches to the urban environment and spatial planning in Eastern Europe are in their infancy. The main reason for this is that most of the post-communist countries are still addressing the challenge of reconstructing their political, social, and economic systems. In this research, we analyse and compare policy practices for EPI in urban planning in the Netherlands and Bulgaria. We first discuss the Dutch area-oriented policy approach, which has gained popularity during the last decade as a means of integrating environmental qualities in urban land-use plans. We then go on to analyse the effectiveness of specific area-oriented methods developed and applied in Rotterdam, and define their applicability in the planning practice of the local authorities of the city of Burgas in Bulgaria. The main conclusion of the study is that the degree of effectiveness of an area-oriented policy is dependent on the impact of specific success factors. Despite the differences between Rotterdam and Burgas in terms of the presence of these success factors, we assert that the area-oriented policy approach applied in Rotterdam can be transferable, and can be adapted to the specific local circumstances in Burgas and used as an instrument for integrating EPI into urban land-use planning.

3.1. Introduction

Ever since the industrial revolution in the nineteenth century, there have been increasing environmental threats to people living in urban areas, mainly due to emissions of pollutants, waste production, increased use of natural resources, traffic congestion and loss of urban green areas (UNFPA, 2007). These consequences of the industrialization process were not immediately recognized and, when urban environmental problems started to become evident, the economic pros were usually considered of higher importance than the environmental cons.

Since the early 1970s, most western countries have established a range of environmental protection programmes and instruments to help governments at all levels with decision-making on environmental issues. These measures included legislation, incentive programmes, environmental impact assessments (EIAs), and multilateral conventions to reduce pollution and other environmental threats (Alker & Haas, 1993; Jänicke & Jörgens, 1998). In most countries, land-use planning and environmental regulations and instruments have co-existed in an attempt to develop more attractive and environmentally friendly urban areas. Usually each policy instrument for solving environmental problems within urban areas was implemented separately from other policies, as the expertise was, in practice, often divided over different organizational units that acted more or less autonomously (Daniels, 1999; Campbell & Fainstein, 2003).

Prior to the appearance of serious environmental problems, the dominant goals in the field of urban land-use planning were economic and social development (Beriatos, 2004). The idea of combining spatial and environmental planning is a product of the last 20 years (Beriatos, 2004). The scientific, socio-economic and political developments of the post-war period generated new conceptions of this issue, in terms of both ideology and science. Since the early nineties, there have been numerous statements in the subject, which refer to reports, studies and other documents by international organizations such as the United Nations (WCED, 1987), the EU (Commission of the European Communities, 1999, 2006), and the Organization of Economic Co-operation and Development (Jänicke & Jörgens, 1998). The new dogma is the need to secure the sustainability of development, which is based on the fundamental ecological principles of solidarity between generations and resources renewal (Commission of the European Communities, 1999).

Based on the new sustainability principle, in the 90s a more integrated approach to national environmental policy has emerged together with the initiation of the urban sustainable development plans (Jänicke & Jörgens, 1998; Conroy & Berke, 2004). These plans were founded upon the idea that the combination of urban development objectives that include both land-use planning and environmental planning is a more effective strategy for improving the quality of life in urban areas and conserving natural

resources (Commission of the European Communities, 1990, 1996; Graute, 1998; Coenen, 1999; Miller & De Roo, 1999; Wellbank, 2002; Leibenath & Pallagst, 2003; Commission of the European Communities, 2004; Conroy & Berke, 2004). This planning approach found increasing acceptance, particularly within EU institutions, after the use of regulatory environmental policy instruments alone began to face a legitimacy crisis, as it seemed to impose high costs on economic actors without producing desired environmental improvements (Lenschow, 2002). In the current political and scientific debates, the incorporation of the environmental objectives in policy sectors promoting economic development, such as transport, agriculture or spatial planning, is widely referred to as a process of environmental policy integration (EPI) (Jordan & Lenschow, 1999; Lenschow 2002; European Environmental Agency, 2005, Simeonova & Van der Valk, 2009). Although EPI (further referred to as EPI in this paper) has drawn increasing attention at regional and local levels of governance since the first sustainable urban development plans were launched, it has nevertheless not yet been fully institutionalized as an operational principle in the urban planning practice by many local authorities in Europe (Lenschow, 2002; European Environmental Agency, 2005; Commission of the European Communities, 2006). Due to the growing environmental pressure within urban areas, and increasing social demand for high quality of life, the need for EPI as a strategy to improve the physical environment and spatial quality continues to increase (Commission of the European Communities, 2006; Simeonova & Van der Valk, 2009).

EPI is receiving support from both planners and environmental experts, and is increasingly considered as a useful and effective strategy to provide a streamlined planning process for urban sustainability (Miller & De Roo, 2005). Both spatial planners and environmentalists currently recognize that initiatives for the protection of the environment often overlap initiatives for urban land-use planning (Van den Berg, 1999; De Roo, 2003; Commission of the European Communities, 2004, 2006; Miller & De Roo, 2005). For example, in the development of environmental objectives, important conditions and preconditions for spatial planning are formulated, such as maximum emission levels in residential areas or blueprints for the lay-out of urban green areas. On the other hand, spatial planning can reduce the need for environmental protection measures, e.g. through the chosen configuration of the urban area, the proper allocation of land use and the design of urban infrastructure. Moreover, spatial planning instruments usually have to be used when implementing environmental plans (Van Lier et al., 1994). While the planning measures introduced in beginning of the twentieth century mitigated the environmental problems in the urban areas, mainly by separating the residential and industrial areas, currently, planners tend to focus on developing new planning approaches that are able to prevent these problems in the urban development process (Miller & De Roo, 1999, 2005; Creedy et al., 2007).

During the last decade, EU policies have had a greater impact in stimulating the development of strategies at both the regional and local level, such as the European

Spatial Development Perspective (Commission of the European Communities, 1999) and the Thematic Strategy on the Urban Environment (Commission of the European Communities, 2006). These strategies reflect on the agreement achieved among European policy makers that urban development is to be based on the sustainability principle and has to aim at advancing the quality of life by protecting and conserving the natural environment on local and regional scales by reducing ecological footprints (Commission of the European Communities, 1999, 2006). This issue is strongly addressed in the EU enlargement policy aiming to establish close relations between the EU and Central and Eastern European countries and to meet the challenges in achieving an integrated European spatial development (Marinov, 2006; Pallagst, 2006; Stanilov, 2007). The implementation of the EU structural instruments and regional development policy that have been introduced in the new member states play currently a crucial role in contributing to a stronger coherency between the European spatial planning initiatives on urban sustainability and formation of governance processes on transnational level between all EU countries (Pallagst, 2006). Within this process, the current developments in Central and Eastern European countries represent a new dimension in European spatial planning.

Up to now, most attempts to integrate environmental objectives in urban land-use planning in Europe have been made in western countries (Commission of the European Communities, 2004). For example, during the past two decades within a number of national and EU programmes and initiatives on urban sustainability in several Western European countries such as for example the Netherlands, Denmark, Sweden, and the UK, the spatial planning strategies have evolved towards a more extensive embedment of the environmental integration principle in a number of innovative policy approaches (De Roo, 2003; Miller & De Roo, 2005; Sanchez & Lauritzen, 2006; Creedy et al., 2007; Porter et al., 2007). One such approach is the Dutch area-oriented environmental policy (AOEP), which aims for a more integrated and decentralized urban planning practice with an equal emphasis on urban land use and on environmental objectives (VROM, 1999; 2004a). This policy approach allows decisions on environmental problems and urban development to be taken mainly by local actors, considering the specific qualities of the area as well as developmental pressures present (De Roo, 2003; VROM, 2003). With such an approach, it is hoped to avoid conflicts between different policy sectors which have an impact on the quality of urban life, or, if conflicts do rise, to find effective solutions supported by all the actors involved.

In contrast to the Netherlands, in the post-communist countries of Eastern Europe, the integration of environmental and urban land-use planning is still in its infancy, as most of these countries are still tackling the challenge of reconstructing their political, social and economic systems (Spiridonova, 1998; MRDPW, 2005; Stanilov, 2007). National authorities in Eastern Europe are currently focusing on the implementation of these reforms after the transformation from a centrally planned

society into a decentralized one (Carius et al., 2001). This transformation process has already provided local authorities with more independence in decision-making on both spatial and environmental issues. However, most post-communist countries still largely lack the institutional capacity and specific policy tools needed to address EPI in urban planning practice (Carius et al., 2001; Stanilov, 2007). In contrast to the situation in many western cities, many local governments in Eastern Europe will first have to find ways to deal with the multitude of complex and often conflicting objectives generated by the ongoing economic reform, the privatization and redevelopment of land, and new measures to protect the environment (Graute, 1998; Markowitz, 2000; ESTIA, 2000; Carius et al., 2001; Kopeva, 2003; Grover, 2006).

The objective of our study is to assess whether AOEP is a suitable approach to achieving EPI in urban land-use planning, and if so, to define the key factors for its success. Furthermore, this study aims to explore the applicability and transferability of AOEP as a planning tool developed in Western Europe to the urban planning practice in post-communist Eastern European countries confronted with the constraints and opportunities entailed by EU membership. To do this, we chose to conduct a comparative analysis between a Dutch city in which the AOEP approach has been applied, and an Eastern European city in which the EPI process still has to be initiated.

3.2. The Research approach

AOEP can be implemented in numerous ways, using different policy instruments (De Roo & Visser, 2004). To study whether it is a suitable approach to achieving EPI in urban land-use planning, we explored two methods used for the implementation of AOEP, both developed by the municipality of Rotterdam in the Netherlands. We selected these methods as Rotterdam is although some other municipalities have developed and applied similar approaches – one of the forerunners in implementing an area-oriented approach.

We described these methods in detail, based on a literature review, and analysed on the basis of a set of indicators their expected effectiveness in achieving EPI in urban land-use planning. We further elaborated on this indicator-based evaluation through interviews with different stakeholders, such as policy makers, urban planners, environmental experts from both national and municipal governmental organizations, and researchers concerned with planning theory and sustainable urban development practices.

To gain more knowledge about the challenges of the Eastern European governments, joining the EU planning arena, to transform their planning policies formerly embedded in the socialist system, we chose to assess the applicability and transferability of AOEP to the urban planning practice in Bulgaria, a newly acceded EU member state. We

selected the city of Burgas in Bulgaria as a relevant case study for this comparative planning research. We found the city of Burgas as a suitable case for this comparative analysis, as this coastal city is similar to the city of Rotterdam in its functions and structure, with an international port, extensive industry and significant residential and tourist activities. This comparative assessment is based on the theoretical concept of the "institutional transplantation", developed by De Jong and Mamadouh (2002). This concept proposes that transferring successful institutions such as policy approaches, organizational practices and procedures from one country to another is a means of speeding up development, or achieving it at lower costs. Borrowing practices that proved successful in a certain political or societal context might be seen as a way to share in that success (De Jong & Mamadouh, 2002). Moreover, such a transplantation process contributes to overcoming the common reluctance in certain governmental structures to consider change by underlining the successful outcomes a proposed change has brought about elsewhere (De Jong & Mamadouh, 2002). While this concept makes sense in theory, it is also essential that a careful empirical analysis be made of the transferability of such policy approaches and practices from one institutional and socio-economic model to another. Therefore, to study the scope for "institutional transplantation" of the AOEP approach to the city of Burgas, we chose first to analyse the current institutional framework for environmental and urban land-use planning practices in the Netherlands and in Bulgaria, and to reflect on the pros and cons of applying AOEP in the case city of Burgas, based on our explorations of the effectiveness of the approach in Rotterdam. Because of the differences in the policy cultures, institutions and legislation between the two countries, it was not our intention to assess whether copying the exact policy approach from the Dutch model is feasible or not. We did, however, attempt to look at the fundamental principle on which the Dutch approach is grounded, as a reference model, and to extract recommendations for an effective achievement of EPI in the Bulgarian planning context.

The comparison between the two cities was conducted by using a hierarchical comparative case-study method (Verschuren & Doorewaard, 1999). In this method, the case studies-Rotterdam and Burgas-are firstly analysed independently from each other. Secondly, all the data from the two cases are compared with the use of a set of variables that characterize EPI (Simeonova & Van der Valk, 2009). These variables indicate to what extent local governments support EPI in their administrative practice by applying concrete policy incentives. For the present study, we used these variables in questions to identify the presence of such incentives for each case: (1) Are there any plans, programmes and strategies supporting EPI within the urban land-use planning practice? (2) What kind of co-ordination mechanism for decision-making is used? (3) Is the EPI principle embedded in specific legislation or normative procedures? (4) Are there any communication strategies for EPI at inter-departmental or inter-organizational levels? In addition to this comparative analysis, based on a review of

policy plans, urban development master plans, municipal urban development strategies and local environmental plans, we conducted a review of the scientific literature and held interviews with stakeholders in both cities to investigate their expectations as to the feasibility and relevance of the AOEP approach for achieving EPI in an Eastern European city.

Although the focus in this paper is on the local level of governance within urban areas, some understanding of provincial and national spatial and environmental policies in both countries is indispensable to evaluate the (expected) effectiveness of AOEP in the different contexts of a Western and an Eastern European city. Therefore, we briefly describe these policies for both countries, as well as possible hindrances to an AOEP approach posed by the hierarchical relations between levels of governance.

3.2.1. Study Sites

The city of Rotterdam is located on the North Sea coast in the west of the Netherlands. Currently, the city comprises an area of about 319 km^2 and has 584,046 inhabitants. It is the second largest city in the Netherlands and part of the country's western conurbation, the so-called Randstad. The city is important to both the regional and national economy due to the presence of the nation's main international sea port, including extensive industrial areas and a transport network that connects the port with most countries in Western Europe. The city of Burgas is located on the Black Sea coast in the east of Bulgaria. Currently the city comprises an area of about 280 km^2 and has 226,000 inhabitants. As in Rotterdam, the economic driver of the city is the international sea port and its accompanying industries.

While the urban governance process in Rotterdam has been embedded in a democratic political model for decades, the local authorities of Burgas are still governing in a phase of transition to democracy after a communist regime. Both Rotterdam and Burgas are cities with ongoing urbanization and an increasing population. They both therefore constantly need more space for industrial activities, services and for quality living areas. Meeting this need requires renovation of old city districts, expansion into new areas and, in the case of Rotterdam, the transformation of former port areas into attractive places to live and work (Gemeentewerken Rotterdam, 1999). The presence of a major international sea port with a well-developed industrial sector and transportation networks characterizes both cities as significant economic centres under continuous environmental pressures. In both cities, environmental quality is a major concern for the local governments as well as for the local communities (Zlatanova, 1999; Kreukels, 2003). In Rotterdam, the environmental pressures are caused by the intensification of the urban area as it accommodates a range of functions, including infrastructure, dwellings and industries. The main challenge in combining these functions is to achieve

good environmental quality by improving the air, water and soil qualities, reducing noise disturbance and improving urban green infrastructure.

In Burgas, the problems with the environmental quality were inherited from the communist period when environment was not a priority in the governmental policy. Just after the breakdown of the communist system, the temporary decline in industrial development led to a decrease in environmental pollution. Currently, the new wave of economic development causes new environmental problems such as air pollution due to intensified urban transport and new industries, as well as loss of green spaces and urban landscapes due to a boom in spatial developments and urban growth.

3.3. Spatial and environmental planning policies in the Netherlands

In the second half of the twentieth century, the Netherlands experienced a rapid economic expansion, interspersed with a few periods of recession in the early 1970s and 1990s (VROM, 1996; Schreuders, 1998; Van der Valk, 2002). Since then, both the economic growth and the increasing population keep the country in a permanent state of reconstruction. Much attention has therefore been given to spatial planning strategies in an attempt to meet the demand for land for residential, business, industrial and transportation purposes, as well as a range of other interests such as recreation, nature conservation and agriculture (VROM, 2004b).

The policy for spatial development within the Netherlands is worked out in National Policy Plans for Spatial Planning (NPPSP), which have been produced, on average, every 10 years since the 1960s (VROM, 1989; De Jong, 1996). Traditionally, these NPPSPs provide directions for the spatial development on a national level as well as a framework for provincial and municipal spatial plans (Hajer & Zonneveld, 2000). The NPPSPs outline the main spatial concepts for development, which change with the times and which have an important leverage on national, provincial and local spatial developments (Faludi & Van der Valk, 1994; Hajer & Zonneveld, 2000).

The Dutch legal system of planning is based on the Spatial Planning Act, which allocates planning responsibilities to three tiers of the government, e.g. national, regional and local. Spatial plans are developed at each level, but there is a particularly strong emphasis on the local land-use allocation plans, which regulate local developments within urban areas (Faludi & Van der Valk, 1994; Van der Valk, 2002). These land allocation plans are developed in compliance with provincial Regional Spatial Plans and Spatial Structure Plans, which in their turn have to reflect the priorities of the NPPSP (VROM, 1999; Van der Valk, 2002). Hence, a hierarchical system has been developed, in which a shift from large-scale spatial policies (national level) to more specific land-use allocations (local level) is currently taking place. In 2008, the government is preparing to introduce a new Spatial Planning Act, which aims to reduce the level of hierarchical

control by the central government and instead gives new optional instruments to the provincial and local governments, which they can use to reshape regional and local developments. Such instruments may range from legally binding plans assigning functions to particular lands, through sets of rules imposed by local governments, to instruments for influencing individual local governments in both reactive and proactive ways. Governments may then be able to choose to use legal instruments or to focus on collaboration and consultation (Kamphorst et al., 2008). This more decentralized approach to spatial planning will determine the impact of spatial planning on different policy fields relating to the environment such as nature, landscapes, green spaces, water, etc. (Kamphorst et al., 2008).

Like the spatial planning policy, the environment policy in the Netherlands is also worked out in National Environmental Policy Plans (NEPP), which have been produced, on average, every 10-20 years since the beginning of the 1990s (VROM, 2004b, 2005). The NEPPs outline the national environmental objectives in relation to other sectoral policies and give directions for priority environmental measures. While the first Dutch NEPP was mainly focused on corrective measures to counteract emergent environmental problems, more recent NEPPs have put more emphasis on preventive measures (Carley & Christie, 2000; VROM, 2004b).

The idea of EPI in the Netherlands was first introduced in 1983 within the Environmental Policy Integration Plan (EPIP) (VROM, 1983). The purpose of the plan was to generally raise the awareness of politicians and professionals on the existing interdependency between environmental policy and other sectoral policies which promote economic development. EPI was interpreted as both an internal and an external process (VROM, 1989, 2005). This meant that links should be established between different environmental themes representing components of the physical environment, and between target groups representing different economic sectors (De Jong, 1996). Consequently, this strategy was incorporated in the first NEPP and was also reflected in the first NPPSP after the publication of EPIP (VROM, 1989, 2004b, 2005). In this process, the environmental objectives were considered important in terms of the influence of environmental policy approaches on spatial planning (De Roo, 2003). There was a gradual change towards a better understanding within all governmental levels of the relationships between the existing environmental problems and spatial developments (De Jong, 1996; De Roo, 2003). This led to the shift in the environmental policy in the 1990s, from a focus on easily defined, compartmentalized environmental problems based on quantitative standards to the area-oriented approach addressed in the action plan on area-specific environmental policy (Tweede Kamer, 1990; VROM, 2005). This approach was recognized as a way to improve the external integration of environmental policy with spatial planning policy while empowering the regional and local authorities to identify areas of special environmental quality, bearing in mind local factors of development (De Roo, 2003; VROM, 2005). The area-oriented policy is seen

as a response to the need for tailor-made solutions to the environmental problems at the local level, for which the generic standards are not workable and specific local planning approaches need to be developed, instead of relying on the national spatial planning framework alone (Hajer & Zonneveld, 2000; VROM, 2005).

3.3.1. EPI in urban land-use planning in the Netherlands

The last few Dutch NEPPs have indicated the need for more decentralized implementation of environmental policy at provincial and local levels by increasing the role of the local governments in improving the quality of the living environment and assigning additional strategic responsibilities to the local authorities for ensuring greater cohesion between environmental and spatial policy (VROM, 2003, 2004a, 2004b, 2005).

As described in the previous section, while in the early years, urban land-use planning in the Netherlands was usually addressed sectorally, a more integrated approach to sustainable urban development has emerged since the early 1990s (VROM, 2005). The urban land-use plans are the most important planning instruments for modifying the urban areas and maintaining the overall quality of urban life (Timar, 2005). Despite the limited extent to which the environmental legislation addresses the environmental quality requirements in land-use plans, urban land-use planning has become more linked to environmental policy through its adoption of the concepts of sustainability and liveability. More environmental aspects have been taken into consideration within the urban land-use plans, which are now also seen as a tool for safeguarding environmental quality (Van der Valk, 2002; Timar, 2005).

So the shift in focus from a sectoral to an area-oriented environmental planning approach has been strongly reflected in national spatial policy plans in the Netherlands (De Jong, 1996; VROM, 2004a, 2005). The shift to a broader application of the area-oriented approach took place at provincial and local levels of governance (De Roo, 2003). As De Roo (2003) points out, for the area policy to be introduced at the local level, location-specific consideration of developmental constraints should take precedence over generic environmental quality standards. While this requires a new governance approach to achieve environmental qualities within specific areas, it also demands engagement with the full range of functions, activities and interests that these areas are used for. Yet, a number of conflicts can be observed in the implementation of the area-oriented approach, particularly related to the way environmental objectives are embedded within the national spatial policy plans and the enforcement of specific environmental measures in the land-use planning process at the local level. For example, the political accent on compliance to environmental quality standards regulated by EU environmental protection laws often hinders the implementation of more feasible solutions for air-pollution reduction such as setting specific locally achievable air pollution targets for the populated and non-populated urban areas (Coenen, 1999; Zuidema, 2005). Obviously

it is still not an easy task to balance all the interests of different policy sectors, despite the well-elaborated national policy framework for both spatial and environmental planning, That is why even in the Netherlands, with its extensive experience of policy integration, the debate continues on the institutionalization of more effective mechanisms for integration and cooperation between different policy sectors, both at one governmental level (horizontally) and between different governmental levels (vertically) (National Institute for Public Health and Environment RIVM, 2004).

As a result of the shift towards the integration of environmental and spatial planning, a number of more specific area-oriented approaches were developed that helped to enforce the general strategy for an integrated environmental policy at the regional and local levels (De Roo & Visser, 2004). These approaches represent the progress made in the Dutch regional and urban planning practice towards more innovative solutions to the dilemmas of the Compact City urban form, i.e. the intensification and concentration of urban functions within the city limits as an alternative to enlarging the urban area (Schreuders & Tiemersma, 1997; De Roo & Visser, 2004). In the past, Compact City planning has been used to prevent the exodus of citizens from the city centres in the larger cities, reduce uncontrolled urban sprawl into the countryside and preserve both spatial and environmental qualities by multifunctional land use (Wellbank, 2002; De Roo, 2003). However, the claims about the sustainability of Compact City planning have not yet been proven completely (Burton et al., 2000).

One reason for this is the lack of tools with which urban managers can measure or evaluate the effects of Compact City development while at the same time taking steps to increase the environmental quality (Schreuders & Tiemersma, 1997; Burton et al., 2000, De Roo, 2003). Within the debate about the sustainability of Compact City planning, the emergence of the AOEP played an important role in initiating the innovative development of such planning tools and in reshaping regional and local planning practices (VROM, 1999; De Roo, 2003). The first practice to use this approach was the practice applied in the Spatial Planning and Environment projects (in Dutch "Ruimtelijke Ordening en Milieu"-ROM). These ROM-projects are examples of an integrated environmental planning, as they were based on the establishment of cooperative dialogues and collaborative planning actions by both spatial and environmental planners at the regional and local level. One of the reasons why ROM-projects stimulated EPI is that they focused on specific environmental problems with local significance while planning for the involvement of the relevant local actors in the planning process. Like this, ROM projects introduced a more communicative and decentralized planning practice. The AOEP approach provided the local authorities involved with more independence and flexibility in decision-making in their search for locally designed solutions to environmental problems, while also keeping their options open for urban spatial developments. With an AOEP approach, both environmental qualities and the potential impacts of spatial developments are assessed for cities or well-

defined geographical areas within cities in which environmental pressures (e.g. from air pollution, industrial activity or traffic) are expected. Usually the environmental pressures are measured in relation to a set of limit values, after which, if standards are exceeded, a reallocation of functions and land use is considered (VROM, 1999; De Roo & Visser, 2004). Unlike previously used planning instruments, the assessments in AOEP focus on an urban area as an integrated structure of functions, networks and actors instead of a collection of independent functions (De Roo & Visser, 2004).

The AOEP approach gained prominence during the past decade, mainly because it creates a good framework for concerted action to neutralize conflicting interests in the development of urban areas (VROM, 1999, 2003; Schreuders & Hoeflaak, 1999; De Roo, 2003). Moreover, AOEP became popular among politicians, as it enables them to demonstrate the results of their planning efforts within a relatively short time. The AOEP approach aims to produce synergy in the planning process through the direct involvement of, and cooperation between, various public authorities, private businesses and other local actors (De Roo, 2003). Such a communication process is of considerable significance for achieving EPI in urban land-use planning and is gradually gaining acceptance internationally among both practitioners and scientists (Simeonova & Van der Valk, 2009).

3.3.2. EPI through AOEP in Rotterdam

As we have mentioned, Rotterdam is the second largest city in the Netherlands and an important urban centre to both the regional and national economy due to the presence of the nation's main seaport. As a result of the port and industrial activities, Rotterdam and its region Rijnmond constitute one of the areas of the Netherlands that are under continuous environmental pressure (Kreukels, 2003). The city is in constant flux: Its reconstruction after the Second World War has been followed by various renovations of old city districts, new expansions and the transformation of former harbors into attractive places to live, work and relax (Gemeentewerken Rotterdam, 1999).

The current local policy framework with regard to spatial development and environmental planning in Rotterdam consists of two plans which provide the directions for the short and mid-term development of the city. These plans are (1) the Rotterdam Spatial Plan 2010 (Gemeentewerken Rotterdam, 1999) and (2) the Rotterdam Environmental Perspective 2007 (Gemeentewerken Rotterdam, Ds + V, 2002). The Rotterdam authorities have developed and applied two methods, both based on the AOEP approach, in an attempt to achieve a balance between the sectoral objectives of the spatial and environmental plans (Gemeentewerken Rotterdam, 1999, 2002). These methods are entitled the "Right place for the Environment" (in Dutch: "Milieu op Z'n Plek"- further referred to as MOZP) and "Guidance for Local Area Typology and

Environmental Quality" (in Dutch: "Locale Gebiedstypologie en Omgevingskwaliteit" – further referred to as LOGO).

The first method MOZP was developed in 1997 (Gemeentewerken Rotterdam, 2002). The method addresses two main questions: (1) What environmental quality should be aimed for at each specific location within the urban area? (2) What is the best way to reach these environmental qualities in the current process of urban land-use planning (Schreuders & Tiemersma, 1997)?

The integration of the environmental and spatial characteristics of the urban area is anticipated in the MOZP method by defining specific environmental qualities for different urban zones and by setting achievable targets for these qualities (Table 3.1.). Thus, the method is designed to geographically specify environmental measures, and so to reduce the environmental pressure on sensitive urban areas (e.g. residential areas), while allowing higher environmental pressures in areas where less impact can be expected. Such an approach is expected to better combine the allocation of urban land-use types with improvements to their functioning, e.g. to optimize the operation of public transport, and to increase possibilities for industries and businesses while improving the overall environmental conditions (Gemeentewerken Rotterdam, 1997; Schreuders, 1998; DCMR & Provincie Zuid Holland, 2004).

The application of the MOZP method includes the following three steps: (1) Describing the current spatial structures in the planning area, such as urban transport infrastructure or ecological networks; (2) Defining types of areas based on the assessed spatial structure in step one (i.e. eight types of areas: rail junction, public transport zone, car area, business infrastructure, agricultural area, urban recreational area, rural area and natural area; (3) Defining specific environmental qualities per type of area in terms of minimum required environmental standards and a recommended target quality based on policy goals (Gemeentewerken Rotterdam, 1997; Schreuders & Hoeflaak, 1999).

The environmental qualities of the planning area in MOZP are defined on the basis of assessment of the function of different urban networks such as transport and ecological structures. Important elements of this assessment are the accessibility level of the transport networks (e.g. very accessible; accessible and less accessible) and the necessary level of ecological quality (e.g. high quality in nature area, good quality in urban surroundings and basic quality in other areas). Because of the diverse competences required, this assessment process is conducted by interdisciplinary teams of professionals from different municipal departments. As a result of the assessment, the contradictions between the spatial and environmental networks are analysed by these teams and usually two alternatives are considered: (1) to prioritize the ecological qualities over the urban development aim or (2) to prioritize the urban development aim over the ecological qualities, while introducing compensation measures for the expected ecological effects. The MOZP method can be applied in different phases of the planning process (initiation, design and implementation of municipal land-use plans). It is used as a tool that helps

to conduct an integrated environmental assessment and supports the professionals involved in the planning process in defining the environmental aims of planned urban developments (De Roo & Visser, 2004).

