![Eesti Maaülikool — Estonian University of Life Sciences]

KNOWLEDGE, LEARNING AND LEGITIMACY IN MULTI-LEVEL PARTICIPATORY ECOLOGICAL NETWORK GOVERNANCE

KAASAMISPROTSESSIDE TÕHUSUS JA TULEMUSLIKKUS ÖKOLOOGILISE VÕRGUSTIKU PLANEERIMISEL NING RAKENDAMISEL MITMETASANDILISES VALITSEMISMUDELIS

MONIKA SUŠKEVIČS

A Thesis for applying for the degree of Doctor of Philosophy in Environmental Protection

Väitekiri
filosoofiadoktori kraadi taotlemiseks keskkonnakaitse erialal

Tartu 2014

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Institute of Agricultural and Environmental Sciences
Estonian University of Life Sciences

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CONTENTS

LIST OF ORIGINAL PUBLICATIONS

The thesis is a synthesis of the following papers, which are referred to in the text by their Roman numerals.

I.   **Suškevičs, M.**, Külvik, M. 2007. Assessing the effects of public participation during the designation of Natura 2000 areas in Otepää Nature Park area, Estonia. In: Chmielewski, T. J. (Ed.). Nature Conservation Management: Form Idea to Practical Results. A Long-Term Biodiversity, Ecosystem and Awareness Research Network. Lublin, Łódź, Helsinki, Aarhus: Lublin Agricultural University, pp. 220–235.

II. **Suškevičs, M.**, Külvik, M. 2011. The role of information, knowledge and acceptance during landowner participation in the Natura 2000 designations: The cases of Otepää and Kõnnumaa. In: Jones, M., Stenseke, M. (Eds.). The European Landscape Convention: Challenges of participation. Springer, pp. 275–294.

III. **Suškevičs, M**. 2012. Legitimacy analysis of multi-level governance of biodiversity: Evidence from 11 case studies across the EU. Environmental Policy and Governance 22: 217–237.

IV. **Suškevičs, M.**, Tillemann, K., Külvik, M. 2013. Assessing the relevance of stakeholder analysis for national ecological network governance: The case of the Green Network in Estonia. Journal for Nature Conservation 21(4): 206–213.

V.   **Suškevičs, M.** Legitimate processes or informed outcomes: Rationales for participation within regional ecological network planning in Estonia. Submitted to Journal of Environmental Planning and Management.

VI. Tillemann, K., **Suškevics, M**., Külvik, M. Ecological network planning and implementation as a multi-level biodiversity conservation tool: An analysis of the Estonian case study. Submitted to Environment and Planning C.

The contributions of the author of the current thesis and other scientists to the papers were as follows:

	I	II	III	IV	V	VI
Original idea	**MS**, MK	**MS**, MK	**MS**	**MS**	**MS**	KT
Study design	**MS**	**MS**	**MS**	**MS**, KT	**MS**	KT, **MS**
Data collection	**MS**	**MS**	*	All	**MS**	All
Data analysis	**MS**	**MS**	**MS**	**MS**, KT	**MS**	KT, **MS**
Manuscript preparation	**MS**, MK	**MS**, MK	**MS**	All	**MS**	All

KT – Kadri Tillemann; MK – Mart Külvik; **MS – Monika Suškevičs**
* – The data for Paper **III** was collected within a Marie Curie Research Training Network GoverNat: "Multi-level Governance of Natural Resources: Tools and Processes for Water and Biodiversity Governance in Europe" (www.governat.eu).

ACRONYMS AND ABBREVIATIONS

CEE	Central and Eastern Europe
ECNC	European Centre for Nature Conservation
EIA	Environmental impact assessment
ENGO	Environmental non-governmental organisation
ESDP	European Spatial Development Perspective
EU	European Union
MLG	Multi-level governance
MoE	Ministry of Environment
MoI	Ministry of Interior
PEBLDS	Pan-European Biodiversity and Landscape Strategy
PEEN	Pan-European Ecological Network
pSCIs	Potential Sites of Community Importance
SACs	Special Conservation Areas
SPAs	Special Protection Areas

1. INTRODUCTION

The beginning of the work behind this thesis dates back to 2005 when I started to prepare my BSc thesis. It was the period shortly after Estonia had joined the EU. For the nature conservation domain, it meant that the selection and designation of the Natura 2000 areas – based on the EU's Birds (Council Directive 79/409/EEC & 2009/149/EC) and Habitats directives (Council Directive 92/43/EEC) – and the associated stakeholder consultations were in full swing. As these processes were accompanied by a hot discussion of the topic in the media and elsewhere, I was keen on learning more about the contradictory perspectives the different stakeholders had on it, to understand the reasons behind the controversies and possible ways to address them.