Table 3.1. *Example of environmental qualities defined per type of residential area defined by the LOGO method (source: DCMR & Province of South-Holland, 2004)*

Environmental factor	Parameter	Reference quality urban centre	Reference quality urban district	Reference quality green district	Reference quality sub-urban residential district	Reference quality built-up residential area	Reference quality apartment district	Reference quality villa area
Waste	Average reuse of construction waste	90%	90%	80%	70%	70%	80%	70%
	Average separated waste per collection household	45%	45%	55%	60%	60%	45%	60%
Energy	Energy use per house per year (in Gigajoule)	40	50	50	60	50	40	60
Green	% public green spaces	5%	10%	15%	20%	25%	15%	25%
	% ecological green from the total open green area	10%	20%	40%	60%	60%	40%	60%
Noise	Allowed noise levels (in Db(A))	55	55	50	50	50	50	50
Air	Permitted emission of NO2 (average annually in $\mu g/m^3$)	30	30	30	30	30	30	30

The second method LOGO was developed in 2004 and can, to some extent, be seen as a follow-up of the MOZP method (DCMR & Provincie Zuid-Holland, 2004). LOGO is based on similar ideas to MOZP, i.e. spatial differentiation of environmental qualities, but it provides a more elaborated operational framework to guide the local authorities in their decisions about what environmental standard should be applied for each urban area type. The LOGO method can be used by the municipalities to map the required environmental qualities and indicate what improvements and measures are possible to improve the quality of life in the urban area. The method is applied in seven steps: (1) describing the ground layer (green and blue frameworks), networks (transport) and functional characteristics of the area, i.e. occupation (living, working, etc.); (2) determining the area type and assessing the spatial opportunities based on the way the existing transport, water or green structures fit in within the desired living, working

or recreation areas. This step also defines the way the water and green facilities can be enhanced and where transport links can be improved; (3) determining the relevant quality factors for the area (noise, living, traffic, etc.); (4) selecting parameters and reference levels to measure the desired qualities per type of area (e.g. noise levels, residential density or accessibility); (5) determining the present quality of the area compared with the reference levels defined in step four; (6) specifying the desired qualities, i.e. the realistic aims for achieving certain qualities (illustrated in histograms indicating the reference level, the ambition level and the current level of quality); (7) specifying quality improvement measures to realize the aims (e.g. reducing noise levels with noise barriers, or decreasing air pollution by limiting traffic speed around residential areas) (DCMR & Provincie Zuid-Holland, 2004).

The LOGO method makes it possible to systematically define a clear set of indicators for environmental quality (DCMR & Provincie Zuid-Holland, 2004). These indicators can be used to formulate a vision for developing the urban areas and to provide insight into the conflicting interests between living, working, traffic, recreation and environmental functions (DCMR & Provincie Zuid-Holland, 2004). This vision can be used as a departure point for developing the land-use plans. With its seven steps, the LOGO method offers a comprehensive framework for an integrated planning approach that can be used in different phases of the planning process (De Roo & Visser, 2004). Like the MOZP, the method can be characterized as both an environmental assessment tool and as a supportive tool for decision-making during the planning process. Unlike the MOZP, the LOGO method also emphasizes the importance of defining environmental measures and monitoring the effectiveness of the use of the environmental qualities per area type (DCMR & Provincie Zuid-Holland, 2004).

3.3.3. The lessons learned from Rotterdam's experience of AOEP

In 2002, the Municipality of Rotterdam drew the first conclusions from the evaluation of the effectiveness of the MOZP method for achieving EPI (Gemeentewerken Rotterdam, 2002). The LOGO method has not yet been extensively evaluated, although a number of brief assessments of the method have been conducted as well (DCMR & Provincie Zuid-Holland, 2004; De Roo & Visser, 2004). In general, both methods were found to be useful, although there was room for improvements to their application.

Firstly, the methods appeared to be effective in initiating a communication process between policy makers and planners from different municipal structures and other local organizations, which resulted in a more integrated planning process (DCMR & Provincie Zuid-Holland, 2004). Both MOZP and LOGO provide flexible choices for the local professionals to define their planning ambitions and feasible goals for environmental and spatial qualities per specific part of the urban area. Secondly, the methods seem to be helpful not only in integrating the sectoral policy objectives but also in integrating

different spatial structures in comprehensive maps and schemes of urban areas. Based on the assessment of the effectiveness of these methods, the observed extent to which they were used by the local authorities, and interviews with various professionals acquainted with the methods, we identified nine success factors for the implementation and application of MOZP and LOGO as integrated planning approaches:

Decentralized policy making. An important precondition for moving towards locally designed integrated policies and decision-making is a higher degree of decentralization of both responsibilities and instruments in urban land use and environmental planning. One of the reasons for the shift towards AOEPs was that the top-down legislative framework proved not always to bring about the desired results for the sustainable urban development.

Awareness of the need to achieve EPI. The acceptance of the new AOEP planning methods in Rotterdam was largely the result of the existing awareness and acknowledgement of both politicians and professionals of the need for EPI in urban land-use planning. Experience had shown that sectoral policy plans for environmental quality and land-use development were not as effective as hoped and planned for. Furthermore, it had become obvious that with a sectoral approach, measures proposed in one sector could even counteract measures taken by another sector, thus further increasing the awareness of the interdependencies between sectoral policies among local actors.

Straightforward and transparent methods. An important factor for the success of AOEP in Rotterdam was the ease with which professionals from different policy sectors could understand and apply the proposed approaches, and their consequent quick acceptance and wide support for these approaches. This was based on the popularization and the open communication about the method within the municipal environmental and spatial planning departments. Moreover, the initiative taken by the environmental department to apply the method in defining the aims of a number of plans for urban developments in Rotterdam has attracted the interest of the planners in the creative solutions and opportunities the method may offer, and how these could help to reach common goals. However, the use of the method has mainly been restricted to the environmental department.

Compatibility with existing planning practices. The AOEP method should be made compatible with the planning practices of both land-use planners and environmentalists. The success of the method depends on its operational use as a routine planning practice, not only when initiated by the environmental department, but also by planners, who need to feel confident about using the method and do so frequently.

Balanced integration of sectoral objectives. In Rotterdam, the AOEP method provided a platform on which the interests of spatial and environmental planners could be equally addressed. An important factor in this was to consider the environmental quality of an area as part of the ambitions for the spatial quality of that area. The MOZP and LOGO methods contributed to a better understanding of the environmental objectives among planners, project leaders and decision makers. By promoting the methods, the environmental department has played an active role in initiating a participatory planning process. The methods therefore appeared to function as an intermediary to help in achieving a balance between the sectoral objectives of specialized departments.

Early involvement of all actors. An important precondition for an AOEP approach is that all relevant actors such as policy makers and professionals are involved from the start of the planning process. While the methods can be applied in any phase of the planning process, it is important to always weigh up the environmental ambitions together with all other interests for the area's development during the initiation phase of the plan. The sooner the environmental ambitions in a plan receive the political support and agreement they need, the sooner they can be incorporated into the plan as indispensable objectives.

Communicative process. To apply AOEP successfully, it seemed increasingly necessary to develop the willingness among policy makers and professionals across departments to communicate and consult each other and other actors extensively, both within the municipal administration itself and in relation to external institutions (e.g. private companies, NGOs, research organizations). It is crucial that relevant information reaches all actors who may have a direct or indirect interest in the plan. To achieve this, the experience in Rotterdam showed that there is a need to develop a "common professional language". Use of the AOEP methods has revealed some differences in professionals' languages. For example, while planners express their ambitions through maps and visual schemes, environmental experts tend to work with norms, standards and facts. The AOEP methods helped with translating these differences by categorizing and visualizing the reference qualities of the areas so that an understandable framework is provided for the planners and the environmental experts to work on the plan.

Attention to the implementation phase. Assessment of the feasibility of proposed aims and visions based on AOEP methods should not just take place at the end of the planning process, but should be an iterative process throughout the development of a plan. Experience with both the methods used in Rotterdam shows that these aims cannot be achieved if agreements are not made between the actors involved about the implementation phase of the area development. The formulation of objectives should be accompanied by clarity on how these can be achieved and on the consequences.

Monitoring and evaluation of policy measures. Success can only be measured if the impact of policy measures is systematically monitored and evaluated. Monitoring the effectiveness of the methods used is important for assessing whether the objectives of a plan have been achieved and for redirecting the planning process if necessary. However, an obvious disadvantage of the AOEP approach is that results in an integrated plan which is more of a vision than a detailed implementation plan (De Roo & Visser, 2004). Further steps are therefore needed before the integrated policies can be implemented. Another missing element in the approach is a broader consultation process with local communities something which remains vague during the planning process by using AOEP methods (De Roo & Visser, 2004).

Another remaining challenge for the AOEP methods in Rotterdam is to improve the inter-sectoral communication during the planning process, as well as to incorporate the environmental policy as an indispensable and active part of the local land-use planning process. It is necessary to ensure that the substantive elements such as the experts' knowledge and specific assessment procedures on which decisions will be based, and the process-related elements such as the discourses between professionals and decision makers are given the same degree of priority, and that they take place simultaneously during the application of the AOEP methods. This may even imply that the organizational structure of the local administrations working with AOEP methods needs adjusting if it is to provide a means of achieving EPI in urban planning (Simeonova & Van der Valk, 2009).

3.4. Spatial and environmental planning policies in Bulgaria

Today's spatial planning system in Bulgaria suffers from frequent changes of direction and is still partly influenced by planning practices that date from the communist era (Kopeva, 2003; Marinov, 2006; Stanilov, 2007). During this period of centralized government, a distinction was made between socio-economic and physical development, which were separately addressed in sectoral policies. As a result, there were two different and poorly coordinated planning documents (Marinov,1998), the first of which addressed the planning of socio-economic development (in a general plan for the localization of productive forces), while the second focused on physical planning (in a unitary national physical plan). The physical planning system was legally anchored in the Law on territorial structure (Marinov, 1998).

The political, economic and social changes that started at the end of the 1980s led to a total rejection of planning. This tendency was exacerbated by the political and economic instability and lack of direction, which made it difficult to adopt a long-term approach to development. Only after 1997 did a new land-use policy evolve. In an

attempt to reach a higher level of integration, socio-economic and physical planning were both concentrated in one newly established state institution, the Ministry of Regional Development and Public Works (MRDPW), (Spiridonova, 1998). During the process of Bulgaria's accession to the EU, many different trends have affected the socio-economic development and the spatial planning policy. These include the progressive process of decentralization to a regional and local planning approach, the development of land and real estate markets, the emergence of new (private) actors in urban development, the restrictive financial policy of the state, the limited funds and investments, and the competition for them between local governments. These trends have been reflected in the revision of the spatial planning system as part of the harmonization of the national legislation in line with the EU structural funds policy and regional development framework (Marinov, 2006; Pallagst, 2006; Stanilov, 2007).

Under the influence of the EU accession process, Bulgaria as most of the Central and Eastern European countries came back to the need for national policy on regional development as an integrated spatial development approach, after years of resistance due to memories of "centralized planning" and the instable socio-economic situation in the first years of the transformation (Marinov, 2006, Stanilov, 2007). Currently, spatial planning in Bulgaria is based upon a newly introduced legal framework which comprises a number of laws, the most important of which are the law for land-use planning (physical structural development) and the law for regional development. These laws have constituted the first response to the shift of the planning system towards a land tenure based on private rights and interests, as well as to the liberalization of markets. The alignment of the spatial planning process with the EU policy and regulations has advanced the popularity of strategic planning as an integral component of the planning system in Bulgaria at different levels of governance (Marinov, 2006; Stanilov, 2007). In 2004, the first draft of the national strategic planning document was prepared, entitled "Operational programme for regional development", which is currently approved by the EC as an important structural funding instrument for regional development initiatives (MRDPW, 2005, 2007). While the land-use planning law describes the types of different land-use plans to be developed at the local level and the legal provisions related to their design and implementation, the regional development law and the operational programme for regional development determine the priorities and main principles to be applied for the implementation of the regional development policy. These include the administrative division into planning regions, the range of strategic planning documents at different levels of governance, the requirements for their contents and the authorities in charge of their design, implementation and monitoring. Differently from the traditional sector oriented form of national spatial policy in Bulgaria, the current operational programme on regional development 2007-2013 provides a more comprehensive framework for territorial development, structured in five priority axes: (1) sustainable and integrated urban development, (2) regional and local accessibility, (3)

sustainable tourism, (4) local development and cooperation and (5) technical assistance (MRDPW, 2007). The need to achieve EPI in urban planning has been addressed in the axis dedicated to sustainable and integrated urban development (MRDPW, 2007). The municipal authorities are one of the main beneficiaries for implementing the activities within this axis and are given the full opportunity to utilize currently available funds for local urban development initiatives, including the development of urban regeneration plans and strategies, improvements in the physical environment and the quality of life in the urban areas (MRDPW, 2007).

As reflected in the national policy documents for regional development, within the ongoing decentralization process, the role of municipalities in local socio-economic development has dramatically increased (Marinov, 2006; MRDPW, 2007; Stanilov, 2007). Although their autonomy, competences and resources are still largely defined by the central government, they have sufficient executive power and are seen as a major generator of new development ideas (MRDPW, 2005; Marinov, 2006). Besides the statutory planning process, within the regional development policy framework, municipalities are currently also required to develop strategic urban development plans by which to prioritize the important trends in the local socio-economic and environmental development on their territory (Marinov, 2006; MRDPW, 2007). Yet, there is little experience in Bulgaria in applying this kind of strategic planning approach under the new circumstances: a market economy and democratic decentralized form of governance. The challenge that remains for many municipalities is to link the strategic and statutory levels of the urban land-use planning process so that the diverse socio-economic and environmental objectives are addressed in an integrated way and can be properly translated into the actual practice.

Meanwhile, in Bulgaria, the development of the environmental policy and legislation have been institutionalized and legally embedded by the Ministry of Environment and Waters (MOEW), which was established in 1990. During the last decade, the development of environmental legislation has accelerated, in keeping with the country's accession to the EU (Carius et al., 2001). Environmental standards are traditionally developed at the national level in a rigid top-down system with much emphasis on the enforcement of these standards by the subordinated regional and local governments (Carius et al., 2001; MOEW, 2005, 2008). The relatively high priority placed on environmental policy at the beginning of the transformation process enabled Bulgaria to prepare an environmental strategy by 1992 (World Bank, 1992). The environmental strategy defines environmental policy principles, identifies the most serious environmental problems and sets forth the state's environmental aims. It also emphasizes the need to refine the institutional and regulatory framework. This strategy was supplemented by the adoption in late 1992 of the first National Environmental Action Plan (NEAP). This plan defines specific short and medium-term measures for priority areas to prevent or counteract pressing environmental problems. In addition,

several other strategies with specific targets were developed for various environmental issues such as environmental infrastructure (waste management and waste water) and biodiversity. The strategy and the action plan are updated every 5 years.

Currently, the Bulgarian government faces the challenge of establishing an institutional framework that helps with balancing environmental concerns with growing economic development. Although within the current reforms in the national environmental policy, the government has paid more attention to developing an integrated approach to economic development and environmental protection, by introducing the concept of sustainable development and addressing the need for embedding the environmental policy into all sectoral policies at the national, regional and local level (Carius et al., 2001; MOEW, 2007, 2008), such an integrated policy is not yet made operational (Marinov, 2006; Stanilov, 2007; MOEW, 2007, 2008). Like other former socialist countries, Bulgaria is implementing its environmental policy primarily through command and control regulatory instruments based on common standards (Carius et al., 2001). This means that the implementation practice depends exclusively on the imposition of economic mechanisms for environmental control such as fines. However, the enforcement of standards is often not feasible and is additionally complicated by the inadequate legal basis for the integration of environmental concerns within planning. Yet, the current national environmental strategy does not provide a set of effective and structured approaches for the implementation of EPI in other policy sectors (MOEW, 2008) including spatial planning (Marinov, 2006). The plans for spatial development and for environment still tend to conflict with each other (Spiridonova, 1998; MRDPW, 2005; Stanilov, 2007). During recent years, new regulations such as environmental assessment of development projects have been drawn up in an attempt to promote environmental protection and to integrate it within sectoral development plans (Carius et al., 2001). Since 2004, an environmental assessment process has been laid down in NEAP and in the new spatial planning law as an obligatory process at both national and local level via the EIA and strategic environmental assessment (SEA) procedures (MOEW, 2005). Local governments are required to apply and follow the provisions of these environmental assessment procedures in their planning practice. However, the environmental assessment and land-use planning processes are embedded within fragmented institutional structures which do not involve the same decision makers and do not consider the same sets of criteria and objectives (MOEW, 2005). The integration between the two is impeded both spatially and temporally. By institutionalizing environmental assessment procedures, the national government in Bulgaria has expressed high expectations that these procedures will achieve full prevention of environmental problems caused by socio-economic development policies. However, the EIA and SEA procedures can help to achieve full acknowledgement of the environmental concerns only by introducing systematic practices in the identification of relevant environmental issues and by assessing environmental impacts in the pre-implementation phase, as well

as in post-implementation stages of plan-making (Partidario, 1996). This is not the case in the current environmental assessment process in Bulgaria. In addition, the proper execution of these procedures is impeded by some difficulties such as late involvement of stakeholders in the public hearings, which are usually not conducted before the final stages of the procedure. The effectiveness of environmental assessment of development plans is threatened by its rigid normative character and its failure to balance the divergent sectoral interests. In its current form, it does not allow consideration of many alternative solutions in decision-making. Moreover, there is a lack of local legal, administrative and scientific capacity to perform the SEA/EIA (Almer & Koontz, 2004). Thus, although environmental policy is currently an important aspect of governance and has a growing impact on other sectoral policies such as spatial planning, the Bulgarian planning system does not ensure a full implementation of integrative policy approaches.

3.4.1. EPI in urban land-use planning in Bulgaria

The contemporary understanding of urbanization in Bulgaria refers to a process of restructuring of the local environment so that vital activities such as residence, business, recreation, etc. can be provided according to the demands of the modern society (MRDPW, 2007).

As mentioned above, the integration of environmental policy in urban land-use planning is currently facing many difficulties in Bulgaria. First, land and private property restitution after the fall of communism have led to spontaneous and uncontrolled developments in the urban and suburban areas initiated mostly by newly emerged private actors in the housing construction sector (Stanilov, 2007). These developments resulted in new inequalities between neighbourhoods, loss of natural, cultural-historical or landscape values, and unsustainable use of natural resources. Second, in most cities, car ownership and use have increased dramatically with the recent economic growth, while the development of infrastructure and public utilities has not kept pace – with congestion and pollution as a consequence. Third, serious deterioration of housing areas as well as of public spaces can be observed in most Bulgarian cities. Fourth, in many cities, old industrial complexes occupy large areas, for which efficient ways to either modernize or reconstruct these have yet to be found. And finally, there is not sufficient recognition of the need to fight poverty and social exclusion as part of the urban land-use planning process. This includes issues such as the need for high-quality transport provision to increase the access of all citizens to basic services and facilities, but as well as the development and conservation of urban green spaces of ecological and social value.

According to the new spatial planning law of Bulgaria (MRDPW, 2005), urban land-use planning is implemented through two types of plans: a general (master) plan and a detailed land-use plan. The general land-use plan is comprehensive in character, covering a broad range of topics and forecasting long-term sectoral development.

It outlines the dimensions of the structural development of both the inner city and the suburbs. The general spatial plan, similar to a master plan, serves as a basis for the elaboration of detailed land-use plans. The detailed land-use plan defines specific development activities based on standard planning procedures. This plan outlines the designation of land functions and urban zones within public and private land. Currently, these two plans serve as the main planning instruments used by urban planners, allowing them to regulate, change, develop and maintain the urban area. Municipalities have full responsibility for the initiation, design and implementation of these plans, and for ensuring a balance between the public and private interests involved during the elaboration and implementation of these plans.

Despite the incompleteness of institutional reform in planning, EPI in urban land-use planning has clearly become an objective of the local policy makers (MRDPW, 2005; Marinov, 2006; MOEW, 2007, 2008; Stanilov, 2007). During the last decade of decentralization, the local authorities were given the opportunity to develop their own integrated environmental plans and strategies (MOEW, 2005, 2008). Consequently, more and more local authorities have developed local environmental action plans which provide a framework for prioritizing environmental objectives more systematically (Markowitz, 2000; MOEW, 2008). Gradually, this local planning approach has been adopted in the national legislation in the form of another obligatory incentive accompanied by centrally elaborated guidance documents for such plans. So far, however, the effectiveness of local environmental action plans has been hindered by economic instability, lack of institutional capacity and lack of financial resources to implement the plans (REC, 1996; Carius et al., 2001; Stanilov, 2007). The environmental objectives addressed in these plans have remained largely detached from the content of the urban land-use plans. The main reason for this is the rigidity of the land-use plans which often requires frequent revisions in order to reflect the continuous socio-economic changes, which in turn compromises the efficiency of the planning process and consistent consideration of environmental problems. While the main planning method relied on is the application of standardized spatial prescriptions with little sensitivity towards the local context and needs, the urban land-use plans do not provide a strategic vision in guiding the evolution of the urban development. The increasing magnitude of the urban development problems and the emergence of the European regional development policy, however, have prompted the local authorities in Bulgaria to embrace strategic planning as a way to involve a broader constituency in the planning process (MRDPW, 2007). This approach targets the development of more holistic plans often called sustainable development strategies. The role of the local development strategy is to advance the capacity of the local authorities to attract investments in the urban centres and foster a more balanced development, accelerating their economic, social, spatial and environmental assets.

The introduction of a more stakeholder-based approach within these strategies is a new task for the local authorities. The municipal development strategies are also seen as the basis for upgrading the general urban land-use plans so that they correspond more closely to the current local demands for socio-economic development and environmental quality. This poses the challenge of establishing a closer relationship and better coordination between regional development and physical planning, and moving towards an integrated urban planning approach (Marinov, 2006; MRDPW, 2007). In this respect, much attention is currently given to institutional capacity building of the local authorities in coping with the poor coordination between various areas and levels of spatial and environmental planning. Meanwhile, the progress with EPI in planning appears to be slow, while many of the municipalities are facing difficulties in balancing between their new responsibilities, powers and competences (Stanilov, 2007), and hampered by remaining resistance of centralized governance to local self-governance.

3.4.2. EPI in urban land-use planning in Burgas

Burgas is the fourth largest city in Bulgaria. Like Rotterdam, Burgas makes a big contribution to national economic development due to its extensive industrial areas and transport infrastructure related to its harbour. For more than 40 years before 1989, the centrally planned growth of industry was a leading factor in the economic and spatial development of the city. As the region's petrochemical industrial sector underwent large expansions in communist times, pollution and environmental degradation increased dramatically (Paskaleva & Shapira, 1998). As a result of the focus on industrial development, Burgas has accumulated some typical problems associated with an industrial city, such as inefficient land use, low quality of life in the residential neighbourhoods, unbalanced utilization of available physical resources, unfinished public buildings, undeveloped public facilities, deterioration of the housing stock and neglected cultural monuments (Paskaleva & Shapira, 1998).

Since 1989, industries established under the logic of central planning have faced enormous pressures to modernize on account of Bulgaria's political transition and its attempt to shift towards a market-based economic system. The centralized industrial sector has collapsed and private economic activity has grown up in its place. In the course of the ongoing socio-economic transition, the local authorities have mainly focused on policy for increasing economic growth and investments in urban development. However, during the process of accession to the EU, besides efforts to build capacity as a key player in the socio-economic transition, the local authorities have also embedded sustainability principles in their policy. Currently, efforts are being directed towards creating opportunities for economic stability and at the same time improving the quality of life and the city's image (Municipality of Burgas, 2000). The main challenge in this is

to achieve a balance between economic growth and environmental protection through an integrated approach to urban land-use planning.

Since 1986, urban land-use planning in Burgas has been based on a master plan (a general land-use plan), the objective of which is to provide guidelines for the future development of the city and a legal basis for land-use changes. The process by which these plans are designed and the way they influence current land use in the city and the balance between different urban functions is the sole responsibility of the municipality.

The environmental responsibilities of the local authorities include enforcing national environmental laws, defining measures to prevent environmental degradation and disturbance, and controlling the implementation of these measures in cooperation with state environmental agencies. A number of reforms have been carried out within the municipal administration of Burgas, including the establishment of an environmental planning department responsible for the development and implementation of a municipal environmental protection programme (Paskaleva & Shapira, 1998; Municipality of Burgas, 2002). The environmental protection programme outlines the priorities and activities of the municipality with regard to environmental quality for a period of 4 years.

The need to apply the EPI principle in urban land-use planning in Burgas was recognized by the local authorities during the implementation of a number of European initiatives on sustainable urban development, e.g. the promotion of the Local Agenda 21 and multilateral programs on sustainable urban development such as Liveable Cities, etc. (International Council for Local Environmental Initiatives, 2002; Creedy et al., 2007) The political commitment of the local authorities has been essential to their active involvement in these initiatives. However, the actual transformation towards embedding EPI principle in urban planning in Burgas has been initiated through the elaboration of the Municipal Sustainable Development Strategy as a requirement of the new national policy on regional development. This strategy is not of a legislative nature but aims at achieving political commitment among policy makers on the long-term trends and perspectives in urban development. It also aims to introduce a comprehensive approach, incorporating economic, social and environmental objectives into one policy document and thus providing a framework for the sectoral plans and programmes of the local authorities, including the development of a general urban land-use plan. Within the strategy, urban land-use planning and environmental protection should be addressed not as two independent policies with their own legal instruments, but by adopting common approaches and measures for both. However, the last two municipal strategies do not seem to fully meet this objective. The first Municipal Development Strategy 2001 – 2006 of Burgas addressed different sectoral policy objectives of important target groups such as industry, transport, agriculture, communications, demographics, education and environment but did not have an interlinked structure between these policy objectives. The currently elaborated Municipal Development Plan of Burgas for the period of 2007 – 2013 emphasizes the significant role of the municipal land-use

planning policy on the overall sustainability of the urban development of Burgas and underlines main development tendencies that will direct the spatial changes during the next decade (Municipality of Burgas, 2007).

As to the environmental protection measures in Burgas, they are mostly defined on the basis of environmental standards, setting limits to acceptable levels of the environmental problems. However, these limits alone do not provide a basis for setting overall quality targets in the urban area, and do not correspond with the urban land-use planning process. There are a number of other constraints to be noted with regard to the integration of environmental objectives in urban land-use planning in Burgas. For example, structural and content-related changes are needed in the general land-use plan for Burgas, the "blue- print" style of which long has been in conflict with the current socio-economic and environmental demands in the city. Amendments to the plan need to be based on partial detail land-use plans developed for small parts of the city or even small neighbourhoods or estates.

As we have noted, planners in Burgas have long worked in a command and control socio-economic system, and are having difficulties in finding a suitable approach to help them develop a long-term vision on urban land-use development. This makes implementation of the new elements in the land-use policy in Burgas particularly challenging for the planners in terms of ways of analysing the physical characteristics and functional potentials of the urban area so that both the spatial and the environmental objectives are incorporated and the expected impacts of intended developments on the urban environment are indicated. The main planning approaches used to develop the general and detailed spatial plans are the traditional zoning instruments, which neither provide a framework for integrating environmental indicators in the plan, nor ensure communication about these issues between planners and environmental departments in the municipality. Despite the progress made with the development of municipal strategic plans and the fact that the current strategic development plan of Burgas 2007 – 2013 addresses the need for achieving EPI in the municipal land-use planning process, yet the general urban land-use plan does not clearly correspond to this objective and does not provide specific planning approaches or mechanisms through which EPI can be implemented in the actual planning practice (Municipality of Burgas, 2002, 2007). There is a lack of clear statements on how the environmental plans influence decision-making on spatial developments and to what extent the current and the newly emerging plans should consider the environmental objectives. The local authorities struggle with the provision of a coordinated framework for decision-making that links the strategic plans with the land-use plans. This way the planning process remains a rather cumbersome process with inefficient collaboration between different local actors.

Although EPI principle has already been embedded in the local governance process in Burgas through the development of both a municipal environmental programme and a strategic development plan, it is still hard to say whether these documents alone

provide sufficient basis for the development of specific planning approaches to facilitate the establishment of EPI. Local policy makers and professionals such as planners and environmentalists seem to need more knowledge about such approaches, a specific guidance on their use and applicability and better understanding on their benefits in ensuring compatibility of environmental objectives with urban planning.

3.4.3. What is needed to introduce an AOEP in Burgas in order to achieve EPI?

In the previous sections, we explored the current systems of planning and the extent to which EPI is reflected in these at the level of urban land-use planning in the Netherlands and in Bulgaria. Table 3.2. provides a simplified overview of the policy frameworks for spatial and environmental planning at all three governmental levels. The planning frameworks in the two countries appear similar in terms of the types of sectoral plans that are developed within the field of environmental policy and land-use planning.