Since then I have been exploring the functioning of participatory approaches within ecological network governance throughout my master's studies and via collaborating in some applied and research projects. Ecological networks, promoted at the European, e.g. the Natura 2000 network, or the Green Infrastructure initiative (European Commission 2011a) and national levels, often take an ambitious goal: to combat the problems with habitat fragmentation scale-sensitively and to integrate biodiversity conservation with other spatial development goals. My research has mainly focused on legitimacy issues, as well as on the questions around knowledge and information exchange within the Natura 2000 designations and the planning of the national ecological network concept – Green Network – in Estonia, as well as in some other countries. The work has been motivated by a number of issues arising from the academic discussions on participatory environmental governance, as well as from practical experience with participatory governance in Estonia and other EU countries.

Nowadays the biodiversity conservation and spatial planning governance practices in Europe face at least two kinds of challenges. First, the inherent complexities of and scientific uncertainties about many environmental problems have urged policy-making to take account of the multiple knowledge-claims of the various stakeholders (van den Hove 2002; Ravetz 2003). As early as in 2001, the EU White Paper on European Governance (European Commission 2001) highlighted the crucial role of regional and local knowledge from different sectors when

developing policy proposals. Recent policies within the spatial planning domain, e.g. the Territorial Agenda of the EU towards 2020 (European Commission 2011b) or biodiversity conservation, such as the resolution on the EU 2020 Biodiversity Strategy (European Parliament 2012) have reinforced this proposition. Despite these appreciations, the practice of environmental governance has encountered many challenges here. How do public officials perceive the value of and to what extent do administrative practices recognise different stakeholders' knowledge-claims? How can we elicit and integrate different knowledge-claims effectively? The ways different knowledge-claims were treated were among the central issues during the Natura 2000 areas' designations in several countries (Alphandery and Fortier 2001; Pinton 2001).

Second, the continuous controversies around and opposition towards delineating the EU's Natura 2000 network in many member states (Weber and Christophersen 2002; Hiedanpää 2002, 2005; Paavola 2004) have distinctly pointed at the legitimacy crisis of implementing the EU biodiversity policies and legislation. The reasons for such crisis have partially been attributed to the weak inclusion of the different stakeholders into decision-making (Paavola 2004) and indeed, participation has gained momentum within the implementation of EU biodiversity policies ever since (Ferranti *et al.* 2013). However, during the last decades, many scholars and practitioners have been increasingly concerned about the various challenges that different multi-level governance (MLG) contexts pose on (participatory) democratic legitimacy of governance practices (Peters and Pierre 2004; Rauschmayer and Behrens 2008; Papadopoulos 2008; Hogl *et al.* 2012). More than twenty years after the launching of the Habitats Directive, many member states are still struggling to achieve social consensus on managing the Natura 2000 areas (Hochkirch *et al.* 2013). Thus, several questions have remained open. On which sources does the legitimacy mostly rely on in MLG contexts? How does participation function across multiple governance levels, and how can it contribute towards greater legitimacy of ecological network governance under such conditions? Few studies (e.g. Paavola 2004; Engelen *et al.* 2008; Apostolopoulou *et al.* 2012) have systematically looked at the different factors that are likely to contribute to the (il)legitimacy of governance practices, specifically in MLG contexts.

The multi-faceted nature of participation as an academic concept (see,

e.g. Fung 2006), as well as the mixed evidence about its benefits and drawbacks in the practice (Irwin and Stansbury 2004), has prompted the development of different approaches to analyse and evaluate them. Specifically, there is still a gap in the understanding on how participation works under different conditions. Indeed, different problems have arisen from the participatory governance practice, specifically in the Central and Eastern European (CEE) countries. Institutional rebuilding from the political and economic regimes from the recent past (e.g. socialism or communism) towards decentralisation, the growing influence of non-state actors and the emergence of multi-level governance (MLG) systems (Kluvankova-Oravska *et al.* 2009) are keywords characterising the decision-making contexts during recent decades in many CEE countries. However, a mismatch between the old hierarchical and new decentralised regimes (Kluvankova-Oravska *et al.* 2009) can manifest itself in various ways, such as via a weak representation of the stakeholders from private and voluntary sectors in decision-making processes, or power asymmetries between and coordination problems across different governance levels (Sladonja *et al.* 2012; Falaleeva and Rauschmayer and 2013; Stringer and Paavola 2013). In fact, under some circumstances, the emergence of more inclusive governance approaches can even stir conflicts between the actors from different levels (Niedzialkowski *et al.* 2012; Stringer and Paavola 2013).