Table 3.2. *Policy framework for spatial planning and environment in the Netherlands and Bulgaria*

Vertical level of governance	**Horizontal level of governance**	
	Spatial planning policy	Environmental policy
The Netherlands		
National	Policy Document on Spatial Planning	National Environmental Policy Plan
Regional	Provincial Development Plan & Structural Plan	Provincial Environmental Policy Plan
Local	Local Municipal Land-Use Plan	Municipal Environmental Policy Plan
Bulgaria		
National	National Plan for Regional Development	National Environmental Policy Plan
Regional	Regional Development Strategy	District Development Strategies
Local	General Land-Use Plan & Detailed Land-Use Plan	Municipal Environmental Plan

However, we observed clear differences between the two countries and between the case studies of Burgas and Rotterdam with regard to the way EPI is reflected in the urban land-use plans. Based on four EPI variables, we assessed to what degree EPI is incorporated within the existing policy framework and planning instruments in both cities (Table 3.3.). It became evident in both cases that the urban land-use plans play the biggest role in actual changes of direction in urban development. While EPI is not yet an indispensable part of these plans, we have noted that, in the Netherlands, besides the legally enforced plans, additional planning approaches have been developed and applied by the local authorities in order to address complex urban environmental problems along with local economic and social demands. The local authorities of Rotterdam have applied an AOEP approach in developing the MOZP and LOGO methods, which aim for all-round quality of life by integrating environmental concerns and spatial

development. In the case of Burgas, however, such an approach is lacking. The AOEP methods used in Rotterdam serve as a methodological guide to EPI, and also as a communicative tool for facilitating coordination between specialized departments and experts. In contrast, in Burgas, the municipal development strategy and the urban land-use plan are embedded in a sectoral, top-down decision-making process with no specific coordination mechanism aimed at EPI. With this in mind, the important question we try to answer is whether the AOEP would be as feasible a planning approach for establishing EPI in Burgas as it is in Rotterdam.

Table 3.3. *Assessment of EPI process in Rotterdam and Burgas*

EPI assessment variables (Simeonova, 2008)	**Rotterdam**	**Burgas**
Are there any strategic plans, programmes or tools supporting the EPI process?	Area-oriented policy MOZP & LOGO methods	Municipal Development Strategy
What kind of coordination mechanism for decision-making is used?	Top-down & bottom-up and horizontally integrated	Top down decision-making disintegrated horizontally
Is the EPI principle embedded in legislation and procedures?	Yes: in national legislation	Partly yes: in national legislation
Are there any communication strategies for EPI at inter-departmental or inter-organizational levels?	MOZP & LOGO methods	Lack of communicative strategy

As outlined above, specific success factors can be identified for the implementation of AOEP methods, derived from the experiences with MOZP and LOGO in Rotterdam. To explore whether an AOEP method could be successfully applied in the case of Burgas, we assessed to what extent the identified success factors are present within the institutional settings and the planning practice of Burgas (Table 3.4.).

Table 3.4. *Applicability of the area-oriented policy approach in Burgas*

AOEP success factors in Rotterdam	Rotterdam	Burgas
Decentralized policy making	✓✓✓	✓✓
Awareness of the need to achieve EPI	✓✓✓	✓✓
Straightforwardness and transparency	✓✓✓	-
Compatibility with existing planning practices	✓✓	-
Balanced integration of sectoral objectives	✓✓✓	✓✓
Early involvement of all actors	✓✓✓	-
Performance and implementation in the planning practice	✓✓	-
Monitoring and evaluation of policy measures	✓✓✓	-

Legend: ✓✓✓ = present; ✓✓ = partly present; - = not present

As described above, the obvious progress towards achieving EPI in Rotterdam through an AOEP approach is the result of a number of reforms within the national spatial and environmental planning policy in the Netherlands. One of the reasons for the shift towards area-oriented policies is that top-down decision-making and the existing general legislation proved to have some limitations with regard to the incorporation of environmental quality requirements in local land-use plans (Timar, 2005). To move towards locally designed policies, a higher degree of decentralization of national policies was introduced. The current socio-political system in the Netherlands allows for such changes to take place. In Bulgaria, however, decentralization is still part of a slow process of building a new democratic society. To introduce AOEP into urban planning in Bulgaria, the key prerequisite is decentralization of decision-making to include the local level as well as the national one, and to allow a bottom-up approach to local governance. Furthermore, we have noted above that the acceptance of EPI as a principle has been successfully achieved in Rotterdam. This can be explained by the current awareness of both politicians and professionals of the need for EPI in urban land-use planning as a new principle and philosophy. Such awareness and understanding is still largely lacking in Burgas, due to the strongly sectoral approach to urban land-use planning and environmental policy. Transparency of the decision-making processes with regard to both local land-use development and environmental policies appears to be another important success factor that is lacking in Burgas. An institutional and organizational link must be established between the environmental and urban land-use plans, as a basis for a more open to communication planning process. Moreover, besides the environmental assessments, land-use planning procedures need improving in terms of transparency and exchange of information between professionals from different departments, so they can simultaneously address different local objectives.

We have observed that the area-oriented methods used in Rotterdam are highly compatible with current Dutch planning practice. The methods provide useful criteria for defining environmental and spatial quality in urban areas, facilitating decisions that

find a balance between the interests of urban development activities and environmental concerns. Despite the many challenges and a certain resistance from local professionals, the methods have been and are still being used by environmental experts and planners in Rotterdam. In order to apply the AOEP methods in Burgas, the approach must be adapted to the current planning practice and the institutional framework in Bulgaria. This means that the methods can be used if they are specifically embedded into the legal competences, procedures and administrative practice of the municipality. Thus embedded, they can be more easily recognized and accepted by the local authorities and the responsible departments.

Another success factor for the AOEP methods introduced in Rotterdam is the fact that urban land-use plans are seen as a tool to safeguard urban environmental quality. In Burgas, there is no such understanding that the plan has to address environmental objectives together with socio-economic land-use developments. Our study revealed that planners in Burgas do not yet accept full responsibility with regard to environmental concerns raised by local land allocation plans. Although in Rotterdam the initiative to address environmental objectives in planning was taken by the environmental department, the planners did show considerable interest in achieving a balance between sectoral interests in their plans.

Another challenge posed by the AOEP methods is that of involving different actors in the urban land-use planning process, and establishing collaboration between them. As we have seen, the coordination mechanisms for decision-making in planning on which collaboration is often based differ between Burgas and Rotterdam. While in Rotterdam, bottom-up coordination is more common within the AEOP approach, in Burgas the local planning is strongly based on hierarchical governance. This means that, while in Rotterdam the professionals at the departmental level can use their knowledge and experience to influence decision-making about incorporating particular objectives in urban land-use plans, professionals in Burgas are more often influenced by decisions taken at a higher level in the municipal administration or in government. This is another reason why it is more difficult in Burgas to ensure sufficient involvement of multiple actors in the planning process. One of the criticisms underlined in the evaluation of the MOZP and LOGO methods, however, was that they do not yet fully anticipate a broad public consultation in the formulation of urban land-use plans.

One of the most important success factors for increasing awareness of the interdependency between different actors in the fields of planning and the environment is communication. In Rotterdam, the development and implementation of urban land-use plans and local environmental plans is seen as a process in which the interests of multiple actors are addressed through inter-sectoral negotiations and consensus-building dialogues in the early stages of the planning process (VROM, 2005). The actors concerned in such cases are those whose interests are directly affected by the planning process. In Burgas, however, little experience has yet been gained in this field. Although

plans such as the municipal development strategy are nowadays more often prepared by involving other stakeholders such as land owners and developers, there are still no actual mechanisms for implementation through communicative planning practices. But in neither Rotterdam nor Burgas has internal communication between professionals in the municipal planning and environmental departments always been straightforward. In Rotterdam, although the AEOP methods have improved the interaction between the planners and the environmentalist, yet more emphasis is needed within the MOZP and LOGO methods on structuring the communication process by developing a "common professional language" to help deal with cultural differences between the environmental and spatial planning fields. In Burgas, communication practices are still very weak, and the need for communication between the different municipal departments is not yet fully recognized: the professionals do not appear to feel a sense of interdependency in tackling their routine tasks and responsibilities.

The use of the MOZP and LOGO methods in Rotterdam has supported a team-building process between the planning and the environmental departments which brought about structural change to improve interdepartmental communication. As we have observed, efficient communication requires that responsibilities be shared equally between planners and environmental experts in the municipal administration. We see evidence that the commonly used division of responsibilities among sectoral structures and tight compartments has hampered the effectiveness of the area-oriented methods used in Rotterdam (Gemeentewerken Rotterdam, 2002).

Plans and strategies are produced to be implemented and each plan is only as good as its implementation. The implementation of the plans and visions developed by the AEOP approach still requires more focus from the local authorities in Rotterdam. The local authorities in Burgas lacked the mechanisms to implement a municipal development strategy which targeted several different sectoral objectives some of which suffer from being implemented through the urban land-use plans. Burgas's implementation problems are typical of a post-socialist city that is introducing strategic planning and changes in the planning system in parallel with decentralization and other reforms, and that lacks previous experience of applying an integrated planning approach. The assessment of the effectiveness of the AEOP methods in Rotterdam indicated that implementing the set of integrated objectives in the urban land-use plans can be difficult if agreements are not made between the actors involved in the area development. Moreover, to make a better link between the formulation phase and the implementation phase, the plans must be specific about the mechanism through which these objectives will be achieved. Besides the implementation process, another success factor for the AEOP approach in Rotterdam was the monitoring and evaluation of policy measures. The evaluation of the MOZP and LOGO methods conducted by the local authorities helped in identifying the role these methods played in achieving environmental policy objectives through planning. In the belief that it is important to identify the advantages and disadvantages

of every approach to achieving EPI, local authorities re-evaluated the aims of the AEOP methods and the experiences of implementing them. Such monitoring and evaluation practices are still to be embedded in the planning practice in Burgas: they will make it possible to see what the gaps are, and to fill them in the course of implementation.

Based on our assessment, we can assert that the AOEP methods developed in Rotterdam can be considered as promising tools for achieving EPI at the local level of governance in Burgas. The main arguments for this are that the methods can be applied as both a guide to translating environmental qualities into urban land-use planning and as a process-supportive tool to enhance communication and coordination between sectoral plans and the local actors involved in their formulation and implementation. However, to date, few of the identified success factors for AOEP are present in Burgas (Table 3.4.). That is why, we consider that the AOEP methods can be applicable to the planning practice in Burgas if the local authorities are able to readjust their governance culture as a basis to create favourable preconditions for introducing an AOEP approach. Yet, within the current self-governance reform in Burgas, the AOEP can be particularly suitable as a learning tool within the local context of planning. The main constraint in this learning process will be to deal with the lack of a streamlined planning process, while trying to improve the effectiveness of plan implementation. The recent refinements in the national and local planning documents open more opportunities for the local authorities in Burgas for making progress in taking the steps between strategy building and actual incorporation of EPI in the urban land-use plans, while involving a wider spectrum of professionals in this process.

3.5. Conclusions

This study makes evident that EPI in urban land-use planning is a challenging process being addressed at the national and the local level of governance in both the Netherlands and Bulgaria. Obviously, this process is more fully elaborated and better reflected in the national and local governance practice in the Netherlands than in Bulgaria, where the impact of the environmental agenda on the spatial planning system has remained limited up to now. It is apparent that in Bulgaria, urban land-use planning is still largely characterized by a set of top-down norms and procedures and is still strongly dependent on the national context. At present, the accent in spatial planning is mainly on economic incentives, which determine where and how urban development will take place without addressing the need for EPI in the urban land-use plans.

The Dutch planning tradition and efforts to introduce EPI in the urban land-use planning practice have brought about some innovative policy approaches such as the AOEP and its specific planning methods. This kind of innovation is in contrast with the current Bulgarian planning practice, which, despite the decentralized institutional

framework, so far lacks clear concepts for such policy. Although the local authorities have full independence to develop and advance their local planning practices, the planning process is still not well structured due to difficulties with implementing the new complex procedures, documents and meeting diverse local interests. At the same time, via the elaboration of strategic planning documents, the desired outcomes towards urban sustainability and EPI have been strongly underlined. As observed, in Bulgaria there is still a substantial difference between the way the planning is envisaged to work and the way it actually works. As the case study of Burgas illustrates, urban planners need to develop innovative planning approaches to effectively apply the new policies and procedures within their institutional environment while considering local developmental interests. An important precondition, however, for the development and application of such approaches is the establishment of better inter-organizational coordination and communication through designing a planning process that does not only require formal planning documents but also the involvement of policy makers, professionals and other local actors. Due to the slow adaptation of the planning practice to the new socio-economic situation, and lack of such planning approaches, we assume that the Dutch AEOP could serve as a reference model for the planners in Bulgaria. Such a model has the potential to enhance the progress of the transformation of the planning practice from technical, rigid, and mostly land-use oriented in support of economic developments to a process-oriented, collaborative and integrated one. This conclusion derives from the evidence that the development of the new planning system in Bulgaria is currently a process of "learning by doing" in which AEOP can play a major role. However, all innovative approaches must first be adapted to the local planning context and needs. The comparative analysis between Burgas and Rotterdam has proved that the local planning processes are strongly dependent on the specific countries' context such as the administrative cultures, professional competences and institutional frameworks.

The Dutch AOEP provides a strong basis for many Dutch municipalities to develop specific methods for EPI in their planning practice. Such area-oriented methods allow more systematic changes in the spatial lay-out of an area, focusing on a common understanding of quality of life rather than on sectoral objectives and norms alone.

We conclude that an AOEP approach can be applicable for addressing EPI in Eastern European cities such as Burgas. Achieving EPI through AOEP is, however, only feasible once important preconditions have been met. Despite the differences between Rotterdam and Burgas, we believe that the AOEP approach can have similar results in terms of policy integration in both cities if more emphasis is placed in Burgas on: (1) decentralizing policy development process and decision-making for both urban land-use planning and environmental planning; (2) raising awareness among local actors of the interdependencies between the sectoral policies and of the need to achieve EPI and improve transparency of decision-making; (3) improving communication process between the structures of the municipal administration, and the willingness

to communicate both internally and externally with other stakeholders, including the public; (4) regularly evaluating achievements through monitoring and evaluation, and adjusting policies and plans as indicated by such evaluations; (5) creating adequate institutional capacity through improving the knowledge of professionals and through collaboration between them across specialized municipal departments.

The need for EPI in the urban planning context is becoming an important policy issue in many European cities in the short term (EEA, 2005). Its form and role and the principles on which it should be based, however, have become increasingly controversial questions. There is a need to obtain further insight into viable approaches to implementing EPI in local planning contexts which address the institutional realities of our increasingly fragmented societies and at the same time are designed to foster better collaboration and communication between planners and environmentalists.

Through our research, we became aware that the Dutch AOEP and the variety of locally initiated methods related to it are of interest to experts and researchers from other countries. Further research will be needed to draw lessons from transplanting and adapting such an approach in specific local practices in Eastern European countries, and to gain more knowledge on the local context in which they are applied.

We can conclude that comparing and transferring innovative planning approaches between Eastern and Western European countries may have an added value in providing better understanding among planners on the current challenges in achieving urban sustainability in different parts of Europe. And secondly, this can foster planners and environmental experts to widen their knowledge and vision on promising approaches towards achieving EPI in urban land-use planning. Furthermore, the current research demonstrates that although the EPI process is not always going smoothly, a new vision and a way of thinking is emerging among planners in Eastern Europe to lead the post-socialist cities out of the confusing transition times into not a less challenging, but hopefully a more promising future.

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CHAPTER 4

Implementing ecological networks through the Red for Green Approach in a densely populated country: Does it work?

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Abstract

Regional and local governments in Europe are often challenged with establishing suitable institutional practices to meet ecological targets within urban spatial development plans and address the ultimate goal of the Environmental Policy Integration (EPI) principle. It is necessary to develop and apply approaches that integrate ecological considerations in the land-use planning process and safeguard the sustainability of urban developments. This is particularly true when implementing key nature policy objectives such as the development of national ecological networks (NEN) aimed at protecting biodiversity, and in which multiple actors and sectorial interests are involved. In the Netherlands, as a forerunner in NEN development, the Red for Green approach (RGA) integrates ecological issues (*green*) in urban developments (*red*) and establishes a communicative platform for the actors involved in these developments. This study assesses experiences with the RGA in seven regional case studies, identifying its key success factors and reflecting on its role as a communicative practice for achieving EPI. The study concludes that the RGA can be a suitable approach to EPI because it offers a way of integrating ecological network objectives in urban developments. However, RGA's success depends on five factors. Communication between actors and strategic vision are the two most important of these factors.

4.1. Introduction

Urbanization has a severe impact on the natural environment and often results in degradation and fragmentation of natural habitats (Folley et al., 2005; UN Habitat, 2012). In an attempt to reduce such impacts, an integrated land-use planning approach is recommended. Such an approach can address both environmental and socioeconomic ambitions at different spatial scales (Theobald et al., 2000; Berkes et al., 2003; Termorshuizen et al., 2006; Shandas et al., 2008; Beatly, 2010; CEC, 2013). However, many regional and local governments have not been capable of establishing institutional practices to fully address environmental objectives as part of their urban development strategies and land-use plans (Termorshuizen & Opdam, 2009; Beunen & Duineveld, 2010; Mullally & Dunphy, 2015). Over the past decade, the need for better integration of environmental objectives in spatial plans has been increasingly acknowledged within European policy frameworks on territorial development and biodiversity conservation (EEA, 2006; CEC, 2011a). The underlying policy process for this integration is based on the achievement of the goal of Environmental Policy Integration (EPI) embedded in the EU sustainability policy (Jordan & Lenschow, 2010). EPI is defined as "*the incorporation of the environmental objectives into all stages of policy-making in non-environmental policy sectors, with a specific recognition of its role as a guiding principle for the planning and execution of policy*" (Lafferty & Hovden, 2003). EPI, therefore, implies the consideration of environmental consequences of sectoral policy activities that promote economic development. EPI is viewed as a process anchored in the institutional systems of policy sectors where structural, political and administrative cultures are underpinning elements upon which the success of EPI depends (Jordan & Lenschow, 2010; Mullally & Dunphy, 2015). Although there is no one-size-fits-all approach to achieve EPI in different policy sectors, studies have identified a number of key approaches to EPI including strategic, procedural, structural, coordinative and communicative approaches (Hertin & Berkhout, 2003; Simeonova & Van der Valk, 2009; Mullally & Dunphy, 2015). Among these approaches, of particular interest among policy makers and planning scholars has been the role of the communicative approach to achieve EPI, especially in relation to the spatial planning sector and urban sustainability (Healey, 2003; Simeonova & Van der Valk, 2009; Runhaar, 2014).

In response to one of the key challenges of EPI, namely achieving coherence among environmental and developmental objectives, a communicative approach to EPI is advocated as a way of providing more efficient communication between a variety of actors across these policy sectors in order to balance different interests (Margerum, 2002; Healey, 2003; Innes & Booher, 2010). The communicative approach as elaborated in the collaborative planning discourse potentially offers a platform for all actors to share their ambitions and competences so that preventing environmental impacts of urban developments is a shared responsibility and not just that of one institution or department

(Innes & Booher, 2010). However, using such an approach necessitates suitable institutional arrangements and organizational structures to facilitate collaboration, communication and exchange of knowledge (EEA, 2005; Homeyer, 2006; Simeonova & Van der Valk, 2009; Runhaar, 2014). This in turn requires proactive attitudes from professionals and stakeholders in urban development projects. This article explores the role of the communicative approach to EPI regarding the issue of biodiversity conservation. The focus is on the implementation of the nature policy in Europe as a specific environmental goal for the achievement of which the role of EPI in urban land-use planning is crucial (Miller & Hobbs, 2002; Klein & Sutherland, 2003; Jongman, 2004; Termorshuizen & Opdam, 2009; Beatley, 2010).

A key objective of the current EU nature policy is the conservation of wild flora and fauna which requires the preservation and restoration of natural habitats, particularly those in close proximity to urbanized areas or within cities borders (Miller & Hobbs, 2002; Opdam et al., 2003; CEC, 2013). It requires the formation of spatially coherent ecological networks of nature areas that interlink fragmented natural habitats (Opdam, et al., 2003; Jongman, 2004). Such an ecological network provides sufficient habitat to facilitate viable populations, allow for the exchange of individuals between populations, and enable the establishment of new populations. The need for a coherent ecological network has been embedded in the EU Biodiversity Strategy and the Habitat and Birds Directives (Council Directive 92/43/EEC, 1992; CEC, 2011b; CEC, 2013). These directives envision the development of a Europe-wide ecological network of protected areas, called Natura 2000. One of the main challenges in the development of this network at European and member-state levels is achieving the needed landscape configuration and spatial cohesion of the network (Opdam et al., 2003; Jongman, 2004). This challenge is aggravated particularly in densely populated areas where pressure from urban land-use developments is high. Moreover, in many countries, the institutional arrangements to implement the ecological network strategy are not explicit regarding the involvement and the responsibilities of different governmental agencies, professionals and stakeholders (Termorshuizen & Opdam, 2007; Shandas et al., 2008; 2009; Beunen & Duineveld, 2010; Beatley, 2010).

Several member states, including the Netherlands, Germany, Poland and Spain, have developed comprehensive plans and national policy frameworks for establishing their national ecological networks (NENs) (Jongman, 2001; 2004). Among these, the Netherlands has been one of the forerunners (VROM, 2004).

The Dutch NEN was introduced in 1990 with the aim of obtaining 728 500 hectares (18% of the Netherlands) of linked nature areas by 2018 (Ministry of Agriculture, Nature and Food Quality-LNV, 1990). Since its introduction the NEN has become a leading concept in Dutch nature policy and is seen as representing a shift from poor preservation strategy for nature to an integrated spatial planning for the development of nature (Hootsmans & Kampf, 2004). The protection of nature areas with low dynamics

against highly dynamic functions such as agriculture and urbanization has become an integral trend within the NEN. While the planned targets are still in the process of being realized, a number of issues have emerged as the NEN develops. Among these are the achievement of balanced land uses, land acquisition and habitat restoration, which are currently behind schedule (CBS et al., 2014). The mid-term evaluation of the progress of the NEN development indicated that more efforts and rapid actions are needed in resolving these issues in order to ensure sufficient spatial cohesion of the NEN, and that the European biodiversity targets are fully met (CBS et al., 2014). As a key element of the NEN, planning of the ecological corridors that are needed to ensure spatial coherence and link habitat patches for the purpose of the NEN appeared to be particularly challenging for many local and regional authorities (LNV, 2008; LNV & VROM, 2009a). The key challenges are related to the ecological requirements that need to be embedded in the urban land-use plans and which affect a large number of public and private actors' interests (LNV & VROM, 2009a; 2009b).

The Red for Green Approach (RGA) was developed in the late 1990s as one way of dealing with these emerging issues in the development of the NEN (Wolff & Spaans, 2010). It evolved from discussions among policy makers about increased competition for land within and around urban areas, which was creating conflicts often described as "*the battle between red and green*". The primary goal of the RGA is to integrate ecological objectives in planning by extending, improving or compensating for possible loss of *green* land-use functions (e.g. nature areas) by using the profits from development of *red* land-use functions (e.g. housing, etc.) (Lint, 2001; Everts, 2005; Milieu en Natuur Planbureau, 2005).

The key role of the RGA is ensuring that regional and local authorities communicate their plans with various public and private actors, while being involved in a bargaining process about balancing *red* (urban) and *green* (ecological) functions (Evers et al., 2003; VROM, 2004; Wolff & Spaans, 2010). The Dutch Bureau for the Environment and Nature states that the RGA stands for: *"an integrated development of red and green, where the development of green is financed by the development of urban infrastructure"* (MNP, 2005). Everts et al. (2003) refers to RGA as a *cross-subsidizing process* or as the way to *"generate improvements for nature by utilizing the incomes from urban developments"*.

Although the RGA is mostly applied voluntarily in both regional and local planning processes, the national government has also supported this approach (VROM, 2004; LNV & VROM, 2006; 2009b). It has also expressed expectations that private parties contribute financially to developing and maintaining ecological areas from property development profits (Ministry LNV & VROM, 2006). The RGA has consequently developed as a collaborative planning practice which breaks with conventional hierarchical planning procedures and involves new networks of actors in the planning process. It implies that governmental authorities will actively seek collaboration with real-estate developers and other parties to improve the quality of spatial developments,

preserve nature, and increase the speed at which ecological projects are implemented (Van Rij, 2008). Although regional authorities have found the RGA appealing because of promising preliminary experiences, the actual effectiveness of the approach has not yet been well studied.

As the RGA originates from planning practice rather than planning theory, its scientific implications have not yet been comprehensively explored (Wolff et al., 2009). Over the past years, the RGA has been applied in a number of projects across the Netherlands (Van Rij, 2008; Wolff & Spaans, 2010). Yet little is known about the key challenges regional and local authorities face when applying the RGA and whether it is a suitable approach to support the effective integration of ecological developments in urban planning. With this in mind, this article aims to identify key success factors of the RGA and assess its role and potential benefits as a communicative approach to EPI.

4.2. Research methods

We performed a comparative case-study analysis to explore the suitability of the RGA for developing or restoring ecological networks. We also identified key success factors. We first compiled a long list and provided a brief description of 45 projects in which the RGA was used in the Netherlands from 2001 to 2005. We selected seven case studies from this long list for an in-depth analysis (Appendix 4.1.). This selection was made on the basis of the following criteria: the project uses the RGA at the regional scale; the project addresses *green* ambitions that are significant for developing an ecological network; and the project involves multiple public and private actors. Appendix 4.1. provides an overview of the selected case studies, including their aim, *red* and *green* ambitions, and involved actors. All case studies consisted of spatial development plans in suburban areas where *red* and *green* functions usually compete for the same space. Data on each selected case study was gathered by interviewing key actors and reviewing relevant documents in which the project was described (such as project plans, progress reports, collaboration agreements, environmental impact assessments, consultation reports and reflective articles in planning journals).

A total of 23 people were interviewed, of whom 10 were representatives of public authorities (mostly policy makers and project managers from national, regional or local government), four representatives from nongovernmental organizations (mostly groups that endorse nature conservation), four representatives from private organizations and developers' associations, and five representatives from universities (mostly experts in the field of spatial planning and ecological network development) (Appendix 4.2.).

The interviews can be best characterized as standardized, open-ended interviews in which all interviewees were asked the same questions. We chose this type of interview, as it facilitates faster responses that can be easily analysed and compared. The interviews

lasted approximately 60 minutes and were taped and transcribed. The questions aimed to solicit information about: project status and progress; a description of interviewees' roles and responsibilities within the project; a description of the project elements in which the RGA was used; their opinions on the RGA's effectiveness; their opinions on whether or not the RGA improved the communication processes between policy makers, planners, NGOs, researchers, and private actors; and perceived success and/or failure factors for RGA. The interviewees were also encouraged to mention any other issues they deemed important in terms of significantly affecting project implementation and outcomes. Appendix 4.3. provides an overview of the open-ended questions that formed the framework for each interview.

We used a stepwise approach to analyse the case studies. In the first step, we reviewed each case study. We analysed whether the RGA was suitable or promising for developing or restoring ecological networks at the regional level in each case. We also identified each case's success and/or failure factors for the RGA. We then used the results of the analyses of each individual case in a comparative analysis across all case studies. We identified similarities and differences between the case studies with respect to the applicability of the RGA and assessed which key success factors are generic factors that determine whether or not the RGA will succeed.

4.3. Research findings

4.3.1. Developing NEN with the Red for Green approach

With the NEN becoming a statutory obligation in the spatial planning process of the Dutch provinces, based on the national spatial policy plan "Nota Ruimte" (2004) and the national structural scheme "Green Space" (SGR, Ministry of Agriculture, 1993; VROM, 2004), responsibility was given to the regional authorities for planning nature conservation functions within their regional and municipal spatial plans. The conservation regime of the NEN as embedded in the national policy documents is directed towards the maintenance, restoration and development of the areas that are part of the network. This process also requires that a balance be achieved with other interests in the spatial development in and around the NEN areas. This includes designing measures where nature compensation might be needed for spatial developments and urbanization. To address these issues a joint agreement was endorsed between the national and regional authorities in the so-called *"Decentralization impulse"* agreement (LNV, 2008; VROM, 2008). Under this agreement, the national government retained the leading role in terms of setting key nature policy objectives and targets of the NEN realization, while the regional authorities were given the jurisdiction to decide on the possible planning arrangements and instruments to realize these targets and implement NEN regionally.

While there is no generally accepted framework of planning instruments for implementing the NEN, there are three distinctive categories of planning instruments which have so far served as the basis for the realization of the NEN, namely: *procedural, strategic, and collaborative.*

The *procedural* planning instruments are embedded in the legal provisions of the national spatial plan and accompanying policy agreements. Therefore, strict conditions apply for using these instruments. The key restriction is to prevent or limit urban developments taking place within the established borders of the NEN unless the proposed development serves an overriding public interest or there are no alternatives (LNV, 2008; LNV & VROM, 2009a; 2009b). The key regulative principle promoted is the *"no, unless regime"*. Spatial development plans and projects that may affect the quality of NEN are strictly assessed according to this rule. The most commonly used procedural instruments used to achieve the regulative restrictions in urban developments as shown by the RGA projects relate to the regulation and financing of the land uses for the purpose of the NEN, including: *amicable land acquisition, land expropriation, and financial compensation*.

The *strategic* instruments are related to the decision-making of the NEN development during the regional spatial planning process. While complying with the *"no, unless regime"*, regional governments are striving to enhance the vitality and the sustainability of their regions through a variety of spatial developments which may conflict with the NEN but also have the potential to create opportunities for enhancing its quality. For this reason, the national spatial plan offers a number of strategic options that refer to more integrated spatial development and tailor-made planning solutions. The Dutch government chose in this case for a less rigid but more strategically oriented spatial planning policy. The strategic instruments set specific conditions under which developments can take place within the NEN and where RGA-related arrangements can be made. For example, within the RGA projects, urban developments were made possible on condition that the NEN maintains its current extent and value, but also that its overall quality is improved. In this strategic process, urban development projects in proximity or within the borders of the NEN are first strictly assessed with regard to "overriding public interests" and consequently are qualified for being implemented via one of the following three strategic instruments: *compensation, boundary redrawing and the balancing approach* (LNV & VROM, 2009b). The first instrument, with the motto *"first mitigate then compensate"*, safeguards the compensation for loss of natural areas or qualities due to specific urban development by introducing mitigation and habitat restoration measures from the start of the project. If mitigation is either not possible or not sufficient in a particular case, then compensation for the loss of nature should be provided in an alternative location (i.e. no-net loss principle). The second instrument, *boundary redrawing*, is used when land-use changes related to urban developments are relatively small and there are sufficient possibilities for mitigation and restoration

measures at the project site itself. This instrument allows provinces to make minor adjustments to the NEN boundaries for ecological reasons as well as for insignificant urban developments. The conditions for this are that any damage to nature is limited and that the boundary adjustment improves the overall quality of the NEN.

The *balancing approach* allows limited urban land-use developments within the NEN, on condition that a cluster of projects is involved and these projects are incorporated in one comprehensive regional plan. The objective of the regional plan is to improve the overall quality of the ecological network. The proposed land-use changes in these projects concern relatively larger areas, occur at different locations, and the effects on nature can only be compensated for through a series of planning measures occurring at different locations. This way a project should ensure that the ecological network will grow both in size and quality, balancing the urban and ecological functions in the entire area under development. The ambition in these projects goes beyond the no-net-loss principle, as most environmental stakeholders demand that nature areas undergo improvement compared to the situation before the start of the project. This strategy is often referred to as the basis for the RGA initiatives (VROM, 2008).

The most common *collaborative planning instruments* are *public party land-exploitation partnerships, public-private land-exploitation partnerships, and private party land-exploitation partnerships*. These instruments are based on agreements between public and/or private actors. These are achieved by early planning-stage negotiations in which actors define the content of the project, investigate possibilities and risks, and negotiate the distribution of costs, benefits, risks and responsibilities (Koppejan, 2005). There is often a great need for one or more of these instruments, as most projects that use the RGA type of planning involve multiple actors with significant differences in ambitions and interests. The agreements play a key role in creating a solid basis for an even playing field for negotiations between all actors. However, implementation of these agreements implies intensive communication and consensus building throughout the project's planning process.

Our research shows that in each of the assessed RGA case studies, different planning instruments (or combinations of planning instruments) were used (Table 4.1.). Obviously, there is no universal combination of planning instruments, as projects, ambitions, actors and restraints may differ considerably. On average, four to five different planning instruments were used in each case study. The most commonly used planning instruments were: 1) from the procedural instruments the *amicable land acquisition* (all seven cases); 2) from the strategic instruments the *balancing approach* (all seven cases) and 3) from the collaborative instruments the *public-public* (four cases) and *public-private partnerships* (four cases). Land expropriation and private party partnerships were the least-used instruments (each was used in one of the cases).

Table 4.1. *Planning instruments used in the selected case studies.*

Type of instrument	*Planning instrument*	*C1*	*C2*	*C3*	*C4*	*C5*	*C6*	*C7*
Procedural	Amicable land acquisition	+	+	+	+	+	+	+
	Land expropriation		+					
	Financial compensation			+	+			
Strategic	Compensation for nature			+			+	+
	Boundary redrawing	+			+	+		
	Balancing approach	+	+	+	+	+	+	+
Collaborative	Public party partnership				+	+	+	+
	Public-private partnership	+	+	+			+	
	Private party partnership		+					

4.3.2. To what extent do RGA projects address NEN ambitions?

Table 4.2. provides an overview of the current project status of each case study and the ecological ambitions that have been reached so far in relation to the realization of the NEN. As most projects are still in the process of realization or in their finalization phase, a final conclusion of the degree to which the NEN ambitions were met cannot yet be drawn. However, the results suggest that all initially formulated ecological ambitions will likely be met in at least five of the projects.

Our assessment showed that there were differences in the time of realization among the different projects and that some projects have experienced significant delays. The reasons for this are that the realization of the RGA projects can be influenced by unexpected budget restraints due to sudden changes in the national land and housing markets. In this case, three of the projects required readjustment of the subsidizing strategies and a partial reformulation of initial ambitions regarding NEN developments. This led to downsizing both of the amount of urban development (housing) and the ecological developments that will be realized by the end of project. In addition, one of the projects was discontinued due to major financial constraints that could not be resolved. Furthermore, in all RGA projects the initial phases can be characterized as involving a time-consuming process due to the need for negations between all actors.

The general observation, however, seems to be that, from the *green* achievements made in the RGA projects, the NEN ambitions have not been overlooked because of urban developments but on the contrary have as much as possible followed the initial ambitions set at the beginning of the projects. This marks the potential role of RGA to safeguard *green* interests where NEN is not quickly ignored but is a key objective of the area development.

Table 4.2. *Status of the RGA projects with regard to NEN ambitions*

Case-study project	**Project status**	**Timing**	***Red* ambitions**	**NEN ambitions**
1. Meerstad	Ongoing	Delay	Downscaling in housing developments	Ecological ambitions in process of realization. The initial area for the NEN development has been downsized by 6%. The ecological corridor is in development.
2. De Blauwe Stad	Ongoing	Delay	Downscaling of the housing developments	Ecological ambitions realized.
3. Hart van de Heuvelrug	Ongoing successful implementation with additional risk prevention measures taken regarding financial constraints on the housing market.	According to plan	Not changed	Ecological ambitions in final phase of realization. Five wildlife overpasses developed and two ecological corridors.
4. Wieringerrandmeer	Discontinued	-	-	-
5. Marickenland	Ongoing realization, new arrangements in the plan were made in 2015 regarding the recreational zones.	According to plan	In process of realization	Ecological ambitions in process of realization. An ecological corridor is being developed.
6. Zoetermeer Zuidplas	Ongoing implementation with adjustments due to financial constraints.	According to plan	Downscaling of the initial ecological ambitions	The initial number of planned ecological corridors has been decreased.
7. Park Lingezegen	Ongoing successful implementation.	According to plan	Not changed	Ecological ambitions in final realization phase. Ecological corridor developed.

4.3.3. Key success factors of the RGA planning

The RGA projects assessed in this study referred to RGA as a feasible option for the development of NEN. The key argument for this is that RGA planning contributes to the design of tailor-made solutions for improving the overall quality of the NEN areas and for restoring ecological corridors across these areas that are crucial for its spatial coherence. Several interviewees said that the RGA made it possible to establish vital parts of the network. One interviewee stated: *"RGA made it possible to fill in some 'missing links' in our ecological network."* In order to gain a better understanding of the way RGA may or may not work for the NEN, we have assessed its key success factors based on the experiences generated within case-study projects.

We identified five key success factors (mentioned by at least five interviewees) which were considered significant for the effective use of the RGA. These include: 1) jointly developed strategic vision; 2) communication between actors; 3) shared responsibilities; 4) economic incentives; and 5) efficient land-use planning procedures (Table 4.3.). The degree of recognition of the key success factors differed between interviewees and cases Table 4.3. shows that at least four key success factors were identified in each case. In cases 1-5, the importance of all key success factors was recognized, although not by all interviewees. The next section describes each success factor and why interviewees perceived them as important for a successful RGA.

Table 4.3. *Key success factors perceived by the interviewees. N indicates the number of interviewees. Each dark circle represents the recognition of the success factor by one interviewee. Open circles represent interviewees that did not mention the success factor*

Success factor	***Case 1 N = 4***	***Case 2 N = 2***	***Case 3 N = 6***	***Case 4 N = 3***	***Case 5 N = 2***	***Case 6 N = 3***	***Case 7 N = 2***
Jointly developed strategic vision	●●○○	●●	●●●○○○	●●○	●●	●●●	●●
Communication between actors	●●●○	●●	●●●●○○	●●●	●●	●●●	●●
Shared responsibilities	●○○○	●○	●●○○○○	●●○	●○	●○○	●○
Economic incentives	●○○○	●●	●●○○○○	●○○	●●	●●○	○○
Efficient land-use planning procedures	●○○○	●●	●●○○○○	●○○	●○	○○○	●○

Jointly developed strategic vision

One key success factor was the development of a strategic vision on the spatial plans in which urban functions and NEN improvements would be integrated and in which all actors participated. The development of such a vision proved to be an essential first step to agreeing on the goals and ambitions of the proposed spatial development and in providing the argument for using the RGA. An agreed-upon vision on how the NEN objectives will be achieved within the spatial plan and how specific land-use developments will be balanced offers a platform for all actors to share interests. It also gives public authorities the opportunity to deliberate with private parties in an early stage of the planning process on how to intertwine conflicting land-use functions and how to provide the needed resources for the intended NEN improvements. Most of the planners interviewed claimed that such a vision is important for assessing the degree of compliance with the national policy objectives on NEN, in order to provide a bird's-eye view of the authorities' aims in the long run. As stated by one interviewee: "*If the public party does not have a good vision of what their ambitions are, the project developers can use this fuzziness for meeting only their own interests.*"

The strategic vision should not only address ambitions and possible developments, but also the preconditions and procedures under which the RGA will operate (Natuur

& Milieu, 2009). Most interviewees who mentioned such a vision as an RGA success factor believed that its success was mostly due to the fact that it initiated dialogue between and inclusive engagement by all stakeholders early in the planning process. In half of the case studies, this factor ensured an early formal involvement of the key public and private actors and prevented the planning process from being dominated by any particular vested interest in consecutive phases of the project.

It became evident from the interviews that there is a clear preference for a well-envisioned spatial plan. With such a plan, actors can better assess the expected benefits of their involvement in the RGA project. In general, project developers seem to be more resistant to, and sceptical of, the use of the RGA, compared to public authorities and NGOs. This resistance is often based on the perception that planning approaches such as the RGA are costly and hinder economically beneficial developments. However, a strategic vision was beneficial for changing these perceptions, as it often demonstrated that economic benefits could be optimized by integrating *red* and *green* land-use planning functions. In several case studies, higher sales benefits were expected due to the increased social value of houses placed in *green* surroundings.

A vision that is jointly developed by all actors may contribute to identifying and generating socio-economic benefits of the RGA projects. Nature conservation issues are then no longer seen as a threat to regional economic developments but are simultaneously addressed, with an emphasis on finding opportunities where both functions may reinforce each other. This may significantly speed up establishing both *red* and *green* functions, as with a joint vision actors may become more proactive. One interviewee noted: *"In the Netherlands, the primary focus of planners is on red developments, and less on how these developments can be used for investing in nature development or conservation measures. The use of an RGA may change that."*

A number of interviewees expressed concerns that the RGA approach may be used by project developers to more readily plan *red* developments within or in proximity to NEN, arguing that the expected loss of habitat will be restored elsewhere. They emphasized that rigorous analyses of the actual nature values in the planning area and the potentials for nature development are needed to optimize the conditions for developing NEN. After all, specific conditions are needed to allow for the compensation of lost nature. Consequently, the promising locations for *green* developments must be explored, and no-go areas should be identified within the RGA plan. An agreed-upon strategic vision is an important tool to clarify such planning restraints in advance.

Communication between actors

About 90 percent of the interviewees pointed out the high importance of direct, frequent communication between all actors involved in the RGA projects. A carefully designed communication process is the most efficient way to identify the particular interests and ambitions of each actor and explore possible solutions for conflicting interests.

Furthermore, it is important to use all available expertise and experience that result in stronger support and commitment from actors. One interviewee stated: *"You have to ensure that at an early phase of the project the interests of the parties are discussed and the possible collaboration is identified in terms of how actors can benefit from each other."*

However, communication should not be limited just to the actors. It quickly became clear in some cases that a well-premeditated communication process was also needed to inform the local communities and consider their interests. Although the local communities were usually represented by one or more NGOs, this was not always perceived as sufficient. While NGOs judge the pros and cons of the total plan, individual or groups of citizens are more likely to focus on one or two parts of the plan that may affect their personal interests. This is a consequence of the so-called *not in my back yard* (NIMBY) principle. Local communities must be well-informed from the earliest planning stages about the goals and expected outcomes and potential benefits of the RGA project, making clear how integrating urban functions with NEN improvements may contribute to the quality of life and the sustainability of the entire local area.

The specific forms and intensity of communication in a project are usually decided upon in the collaborative agreements signed by the actors at the start of the project. In public-private partnerships (PPPs), the RGA is usually based on reciprocity. In other words, private and public parties have something to offer to the other, but also need the cooperation of the other party to reach their own interests. Both sides often quickly recognize the importance of a carefully designed communication process to reach consensus for a PPP agreement. One interviewee stated: *"The driving force behind a PPP is the recognition of the interdependence between the different actors in achieving the goals of the proposed plan."* Understanding this inevitability of collaboration helped prevent one or two actors from dominating the planning and decision-making process. The same applies for public-public partnerships (PuPs). Public authorities often have quite fragmented administrative structures and cultures that hinder efficient communication between professionals and decision makers. Explicit collaboration agreements are essential to streamline communication and the agreed-upon division of tasks and responsibilities. If consensus cannot be achieved between public authorities, the RGA cannot be effectively implemented. This is also true for the communication process within the organizational structures of public authorities, such as between the planning departments and the environmental and nature-conservation departments. In most of the studied cases, to one degree or another impediments were observed regarding collaboration during the entire planning process of the projects and the accompanying decision-making. In this regard, one of the interviewees stated that although private actors often compete with each other, they more quickly find practical ways to collaborate compared to public actors: *"Private parties seem sometimes to find more easy ways to collaborate than the public authorities, which is based on their fundamental similarities and working perceptions such as continuity of the business. By making the competitors interested in a partnership, a company*

can progress in the market with fewer competitors." This has not been the case for the public authorities involved in the RGA projects, which appeared to have more rigid and time-consuming communication processes due to fragmented administrative structures and more hierarchically oriented decision-making processes.

Meanwhile, several interviewees indicated that the communication process was most successful when there was mutual trust and an initial willingness to reach a common understanding during the RGA planning process. Reaching a common understanding greatly depends on creating an open communication process in which actors can freely express their visions, interests and fears. Actors may have wrong perceptions about each other. Public actors may have the perception that private actors are mainly interested in quick financial benefits. Private actors may have the perception that public actors' bureaucracy inhibits their creativity and flexibility in planning (PPS Bureau, 2004). Overcoming such perceptions is an essential step in any RGA project. It allows for more transparent deliberations and quicker results from actors who respect each other's opinions and interests, even if these are not necessarily shared. It encourages a process of learning and helps to achieve mutual trust, which is often a key factor for the success of a project. One interviewee stated: "*The formal and informal interaction between the actors has helped them to learn about each other and from each other. Of highest importance is that actors trust each other. Therefore, parties need to put extra efforts into establishing a trustful relationship*."

Communication was most successful when based on more informal horizontal relationships between actors across organizational structures, rather than on hierarchical, top-down power relationships. The initiative for such a communication process within the RGA projects was usually taken by the public authorities and followed up by the public-public or public-private partnerships agreements. Each RGA project formed a unique form of communication which was dependent on the leadership, the motivation and the bargaining capacity of the public and private actors.

Shared responsibilities

All actors' commitment to and responsibility for reaching the project goals are important for the success of a RGA project. Several interviewees emphasized that *green* functions in a spatial plan, such as one for the development of a NEN, should no longer be the sole responsibility of the governmental authorities or nature-conservation oriented NGOs. Instead, *green* developments should be a shared responsibility of all actors. All actors must accept, and consequently act upon, the idea that neither *red* nor *green* developments can go forward without the other kind of development. As was observed in a number of the RGA projects, when all actors acknowledged the need for sharing responsibilities on the RGA developments, compromises could be reached more easily. In this case, key bottlenecks could also be solved, and more of the initial ambitions could be met.

Currently, there is no legal framework at the regional level to regulate or guide the initiation and the management of RGA projects. Most RGA projects are initiated by provincial authorities alone, based on their emerging planning ambitions. In most cases, the incentives to start an RGA project are related to implementing provisions of the NEN national policy in the regional plans. Provincial ambitions regarding NEN objectives are usually high at the beginning of the RGA projects. The authorities, however, are well aware that implementation will be challenging, particularly with regard to the involvement of different stakeholders at the earliest stages of the project and the way the responsibilities and roles will be divided between them in the planning process. In this context, the role of the RGA as a planning process that integrates different developmental objectives tends to be perceived as a structured form of collaborative planning that clearly outlines the shared responsibilities in joint agreements between actors.

Economic incentives

The interviewees mentioned economic incentives as a success factor for the RGA as a way to attract private investments in regional developments and identify opportunities for financing the development of NEN at regional level. In the studied cases, housing developments were the main economic incentive offering a return on investments and explaining the interest of private actors, such as project developers, to join an RGA project. One of the common statements among project members of the RGA regarding the economic outcomes of the RGA developments was that: *"RGA is interesting for developers only if this will deliver benefits for investments in housing or infrastructure."*

One complicating factor in this respect is that the economic benefits are sometimes difficult to predict, due to the dynamics in the land and housing markets. Therefore, expectations of economic benefits and consequent possibilities for co-financing *green* ambitions may be inaccurate. In case studies where this occurred, the project often suffered from serious delays. RGA projects require both private and public parties to estimate possible financial risks due to the land and housing market and embed these in the formal agreements. As observed by an interviewee: *"While in the first phase of the project many ambitious ideas are considered, there is also a strong need for the actors to consider the commercial and political risks that may occur."*

According to public authorities, another complication is that *green* ambitions in some regions may be too high to be fully funded by *red* developments. For example, in areas where the aim is to develop robust ecological corridors, available space for *red* developments is relatively limited. One interviewee mentioned: "*There is a growing scarcity of locations for urban developments. As a result, the developers might have a surplus of financial resources. There should be more areas where, with relatively small red developments, significant profits can be gained in order to co-finance relatively large NEN developments."* In this regard, other interviewees emphasized that fully funding *green* developments

from the profits of *red* projects is not always the best choice. If land prices are high, this may result in a lot of *red* for only a little bit of *green*. This statement emphasized a more common perception of RGA participants that implementing the NEN policy and targets has a public value and, in line with the private actors' contributions, it should always be co-financed by the government: *"You do not wish to finance green developments only with private funds. Often the ambitions are so high that concessions are made, eventually resulting in red developments invading the green areas more than planned. This may compromise the value of the green assets and their ecological functionality."*

Efficient land-use planning procedures

One-third of interviewees mentioned efficient land-use planning procedures as a success factor for RGAs, in which clear steps are distinguished to designate both *red* and *green* land-use functions. Within the Dutch regulatory framework of land-use planning, a number of procedures for zoning and designation, acquisition, and expropriation of land can be used in RGA projects. The efficiency of these procedures is based on creating smart combinations of designated land uses that benefit most of the actors involved in the RGA project. The accompanying negotiation process to implement the land-use procedures and provide the land for *red* and *green* functions has been key to the efficiency of land-use planning procedures.

In the cases studied, the efficiency of the planning procedures greatly depended on the proportion of land owned by the government within the project area. If most land is government owned, planning ecological corridors as part of NEN is easier and implementation is more likely to be a success story, compared to cases in which private developers own most of the land and/or public authorities must negotiate with private landowners about possible land acquisition, purchase or land expropriation. In such cases, time-consuming negotiations were often needed to reach consensus regarding proposed land designations for *red* or *green* functions, and to outline the financial mechanisms to compensate landowners for *green* developments.

Furthermore, land ownership largely determined actors' power positions in the planning process. In this regard, four key strategies could be distinguished within the RGA projects that were applied to ensure efficient acquisition of the needed lands. A first strategy is agreeing that the government has the right of first refusal if private landowners decide to sell their property. High cost for land acquisitions can be prevented since such agreements hinder speculative acquisitions by project developers. It is important that negotiations on the financial framework between private and public actors are finalized and a PPP agreement is signed before the project is publicly announced.

Proactive acquisition of land by the public authorities before, or at the start of, the RGA project is a second strategy. Such land acquisitions are usually not limited to land within the project area itself. Land outside the project borders is also acquired to be able to offer landowners a land-for-land option.

A third strategy used was to maximize flexibility in the plan, such as by developing different scenarios for the *green* ambitions. One interviewee advised: *"You should be sufficiently flexible in your plan, so you will not be dependent on a particular square metre of land, because it is evident that if you need just that piece of land, you will pay the jackpot for it."*

A fourth strategy is land expropriation. This strategy was only used if land acquisition stagnated as a result of land price speculation or landowners' unwillingness to sell land that was an indispensable part of the plan. Land expropriation is usually not the first choice (see Table 4.1.), but may become necessary to secure project progress or ensure that planned *green* developments can take place. However, the issue of land price becomes particularly delicate in land expropriation for NEN proposes, because landowners might be forced to sell their land at a low price to the same government that designated land uses.

4.4. Discussion

In our research we evaluated the suitability of the RGA to integrate the key objectives of the NEN implementation into regional spatial plans. By assessing seven case studies in which the RGA was applied, we explored its potential to contribute to integrated and therefore more sustainable land-use development and achieve a higher degree of EPI. We identified the key success factors for implementing the RGA based on this assessment.

Our findings show that the use of RGA has not yet been firmly institutionalized in the spatial planning policy and land-use planning practices of national, regional and local authorities in the Netherlands, but that it is more of an ad-hoc approach. However, interviewees shared the opinion that the RGA will be of great benefit if it is embedded and channelled within spatial planning policy at regional and local level. They believe that with a more solid institutional basis for RGA as an integrated from of land-use planning, private actors can be better encouraged to invest in *green* developments, and funding for the compensation of the loss of natural areas due to *red* developments can be more easily secured.

At the same time, it became evident that certain legal provisions alone will not fulfil all the RGA needs. While legislation can provide the rules of the game, it cannot replace the need for actors' strong commitment. Actors should be convinced that multiple development needs can be met through the RGA in the spatial plan. This requires a stronger collaborative attitude and more communication skills than those required in more conventional planning approaches, where regulations and governmental hierarchy usually play a more dominant role in decision-making. RGA projects emphasize the deliberation process for negotiating a shared vision on the spatial development goals. While these negotiations in the first stages of a planning project require more effort

and usually take more time than the more conventional planning approaches, most interviewees agreed that they pay off at later stages in the planning process. Although a signed agreement between the actors is indispensable in this respect, the success of an RGA project also greatly depends on the quality of the relationships between the public and private actors.

An essential element in this process is the proactive role of the regional authorities toward both private actors and other governmental agencies. Although the Dutch national policy on establishing the NEN promotes integrated, nature-friendly spatial developments, applying the RGA is not mandatory. The use of the RGA greatly depends on the ambitions and the initiatives of the regional authorities.

Our research illustrates that no two RGA projects are the same in terms of ambitions, objectives, planning process, or agreements between actors. This makes RGA projects complex but simultaneously allows for tailor-made planning solutions that address the needs of a specific regional development initiative. It became clear in the seven case studies that achieving agreement between all actors differs for each project is a very dynamic, complex process. However, deliberations allow for a certain amount of flexibility regarding the choice of the planning instruments, the design of the communication and negotiation process, the division of responsibilities, and the financial mechanisms needed to implement the RGA project. The advantage of this flexibility, compared to more rigid conventional planning processes, is that specific ways of working can be designed for each project that fit best with the local situation and preferences of the actors involved. This advantage results in differences both in agreements between RGA projects managed by different regional authorities and between projects initiated by one regional authority.

We have shown that regional use of the RGA can enhance the functionality of the NEN. Within the explored projects one particularly beneficial outcome for the NEN was the development of a number of substantially important ecological corridors. In this relation, the RGA could be seen as a promising approach towards progress with the implementation of the NEN at national scale.

The benefit that the RGA offers to this NEN process is that it allows actors to no longer limit their focus to individual *green* developments on a local scale but to look at the whole picture as a cluster of interdependent *green* developments that should be addressed together to achieve ultimate coherence and conservation targets of the NEN. Although the development of the NEN cannot fully be realized just through RGA projects, the RGA seems to be suitable for addressing *green* ambitions in densely populated areas where urbanization exerts high pressure on nature. It illustrates a new form of land-use planning at the regional and local scales of spatial development, designed to embed conservation objectives within the land-use planning process. Nevertheless, RGA use at the regional level is not a common practice. Some interviewees explained that there is still some hesitation about routine use of the RGA due to its complexity with regard to

planning procedures, financial arrangements, multiple actors' involvement, and timely negotiations. Nevertheless, most regional authorities agree that the approach helps to raise general awareness that *green* developments are not necessarily solely a governmental responsibility. The RGA promotes integrated planning, meaning that *red* and *green* ambitions are simultaneously addressed with even weight. Although *green* developments were a priority objective in most of the case studies, the RGA has proven that it is not only that *red* projects pay for *green* ones, but also that *green* projects improve *red* ones, for example by providing economic benefits as a result of increased real-estate values due to high-quality *green* space surrounding the *red*.

Several of the cases showed that successful implementation of *green* ambitions greatly depended on a clear vision of what the *green* developments should be in the earliest stages of the project. An elaborated plan, in which the necessary *green* areas, their spatial configuration, and the conservation objectives within these areas are specified, will result in better incorporation of NEN ambitions in the final plans, compared to projects in which *green* developments were not specified. Such a vision streamlined the deliberations between actors, as it prevented unexpected or new demands with regard to *green* developments at later stages in the project.

It is essential for the RGA to balance power relationships and build trust between actors. The formalized actors' agreements play a key role in this respect, as these should outline the roles and responsibilities of the actors. The agreements, such as the PPPs and PuPs, should be based on a consensus among all actors. Incomplete agreements may result in conflicts, disturbed relationships, or even legal battles. The essential issue for consensus building is acknowledging public and private interests, potential risks of the RGA agreement, and how these risks will be divided among the actors during the RGA planning process. Furthermore, it is essential that the cross-subsidizing mechanisms also be agreed upon among all actors, such as how *red* developments will contribute to *green* ones.

RGA projects have an added value in that they improve the image of the actors involved and this applies to both public and private actors. For governmental authorities, they are a clear means to demonstrate their interest in protecting the environment and, specifically, their support for developing and restoring *green* areas, including ecological networks. This may strengthen the position of a region, as RGA projects may change the view of both private actors and the public on the attractiveness of an area to live or start an economic activity. They can also be a means for private actors to show their ambition to conduct nature-friendly businesses or actively put efforts into improving natural values. Although such benefits will not necessarily improve the quality of a spatial plan, they may result in greater commitment from the actors, fewer obstacles during the planning process, and a greater chance of the project being implemented successfully.

4.5. Conclusions

The growing pressure on natural areas due to land scarcity, urbanization and the general call for decentralization of development activities in favour of regional governments in the Netherlands has increased the need for planning approaches such as the RGA. Using profits from property development is a possible way to finance the development and maintenance of nature areas. However, a key element of the RGA is the collaborative planning process that it involves. In this study we have shown that the RGA is a balancing approach but to a high degree it is also a collaborative planning tool that regional authorities, private developers and nature-conservation parties can use to develop parts of the NEN. The RGA provides tailor-made solutions for balancing *red* and *green* land-use functions by promoting more integrated planning instruments, facilitating communication between multiple actors, and offering new financial incentives. Although opinions differ among regional actors about when and how to use the RGA, current experiences demonstrate the vast array of opportunities that it offers for achieving complementary purposes, such as ecological developments alongside conventional land-use planning aims.

Our research shows that nature-conservation objectives can be part of collaborative RGA planning processes initiated by regional governments. The RGA is also a collaborative process that crosses the boundaries of private and public interests and actors' perceptions. The case studies illustrated that the RGA supports regional governments in speeding up the needed NEN ecological developments, based on their jurisdictions, status and authority. Private actors, such as project developers, can also benefit from engaging in RGA projects by designing innovative developments while investing in improving quality of life of an area and a region. Meanwhile, some regional actors are concerned about the struggles with insufficient public funding for developing the Dutch NEN and whether the RGA alone can meet these needs. However, others viewed positively the opportunity offered by the RGA to create public-private partnerships that increase actors' overall awareness, considerations and desire for investments in NEN. The RGA provided provinces with a means to orient their initial ambitions toward development that is not restrictive but based on sustainability principles in which economic opportunities can provide better quality of life and nature. The RGA can prevent economic developments being made at the cost of actual or potential natural values. The RGA is a tailor-made process, and specific planning solutions are needed for each development plan, where a mix of planning instruments are used, including procedural, strategic and collaborative instruments.