Estonia, one of the CEE countries, forms a specific case in the context of these challenges. The country has a long history of biodiversity conservation, based on customary and formal rules: with the traditions for nature conservation rooted in the folk religion and the first protected area established in 1910 (Sepp *et al.* 1999: 162; Caddell 2009). Since then, the number of designated protected areas has been continuously growing (Tuvi *et al.* 2011). Estonia is also among the pioneers in Europe to introduce a national ecological network concept in the 1980s (Bennett and Mulongoy 2006: 13). Nowadays the national concept of ecological networks – Green Network – is embedded in the country's spatial planning system (Jongman *et al.* 2004). The past two decades, after the country regained its independence in 1991, have witnessed several institutional changes where participation has gradually been integrated into the spatial planning and nature conservation sectors. Since entering into the EU in 2004, Estonia has also become part of its multi-level governance context (Kungla 2007). Estonian spatial planning policies

and legislation are increasingly more oriented towards the integration of knowledge from different sectors and stakeholders, and towards the recognition that participatory planning should function as learning processes (Estonian Parliament 2003; Hendrikson & Ko 2004; Estonian Ministry of Interior 2012a). In the biodiversity conservation sector, after the controversial designations of the Natura 2000 areas, specific attention is paid on stakeholder involvement, which should play a key role in managing these areas (*Keskkonnaministri 20. oktoobri määrus nr. 60...* 2009). The practice of participation has yet encountered several challenges (Estonian Ministry of Environment 2007; 2010; 2013) that pose a number of questions. For example, who are the relevant stakeholders and how can they be identified? How can they be informed early and sufficiently enough? How can we bring together the different knowledge-claims, interests and other concerns? There have been calls for establishing a better "participatory culture" in Estonia (e.g. Lepa *et al.* 2004), but what does such culture mean in practice? How do the public officials understand involvement and how motivated are people to participate? What are the possible reasons behind the opposition towards biodiversity conservation and what role does participation play here? How can biodiversity governance become more legitimate?

This thesis synthesises six original publications (as listed above, and hereinafter referred to as Papers), provides some reflections on the practical application of participatory approaches within the selection and designation of Natura 2000 areas (Papers **I**, **II**), as well as within the planning and implementing the national Green Network in Estonia (Papers **IV**, **V**, **VI**). It also illustrates some challenges that the multi-level biodiversity governance context poses for participatory processes and their outcomes, based on empirical cases from other EU countries (Finland, the UK, Germany, Spain, Greece, Hungary and Slovakia, Paper **III**). The following research questions are addressed:

1. To what extent are participatory approaches able to function as effective awareness-building tools? Which factors facilitate it?
2. What are the instances of and factors contributing towards knowledge integration (sub-question 2.1) and social learning (2.2) within participatory processes in ecological network governance?
3. Which process-related and contextual conditions affect the legitimacy of ecological network governance?

The thesis is structured as follows. Chapter 2 outlines the background, basic theoretical considerations and the research gap for the study: in section 2.1 the main concepts of the thesis (participation, multi-level governance and ecological networks) are introduced and examined, section 2.2 provides a background for the selected conceptual-analytical framework, which is presented in the next sub-chapter (2.3). Chapter 3 summarises the main research gaps and elaborates in greater detail on the research questions addressed in the thesis. Chapter 4 describes the general methodological approach (qualitative case studies) and explains the used data gathering and analysis methods. In the fifth chapter, the main results of the synthesis from the original Papers (**I** to **VI**) are presented according to the three research questions and the conceptual-analytical frame. The final chapter (6) summarises the main conclusions from the synthesis, and draws the recommendations for future research as well as some practical implications on the basis of this study.

The synthesis of the analysed cases from the Papers presented in this thesis demonstrates that more personalised and practice-based ways of communication and involvement are needed to raise stakeholders' awareness. The results also show that certain stakeholder attributes (e.g. their attitudes towards each other's expertise), as well as some characteristics of decision-making processes are important factors affecting knowledge integration. Furthermore, the results add on to earlier studies that have mainly looked at social learning via collaborative processes, by showing that learning is also easily catalysed through conflictive situations. The thesis also suggests a set of contextual factors that can affect legitimacy, in addition to certain procedural factors.

2. LITERATURE REVIEW AND CONCEPTUAL-ANALYTICAL FRAMEWORK

2.1. Concepts

2.1.1. Multi-level environmental governance: actors, institutions, scales and levels

The term "multi-level governance" has emerged in the 1990s in relation to EU-studies (Bache and Flinders 2004). Since then, the concept has gradually been introduced to a variety of fields, including the environmental domain (Smith 2007).

In general, the concept has two facets. First, different meanings are associated to the notion of "governance". Rhodes (1996) notes that despite of the wide usage of this concept, its meaning has remained rather vague. He lists and discusses six different definitions of the notion, including the "minimal state" where governmental interventions into public issues are marginal (*ibid.*: 654, 657), or governing by self-organising networks of public and private actors (*ibid.*: 658). Governance, seen from this perspective, basically means a new process or method of governing (Rhodes 2007: 1246). Second, the concept of "levels" is inherent to the MLG notion. The understanding of the terms "levels" and "scales" in this thesis builds on the works of Gibson *et al.* (2000: 218) and Cash *et al.* (2006), who note that the words are often used interchangeably as synonyms, they are essentially different notions. Scales can be "spatial, temporal, quantitative or analytical dimensions" to study different objects, whereas levels refer to distinct points along these dimensions (Gibson *et al.* 2000: 219). Thus, the concept of "levels" in this thesis refers to analytical units along the spatial-jurisdictional and institutional-policy scales (see, e.g. Cash *et al.* 2006).

MLG denotes the "dispersion of authority away from central government: upwards to the supranational level, and/or downwards to the regional or local level (sub-national) or sideways to the public-private networks" (Hooghe and Marks 2001: 4). This definition of MLG highlights two aspects: first, the changing relationships between and roles of different actors, foremost in terms of decentralisation or devolution (Arts *et al.* 2006), and second, the involvement of a wider set of actors beyond the

government, from both, public and private domains, "in contextually defined forms of exchange and collaboration" (Peters and Pierre 2004: 78). MLG therefore points at the vertical and horizontal scope of interactions. The word "multi-level" refers to the actors operating at different territorial-jurisdictional levels and their relationships (vertical dimension), and "governance" implies the growing influence of various non-state actors from different sectors (horizontal dimension) (Bache and Flinders 2004: 18), i.e. governance is "the totality of interactions in which government, other public bodies, and civil society participate, with the objective to solve societal problems or creating societal opportunities" (Meuleman 2008: 11).

Institutions, understood from the sociological perspective (e.g. Edelenbos 2004: 115-116), mean rules that "define social practices", assign roles to the different actors and influence their interactions (Young 2002b: 5). Thus, institutions are essential elements of the MLG concept. Such rules include sets of formal and informal regulations that guide the behaviour of different actors, either by constraining or enabling it (North 1990: 3; Helmke and Levitski 2006: 3-4). Formal rules are usually codified into legally binding documents and enforced through official channels of state administration (Pahl-Wostl 2009: 356). Informal institutions, in contrast, are usually unwritten socially shared rules, such as social or cultural norms (*ibid.*), developed, communicated and sanctioned outside the officially sanctioned channels (Helmke and Levitski 2004: 727). Depicted on a scale (Cash *et al.* 2006), institutions can range from more general, such as international multi-lateral agreements, to more specific national legislation, and finally to concrete locally relevant rules-in-use (*ibid.*).

The concept of MLG is relevant for the environmental domain in several ways. On the whole, environmental policies are produced in a continuous interaction between different spatial-geographical (Peuhkuri and Jokinen 1998: 140) but also jurisdictional and institutional levels. More specifically, a systems-scholarship perspective suggests that ecological and social systems are interconnected, and looks at the relationships, termed as "interplay" and "fit" (Young 2002b: 20-25), between actors, institutions and environmental resources. This perspective can help us to understand how these systems interact (Folke *et al.* 2005; Paavola *et al.* 2009: 152). Many environmental problems,