The key success factors to RGA include: 1) actors' communication; 2) strategic vision; 3) shared responsibilities; 4) economic incentives and 5) efficient land-use procedures. Of these, we conclude that the communication between actors is the most important success factor. Within all the case studies, the communication between actors

was an ongoing process that influenced the outcomes of all planning stages. Ensuring successful communication between actors, while also understanding the particular regional setting, institutional and organizational interactions, and the public and private actors' relationships, is the most challenging and unpredictable endeavour of the RGA. While this process requires serious effort and a proactive role on the part of regional authorities, it still offers an attractive perspective for more sustainable regional developments. Despite a few observed complexities in RGA implementation, such as too high initial ambitions, sudden financial constraints and longer implementation time, most projects can be considered successful. We can thus conclude that RGA did contribute, to some degree or another, to the realization of at least a substantial number of the NEN ecological developments and of the enhancement of the NEN overall.

The RGA serves as an alternative to the more conventional planning practices in which powerful economic forces often hinder *green* ambitions. Although the RGA still possesses a number of challenges and dilemmas, it offers ways to mediate between competing demands for land in favour of nature conservation goals. It is a promising communicative approach to further promote the implementation of the EPI principle in regional spatial planning. Last but not least, the RGA remains a rather unique approach and its potential should be further revealed in the planning discourse, in line with the emerging planning practice of regional and local authorities.

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Appendix 4.1. *Short description of the case studies*

Project	**Initiator**	**Aim of the project**	***Red* ambitions**	***Green* ambitions**	**Actors and type of agreements**
1. *Meerstad*	*Province of Groningen*	Developing a multifunctional area (2,400 ha) for housing, business, water management, recreation, an attractive landscape and a robust ecological corridor as part of the national ecological network.	• Housing (700 ha; 10,000 houses). • Business activities, services and sport facilities (162 ha).	• Recreational area, including a lake (1,400 ha). • Ecological corridor (395 ha) between Groningen and Zuidlaarder lake in Drenthe (Natura 2000 area). • Habitat restoration outside the project area, compensation of habitat loss due to *red* developments (250 ha).	*Public:* • Ministry of Economic affairs • Province of Groningen • Municipality of Groningen • Municipality of Slochteren *Private:* • AM Grondbedrijf B.V. • Hanzevest Ontwikkeling B.V. • Heijmans IBC Vastgoedontwikkeling B.V. • BPF Bouwinvest LTD *Agreement type:* PPP
2. *Blauwe Stad*	*Province of Groningen*	To stimulate the regional economy by developing 1,500 ha for attractive living and working environments. Creating a lake and surrounding housing, nature and leisure facilities. Transforming open and agricultural areas.	• Housing: land for building plots (160 ha; 1480 houses).	• Development of a lake for recreation and nature (800 ha) and separate nature areas (350 ha) as part of NEN, including an ecological corridor.	*Public:* • Province of Groningen, • Municipality of Reiderland, • Municipality of Scheemda • Municipality of Winschoten • Water Authority • State Forestry Service • Provincial Conservation Society *Private:* • Developers' union • Management body De Blauwe Stad B.V. *Agreement type*: PPPs
3. *Hart van de Heuvelrug*	*Province of Utrecht*	Restoring nature by developing ecological corridors, combining housing, services and recreation. By a "chess" planning model, allow exchange of areas for *red* and *green* functions, and achieve positive balance with connected natural areas. Regional clusters of projects.	• Housing, services, and business areas. The *red* functions shall be the same in size as the *green* areas.	• Development of large natural area in the country with ecological corridors. • Construction of five wildlife overpasses and two robust ecological corridors.	*Public:* • The Province of Utrecht • Municipality of Soest • Municipality of Zeist • Municipality of De Bilt, • Municipality of Leusden • Municipality of Amersfoort • Five Ministries • NGO Utrechts Landschap *Private:* • Abrona, • Altrecht, • Reinaerde • Pro-Rail *Agreement type:* PPPs: "Platform Hart van de Heuverug"

Project	Initiator	Aim of the project	*Red* ambitions	*Green* ambitions	Actors and type of agreements
4. *Wieringer-randmeer*	*Province of Noord-Holland*	Development of a lake to give a new socio-economic impulse to the Kop van Noord-Holland region by providing opportunities for recreation and services. Making robust ecological corridors between the Ijsselmeer and North Sea.	• Housing: (2,100 houses). • Extension of recreation terrain and marinas.	• Development of a lake to connect Ijsselmeer and Amstelmeer lakes.	*Public:* • Province of North Holland, • Municipality of Wieringen • Municipality of Wieringermeer • Municipality of Hooggheemraadschap Municipality of Hollands Noorderkwartier Domeienen • Staatsbosbeheer • WLTO • Ministries of VROM, LNV, Finaces V&W *Private:* • Boskalis • Volker Wessels • Witteveen+Bos *Agreement type*: PuP and PPPs
5. *Park Lingezegen*	*Province of Gelderland*	Development of a regional park between the urban areas of Arnhem-Nijmegen (1,500 ha), including public open space for recreation (370 ha), water retention (20 ha), agriculture (300 ha); ecological zones (69 ha), nature (255 ha), and other park zones and infrastructure.	• Recreational infrastructure and services. • Limited urban fringe housing on the park edges and estate developments within the park for public use.	• Regional green park: recreation, water, river landscape, and nature (255 ha). • Developing two ecological zones with stepping stones between the big river wall and the centre of Park Lingezegen (69 ha).	*Public:* • Province of Gelderland, • City Region Arnhem-Nijmegen • Municipality of Lingewaard • Municipality of Overbetuwe • Municipality of Arnhem • Water board Rivierland • State forest agency • Rural development agency *Agreement type*: PuP Management group Park Over-Betuwe
6. *Zoetemer Zuidplas*	*Province of Zuid-Holland*	Redevelopment of 2,080 ha from agricultural land to nature and recreation area in the province of Zuid Holland. Improvement of the ecological structure of the forests and water area, and preservation of the open space between the surrounding cities.	• Sports fields outside the urban borders with compensation for nature in the Bentwoud Forest.	• Development of the Bentwoud Forest. • Three ecological corridors.	*Public:* • Province of Zuid Holland • Municipality of Rijnwoude • Municipality of Zoetemeer • Municipality of Waddinxveen • Ministry of Economic Affairs *Agreement type:* PuP between the public actors PPPs between private parties in, land acquisition for the realization of green (450 ha). Recreatieschap Reeuwijk.
7. *Marickenland*	*Province of Utrecht*	Development of nature and recreational area in the polder of Groot Mijdrecht South (500 ha). The aim is to preserve the open space between three core areas (Mijdrecht, Wilnis, and Vinkeveen) by developing an ecological corridor between north and south of the area.	• 950 houses next to the existing urban zone of Wilnis.	• Development of NEN nature (320 ha) combined with recreation (180 ha). • Development of a NEN ecological corridor between: Vinkeveense- Botschol and Nieuwkoopse Plassen with defragmentation measures across regional road.	*Public:* • Province of Utrecht • Municipality De Ronde Venen • State forest agency • Water boards of Amstel, Gooi en Vecht *Agreement type*: PuP Negotiations with landowners for acquisition of the farmland to be owned by the municipalities and three developers.

Appendix 4.2. *Interviewed stakeholders*

Case study	Interviewee			
	No.	**Name of organization**	**Type of organization**	**Position**
Meerstad Groningen	1	Province of Groningen	GOV-R	Policy maker
	2	Project Bureau Groningen Meerstad	GOV-R	Project manager
De Blauwe Stad	3	Province of Groningen	GOV-R	Project manager
Wieringerrandmeer	4	Municipalities of Wieringen and Wieringermeer	GOV-L	Project manager
	5	ACRO Consult	PRC	Consultant
Hart van de Heuvelrug	6	Association Landscape Utrecht	PNP	Expert
	7	Municipality Soest	GOV-L	Policy maker
	8	Province of Utrecht	GOV-R	Project manager
	9	Program Bureau Hart van de Heuvelrug	GOV-R	Project manager
Marickenland	10	Province of Utrecht	GOV-R	Project manager
	11	Municipality De Ronde Venen	GOV-L	Project manager
Zoetermeer Zuidplas	12	Province of Zuid-Holland	GOV-R	Project manager
	13	Agency for spatial planning	GOV-N	Project manager
Park Lingezegen	14	Province of Gelderland	GOV-R	Project manager
	15	Water agency Rivierenland	GOV-N	Policy maker
Non case-related interviewees	16	NEPROM Association of developers	PRC	Director
	17	Agency for spatial planning	GOV-N	Expert
	18	Technical University of Delft	UNI	Researcher
	19	Technical University of Delft	UNI	Researcher
	20	Wageningen University	UNI	Professor
	21	Alterra	UNI	Senior researcher
	22	National Fund for Rural Areas	PNP	Expert/consultant
	23	National Fund for Rural Areas	PNP	Expert/consultant

Legend:
GOV-N = Government, national
GOV-R = Government, regional
GOV-L = Government, local
UNI = University
PUC = Public Commercial Organization
PRC = Private Commercial Organization, including consultancies
PNP = Private Non-profit Organization

Appendix 4.3. *Interview questionnaire*

General questions:

1. What is your understanding about the RGA and its concept/idea?
2. Do you know if the RGA is institutionalized in the Netherlands in any regulations, contracts, or financial arrangements?
3. When can you use RGA, and when not?
4. Is the RGA used on a regular basis within the planning practices of the regional and local authorities?
5. Why was the RGA chosen for a specific project?
6. Is the RGA a useful approach now and for the future, and why?

Specific questions related to the cases:

7. Which actors proposed applying the RGA in the project and why?
8. Which public and private actors were involved in the RGA project?
9. What benefits and advantages did the actors (public and private) consider to getting involved in the RGA project?
10. How was the RGA project organized (who took the initiative and the leading roles)?
11. How was communication between project actors organized?
12. Were there any conflicts during implementation of the RGA in the planning process of the project?
13. Were there any collaborative teams established between the actors involved in the RGA project?
14. Which essential interests and differences were observed among the actors involved?
15. Did any of the actors make use of their power positions during the RGA project? If yes, in what way?
16. What are the risks of applying the RGA?
17. Was the RGA development accepted by the local community?
18. What are the key success factors of the RGA and why?
19. Which land-use planning instruments did the regional authorities use to implement the RGA and why?

CHAPTER 5

Environmental Policy Integration: Towards a communicative approach in integrating nature conservation and urban planning in Bulgaria

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Abstract

As urban areas continue to expand, the need to consider nature conservation objectives in planning is growing. Policy makers across Europe recognize that effective nature conservation requires an integrated approach to land-use planning that includes relevant ecological and spatial knowledge. Although a number of such integrated approaches have been developed, many local authorities in Europe encounter important institutional barriers to this integration. This is particularly true for countries in Central and Eastern Europe (CEE) like Bulgaria. The post-socialist transformation in Bulgaria led to intensified urban growth and local authorities struggle to find a balance between environmental and socio-economic interests. Meanwhile, the Environmental Policy Integration "principle" (EPI) has been gaining prominence in Europe, aiming to address the trade-offs between environmental and economic incentives. Research highlights that successful EPI depends on institutional processes within different economic sectors and across governmental scales. These processes have not yet been comprehensively studied in the CEE and in Bulgaria. This article assesses the EPI process in urban planning in Bulgaria and identifies the institutional approaches that may contribute best to EPI in urban planning. Using the example of the *Corner Land* project in the city of Burgas, we discuss the key challenges that the local authorities face in addressing nature conservation in land-use plans. The findings indicate that EPI is to a high degree constrained by the lack of an efficient communicative process across fragmented organizational structures throughout the entire planning process. While a procedural approach to EPI appears to be prevalent it is concluded that a communicative approach is urgently needed if the sustainability of urban plans is to be safeguarded and negative impacts on nature prevented.

5.1. Introduction

Urbanization is increasing steadily worldwide with no signs that this trend is likely to halt soon (CEC-Community of the European Commission, 2011; United Nations Population Fund, 2007; U.N-Habitat, 2012). More than half of the world's population now lives in urban areas (UNPF, 2007; Coutard & Finnveden et al., 2014). A number of studies provide evidence that, in the face of urban sprawl, spatial planning policies often let economic interests prevail over open space and nature conservation concerns (Dale et al., 2000; Miller & Hobbs, 2002; Daniels & Lapping, 2005; Sandstrom et al., 2006; Termorshuizen et al., 2007; Zonneveld, 2007; CEC, 2011). Urbanization has proved to be one of the most severe threats to the preservation of natural areas and biodiversity (Beatley, 1994; Fahrig, 1997; Rottenborn, 1999; Palomino & Carrascal, 2006; Coutard & Finnveden et al., 2014).

During the last two decades, the pressure from urbanization has been steadily increasing, particularly in the Central and Eastern European (CEE) countries, including Bulgaria. Since the end of socialism, Bulgarian cities have experienced notable suburban growth (MRDPW, 2006). This process has been regarded by the local governments and residents as an economic opportunity to develop affluent suburbs, following the model of Western capitalist cities (Hirt & Stanilov, 2009). The shift from the socialist, centralized political system to a market-oriented, decentralized one, with more governing power given to local government, has led to a rapid increase in land developments (Stanilov & Sykora, 2014). This has placed new demands upon local governments to act in a more pluralist society with the involvement of a greater variety of public and private actors and interests. While economic interests have started to dominate planning, developments undertaken in the real estate and tourism sectors have led to the accumulation of significant threats to preservation of nature resources in the coastal areas (MRDPW, 2006; Stanilov, 2007; Anderson et al., 2012; Stanilov & Sykora, 2014). With Bulgaria's accession to the EU, the responsibility for the implementation of the EU nature policy directives was delegated to the local authorities (MRDPW, 2005; Brinkerhoff & Goldsmith, 2006; MOEW, 2007). This, however, became a major challenge for the local governments in Bulgaria, which followed the neoliberal fashion of planning, seeking primarily economic opportunities while allowing powerful market players to push the expansion of developments (Carmin & Vandenveer, 2007, Stanilov & Sykora, 2014). This situation has been exacerbated in the absence of planning practices that integrate environmental and socio-economic concerns (Stanilov, 2007; Anderson et al., 2012; Stanilov & Sykora, 2014).

In this article we discuss the need for such an integration process which is embedded in the Environmental Policy Integration principle (EPI). EPI was introduced by the EC policy with the aim of addressing the needed trade-offs between the environmental and socioeconomic sectors (EEAa, 2005). EPI is considered to be the operational expression

of the sustainable development concept, focussing on environmental concerns being an indispensable part of other policy objectives and sectors (horizontal integration) and of national, regional and local governance (vertical integration) (Laferty & Hovden, 2002; EEAa, 2005; Herodes et al., 2007). Studies have shown the need for EPI in urban planning by revealing that to achieve desired environmental quality and conserve nature requires well-designed interdisciplinary approaches, incorporating both ecological and spatial planning knowledge (Theobald et al., 2000; Termorshuizen et al., 2007; Kihslinger & McElfish, 2009). Across academic disciplines and policy sectors, recognition has been growing that planning decisions involving land-use transformations of natural landscapes into urbanized areas must be based on knowledge about the impact of these transformations on natural habitats (Beatley, 2000; Lofvenhaft et al., 2002; Opdam et al., 2002; Theobald & Hobbs, 2002; Beunen, 2006; Geneletti et al., 2007). However, despite efforts to develop suitable approaches to facilitate integration of ecological knowledge into urban land-use planning, some important barriers remain (Crist et al., 2000; Theobald & Hobbs, 2002; Termorshuizen et al.,2007). Planning research and practice has shown that, even if available, ecological knowledge is often not shared among planners or decision makers during the planning process (Miller & Hobbs, 2002; Beunen, 2006; Termorshuizen et al., 2007; Gibbs et al., 2007). Although more planners are starting to recognize the importance of using ecological principles while searching for mutual benefits between nature and economy, ambiguity remains about the weight that needs to be given to ecological concerns and how to address them systematically in different phases of a planning process (Campbell, 1996; Zipperer et al., 2000; Lofvenhaft et al., 2002; Sandstrom et al., 2006; Shandas et al., 2008). Contemplations on this issue are found in the planning and ecological literature, arguing that this ambiguity largely results from discrepancies between the implementation process of the environmental and spatial planning policies (Campbell, 1996; Healey, 2010; Termorshuizen et al., 2007; Sager, 2013). In particular, the poor levels of communication among planning and environmental professionals within fragmented governmental structures are considered an issue of great concern in the science-policy debate (Peyrache-Gadeau, 2007; EEAb, 2005, Stead & Meijers, 2009). Moreover, as local governments may act differently upon national policies, questions have been raised about the institutional mechanisms at local level through which planners can successfully integrate and safeguard nature conservation objectives (Hajer & Wagenaar, 2002; Gibbs et al., 2007; Anderson et al., 2012). This issue has been addressed as essential for the achievement of EPI (EEAb, 2005).

While studies have conceptualized EPI as a new mode of "good governance", making reference to a number of guiding recommendations and approaches (Laferty & Hovden, 2002; OECD, 2001; Von Homeyer, 2006; Herodes et al., 2007), there is currently no unified strategy for achieving EPI. A number of commonly used approaches to EPI have been highlighted in the EPI literature, including strategic, procedural, structural and communicative approaches (OECD 2001; EEAa, 2005; Simeonova & Van der

Valk, 2009). While the strategic, procedural and structural approaches focus on the substantive elements of the EPI process, such as elaborating an overarching EPI strategy, establishing coordinating structures and legal procedures, the communicative approach aims to address actors' communication processes at inter-organizational level (Hertin & Berkhout, 2001; Von Homeyer, 2006; Mickwitz, 2006; Jordan & Shout, 2007). The communicative approach to EPI has been of particular of interest and it has strong links with the communicative planning discourse (Healey, 1997; 2010; Raemaekers, 2000; Wondolleck & Yaffee 2000; Margerum, 2002, Innes & Booher 2003; Sager, 2013). In the context of urban sustainability the benefits and credibility of a communicative approach to EPI have been debated and explored by a variety of planning scholars studying the relation between environmental policy and spatial planning (Healey, 1997; Miller & De Roo, 2005, De Roo, 2007; Zonneveld & Spaans, 2012; Sager, 2013). Among its key proponents, Healey (1997) argues that the communicative approach is needed to reconcile the environmental goals of planning with market forces by means of dialogue. Other studies that have explored EPI-related practices in spatial planning have indicated the potential benefits of the communicative approach for achieving the goals of EPI and have referred to a number of experiences with EPI collaborative practices in planning generated by local governments in Europe (Miller & De Roo, 2005; De Roo, 2007; Stead & Meijers, 2009; Simeonova & Van der Valk, 2010; Haley, 2010; Scholz, et al., 2012; Stigt, 2013). More empirical evidence is needed, however, regarding the potential benefits of the communicative approach to EPI within various local contexts and regarding different environmental issues. Particularly, we need to know more about its potential to provide local governments in CEE with the mechanisms to reshape the planning process in ways that would enable specific environmental concerns, such as degradation of nature areas, to be embedded in urban plans.

This article explores key challenges to EPI in the context of post-socialist urban planning in Bulgaria and assesses the potential benefits of the communicative approach to embed EPI in urban planning practice. Using an in-depth case-study analysis of the planning process of the *Corner Land* urban development project, located on the Black Sea coast in the city of Burgas and bordering an important bird protected area *Atanasovsko Lake,* we discuss the role of the communicative approach in safeguarding nature objectives in urban planning. The *Corner Land* case provides a vigorous context to explore the legitimacy of the EPI concept as a communicative process as it represents a distinctive planning practice of a post-socialist city and illustrates typical urban sustainability dilemmas. The scope of this paper is on assessing the degree of EPI achieved during the routine process of plan preparation. The paper envisions whether the institutional settings within which planning is framed make a difference for the outcomes of EPI in a country like Bulgaria. It discusses the specific socio-political context, which may affect the EPI process. The analysis, however, does not extend to the realm of local politics.

5.2. Conceptual framework

5.2.1. The use of EPI concept in planning

Interest in EPI has been steadily growing among planners as they search for operational approaches to increasing urban sustainability (Briassoulis, 2004; Stead & Meijers, 2009; Zonneveld & Spaans, 2012; Scholz, Hedmark et al., 2012). However, more cohesive knowledge is still needed, especially regarding approaches to achieve EPI at local level and about the local authorities' challenges in dealing with the EPI in their planning practices (Stead & Meijers, 2009; Zonneveld & Spaans, 2012; Stigt, 2013). The EPI rationale used in this research is based on the concept of EPI developed by Lafferty and Hovden (2003), which defines EPI as integration of environmental policy objectives into other sectoral policies. EPI is therefore referred to here as the integration of environmental concerns in the urban planning domain, and as a process for addressing an ecological perspective in planning as part of urban sustainability. This view of EPI implies giving principled priority to environmental sustainability in urban planning.

So far, no consistent framework of approaches exists for implementing EPI in various policy contexts and governance levels (Lenschow, 2002; Persson, 2004; Hohn & Neuer, 2006). As Collier (1994) and Mickwitz (2006) have argued, policy integration may occur at different phases of policy development as long as it is embedded in the policy implementation approaches. Lenschow and Zito (1998) defined three success factors for achieving EPI: normative, organizational and procedural. Similarly, De Boe et al. (1999) distinguished three possible forms of policy integration: sectoral, territorial and organizational. Of these forms of integration, organizational integration is considered critical to effective delivery of EPI (Hertin & Berkhout, 2001; Jordan & Lenschow, 2008). In addition, Briassoulis (2004) refers to a "relational approach", which incorporates the policy objectives, actors, goals, structures, procedures and instruments that can be used to facilitate the policy integration process. In their comprehensive review on EPI, Simeonova and Van der Valk (2009) synthesized and compared five prominent approaches for achieving EPI (strategic, coordinative, structural, procedural and communicative) and highlight the key characteristics of these approaches. Following the communicative planning paradigm and the EPI literature, they emphasized the potential benefits of the communicative approach for EPI. The communicative approach entails routine communication process that would facilitate interaction among multiple actors across fragmented organizational structures in which a planning process is embedded (Hertin & Berkhout, 2001; Jordan & Shout, 2007). As explained by planning scholars, it is based on rational arguments, knowledge exchange and broad stakeholder involvement (Innes, 1996; Healey, 1997; Booher & Innes, 2002). For the purpose of this research we use this rationale and characteristics of the communicative approach to EPI.

5.2.2. Approach to assess EPI

To assess the degree of policy integration in a selected context, specific EPI criteria must be considered. While a single systematic approach to assessing EPI is lacking, a number of studies have referred to normative, organizational and procedural criteria for judging its success (OECD, 2001; EEAa, 2005; Mickwitz & Kiwimaa 2007; Nilsson & Eckerberg, 2007). These criteria have been used to assess the role of political, organizational, economic, management and behavioural factors which determine the achievement EPI (Jacob et al., 2008; Stead & Maijers, 2009). In line with these studies, Simeonova and Van der Valk (2009) selected four generic EPI criteria. These include: 1) presence of strategies and plans that support and guide EPI; 2) manifestation of shared responsibilities for EPI at an inter-organizational level (coordinating bodies, policy commitments, etc.); 3) presence of regulatory procedures requiring EPI (environmental impact assessments, legal incentives, etc.); 4) presence of a communicative process towards EPI (collaborative practice, inter-organizational networks and expert teams, etc.). We have used these criteria to assess the degree to which EPI has been addressed within the *Corner Land* project and to determine whether a communicative approach has been applied. We qualitatively evaluated the extent to which the four criteria were met within three planning phases: initiation, design and implementation. Within these planning phases we assessed in total nine specific actions (Table 5.1.). The degree to which the criteria were applied was rated as fully, partly, weakly, or not applied. In other words, the degree of EPI achievement was a dependent variable and the four EPI criteria were independent variables. The EPI assessment in the implementation phase was based on general observations and on the outcomes of the initiation and design phases, because the implementation phase had not been completed at the time of the research (Tables 5.1, 5.2.). For this reason the formal decision-making aspects on the implementation of the plan were left out of the analysis.

Table 5.1. *Planning phases and actions of the Corner Land project*

Planning phase	**Actions**
Phase 1: Initiation	Action 1: Definition of the plan and motivation of its necessity Action 2: Analysis of the socio-economic and environmental impacts Action 3: Exploration of alternatives
Phase 2: Design	Action 4: Elaboration of the spatial design Action 5: Environmental Assessment Action 6: Consultation with stakeholders Action 7: Final revision of the plan
Phase 3: Implementation	Action 8: Planning the implementation phase Action 9: Executing the implementation

Table 5.2. *EPI assessment in the planning process of the Corner Land case study (adapted after Simeonova & van der Valk (2009)*

Planning phases	**EPI assessment criteria**			
	Strategies and plans that support and guide EPI	*Shared responsibilities for EPI at inter-organizational level*	*Regulatory procedures embedding EPI*	*Communicative approach to EPI*
Initiation phase				
Action 1: Definition of the plan and motivation of its necessity	✓	✓	-	-
Action 2: Analysis of the socio-economic and environmental impacts	✓	✓	-	-
Action 3: Exploration of alternatives	-	-	-	-
Design phase				
Action 4: Elaboration of the spatial design	-	✓	✓	✓
Action 5: Environmental Assessment	✓	✓✓	✓✓	✓
Action 6: Stakeholders consultation	-	✓	✓✓	✓
Action 7: Final revision of the plan	-	✓	✓	-

Legend: ✓✓✓ fully applied; ✓✓ partly applied; ✓ weakly applied; - not applied.

5.3. Data collection

Three methods were used to gather information needed to evaluate the planning process of the *Corner Land* project. First, we analysed all relevant project documents, which included the spatial plans of Burgas (general and master plans), the detailed land-use plan of the *Corner Land*, the management plan and documentation regarding the Atanasovsko Lake protected area. Furthermore, national and local policy documents and legislation were reviewed, including environmental reports and scientific literature. Second, we conducted open, semi-structured interviews with 27 respondents. Following Creswell's method of qualitative research (2007) we assessed in advance who might be appropriate candidates for the interviews (Creswell, 2007). The criterion for selecting the respondents was that they were directly or indirectly involved in the *Corner Land* project.

Furthermore, we selected respondents whose interests were more or less affected by the developments of the *Corner Land* and who were willing to openly share information or opinions. The selection consisted of eight key groups of respondents: (1) five people from the municipal Department of Spatial Planning; (2) five from the municipal Department for EU Integration, Sustainable Development, and Environment, (3) three from the Regional Inspectorate for Environment and Water, (4) two from the Department of Urban Planning of the University of Architecture and Civil Engineering in Sofia, (5) two from the Bulgarian Academy of Sciences, Laboratory of Ecology (6) one from the salt industry, (7) seven from the private landowners association of Sarafovo, and (8) two from the Bulgarian Society for the Protection of Birds. The semi-structured interviews were based on the following questions: (1) Has your department/organization taken actions to include nature conservation concerns in the planning process, such as consultations with experts and stakeholders, assessment of ecological impacts of the plan, and supporting decision-making in favour of nature conservation issues? (2) If such actions have been taken, what do they encompass and at what stage in the planning process did they occur? (3) What factors, in your view, enable or inhibit the integration of nature conservation concerns into the land-use plan for the *Corner Land*? Third, action research was applied through participant observation, by virtue of the researcher being involved as an independent environmental expert in a European project on urban sustainability, where the Municipality of Burgas was a pilot city. This included observing meetings, attending forums and documenting evidence from local participants on the *Corner Land* project. At a participatory workshop we gathered and articulated opinions of stakeholders and professionals from elsewhere in Bulgaria. Through the discussions that took place, the workshop allowed us to better understand the dynamics of the local authorities' work and to collect a variety of reflections regarding the environmental considerations in the plan, the proposed planning approaches and issues concerning the stakeholder involvement process. The data collection, which included the interviews and the participant observation, was conducted in Bulgarian and English. The data was subjected to content analysis: first the data was described and categorized. Then we interpreted and highlighted the key messages, features and meanings.

5.4. The *Corner Land* case study

5.4.1. Urban planning agenda in post-socialist Bulgaria

Bulgaria's accession to the EU in 2007 represented the stable transition of the country to a functioning democracy. In this process, major reforms of the country's main sectoral policies and legislation were accomplished and implementation of these policies has since commenced. The course of urban planning in Bulgaria during the last decade has been influenced first and foremost by revised policies aimed at the transformation

from a socialist to a capitalist socio-economic system. The reform initiated after the collapse of the communist regime was anchored in three key imperatives that called for the privatization of state property, the deregulation of economic activities and the decentralization of political power (Stanilov & Sykora, 2014). All three of these key areas of social reform provided critical impetus for rapid post-socialist urban development. The first issue on the reform agenda was privatization of land. Of particular importance for post-socialist urban planning was the restitution of agricultural land on the periphery of cities (Kopeva, 2003). The values of such properties increased considerably over the course of several years, particularly in areas with good development potential in terms of the properties' accessibility and physical environment (Anderson, 2012; Stanilov & Sykora, 2014). This led in turn to a rush among investors and landowners to develop and purchase the agricultural properties in the vicinity of urban centres (Hirt & Stanilov, 2009). As a result, the property rights agenda and liberalization of land prices gained significance in planning (Kopeva, 2003, Stanilov, 2007).