such as climate change, loss of biodiversity, or degradation of water resources transcend administrative boundaries (interactions along spatial scales), might have long-term impacts (interactions along temporal scale), and touch upon different stakeholders (interplay along a scale of social organisation) (see, e.g. van den Hove 2000; Hogl *et al.* 2012: 3-4). Accordingly, the governance solutions designed to tackle such problems should take these aspects into account, e.g. by considering the relevant spatial or temporal scope of the problem but also issues related to its social organisation (i.e. horizontal interplay) (Paavola *et al.* 2009: 149). If guided effectively, these interplays in MLG contexts can be expected to allow for the use of info and knowledge from multiple levels, and to offer a greater flexibility in designing locally adaptable governance solutions (Nielsen *et al.* 2013: 439). Particularly, Paavola *et al.* (2009: 149) distinguish between wider governance regimes and more specific purposive governance frameworks. The first denote institutional interventions, like the EU directives and policies, or national legislation, designed for a specific goal, such as the protection of biodiversity (*ibid.*). The latter – governance frameworks – refer to a broader set of institutions on various administrative levels, including informal rules that guide the value orientations, attitudes, understandings and ultimately the behaviour of various actors, embedded in a particular social, economic and cultural context, that (unintentionally) affect biodiversity (*ibid.*). Thus, to better understand the wide range of possible factors affecting the interactions among different actors, and the ultimate environmental and social outcomes of governance processes, it is specifically important to consider these broader institutional regimes (*ibid.*).

Linking the MLG concept to the notion of ecological networks (explained in section 2.1.3 below), the term "landscape governance" (Görg 2007) seems to be specifically relevant, in addition to terms like "environmental governance" or "natural resource governance". The notion of landscape intrinsically links the spatial-natural scales with their socio-cultural dimensions, i.e. the social construction of places (e.g. patterns of land-use) (*ibid.*). As mentioned above, social and natural scales are both important for understanding the interactions between ecological, political and social systems.
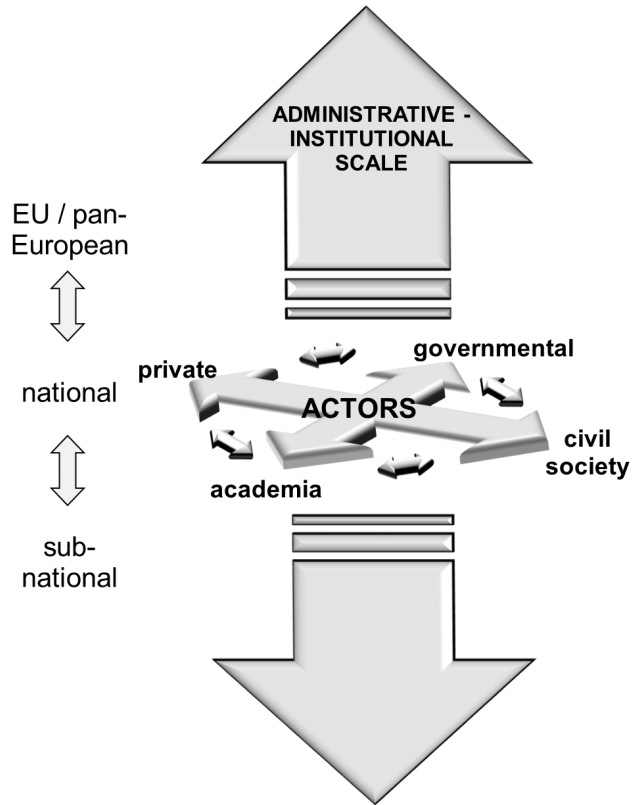
Figure 1. A general scheme of multi-level governance contexts: vertical and horizontal interactions between levels (along the administrative-institutional scale) and actors (illustration by the author).

The MLG concept in this thesis is understood as a broad and general contextual notion that embeds participatory decision-making processes (as explained in the next section below). The concept here refers to the distribution of decision-making power among and interactions between different actors from multiple levels, along the administrative-institutional scale (Figure 1) (adapted from Arts *et al.* 2006; Cash *et al.* 2006). Thus, MLG is treated as a broad notion where particular actor constellations, institutional settings and the interactions between them (see, e.g. Pahl-Wostl *et al.* 2012) may depend on a concrete situation.

2.1.2. Participation

As can be seen from above, the participation of the public, different actors or stakeholders has become increasingly important in the practices as well as academic debates on multi-level environmental governance. This section further explains the meaning of the key terms associated to the concept of participation.