The second critical element of post-socialist reform-deregulation aimed at the creation of a free market economy. In the urban arena the deregulation imperative was translated into a general relaxation of development controls, which extended to the conversion of agricultural land to urban uses. This has fuelled the proliferation of urban sprawl and added to the construction of housing in close proximity to or within nature protected areas (Hirt, 2011; Anderson, 2012; Stanilov & Sykora, 2014). The general pattern of post-socialist urban planning is that deregulation was aimed at advancing individual property rights (Hirt & Stanilov, 2009). This facilitated the emergence of a market-driven approach to urban planning and favoured investors' interests over those of the general public, often at the cost of the environment (Hirt & Stanilov, 2009; Stanilov & Sykora, 2014). As to the local governments, they embraced this entrepreneurial style of planning in order to capitalize on the devolution of power from central to local level (Hirt, 2007). In this regard, the third pillar of post-socialist reform – the decentralization of political power, which passed from state to local governments – has proven to be a critical factor in post-socialist urban planning. This process granted the lower levels of government more power to manage their local affairs, including the right to regulate land development (Nedovic-Budic, 2001; Stanilov & Sykora, 2014). The reduction of state subsidies and the greater fiscal autonomy encouraged municipalities to make the most of their resources, often taking on the role of a developer. Providing incentives for land development became the most common revenue-generating strategy of the local governments who started to act as legal entities with independent budgets and properties.

Current urban planning policy in Bulgaria has been shaped by the emergence of a market economy in which privatization, deregulation and decentralization have set the tone for the formulation of urban development strategies (Hirt & Stanilov, 2009; Stanilov & Sykora, 2014). However, debate on these reform imperatives is still taking

place. Key issues being considered are whether the assumptions embedded in the initial planning reforms, regarding the local governments' role and power in managing local development, are still credible and under which conditions. Until now, these reforms have illustrated the need for a coherent urban growth policy and a sustainable urban management strategy at national and local level. The current urban policy however is dominated by pro-growth policies of the local governments while local political elites have embraced free-market planning in favour of private property rights. This shift has raised concerns about the potential ethical devaluation of urban planning because issues such how to parcel, sell and develop have now been turned over to the private realm. In this process often nature protection has been overlooked which has led to a growing societal criticism of post-socialist planning. The urban-planning domain is challenged by these dilemmas of post-socialist urbanization and planners need to urgently consider alternatives for dealing with current inner-city decline, suburbanization, environmental degradation, and preservation of pristine nature areas.

5.4.2. Conservation aspects of urban planning

Bulgarian environmental legislation is now fully harmonized with the EU legal framework. Key EU directives on nature conservation have been endorsed, with commitments made by the government to comply with sustainability principles. Implementation of the EU Habitats and Birds Directives in Bulgaria commenced in 2002 (Biserkov et al., 2015). The main obligation under this directive is to designate protected status to key nature areas (Natura 2000 areas) in order to develop a coherent ecological network (EEA, 2006). In 2008 the list of Natura 2000 areas was accepted by the European Commission (Biserkov et al., 2015). The implementation process, however, has proved an immense challenge to local governments, as they were not prepared to deal with the conflicts of interests of multiple actors that have arisen in the urban development sector regarding land uses, property rights and conservation. The Natura 2000 endeavour has been characterized as an issue of complex and hegemonic interplays between local governments, investors, landowners, NGOs and local communities. While urban sustainability has now become part of the agenda of the local governments, the implementation of the ecological principles that this new policy requires still awaits the provision of effective planning instruments (MOEW, 2007; Hirt, 2011; Anderson, 2012). While Bulgaria's accession to the EU has had a positive effect on the formulation of urban sustainability policies, it has also created new challenges. Most of the national strategies, including the Strategy for Regional Development 2005-2015, convey the commitment of the government to applying the EPI principle, while highlighting the problems of disproportional territorial development and environmental deterioration (MRDPW, 2005). However, while these strategies are evidence of good will, they do not yet provide local authorities with implementation mechanisms. There are very few

examples in which environmental principles have served as the basis in the development of new urban plans (Hart & Stanislav, 2009; Stanilov & Sykora, 2014). In the absence of specific implementation instruments, the ideas embedded in national policies have been left open for interpretation by local authorities (Carmin & Vandeveer, 2007; Anderson et al., 2012). The lack of planning approaches that incorporate ecological issues in the planning process merely serves to strengthen the economic development agenda.

Meanwhile, during the last few years, the negative consequences of uncontrolled urban growth in tourism sector that have generated threats to nature areas in coastal regions have begun to emerge as an area of increasing public concern (Anderson et al., 2012). Tourism is seen as a vital income source for municipalities, investors and landowners as it not only increases potential revenue, but also leads to overall local improvements in the provision of jobs, local infrastructure and public services. In this process, local authorities may fear that discouraging new urban developments in favour of nature conservation goals will be detrimental for their region's prosperity. Meanwhile, investors and landowners seek to preserve the channels they have created at the municipal level in areas with development potential (Anderson et al., 2012). The emergent nature conservation policy and Natura 2000 objectives have required that planners, developers and local community in Bulgaria formulate new ways of planning in order to address arising developmental dilemmas.

5.4.3. The Corner Land urban development

The *Corner Land* project is located within the administrative borders of Burgas, the fourth largest city in Bulgaria. The country's largest seaport, Burgas is an important economic and tourist centre. As a consequence of the post-socialist reforms, the city has undergone rapid development in, among other things, the housing, infrastructure, and tourism sectors (Zlatanova, 1999; Municipality of Burgas, 2010). The urban development that has taken place in the last decade in Burgas has resulted in a highly fragmented spatial pattern due to the lack of an actual master plan (Zlatanova, 1999; Hirt, (2007,) Municipality of Burgas, 2010). Until recently, spatial plans were developed for specific urban areas individually. The first comprehensive Master Plan of Burgas was officially approved by the city council in 2011. While addressing key sustainable development principles, the focus of the plan is on enhancing the urban competitiveness of the city in several key development sectors. The prevailing tendency embedded in the plan is urban growth (Municipality of Burgas, 2010). The key planning strategies addressed in the plan to achieve this goal are promoting demographic decentralization to the urban periphery, suburbanization, improvement of major urban infrastructure, investments to revive industry and business, increasing industrial production, and further development of tourism. Within this focus on growth, the local government explored new opportunities for urbanization near the coastal area. With its strategic location along the coast to north of the city, the *Corner Land* area constitutes such

an opportunity, presenting a solution to the limitations on urbanization towards the harbour and the industrial zones in the west and south of the city. The *Corner Land* area borders the suburban residential neighbourhood of Sarafovo on the north and the Atanasovsko Lake Natura 2000 protected site on the west (Figure 5.1.). The municipal spatial planning department initiated the transformation of the *Corner Land* area (260 ha), adopting a scenario for merging Sarafovo residential neighbourhood with the main city by creating a new urban area for recreation and tourism (Municipality of Burgas, 2010, 2011). The *Corner Land* was an area of public farmland inherited from the socialist era. Following the recent land privatization, 98 percent of the area is now private property. So far landowners have been benefitting from their land by leasing plots to an agricultural holding. The general urbanization trend of the coastal areas around Burgas and projections for high land-development profits have opened up new opportunities for economic gains for the municipality and landowners. These have also been the motivations behind the initiation of the *Corner Land* project (Municipality of Burgas, 2007; 2010).

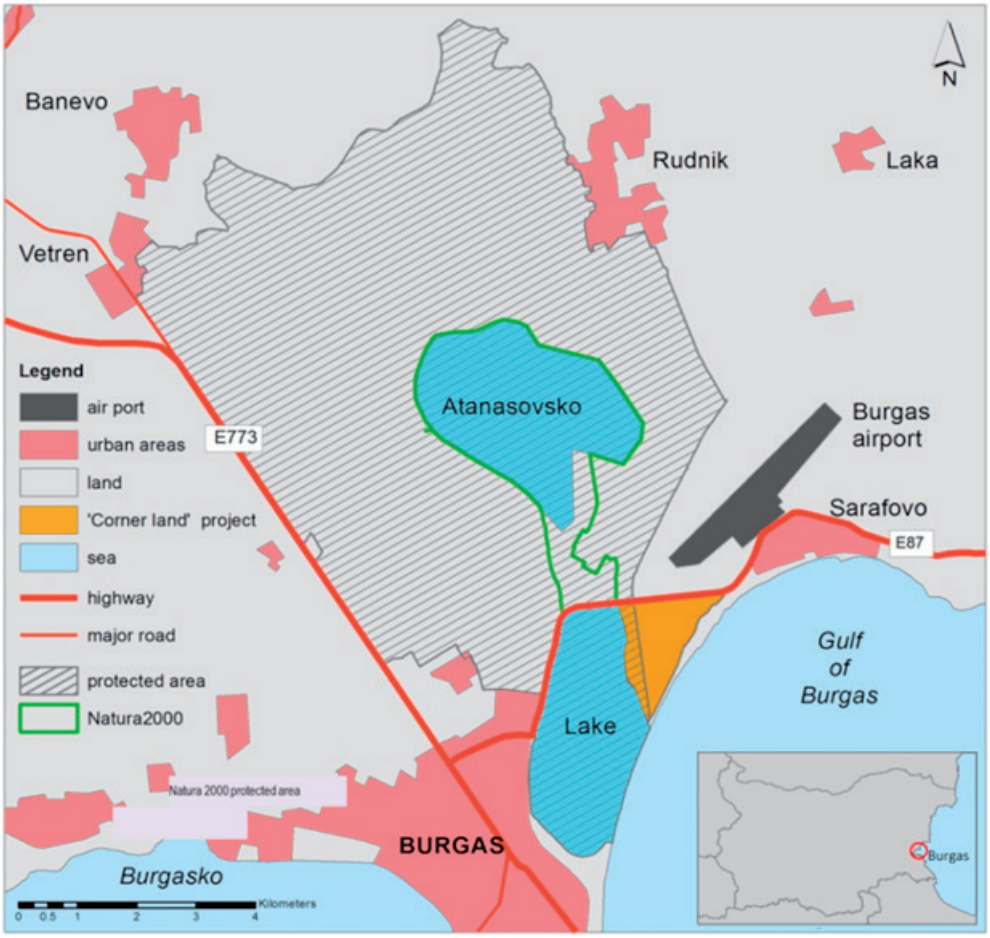

Figure 5.1. *Map of the Corner Land project area*

5.4.4. The Atanasovsko lake protected area

The Atanasovsko Lake protected area (7209 ha) is part of the Burgas lakes complex - one of the three most significant wetlands for waterfowl along the Black Sea coast. The area is part of Europe's second largest migration route, the Via Pontica (Kostadinova & Gramatikov, 2007). Near the lake are large privately owned arable plots, and the southern portion of the area borders residential neighbourhoods in Burgas (Figure 5.1.). The state owns the protected area, which is managed by the Regional Environmental Agency (REA). The Ministry of Environment controls the implementation of the area's management plan, developed in 2008. Since 1984, the area has been designated as a wetland of international importance under the Ramsar Convention, and since 2007 it has had the status of a Natura 2000 area (CEC, 2009; MOEW, 2016). The high protection status is based on the uniqueness of its coastal lagoons and the considerable diversity of habitats for birds, mammals, reptiles, amphibians and plants (Bondev, 1991; Michev, 2003; Michev et al., 2004). The area supports about 316 nesting, wintering and migrating bird species, 84 of which are listed in the Red Data Book for Bulgaria (1985). Among these species, 127 are of European conservation concern (BirdLife International, 2004), 108 are threatened in Europe, and 19 are globally threatened (Michev, 2003; Georgiev, 2004). The lake has experienced continuous anthropogenic pressure that has threatened conservation of its habitats (Michev, 2003; Dimitrov et al., 2005). The main disturbance is caused by the area's close proximity to densely populated urban zone and an international airport (Kostadinova & Gramatikov, 2007).

5.5. Assessment of the Corner Land planning process

5.5.1. Initiation phase

In 2006, the Municipality of Burgas initiated the *Corner Land* project with the publication of an investment proposal to amend the General Urban Land-Use Plan of Burgas (GULUP) (Municipality of Burgas, 2007, 2011). The initial plan proposal aimed to exploit the economic potential of the *Corner Land* area by re-zoning and re-designating the agricultural land to urban functions (Municipality of Burgas, 2007; RIOSW, 2007; News of Burgas-24, 2012). Following the legal planning procedures, the initiation phase included: 1) plan formulation, 2) assessment of socioeconomic and environmental impacts, and 3) exploration of alternatives (Table 5.1.) (Municipality of Burgas, 2010).

Plan formulation

The *Corner Land* development is defined as a strategic project for Burgas, as it provides new economic stimuli for the local authorities and the community (Municipality of

Burgas, 2007, 2010; News of Burgas-24, 2012). The area was targeted because of its location on the coast while being close to the city centre, and because it can be easily linked with the existing green public infrastructure. The new zoning developed by the municipal planning department and an external consultancy firm included new urbanized areas for housing and services, and tourism facilities such as hotels, a yacht marina, sport and entertainment facilities, and housing (Municipality of Burgas, 2010). The zoning plan aims to generate new economic investments in housing and tourist activities by offering multiple services for recreation, tourism and housing. The project was consequently envisaged as the luxury Riviera of Burgas (Mediapol, 2011). This led to a rise in land prices and in the economic anticipations of the municipality, landowners and developers. The project was sustained by two political elites: the former pro-socialist mayor's administration, followed currently by the centre-right local government. Both administrations supported the pro-growth strategy of the plan.

Socio-economic and environmental impacts

The mandatory feasibility analysis of the socioeconomic and environmental aspects of the plan concluded that the plan would be highly strategic for urban growth and would serve as an economic impulse, while satisfying multiple private and public interests (Municipality of Burgas, 2007, 2011). Meanwhile the environmental risks were considered insignificant. One of the key planners stated that: *" The new urban development will have a sustainable character and would not harm the Atanasovsko Lake protected area. Instead it will enhance the quality of life of the area and bring attractiveness to the main city."*

However, in drawing these preliminary conclusions, the municipal planning team did not make reference to any evidence-based arguments and knowledge, and potential impact of the proposed plan on the protected area was disregarded at this stage. Local and national nature conservation organizations and individual ecologists expressed their opposition to the plan and asked local authorities to initiate an early detailed environmental analysis. But neither the city's planning department nor the environmental department considered such an in-depth analysis necessary at this planning stage. As a result, no trustworthy predictions were made concerning the expected environmental impact, and consequently no clear criteria for assessing these impacts were provided for the preparation of the detailed urban land-use plan.

Exploring alternatives

Despite the fact that the current planning procedures request planners to explore all alternative scenarios for urban development, including alternative locations and solutions, no alternatives to the *Corner Land* project were considered. Because the planning process focused on the future economic opportunities, nature policy objectives were not adequately researched and the planning team saw no need to explore any alternatives.

EPI in the initiation phase

Analysis of the EPI criteria (Table 5.2.) revealed that ecological issues were insufficiently addressed in the initiation phase of the plan. The assessment of Action 1 showed that strong arguments in favour of the essential need for the proposed developments were absent. The municipality lacked the motivation and capacity to provide critical reflection on the plan's objectives and did not communicate the emerging environmental concerns efficiently with all affected actors. Despite concerns expressed by local nature conservation groups and their experts, the local environmental actors remained detached from the planning process.

The municipal authorities' goal, according to the new Master Plan, is to exploit the *Corner Land* area and its high urbanization potential. Focusing primarily on an entrepreneurial planning strategy, ecological issues related to the direct proximity of the area to the Atanasovsko Lake area were bypassed. There was no specific EPI-related approach defined during the first two actions of the plan initiation. Although planners referred to the sustainability goal of the new plan this goal was not further elaborated in the plan in the form of specific actions. A general EPI strategy was lacking at this stage and the plan was not regarded as a joint responsibility and was solely in the hands of the municipal department for spatial planning. Other stakeholders, such as landowners, local community members, and conservationists, were not systematically involved, and structured communication strategy to ensure contribution from all relevant experts and stakeholders was lacking. In Actions 1 and 2 regulatory procedures to support EPI were not required, which seemed to favour the progress of the plan in this planning phase. In sum the local authorities simply assumed the plan was a positive development for acquiring the protected status of the Atanasovsko Lake under the Natura 2000 policy, although no solid knowledge-based evidence for such a view was presented. In the quick-scan, resulting from Action 2 (Table 5.2.), the socioeconomic impacts were rated as high and the environmental impacts as low. However, no in-depth analysis for either aspect was carried out, and consequently no clear criteria were formulated to guide the next steps of the plan regarding these aspects The quick-scan results were publicly announced, but the full involvement of all affected stakeholders did not occur because of local authorities' limited engagement with them. Consequently, the initial phase of the plan was dominated by the municipal team alone. In Action 3 – exploration of alternatives – none of the EPI criteria were met simply because no alternatives were explored. Therefore, in this planning phase the four EPI criteria were only weakly applied or not at all (Table 5.2.).

5.5.2. Design phase

The plan design included four actions (Table 5.1.). The first action was the elaboration of the zoning plan, i.e. the Detailed Urban Land-Use Plan (DULUP). The second action included

implementing an environmental assessment of the plan. The third action was stakeholder consultation, regarding both the DULUP and the strategic environmental assessment. The fourth and last action in this phase was a final amendment of the plan and a final design.

Elaboration of the spatial design

An external planning consultancy team appointed by the municipality of Burgas assisted with the spatial design of the *Corner Land*. The proposed zoning plan included pre-designating the agricultural land for new urban functions. About 75 percent of the land was designated for housing and tourism, including public services and recreation facilities (Municipality of Burgas, 2007). The remaining area would be designated as public green spaces, including two small-scale city parks. The zoning scheme was mainly based on the idea of developing an attractive summer vacation village, and initially no functions were designated solely for nature conservation activities. Within the public park zone, bordering Atanasovsko Lake, a linear patch of 12.5 hectares was labelled as the Bird Park. Designated primarily for recreation, the Bird Park was to be a construction-free area that would serve as a buffer zone between Atanasovsko Lake and the new district.

Environmental assessment of the plan

Bulgaria's current environmental legislation states that urban land-use plans must address ecological principles and protect the viability and spatial connectivity of natural habitats. This foresees furnishing measures to prevent deterioration and disturbance of natural habitats within and around protected areas (MOEW, 2007). Adhering to these legal provisions, the Municipality of Burgas submitted a mandatory request to the authorized Regional Environmental Agency (REA) to evaluate the need for an Environmental Impact Assessment (EIA) of the *Corner Land* plan. In conformance with the EIA law, the REA requested an EIA of the plan. To comply with this request, the municipality assigned an EIA consultancy to develop an EIA report. The EIA report was submitted to an expert team of REA which was responsible for determining whether the EIA complied with the national and European nature legislation, and whether it proposed adequate measures and a mitigation strategy to prevent any negative effects on the protected nature area. Based upon the conclusions of the EIA report, REA decided that the *Corner Land* plan would not have significant negative impacts on the integrity and the function of the Atanasovsko Lake area (RIOSW, 2007). A few minor negative impacts were specified in the EIA report, which would be of a temporary nature, such as disturbance of bird habitats during the construction, the loss of foraging areas for some bird species, and loss of habitat for small mammal and amphibian species. These impacts are described by the report as having minor consequences for the overall biodiversity of the lake, due to the fact that species are mobile and have already adapted to an urbanized landscape (RIOSW, 2007). Furthermore, the report concluded that the natural habitats would be fully restored – and even be improved after the plan was

realized (RIOSW, 2007). Compared to the zero-alternative (i.e. that the plan would not be realized), the report states that the situation regarding the state of biodiversity would not change or even improve (RIOSW, 2007). Quite few of the respondents disagreed with these conclusions, among these being ecologists and landscape architects from local and national professional organizations and those directly involved in the management of the Atanasovkso Lake protected area. Some of them stated that: "*The conclusions of the EIA report does not specify the vulnerability of the habitats to the proposed developments and does not refer to relevant ecological studies...*" and that: *"The EIA does not offer alternative scenarios to the plan and does not explain why in contrary to the zero option; the plan will rather tend to have a positive than a negative impact on the protected area..."*

As ecological research has shown, urbanization of coastal territories in close proximity to bird habitats and wetlands has a profound impact on biodiversity and natural habitats (Beissinger & Osborn, 1982; Rottenborn, 1999; Lotze et al., 2006; DeLuca et al., 2008). The EIA, however, was not based on clear guidelines regarding the specific ecological aspects to be included in the assessment and how to identify and quantify the potential impacts of specific urban activities on the Atanasovsko Lake. As a result, some potentially important issues were not addressed, or were only mentioned descriptively without actual assessment of the plan's specific impacts on the lake's ecosystem. For example key ecological principles were neglected such as: dose-effect relation assessment of all impacts; expected shifts in species' distribution in relation to spatial development, empirical studies to quantify the disturbance and spatial fragmentation effects of the plan; and the effects of recreational activities in and around the adjacent Natura 2000 site (Rottenborn, 1999; Opdam et al., 2002; Palomino & Carrascal, 2006). The EIA considered only short-term limited impacts and not the long-term cumulative impacts and turned out to be descriptive rather than analytical and predictive. No details on field or analytical methods used were presented, which makes it impossible to judge whether all potential impacts were included in the assessment or the extent to which the data actually supported the conclusions. Also missing were proposals for long-term prevention and mitigation measures of identified or expected loss of biodiversity.

The EIA process did raise a number of ecological concerns and managed to draw attention to the ecological aspects of the *Corner Land* development by mentioning opportunities for eco-tourism, sustainable use of salt resources and recreation. However, it did not substantially contribute to the integration of the ecological concerns into the land-use plan. In fact, no significant change was made to the land-use plan after the EIA report had been finalized. Planners professed partial ignorance of the ecological aspects of the plan, while environmental experts ended up adopting a similar stance by expressing their confidence that all negative impacts of the developments could be avoided by following the current EIA conclusions. This behaviour was characterized by some respondents as the "path of least resistance". After all, the limited conservation measures provided by the final EIA decision included: 1) protection of the Atanasovsko Lake from

urbanization, 2) limiting access of the general public to the lake, and 3) removing an existing secondary road from the buffer zone (RIOSW, 2007). Besides the lack of general ecological guidelines, the EIA's role in the planning process was also limited because the EIA consultants lacked site-specific ecological knowledge. Interviewees explained that this knowledge gap was caused by the manner in which the EIA consultancy was selected. The municipality did not stipulate which ecological questions needed to be considered and the EIA consultancy was not selected on the basis of requirements such as having in-depth knowledge and understanding of the ecology of the Atanasovsko Lake area. This was supported by the fact that the EIA report was not explicit about the methodological basis and approach upon which the assessment was made and the conclusions were drawn. The conclusions presented were clearly contradictory to statements within a number of ecological studies conducted earlier in the area (Michev, 2003; RIOSW, 2007). These studies indicated that significant ecological impacts had already been incurred from human activities, such as pollution from road run-off, the airport, the nearby salt production industry, and habitat degradation and disturbance, resulting from recreational and agricultural activities (Michev, 2003; Michev et al., 2004; Kostadinova & Gramatikov, 2007). Meanwhile, the Bulgarian Society for the Protection of Birds have warned that some of these activities are likely to increase if the *Corner Land* is developed as planned, and new impacts are expected from land uses not yet present in the area. Despite the obvious gaps in the assessment, the REA speedily approved the EIA report and did not request further improvements (RIOSW, 2007).

Stakeholder consultation

The national legal framework in Bulgaria requires that stakeholders be consulted regarding new urban developments. Stakeholder consultation is expected for both the process of land-use design and the environmental impact assessment. Local authorities have the autonomy to freely initiate stakeholder consultations and, if needed, to form public-private partnerships to ensure sufficient engagement of local actors. The most common method of engaging stakeholders is a public hearing (Almer & Koontz, 2004; Hirt, 2011), which has the advantages of being open to everyone and provides an opportunity to hear opinions from those not actively involved in the plan design. A disadvantage is that organizers and participants often view a public hearing as a pure formality, which seemed to be the case for the *Corner Land* project's two public hearings.

The public hearings were the only occasions where all groups of stakeholders, which included public, private and civil society representatives (see Figure 5.2.), were inquired to participate. Some stakeholders, however, among which NGOs, general public and landowners, stated that the public hearings did not facilitate a transparent debate. This was because the municipality dominated the discussion and little effort was made to elicit participants' opinions. The first public hearing, during the initiation phase of the plan, focused primarily on the municipal planners' promotion of the need for the

plan, with little attention to multiple stakeholders' interests. In addition, the hearing paid no attention to possible alternatives to the proposed plan, despite the fact that sustainability issues were repeatedly raised, and that representatives from the general public, local NGOs, and environmental experts expressed concerns regarding a lack of consensus among municipal professionals on the vision for the plan. The lack of a structured and sustained communication process among municipal professionals and between the municipality and stakeholders disregarded a wider range of interests in the planning process. Some stakeholders expressed similar views after the second public hearing, organized by the municipality and the REA, in which the EIA report was discussed. Stakeholders had limited involvement in this rather formal hearing; as a result, the hearing did not produce any constructive change of direction regarding the nature conservation aspects of the plan. A participant reflection on the hearings stated that: "*The hearings were not a discussion but rather a report on behalf of the plan's authors. The provided information about the plan was not adequate as to reach a broad audience, nor did it use a language that people understand.*"

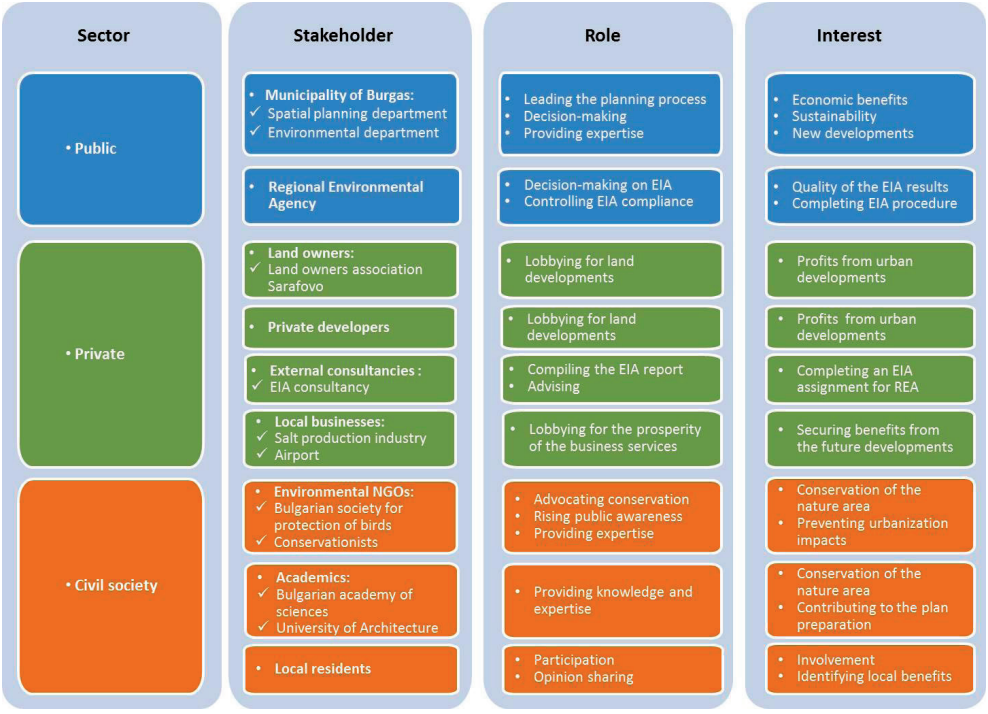

Figure 5.2. *Roles and interests of stakeholders in the Corner Land project*

While the municipality has the potential to enlist public input, it preferred to engage in pseudo-public hearings instead of in actual stakeholder involvement. It did not achieve a tangible engagement with the different stakeholder groups through which

they could have solicited their specific interests and sought consensus and commitment to address any apparent disagreements. While the municipality disregarded concerns of conservationists regarding the threatening proximity of the proposed development to the Atanasovsko Lake area, it did seem to support landowners' interests (Figure 5.2.). The fact that only formal public hearings were held, and the way these were organized, limited opportunities for considering the positions, ideas and interests of all relevant actors. Authorities may still have believed that stakeholder involvement was unnecessary or even a nuisance as it might exacerbate conflicts or impair local economic benefits, and stakeholders may still have thought their interests indeed would not be considered. The expected increase of land value in the *Corner Land* area has empowered the role of landowners (Mediapol, 2011). Interviews with a few landowners revealed that they played an important lobbying role in favour of the *Corner Land* project. Only a few landowners showed concern regarding the plan: those whose property will be acquired for public uses. While the municipality took on the role of a developer, private investors from the housing and tourist sector also expressed considerable interest. The role of the investors is seen in purchasing land plots from the landowners in order to maximize their profits from larger scale developments. Yet at this phase of the plan, there were no indications regarding potential "gentlemen's agreements" between the municipality and private investors, though this is often a common practice during the plan's implementation phase. Nor, however, did the municipality develop clear criteria regarding possible mechanisms for the realization of the developments and the expected conditions for public or private interventions. The stakeholder involvement process can be characterized as mostly formal and conventional, with a lack of leadership and motivation shown by the municipality for open collaboration.

Final revision of the plan

After the preceding two phases of the plan no significant changes regarding conservation aspects of the Atanasovsko Lake were made. The final design of the plan was not accompanied by any form of stakeholder agreement, nor did it make clear what the roles of different actors would be in the plan implementation. The lack of such agreements introduces risks of potential conflicts between public and private actors and creates uncertainties regarding the course of the plan implementation. For example, no process was outlined on the legal and financial incentives for the affected stakeholders, or about the expected land acquisition, purchase and compensation. Nor were further insights provided on the long-term management of the adjacent protected area. The plan was finally approved in June 2012 by the city council of Burgas after which its implementation could officially commence.

EPI in the design phase

The assessment of the four key actions of the design phase revealed that EPI was rather weakly addressed (Table 5.2.). First, there was no clear strategy for EPI, nor was there a straightforward initiative by the municipality to support EPI in all four actions. Second, the responsibilities for EPI were shared only to a limited degree, and particularly weakly between the municipal planning and environmental departments. No clear agreement was reached on how and to what degree nature conservation concerns would be addressed. With this regard interviewed professionals stated that: *"The local authorities' practice of following rigid administrative procedures offers limited efforts to address conservation issues."* Meanwhile, the emergent need for more proactive involvement of professionals with ecological competencies and for a structured communication process was largely overlooked. Environmental experts were not involved in the plan preparation until the start of the EIA process, and, from the planners' viewpoint, the environmentalists' role would end once the EIA was completed. The EIA process was the only action that addressed all EPI criteria, but to differing extents (Table 5.2.). The EIA report itself obliged all actors to a greater or lesser degree to consider plan's potential impact on the Atanasovsko Lake area. The EIA was the only instrument in the planning process that required specific ecological expertise, and this was based on legal incentives. The municipality, the REA and the EIA consultancy team shared responsibility for the EIA. Although this seems to be a transparent and logical division of tasks, the EIA process only partially achieved EPI because of the lack of clear guidelines and consensus among the professionals involved on what to include and how to quantify and act upon potential ecological impacts. Also, the EIA consultancy team's lack of site-specific ecological knowledge was a weakness in the process. Apart from the obligatory EIA, no other ecological assessments were initiated to maximize the outcomes of EPI, such as developing and applying scientifically based ecological approaches for biodiversity assessment. Meanwhile, respondents stated that communication among planners and the EIA and REA professionals was poor during the EIA process, which may have compromised the EIA's quality and kept its recommendations too general (Table 5.2.).

Regarding stakeholders' consultation (Action 6), the EPI criteria were met only weakly or not at all (Table 5.2.). First, no deliberate actions were taken to involve all concerned stakeholders before, during or after the legally required public hearings. Most actors perceived the hearings as a formal step with little potential for actual debate or shared benefits and responsibility. The statutory organization of the public hearings and the inefficient communication with the stakeholders indicated that the communicative approach to EPI was weakly applied (Table 5.2.). The growing activism among a number of nature conservation groups and professionals has been a first step toward the recognition of the need for EPI. However, no changes in either the land-use plan or its EIA report were identified at the public hearings.

During the final amendment of the plan, EPI was insufficiently addressed (Action 7). The strategic incentive was not applied, as no specific conservation strategy was developed for the plan implementation (Table 5.2.). After the EIA decision was formalized, the municipal planning team adopted it without additional considerations. At this stage communication was merely taking place as the plan design was considered accomplished.

5.6. Discussion

The *Corner Land* project is an example of planning at the local level that is characterized as a fragmented process based on an investment-led approach and a lack of long-term vision. This obviously creates a number of problems for nature conservation. The rapid utilization of new suburban territory encourages a fragmented spatial pattern of development and contributes to increasing problems for the implementation of the Natura 2000 policy objectives. The clientelism-oriented practice of the municipality to satisfy its own economic needs and those of landowners particularly undermined nature policy priorities. The forces of urbanization of the post-socialist era seem to supersede the local authorities' environmental jurisdiction. Evidently, the strong desire for fast economic growth may, intentionally or unintentionally, quickly result in reduced attention to nature conservation. In this process local governments may appear to act as the accomplices of private interests rather than as defenders of a public good. This is exacerbated by the lack of collaboration and communication between local government departments of planning and environment and local stakeholders. Below we summarize the key research findings, categorized in three perspectives: 1) the general responsiveness of the planning process to EPI, 2) the effect of the organizational structures on the achievement of EPI, and 3) the role of the communicative process towards EPI.

5.6.1. The general responsiveness of the planning process to EPI

This study revealed that local institutional settings determine to a high degree the extent to which local governments can resist urbanization forces and pressures on the environment. A thorough understanding of the institutional background of planning and of key actors and their interaction is essential in order to select an approach to a successful EPI process. The case study illustrated that specific efforts are needed to adapt local government's capacity to perceive EPI as indispensable to urban planning and as a collective goal. Such efforts will be effective if they are embedded in the entire planning process across departments. As Lafferty and Hovden (2003) indicate, the general EPI responsiveness in the planning process can be viewed as policy integration at two levels of governance: vertical (within the policy sector hierarchy) and horizontal

(across sectors). In the *Corner Land* project we found that EPI responsiveness at vertical level was limited to formal procedural interactions between hierarchical tiers of the local authorities where the Municipality of Burgas had a dominant role. This strongly statutory process was based on formal compliance with national legislation regarding planning and environmental impact assessment procedures. At the horizontal level, EPI was also poorly addressed because of constrained interactions among professionals, landowners and community stakeholders. To achieve EPI at the horizontal level, Lafferty and Hovden (2003) refer firstly to a need for a clear vision and strategy on EPI and for institutions that are designed to implement this vision through integration of policy objectives across organizational structures. The lack of such a clear vision resulted in insufficient guidance regarding EPI throughout the planning process. The interaction between different actors remained confined to the legal procedures alone. Hence, we substantiate the view that a vision and a specific strategy are needed in the initiation phase of the plan in order to increase responsiveness to EPI in subsequent planning phases.

While a certain degree of responsiveness to EPI was present at the very beginning of the plan formulation as evidenced by the reference to the urban sustainability goal, during the subsequent planning phases the goal became diluted and therefore difficult to keep intact. The inconsistent participation of different actors was one of the reasons for this. For example, municipal environmental experts and local ecologists had difficulty becoming actively involved in the various planning phases. Moreover, the professionals in the planning department and the environmental department did not systematically collaborate, but instead worked independently. Environmental concerns were included in the planning only to a very limited degree, and were relegated to the EIA decision at the later stage of the plan design.

5.6.2. The effect of the local organizational structures on EPI

From an organizational perspective, the preparation of the *Corner Land* project can be characterized as highly fragmented. The authorities that prepared the plan were divided among specialized municipal departments, the regional environmental agency, external consultancies, etc. Throughout the entire planning process, the actors within these different organizational structures did not attach the same priority to the EPI principle. While diversity of interests is a common phenomenon in planning, the predominance of certain interests over others is dependent on the relations between and within the organizational structures involved. The strong divisional culture within the local organizations inhibited the EPI process by impeding consistent communication among the involved professionals and stakeholders within these structures. As a result, the exchange of information was inefficient, expert opinions were not well considered, and conflicting interests were unresolved. Scientific studies of EPI issues in urban planning have produced similar observations regarding the effects of fragmented

organizational structures on the EPI outcomes (Roseland, 2000; Hertin & Berkhout, 2003; Briassoulis, 2004; Jordan & Leschow, 2008; Simeonova & Van der Valk, 2009).

This study revealed that goals and priorities may differ significantly between different parts of local authorities' organizational structures and can cause differences in viewpoints on the problems that may accompany land-use changes required by EPI and potential alternatives to these problems. This finding suggests that there is little chance of success for EPI in urban planning if local government organizations are fragmented and follow a dominantly procedural and rigid hierarchical process. Due to the lack of transparent communication that would support open deliberations on differences in the objectives and expected realization of the plan, an imbalance occurred in the weight given to economic versus conservation interests. The planners made many of the choices about the needed developments in the *Corner Land* and played a central role in the degree to which nature conservation objectives would be met in the plan. Moreover, we observed that the inefficient inter-organizational collaboration could not be compensated, even where the procedural criteria for EPI were met, such as in the EIA. Instead, the EIA process revealed similar problems related to the lack of evidence-based knowledge and shared experts' opinions. This compromised the quality of the EIA. Similar issues with EIA have been highlighted in the scientific literature (Thompson et al., 1997; Atkinson et al., 2000; Border, 2005). Therefore, organizational factors, such as sectoral compartmentalization within local governments, are a major impediment to addressing EPI in planning. This organizational culture clearly illustrated the constraints of the conventional departmental pluralism regarding EPI and the competitive mentality of the professionals in realizing their interests. As a result, the environmental portfolio was awarded a rather low status.

As this study showed, local governments may be ineffective in promoting collaboration among their organizational structures, and professionals may be either not well equipped for collaboration or lack motivation to communicate with other actors across organizational structures. Some of the interviewees shared the opinion that: *"…there is to a large extent a capacity problem with the planners in Bulgaria, being able to understand, discuss and work out environmental concerns in a land-use plan..."* Others mentioned that there is an urgent need to increase the capacity of both planners and environmental experts in improving their communication skills across professional disciplines and different jurisdictions so that they are able to articulate their expert opinions more openly. As pointed out by planning and organizational theory scholars, the evolution of shared views as a result of combining expertise would increase the probability of ecological principles being incorporated in land-use planning processes. Establishment of an inter-organizational communication culture can potentially reduce personal resistance to the opinions and interests of other sectors and disciplines, and can help to build more trust among professionals (Jablin & Putnam, 2001; Weick & Ashford, 2000; Margeru, 2002; Mintzberg et al., 2003). Interaction among planners,

nature conservation professionals, and other stakeholders during the planning process may foster choices and decisions based on relevant knowledge and transparent deliberations, rather than on the division of labour and dominating interests (Jablin, & Putnam, 2001; Mintzberg, 1983; Alexander, 1995; Mintzberg et al., 2003). With this in mind, in attempts to resolve these organization issues, the communicative approach to EPI becomes crucial. The role of the communicative approach to EPI is therefore in adjusting organizational cultures from strongly specialized to more multidisciplinary, integrated ones in order to involve and use the multiple competencies of local professionals. The purpose is not to restructure local organizations, but rather to support sectoral departments to internalize the EPI principle by creating a co-governing environment based on communication in multidisciplinary teams with shared responsibilities.

5.6.3. The role of the communicative process towards EPI

The *Corner Land* case study demonstrated how easy it is to lose sight of the need for structured communication among all stakeholders in planning. The communicative approach to EPI was either not applied or only weakly applied in the planning process of the *Corner Land* (Table 5.2.). If EPI is to be genuinely implemented, in addition to a general formal commitment to urban sustainability a communicative approach is needed to be able to recognize the interests of all actors, to explore the implications of the plan for each actor, and to develop collective capacity in the planning process (Healey, 1997; Forester, 2000; Hajer & Wagenaar, 2002; Campbell & Fainstein, 2003). We have observed how insufficient recognition of the mutual interdependency among professionals and stakeholders can inhibit the EPI process. Planning scholars have referred to mutual interdependency as a process that builds social capital and collective capacity (Healey, 1997; Booher & Innes, 2002).

When discrepancies between objectives arise and conflicts between stakeholders' interests occur, actors can rely on their shared sense of purpose to develop solutions together (Innes, 1996; Healey, 1997; Forester, 2000; Booher & Innes, 2002). The EPI literature shows significant support for this view, highlighting the indispensable role of the communicative approach to EPI (Laferty & Hovden, 2003; EEAb, 2005; Von Homeyer, 2006; Simeonova & Van der Valk, 2009). As illustrated, however, communicative practices in planning are context oriented and depend strongly on the capacity of all individuals involved. In the *Corner Land* project, planners and environmental experts have been not proactive and have even resisted deliberate interaction because they are not ready or lack the capacity to deal with potential conflicts of interests that may arise and that may affect specific category of actors or political aspirations. Such resistance may be based on the fear that the plan will be changed and that economic benefits will decrease if necessary nature conservation measures are implemented. Resistance may

also be the result of knowledge gaps regarding suitable planning instruments to embed environmental aspects in planning. Therefore, a communicative approach can be applied only when there is willingness among actors to interact, share opinions and competencies. To support this process, deliberations across departments should not be limited to a few formal moments in the planning process, but should involve continuous action throughout all planning phases (Healey, 1997; Booher & Innes, 2002; Campbell & Fainstein, 2003). Planners and environmental experts, however, need to apply problem-solving competencies and communicative skills within a wider disciplinary scope in order to facilitate this process (Rogers & Whetten, 1982; Mintzberg, 1983, Mintzberg et al., 2003). Unlike formal planning, a communicative approach is more likely to result in nature policy objectives being deployed in a more egalitarian manner. Decision makers may follow such a process if local stakeholders are able to openly express their interest in knowing what measures their local government is, could, or should be taking in urban planning.

5.7. Conclusions

Based on the research findings synthesized above, we identified key challenges to EPI and draw key conclusions about the potential benefits of the communicative approach to EPI in the context of post-socialist Bulgaria. The generally weak responsiveness of the planning process to EPI in the *Corner Land* example appears to be a consequence of hierarchical and fragmented organizational structures, limited professional capacity, and insufficient communication between actors. Hence, the key challenge identified to EPI concerns the organizational structure and sharing of responsibilities among competent authorities. If jurisdictions among professionals are not well coordinated, achieving EPI becomes a priority only for some rather than a collective responsibility.

The interactions between actors during the planning process cannot simply be based on a procedural approach, with communication limited to a few formal moments or legal requirements prescribed by legislation. Instead, these interactions must be contextualized within locally established inter-organizational structures in which a common vision and a mutual understanding can be developed. As the EIA process revealed, the EIA results can be guaranteed only if planners and environmental professionals have mobilized their collective capacity to allow an open exchange of knowledge. The EIA results must also be accessible to all stakeholders, beyond the formal sphere.

The lack of organizational communication was identified as being at the core of the overall constraints experienced in EPI in the *Corner Land* project. After all, environmental policy objectives in planning can only be achieved by surmounting the barriers between the environmental and planning departments and those between other local actors. Establishing nature conservation policy incentives alone is not sufficient to

guarantee that such interests are included in urban plans. Much depends on the ability to communicate public and private interests in a way that frames nature conservation as a shared responsibility. As a result, environmental concerns are less likely to be quickly ignored.

The main conclusion here is that meeting the challenges to EPI can be supported by adopting a communicative approach to EPI, which would help to: 1) develop a shared vision of and approach to the environmental sustainability of land-use plans; 2) maintain open and more flexible deliberations and shared responsibility among professionals and local stakeholders throughout the planning process; and 3) allow local authorities to engage more transparently with local interest groups and to initiate collaborative processes regarding environmental concerns. The communicative approach can be potentially illuminating for the professionals involved, as it can allow them to redefine their role from that of purely rigid civil servants to proactive individuals with a broader professional view on urban development. To optimize the benefits of the communicative approach, a communication strategy for EPI should be developed at the beginning of the planning process to facilitate involvement, interdependence and trust among local authorities and key stakeholders.

A communicative approach may make arising conflicts of interest more visible, and may also help to identify complementarities between different planning objectives, as well as the knowledge that needs to be shared between professionals to support decision-making about conservation aspects of a plan. The question is whether the local authorities in Bulgaria would be ready in the near future to accommodate the communicative style of planning within the current patterns of sub-urbanization and struggles between private and public interests. Three critical factors might play a role in changing the trajectory of the of local authorities in adopting a communicative approach to EPI, namely: 1) the evolution of the post-socialist institutional reforms, under the influence of the market-oriented, neoliberal doctrine; 2) achieving broader societal recognition of the need to prevent urban development impacting negatively on nature areas; and 3) reorienting the professionals' views, skills and knowledge on environmental sustainability. Any change in the current devotion to privatization, deregulation and decentralization as a strategy for urban growth would reshape urban planning philosophy. Meanwhile, the routine planning practice reflects on the post-socialist developments leading to environmental ignorance based on both professional incapacity and public disdain regarding conservation of valuable nature areas from urbanization. A correction of this course of development in favour of serving the goal of urban sustainability would require a profound reassessment of the balance between public and private interests and the role of the local authorities in achieving this balance. While the current institutional framework allows a wider social dialogue in planning, a stronger attentiveness to pluralist tolerance is needed within the local governments

in order to accept the role of a variety of stakeholders and professionals as legitimate participants in planning.

If the current planning process is to be reshaped towards EPI, it will have to be able to deal with the forces that have created practices which are led by purely economic forces and private interests. This highlights the urgency of the need to shift towards a more communicative form of planning, whereby gradual steps can be taken to allow the public and private sectors and the civil society to consider a wider range of interests including environmental benefits.

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CHAPTER 6

Future directions of EPI in urban planning

General synthesis and conclusions

6.1. Introduction

The goal of the research presented in this thesis was to assess the role of Environmental Policy Integration (EPI) in meeting the current needs of local governments to enhance the environmental sustainability of urban land-use plans. While reflecting on the general meaning of the EPI principle the thesis explored its implications in the urban planning domain. It took a closer look at promising approaches for local governments to address EPI and provided both theoretical reflection and empirical evidence regarding the challenges of the EPI process in urban land-use planning. The central research question was to find out what the potential benefits of, among other approaches, a communicative approach to EPI might be for urban land-use planning practice. The following specific sub-questions were addressed with this regard:

- What theoretical considerations are fundamental for understanding the concept of EPI in the urban planning domain? (6.2.1.)
- Is EPI embedded in the institutional frameworks of urban planning and what are the most commonly used approaches to EPI? (6.2.2.)
- What approaches have been used to achieve EPI in urban planning in Western and Eastern Europe, and does a communicative approach to EPI offer potential benefits? (6.2.3.)
- What are the key success factors and lessons learned for achieving EPI in urban land-use planning and for the communicative approach to EPI? (6.2.4.).

This chapter synthesizes the research findings for each research question, provides a general reflection on the research, and draws key conclusions.

6.2. Synthesis of the research findings

6.2.1. What theoretical considerations are fundamental for understanding the concept of EPI in the urban planning domain?

The theoretical reflection of this thesis made it clear that the idea of policy integration, upon which EPI is based, has been gaining prominence in sectoral policy making (see Chapter 1). This is particularly the result of growing societal demands to consider more complex policy problems, and not only environmental ones, including the web of relationships among many actors in a variety of policy fields (Nilson & Eckerberg, 2007). Within the European Union policy framework, EPI has been formulated as a key principle to integrate environmental concerns in socio-economic policy sectors and as the pathway to achieving the goal of sustainable development (Lenschow, 2002; Lafferty & Hovden, 2003). As discussed in Chapter 1 and 2 of the thesis, interest has been growing among scientists, professionals and policy makers in the field of urban planning, regarding the potential role of the EPI principle in developing more

sustainable urban plans (Berke & Conroy, 2007; Stead & Meijers, 2009; Scholz et al., 2012; Stigt et al., 2013). Moreover, the EPI principle has been playing a key role in the formulation of urban sustainability strategies and planning approaches across Europe (Stead & Meijers, 2009; Scholz et al., 2012).Yet, the current scientific debate has raised key questions concerning the institutional mechanisms needed to make EPI credible, effective and substantive in the field of urban planning (Jacob et al., 2008; Scholz et al., 2012; Runhaar et al., 2014; Mullally & Dunphy, 2015). This thesis has attempted to formulate a few research findings with this regard.

Firstly, it emerged that there are different interpretations and forms of EPI (see Chapter 1). For example, EPI can be achieved by various kinds of integration such as substantive, methodological, procedural, institutional or strategic integration. (Eggenberger & Partidario, 2000). It can also be viewed as policy integration at the vertical level (across governmental levels) and horizontal level (across policy sectors) of policy making (Lafferty & Hovden, 2003). While there is no single unified framework outlining the process of EPI, we found several analytical attempts in the literature that explain how EPI might work and how it could be relevant to sectoral policies including those in the urban planning domain (Lafferty & Hovden, 2003); Parsons, 2004; Runhaar, et al. 2014; Mullally & Dunphy, 2015). Based on these explanations, it is important to note that, for exploring the role of EPI in urban planning processes, clear conceptual choices need to be made regarding its meaning and forms of policy integration.

Secondly, it is clear that both the process and output of EPI need to be considered in order to understand how EPI can be achieved (Lafferty & Hovden, 2003; Persson, 2004). In the context of urban planning policy, EPI can be understood as a holistic process, requiring synergy between the policy objectives of urban land-use developments and those of environmental protection. The ultimate outcome of this process is a higher degree of urban sustainability based on envisioned solutions to urban development dilemmas of economic prosperity, better environmental quality and conserved natural resources (Campbell, 1996; Berke & Conroy, 2007). Moreover, the link between the EPI process and its output is important for formulating the best possible pathways for local governments to address EPI within their planning practices.

Thirdly, based on the exploration of planning practices it was observed that EPI is not always self-evident and requires local authorities to make ethical choices (see Chapters 3, 4 and 5). These ethical choices include considering whether environmental objectives should be given "principled priority" over developmental ones in order to prevent environmental concerns from becoming a subsidiary issue, or whether these concerns should be weighted evenly with other planning objectives. EPI therefore presents normative and rational choices (Persson, 2007). We have shown that, while addressing EPI in the urban planning context requires normative choices to be made, a more rational, pluralist and actor's oriented view on EPI is needed in order to make EPI

operational in the planning practice (see Chapter 2). In this regard, the complementary aspect of the conceptual view of EPI proposed and elaborated in this thesis is the inclusion of a communicative dimension to EPI based on the ideas of communicative planning (Healey, 2003).

The substantial link between EPI and the communicative planning paradigm was revealed in Chapters 1 and 2 of this thesis, illustrating that both the process and output of EPI are dependent on collaborative *processes*, interlinked organizational *structures* and employment of rational *knowledge* in planning (Figure 6.1.). Hence, EPI can be understood as a communicative process across the organizational structures of planning and environmental policy domains. This communicative process supports communicative action across policies, actors and organizations. It intertwines competences, values and understandings of multiple actors at inter-organizational level, where rational knowledge and collective capacity are used to prioritize the environmental aspects of urban plans. This view on EPI was elaborated in the initial phase of the research (see Chapter 1), where it was assumed that establishing links between *policy integration theory*, *communicative planning theory* and *organizational theory* can result in the development of a communicative approach to EPI (Figure 6.1.). Subsequently it was discovered that the juxtaposition of conceptual views from *policy integration*, *communicative planning* and *organizational theories* is fundamental to understanding EPI in the urban planning domain (see Chapters 1 and 2). Based on this finding, the communicative perspective to EPI was further elaborated by formulating its key components, namely: *1) collaborative processes, 2) networking structures, 3) consensus-building dialogues*, and *4) multi-faceted knowledge* (Figure 6.1.). Each of these elements addresses potential communicative mechanisms of planning, aiming to better understand how an urban development project may affect the environment and how an environmental issue can be addressed in different phases of planning. Among the currently debated variety of perspectives on EPI, the communicative dimension to EPI in urban planning complements the wide acknowledgement of the importance of collaborative and learning processes towards the achievement of EPI (Hertin & Berkhout, 2003; Persson, 2007; Mullally & Dunphy, 2015).

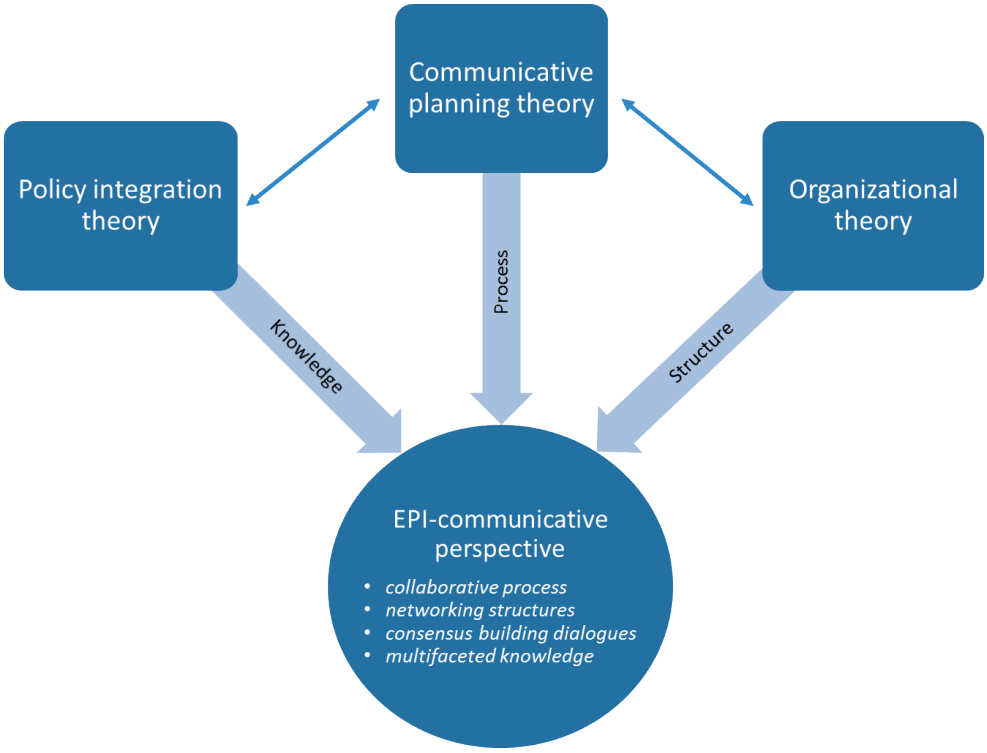

Figure 6.1. *EPI-communicative perspective in urban planning*

6.2.2. Is EPI embedded in the institutional frameworks of urban planning and what are the most commonly used approaches to EPI?

This thesis has revealed that EPI is mostly not firmly institutionalized in different urban planning practices (see Chapters 3, 4 and 5). EPI is, however, more often addressed at a strategic level of governance and it has been reflected in local governments' ambitions and strategies (CEC, 2007; Scholz et al., 2012). Its implementation within local governments' planning practices, however, often lags behind and faces many challenges. One of the reasons for this is the lack of a consistent framework regarding the implementation mechanisms for EPI. To address this implementation gap, we identified, conceptualized and compared five key approaches to EPI (see Chapter 2), namely: *1) coordinative, 2) strategic, 3) structural, 4) procedural and 5) communicative* approaches. In addition, four criteria for assessing the degree of EPI and the employment of one or other of these EPI approaches were developed: *1) presence of strategies and plans to support and guide EPI; 2) presence of shared responsibilities for EPI at the inter-organizational level; 3) presence of regulatory procedures embedding EPI; and 4) presence of a communicative process to EPI.*

Furthermore, it emerged that local governments in Europe have been generating a variety of experiences of using these different categories of approaches in their attempt to

incorporate environmental goals in urban land-use plans (Jacob et al., 2008; Franke et al., 2012). While the procedural and strategic approaches appear to be more conventional ones, already in place within currently operating planning systems of local governments, the coordinative, structural and communicative approaches are used less frequently and are not always fully embedded in the institutional frameworks of planning (see Chapter 2). Among these approaches, the communicative approach to EPI appears to be less widespread within planning practices, having more of an ad-hoc character rather than being part of a routine planning process. In contrast, the prevailing approach is the procedural approach, followed by the strategic approach. Among the more conventional approaches to EPI, the communicative approach appears to be highly complementary to the EPI process. It offers potential solutions for dealing with key impeding factors to EPI, as identified in the case studies, such as the need for collaboration at inter-organizational level, shared competences, use of rational knowledge and consideration of multiple interests of actors. However, in some cases the communicative approach did not always appear to be an immediately appealing choice for the local authorities. The key reasons for this were often hidden in the surrounding institutional context of the local governments and their planning routines. Yet many local governments' departments operate under different jurisdictions, with a different legal and institutional basis that does not always correspond to the EPI objectives. A communicative approach to EPI, therefore, requires revisiting the established planning routines and administrative processes in order to open up opportunities for collaboration.

6.2.3. What approaches have been used to achieve EPI in urban planning in Western and Eastern Europe, and does a communicative approach to EPI offer potential benefits?

The EPI experiences presented within selected case studies from the urban planning practice underlined the variety of factors influencing the embedment of EPI in urban land-use plans. These experiences illustrated that there are differences in the perception and use of EPI and its approaches within different socio-economic contexts. The local examples from Western and Eastern European countries, namely the Netherlands and Bulgaria, helped to identify the key EPI challenges and approaches applied within the local governments.

Firstly, it was found that the general idea behind EPI has been addressed to one degree or another by the local authorities in the Netherlands and Bulgaria (see Chapter 3), although the overall strategy and approaches differ. While in the Netherlands EPI has for a while served as a guiding principle in urban planning, in Bulgaria this principle has only been addressed more recently as a strategic goal of urban planning, but has not yet been fully implemented. Furthermore, we found that the presence of specific planning tools and methods to address substantive environmental quality issues in urban land-use plans is highly relevant to the EPI process. However, these tools should always be

accompanied by or embedded in a communicative process between the professionals in order to secure their effective implementation and outcomes.

The cases illustrated that, while planners in the Netherlands have sought to introduce EPI in their planning practice and have brought about innovative policy tools for integrating environmental quality criteria in planning, such as the A*rea Oriented Environmental Policy Approach* (AOEP, see Chapter 3) and the *Red for Green approach* (RGA, see Chapter 5), the planning practice in Bulgaria has lacked such a specific approach to EPI. In Bulgaria, urban land-use planning is dominated by legal procedures, while a clear vision on the practical use of the EPI principle is still absent (see Chapter 4). A key reason for this is that the urban planning process has been influenced by the post-socialist transformation in the country and by the prevailing socio-economic and political forces. Among these forces are the relatively recent decentralization of power to local governments and the privatization of land. As a result, the current pattern of urban planning in Bulgaria is urban growth oriented towards individual property rights (Stanilov & Sykora, 2014). In this process EPI remains at the level of rhetoric and receives only secondary priority in actual planning practice.

In the Netherlands, where local governments have been operating within a decentralized socio-political milieu for far longer than the local authorities in Bulgaria, more deliberate action towards EPI has been manifested. The local authorities in the Netherlands have been more proactive in pursuing urban sustainability targets and have mobilized the innovative capacity of planners and environmental experts to achieve these targets by elaborating a variety of EPI-related planning methods (De Roo & Visser, 2004). While the procedural and strategic approaches to EPI are fairly prominent in the planning process, local authorities in the Netherlands have been following a more flexible, collaborative, yet systematic, approach to incorporating environmental quality concerns in the urban planning process. Despite the above-mentioned differences, however, in both countries planners and environmental professionals are still faced with the similar challenges of developing solutions and satisfying multiple policy objectives in order to address EPI effectively within their currently operating institutional frameworks and planning practices. An important precondition to this process is the establishment of a more collaborative style of planning that not only requires formal planning procedures, but also stimulates an incremental dialogue across organizational structures, policy makers, professionals and other local actors. This has substantiated the need for a communicative approach to EPI in addition to the other EPI approaches employed by the local authorities. This need has also been manifested by the implementation process of the AOEP approach in Rotterdam and by the emerging need for introducing a suitable planning approach to EPI in Burgas alongside its procedural style of planning. The experiences generated by AOEP in Rotterdam are evidence of the delivery of successful outcomes of EPI, while they also highlight the interrelation between the substantive aspects of EPI and its process and the essential role of the communicative approach in

dealing with issues of urban environmental quality. Moreover, the AOEP can be defined as a best EPI practice which proves that this approach can provide useful lessons for the planners in cities where such practices have not yet been implemented, such as Burgas (see Chapter 2). The key finding with this respect is that, while such a best practice appears highly relevant for local authorities in Eastern Europe, it can only be applicable in the presence of specific preconditions, including: *1) decentralized policy making, 2) actors' commitment and awareness, 3) stakeholders' early involvement, 4) professionals' transparency and knowledge capacity, 5) evaluation of the planning tools and methods* (Table 6.1.). In addition to the existing knowledge on integrated urban planning practices, these findings revealed specific disparities and similarities between local authorities in different parts of Europe in dealing with the EPI challenge (Scholz et al., 2012; Stigt, 2013; Runhaar et al., 2014). The communicative approach to EPI has been shown to be beneficial to different planning practices and local contexts. However it may require different types of efforts, commitments and preconditions to be put in place by the local authorities. Table 6.1. summarizes the key success factors per case study and indicates the need for a communicative approach to EPI.

Table 6.1. *Success factors for achieving EPI per case*

Success factors for achieving EPI in urban land use planning per case		
Case	**Key success factors**	**Use of EPI-communicative approach**
Urban environmental planning practices in Rotterdam and Burgas (Area-oriented environmental policy)	• Decentralized policy making • Actors' commitment & awareness • Stakeholders' early involvement • Professionals ' transparency & knowledge capacity • Evaluation of planning tools and methods	• Communicative approach with elements of strategic and structural approaches.
Atanasovsko lake urban development plan in the city of Burgas	• Strategic vision • Stakeholders' early involvement • Shared responsibilities and competences • Professionals ' transparency & knowledge capacity • Local leadership	• Communicative approach with elements of coordinative, procedural, and structural approaches.
Red for Green planning in the Netherlands	• Strategic vision • Actors' communication • Shared responsibilities • Economic incentives • Efficient land-use planning procedures	• Communicative approach with elements of coordinative, procedural and structural approaches.

6.2.4. What are the key success factors and lessons learned for achieving EPI in urban land-use planning and for the communicative approach to EPI?

Based on the lessons drawn from exploring how the EPI process has unfolded within selected local planning practices in the Netherlands and Bulgaria, a number of success factors for EPI have been identified, and the benefits of the communicative approach for EPI have been formulated (see Chapters 3, 4 and 5). As illustrated, depending on the countries' socio-economic contexts and the planning routines of local governments, the degree of EPI varies. However, regardless of the differences in EPI progress identified, the key challenges and the success factors for EPI appear to be rather similar. In line with earlier EPI studies, we have confirmed that the success of EPI is strongly dependent on the ways planning objectives are prioritized, and how actors' interests are communicated and responsibilities are shared (Nilsson & Eckerberg, 2007; Jacob, et al., 2008; Jordan & Lenschow, 2010; Lafferty, 2012).

The in-depth assessment of planning practices of the C*orner Land* urban development project in the city of Burgas in Bulgaria and of the (RGA) applied in different urban regions in the Netherlands have illuminated the essential role of the communicative process to EPI (see Chapters 4 and 5). In the case of the *Corner Land* case study, it was found that hierarchical and fragmented organizational structures, insufficient professional capacity, and a lack of a clear communication strategy limited the implementation of the nature conservation policy objectives in the urban land-use plan. Despite the local authority's formal commitment to EPI and the available legal procedures for environmental assessment of plans, the economic and social pressures were too high to secure effective integration of nature conservation in the *Corner Land* plan. This has resulted in the lack of a shared vision and understanding among local actors and professionals on how nature conservation issues should be embedded in the planning process and on how responsibilities should be allocated among competent authorities with poor communication practice.

The issues of organizational communication among professionals and the lack of collaborative capacity among planners were at the core of the failure to integrate these environmental concerns in the *Corner Land* project. This finding adds to earlier research evidence that highlights similar issues within urban planning practices (De Roo, 2007, Termorshuizen et al., 2007; Scholtz et al., 2012; Stigt et al., 2013). The case study has shown that when no clear communication strategies between the planning and environmental departments are established at the beginning of the planning process, the inclusion of environmental interests in a land-use plan is hindered. In this case, the professionals' capacities for communication to address these objectives affected the choices made concerning the plan formulation and design. In addition, the ability of the local authorities to lead and maintain such a communication process were shown to be essential for EPI because setting nature conservation policy objectives alone proved

insufficient to guarantee that such interests would be included in an urban land-use plan. Moreover, the consideration of ecological competencies among a variety of planning professionals is needed in order to explore alternatives to proposed urban developments, to make strategic choices and to evaluate potential environmental impacts. Therefore, the key success factors to EPI identified in this case study included: *1) strategic vision, 2) stakeholders' early involvement, 3) shared responsibilities and competences, 4) professionals' transparency and knowledge capacity, and 5) local leadership and commitment.*

The exploration of the RGA practice in the Netherlands (see Chapter 5) provided additional evidence that regional and local authorities, private developers, and nature conservation parties need collaborative mechanisms in place in order to be able to deal with conflicting developmental objectives and to integrate ecological principles into urban plans. In the seven RGA projects implemented in different regions in the Netherlands, the collaborative processes proved to play a key role in EPI. Consensus-building processes among multiple actors led to the design of innovative planning solutions for implementing the objectives of the National Ecological Network (NEN) in the Netherlands. The RGA approach served as a *balancing approach* for resolving conflicting land-use issues, regarding urban functions and spatial development of core nature areas as part of the NEN. In a few of the cases, the RGA process even prevented economic developments at the cost of nature. In addition, the RGA showed that nature policy objectives could be served by a mix of collaborative mechanisms adopted and led by the regional governments themselves, e.g. public-private or public-public partnerships (see Chapter 5). The approach proved to be beneficial to EPI in allowing boundaries of the planning sites and actors' perceptions to be crossed. In the current institutional setting of spatial planning in the Netherlands, developing an urban planning policy that is dependent purely upon ecological indicators is not feasible. However, use of the RGA by the local and regional authorities can further stimulate a dynamic, collaborative planning process that may better safeguard nature conservation objectives in urban development plans. The RGA particularly demonstrated the potential of public and private actors' communicative actions to deliver a shared vision on urban developments and to propose tailor-made solutions that do not clash with ecological developments but instead may increase the overall quality of urban spaces and nature. Despite a few critical views regarding the sufficiency of governmental efforts in implementing the nature policy objectives and whether the RGA alone can meet these objectives, we observed a generally positive attitude among the majority of actors involved in the RGA projects (see Chapter 5). The RGA approach therefore can be described as a promising collaborative planning mechanism to EPI in the urban planning domain. Its role is seen to be one of creating a consensus-building platform for public-private and public-public actors, which in turn can lead to increased investments in ecological developments needed for the implementation of a NEN. In the last decade, practices such as the RGA have become characterized as rather innovative and tailor-made in nature (Schandas

et al., 2008; Termorshuizen & Opdam, 2009; Wolf & Spaans, 2010). Meanwhile such practices are proving to be beneficial for regional authorities, as they present an opportunity through which the authorities can orient their initial ambitions to achieve urban development that is not restrictive but rather based on the EPI principle, and where economic opportunities are employed to provide both a better quality of life and to conserve nature. Key success factors for the use of the RGA include: *1) strategic vision, 2) actors' communication, 3) shared responsibilities, 4) economic incentives, and 5) efficient land-use planning procedures* (Table 6.1.).

6.3. Towards a collaborative framework for EPI in urban planning: the concept revisited

This thesis highlights the fact that EPI in urban planning is particularly dependent on the coherence of local policy objectives regarding urban sustainability and on the means for integrating these objectives in the routine planning processes. In this regard, a number of institutional factors that impede EPI processes in urban land-use planning have been identified, including: *1) fragmented organizational structures for environmental policy and urban land-use planning; 2) a lack of common strategic vision among professionals and stakeholders about EPI; 3) hierarchical planning cultures with insufficiently shared responsibilities, knowledge and competences; 4) a lack of routine communication process between planning and environmental professionals.* These impediments are in line with earlier studies on the EPI process across Europe (Lafferty & Hovden, 2003; Jordan & Lenschow, 2010). In order to address these impediments, this thesis has demonstrated the relevance of, among other approaches, a communicative approach to EPI, and it has substantiated the need for an overarching collaborative framework to EPI in urban planning (Figure 6.2.). Thus, this research complements the current body of literature on relevant approaches to EPI (Nilsson & Eckerberg, 2007; Jacob et al., 2008; Stigt et al., 2013; Runhaar et al., 2014; Mullally & Dunphy, 2015). The collaborative framework presented here views the communicative process towards EPI as part of the institutional and socio-economic context of urban planning, where spatial and environmental conflicts arise and where actors within the organizational structures of planning and environmental domains interact (Figure 6.2.). In line with the initial theoretical premise (see Chapters 1 and 2), the generic understanding promoted is that actors' communication and the recognition of their mutual inter-dependency are closely related to the organizational structures and administrative processes of urban planning. These in turn have a large impact on the choices made during the plan preparation process and on EPI performance (Figure 6.2.).

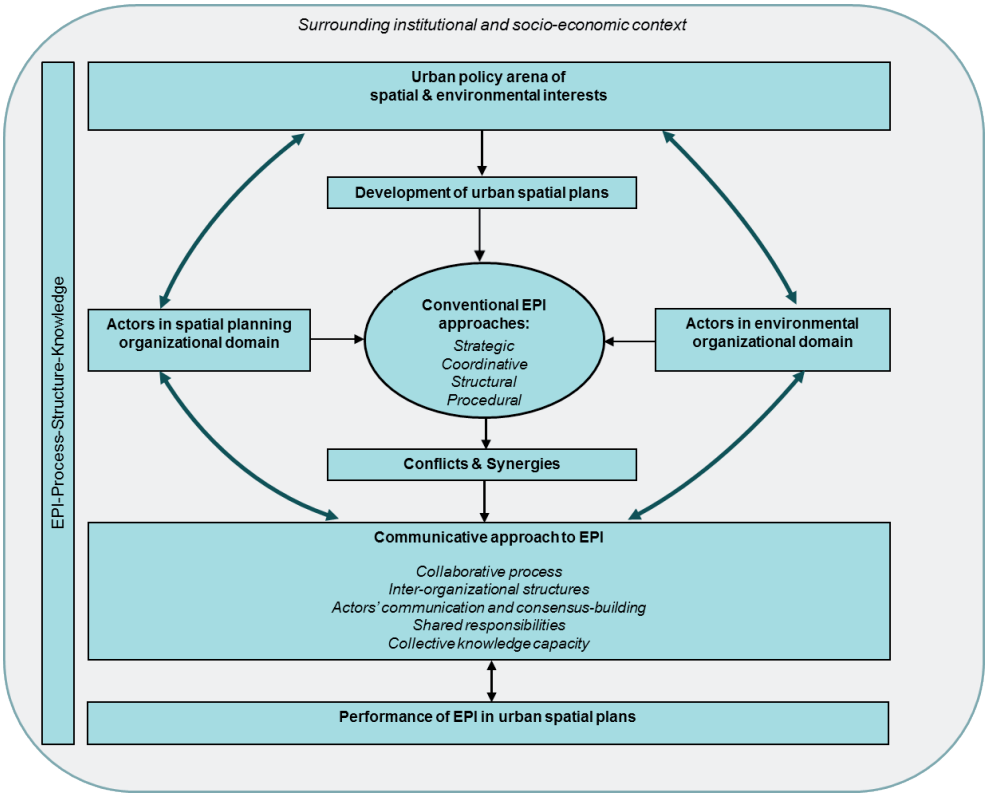

Figure 6.2. *Collaborative framework for EPI in urban land-use planning*

Together with the proposed communicative approach to EPI, the collaborative framework for EPI provides the means to embed the conventional forms of integration through which EPI can be addressed, such as strategic, coordinative, structural and procedural approaches (Figure 6.2.). All these approaches proved to be strongly interconnected and, importantly, it became clear that rarely is only one approach used in the actual planning practice. However, as the experiences explored showed, the benefits of the communicative approach can be more easily overlooked because its use depends on the proactive role of local governments and other actors in planning, rather than on obligations formally embedded in planning procedures. To prevent this situation, collaborative processes for EPI need to be seen as a routine mechanism of engagement and learning guided by local governments' institutional arrangements and organizational structures. In agreement with the contemporary views of the communicative planning paradigm, the communicative approach to EPI proves to be potentially illuminating in mobilizing the collective capacity of professionals, utilizing needed knowledge and connecting different actors across fragmented organizational structures (Healey, 2003; 2007; Sager, 2013). Clearly, however, the communicative approach is not all-inclusive, as each approach addresses different aspects of EPI and

translates them differently into the planning practice. Nevertheless, it is clear that it has the potential to enhance the effectiveness of the more conventional approaches to EPI, as it may change actors' perceptions of environmental issues and of the choices to be made when deciding whether to apply one or another planning solution. Depending on the specific institutional and socio-economic contexts which influence the style of planning, a communicative approach is likely to work best in combination with elements of the other EPI approaches. These also include substantive methods for embedding environmental quality criteria in urban plans.

6.4. Benefits of the communicative approach to EPI

The key benefit of the communicative approach to EPI is achieving a higher degree of consideration for the actors' inter-dependencies and strengthening the inter-organizational relationships among these actors in routine planning processes. While it involves multi-faceted organizational transformations, the communicative approach to EPI addresses the institutional milieu in which planners and environmental experts operate and where they build relationships with each other and with multiple stakeholders. These interactions are geared towards enhancing collaboration, consensus building, shared responsibilities and collective knowledge capacity. This means not only shifting principles in planning towards EPI, but also introducing new forms of planning. The communicative approach, therefore, can be used as a bridge between planners and other professionals without which they will be unable to engender consensus on important planning decisions, what to do and, most importantly, want not to do. Meanwhile, the choice is left here to local policy makers and professionals to decide whether environmental issues will be given "principled" priority in urban land-use plans, or whether the planning process will be designed to address equally developmental and environmental objectives. A greater degree of consideration of environmental issues, however, can be achieved in both cases, compared to cases where no form of EPI has taken place during the planning process.

As planning intertwines multiple interests, the communicative approach to EPI explicitly recognizes that situations of disagreement may arise and that political plays may interfere in the planning process. Its role is to provide a platform and mechanisms for the engagement and mutual adjustment process needed, through which minimum domination of economic interests over environmental benefits can be achieved. While certain actors may not be able to reconcile fundamental differences regarding environmental goals, they may nevertheless be able to balance interests, compromise and learn. In addition, it was revealed that the communicative approach can be beneficial to not only enhancing the local authorities' capacity in dealing with EPI, but also to avoid relying on the principle of least efforts in addressing environmental issues in planning.

Our research showed that the local governments and their professionals play a crucial role in the choices concerning EPI, as they pursue actual urban sustainability ambitions and seem to be in the best position to promote collaborative practices and weigh local interests. The challenge remains for planners and local professionals to be able not only to anticipate and respond to future agenda setting by local officials, but to also be proactively involved in the policy-making process.

While the communicative approach to EPI may generate uncertainties and may have limitations in fully securing win-win solutions to environmental disputes because of socio-economic pressures, rigid planning practices or power imposition, it still holds the promise of enhanced recognition of EPI. The communicative approach is also more likely to lead to a higher degree of interdependence between multiple actors and organizations in the urban policy arena than where poorly substantive or procedural approaches to EPI are applied. Therefore, the following *key conclusions* were formulated regarding the role and the benefits of the communicative approach to EPI in urban planning:

- The communicative approach to EPI is highly beneficial for achieving EPI in urban land-use planning. It may enhance the effectiveness of all other EPI approaches (i.e. coordinative, strategic, structural and procedural) and it can be used in tailor-made combination with these approaches.
- The implementation of EPI in urban planning requires a high degree of interdependence between local organizational structures with planning and environmental jurisdictions.
- To address EPI in urban land-use plans, a shift is needed from planning by independent, single organizations or organizational units towards inter-organizational structures. Actors within these organizations need to build awareness about the need for effective communication, shared responsibilities and competencies in order to achieve EPI.
- The communicative approach to EPI can facilitate collaborative actions and consensus building among local actors, which are essential for anticipating, detecting and reconciling various environmental and urban development objectives and interests.
- The communicative approach to EPI may enhance planners' and environmentalists' innovative capacities to develop tailor-made tools and methods for addressing environmental quality issues in designing urban plans. It provides a learning ground for local professionals, fostering greater use of multifaceted knowledge and skills.
- In order to assess the degree of EPI achievement in urban land-use planning, four key assessment criteria can be used, namely: 1) s*trategic:* presence of strategies and plans that support and guide EPI; 2) *organizational:* presence of shared responsibilities for EPI at inter-organizational

level; 3) *procedural:* presence of regulatory procedures embedding EPI; 4) *communicative:* presence of inter-organizational communication.
- Exploration of local governments' experiences in addressing EPI is a source of valuable knowledge, which is essential for understanding how EPI may or may not work.

6.5. Concluding remarks

This thesis illustrates that the role of EPI is gaining prominence in the urban sustainability discourse and in planning research and practice, while different approaches to EPI are being considered and developed by local governments in Europe. Moreover, as the environmental pressures of urban developments are growing, urban land-use plans are tending to become more seriously regarded for their integrated character and sustainability outcomes. Evidently, EPI is a challenging process that is dependent not only on substantive solutions, but rather on process-oriented mechanisms of engagement, coordination and mutual adjustment.

The collaborative framework to EPI proposed here opens up opportunities to further explore how local authorities might transform their planning practices, established mindsets, capacities and aspirations towards the goal of EPI. It provides a way to find out how stakeholders with vested interests (e.g. officials, local communities, private actors) can be persuaded of the benefits of collaboration in order to make more environmentally friendly urban areas. Additional scientific research will be needed to show possible ways to assess the outcomes of the EPI process in urban land-use planning and to evaluate the benefits of the communicative approach within a broader context and scope of urban planning. Meanwhile, EPI seems to become an important policy issue for local authorities throughout Europe. Addressing a wider variety of EPI-related practices, regarding different environmental issues and across different planning systems in Europe, would be particularly valuable in helping to delineate the wide-ranging use of the communicative approach to EPI in urban planning and to further substantiate its credibility and implications. After all, the future directions of EPI in urban planning can only be revealed by linking scientific insights with knowledge generated by actual planning practices.

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SUMMARY

The debate on sustainable development emphasizes the importance of integrating environmental policy into other policy sectors. It is increasingly recognized that such integration is needed at the national, regional *and* local levels of governance. Hence the Environmental Policy Integration (EPI) principle has been proposed, which is defined as "*the incorporation of the environmental objectives into all stages of policy making in non-environmental policy sectors, with the recognition of this goal as the guiding principle for the planning and execution of policy*". Currently EPI is agreed upon in a number of EU commitments and is receiving the attention of urban planning scholars. The achievability of EPI, however, has not yet been well studied, particularly in the urban planning context, while its implementation often seems to be hindered by organizational fragmentation.

This thesis assesses the potential role of EPI as an operational principle for achieving sustainable urban development in Europe. It addresses the scientific premises of EPI and the current knowledge gaps in applying it in the urban planning domain. The research combines theoretical and empirical dimensions. The theoretical dimension includes evidence of the current knowledge gap regarding the integration of environmental aspects into urban planning and the emergence of EPI as a promising perspective in urban sustainability research and planning practice. This includes reflections on EPI's definitions, interpretations and its different approaches. The empirical dimension of the thesis explores evidence regarding the EPI process in actual planning practices, with an assessment of the relevance of different EPI approaches. Based on the exploration of case studies within different planning contexts, the empirical research provides insights into the key challenges and barriers to achieving EPI in urban planning and identifies key success factors for local governments addressing specific environmental issues in urban land-use plans. The key objective of the thesis is, therefore, to explore the responses of planning systems to the current EPI challenges, with the twin goals of gaining insight into the role of EPI in integrating environmental concerns in urban land-use planning processes and of identifying the most promising approaches for achieving EPI. The central research question aims to provide an answer about the potential benefits of, among other approaches, a communicative approach to achieve EPI in urban planning practice.

The thesis comprises four scientific articles that provide theoretical and empirical insights into the role of EPI in urban planning.

The first article (Chapter 2) provides a theoretical reflection on the current understanding of EPI in urban planning based on concepts from policy integration theory, organization theory and communicative planning theory. This has shed light particularly on the relevance of the communicative approach to EPI by comparing this with more conventional EPI approaches, namely the coordinative, strategic, structural and procedural approaches. Furthermore, this chapter presents four key variables that characterize EPI. These variables serve as criteria for assessing the degree to which EPI has been addressed in planning processes. The key conclusion is that a communicative approach to EPI is potentially illuminating in transforming fragmented organizational structures and how

individual actors interact in urban planning processes which can be beneficial for achieving EPI.

In the second article (Chapter 3), we argue that within many local governments there is already a growing wish to apply EPI principles in urban planning in an effort to achieve better quality of life in and around cities. Within Europe, however, most attempts to develop EPI approaches can be found in the countries of Western Europe, while similar efforts in Eastern Europe are in their infancy. The main reason for this is that most of the post-communist countries are still addressing the challenge of reconstructing their political, social and economic systems. This article explores the overall policy frameworks and planning practices for EPI in urban planning in the Netherlands and Bulgaria. It first discusses the Dutch area-oriented policy approach, which has gained popularity as a means of integrating environmental quality standards into urban land-use plans. It then analyses the effectiveness of specific area-oriented methods developed and applied in Rotterdam, and assesses their applicability to the planning practice of the local authorities of the city of Bourgas in Bulgaria. The main conclusion derived from this analysis is that the degree of effectiveness of an area-oriented policy is dependent on specific success factors, among which are decentralization, actors' awareness and early involvement, transparency among the professionals, and planning tools being evaluated on their effectiveness. Despite the differences between Rotterdam and Bourgas in terms of the presence of these success factors, we assert that the area-oriented policy approach applied in Rotterdam can serve as a best practice that can be adapted to the specific local circumstances in Bourgas and used to address EPI in urban land use planning.

The third article (Chapter 4) discusses the challenges of EPI against the background of the post-socialist transformation in Bulgaria. The accent here is on exploring the role of EPI in dealing with the inevitable trade-offs between nature conservation and local economic stimuli for urbanization. Based on the "Corner Land" case study in the city of Bourgas, this article explores the key challenges in applying EPI at the local level of governance in Bulgaria. The findings indicate that while EPI is addressed within the planning procedures, it is mostly an organizational challenge for the local governments. Communication problems among professionals during the planning process were shown to be detrimental to the EPI process. Issues such as lack of professional capacities, knowledge and shared responsibility through the entire planning process were identified as key impediments to addressing EPI in the Corner Land case study. Despite the current socio-economic and political forces influencing planning, the communicative approach to EPI is proving to be a promising choice for addressing these shortcomings.

The fourth article (Chapter 5) explores the challenges that regional and local governments in the Netherlands face in establishing suitable institutional practices to meet ecological targets within urban land-use plans and address the ultimate goal of EPI. The article assesses the role of the Red for Green (RGA) approach developed and applied by regional authorities as a means to integrating ecological considerations in

land-use plans when developing the national ecological network (NEN). The roles of multiple actors and interests are explored in this process. The RGA integrates ecological objectives (*green*) in urban developments (*red*) by establishing a consensus-building platform for all actors involved in planning. Based on the experiences with RGA in seven regional case studies, we identify its key success factors and its potential role as a communicative practice for achieving EPI. The RGA can be a suitable approach to EPI for integrating nature policy objectives in urban developments. Its success depends on five key success factors of which communication and consensus building among public and private actors and development of a joint strategic vision of a plan seem to be the most important ones.

In the concluding chapter (Chapter 6) the key research findings and conclusions are presented. Among the key research findings are the key challenges and impediments to the EPI process in urban land-use planning that have been identified. These include fragmented organizational structures for environmental policy and planning, lack of common strategic vision among professionals and stakeholders about the sustainability of the plans, hierarchical planning cultures with insufficient shared responsibilities and competences, and a lack of effective communication among professionals in planning and environmental departments. With regard to these, a number of success factors for EPI have been identified and the need for a communicative approach to EPI has been substantiated.

Based on a compilation of the research findings, a collaborative framework to EPI is proposed. The communicative approach towards EPI is a key element here. It addresses the institutional and socio-economic context of urban planning, where spatial and environmental conflicts arise and where actors within the organizational structures of the planning and environmental domains interact. The generic understanding promoted is that actors' communication and the recognition of their mutual interdependency are closely related to the organizational structures and administrative processes of urban planning. These in turn have a large impact on the choices made during the plan preparation process and on EPI performance.

Furthermore, the framework illustrates the different forms of integration through which EPI can be addressed, namely the five currently used approaches to EPI. These approaches have proved to be strongly interrelated during the development of urban land-use plans and, importantly, rarely is only one approach used in actual planning practice. However, this research has also shown that the communicative approach can make a significant contribution to the success of EPI. Moreover, a communicative approach appears to be beneficial for the effective application of the more conventional approaches in urban land-use planning such as the procedural approach.

Understanding how EPI works as a collaborative process can be an important stepping-stone towards its implementation in urban planning practice of local governments in Europe. The key conclusion of this research is that using the communicative approach to achieve EPI

can deliver number of benefits for making more sustainable urban land-use plans. While it involves multifaceted organizational transformations and complex interactions between actors, it addresses the specific institutional settings in which planners and environmental experts operate and their relationships with multiple stakeholders. The thesis concludes that:

- The communicative approach to EPI is highly beneficial for achieving EPI in urban land-use planning. It may enhance the effectiveness of all other EPI approaches (i.e. coordinative, strategic, structural and procedural approaches) and it can be used in tailor-made combination with these approaches.
- The implementation of EPI in urban planning requires a high degree of interdependence between local organizational structures and planning and environmental jurisdictions.
- To address EPI in urban land-use plans, a shift is needed from planning by independent, single organizations or organizational units towards inter-organizational structures. Actors within these organizations need to build awareness about the need for effective communication, shared responsibilities and competencies in order to achieve EPI.
- The communicative approach to EPI can facilitate collaborative actions and consensus building among local actors, which are essential for anticipating, detecting and reconciling various environmental and urban development objectives and interests.
- The communicative approach to EPI may enhance planners' and environmentalists' innovative capacities to develop tailor-made tools and methods for addressing environmental quality issues in designing urban plans. It provides a learning ground for local professionals, fostering greater use of multifaceted knowledge and skills.
- In order to assess the degree of EPI achievement in urban land-use planning, four key assessment criteria can be used, namely 1) strategic: presence of strategies and plans that support and guide EPI; 2) organizational: presence of shared responsibilities for EPI at inter-organizational level; 3) procedural: presence of regulatory procedures in which EPI is embedded; 4) communicative: presence of inter-organizational communication.
- Exploration of local governments' experiences in addressing EPI is a source of valuable knowledge, which is essential for understanding how EPI may or may not work.

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CURRICULUM VITAE

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