Different approaches to define participation have been proposed. The "ladder of participation", introduced by Sherry Arnstein (1969), depicts involvement as a one-dimensional continuum, where various levels or categories of participation can be distinguished, based on the extent power is shared among the involved parties. This approach has also continued to have a remarkable relevance in contemporary studies (Cornwall 2008: 270). Yet, Arnstein's conceptualisation of participation has been criticised for focussing solely on the issue of power distribution, which might neglect other goals for participation, such as social learning (Tritter and McCallum 2006; Collins and Ison 2009). Thus, the "ladder" has been subject to various amendments (for an overview, see, e.g. Bruns 2003). Figure 2 by Pomeroy and Douvere (2008) provides one example of a possible interpretation of the "participation ladder", which is partially based on the extent of power sharing, but also considers some other aspects, like the direction of interactions and information flows between the actors.
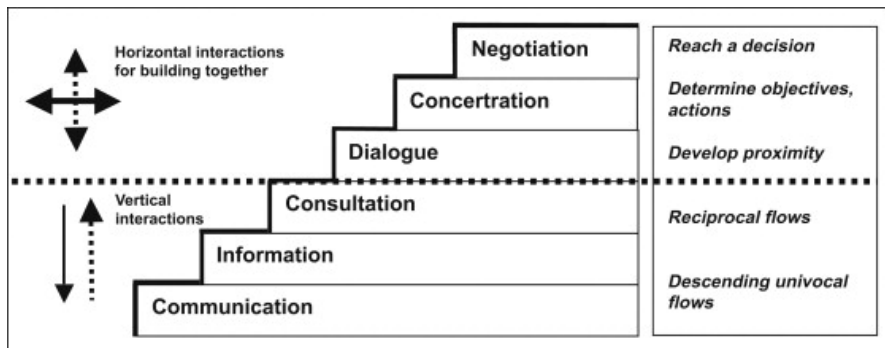

Figure 2. Different forms of participation (source: Pomeroy and Douvere 2008: 817).

Responding to this critique, some later attempts to define participation have added further dimensions to it. Fung (2006) offers a view of

participation on the basis of (i) who participates, (ii) the way they interact and (iii) the extent power is shared among them (Figure 3 below). Berghöfer and Berghöfer (2006) propose an analogous approach along four axes of differentiation: who participates; in what dimension; how the process is implemented; and for what purposes, e.g. to find innovative solutions to the problem in question, or to strengthen civil society. A similar classification (Dietz and Stern 2009) distinguishes five aspects of involvement regarding to who is involved, at which stage of the process they are involved, the intensity of involvement, the extent of power sharing, and the goals of the process. The practical design of participation, e.g. the goals of a participatory process, but also the choice of participants and involvement methods, is largely based on different rationales or underlying principles for participation (e.g. Fiorino 1990; Stirling 2006; Stirling 2008).

With regard to "who" participates, two further concepts have been distinguished: "public participation" and "stakeholder participation", although they are also often used interchangeably as synonyms, e.g. Glicken (2000) or Rowe and Frewer (2005: 251). The "public" is a broader term, referring to "a collection of individuals generally unstructured and unorganised" (Luyet *et al.* 2012: 213). A wide variety of approaches to explain the concept of "stakeholder", specifically in the natural resource management literature (see, e.g. Billgren and Holmen 2008) exist, but one of the most known definitions is the one by Freeman (2010: 46), which takes the "affect criterion" as a basis: "stakeholders are any group or individual who can affect or is affected by the achievement of organisations' objectives". Thus, stakeholder participation denotes "processes where individuals, groups and organisations choose to take an active role in making decisions that affect them" (Reed 2008: 2418). The concept of "stakeholders" is sometimes used in parallel with the term "actors" (e.g. Brugha and Varvasovszky 2000; Dewulf *et al.* 2005; Prell *et al.* 2008; Pomeroy and Douvere 2008). The concept of "actors" is perhaps more widely used in policy analysis literature (e.g. actors in advocacy coalitions, see for example, Weible *et al.* 2009), and appears to refer to a more "active" (i.e. those individuals, groups or organisations who affect the decisions) (Ramirez and Fernandez 2005), or to a more general set of players, like in the following definition "four central actors in modern plural societies: governments, economic players, scientists and civil society organisations" (Renn and Schweizer 2009: 175). In this thesis, the concepts of stakeholders and actors are used as synonyms.
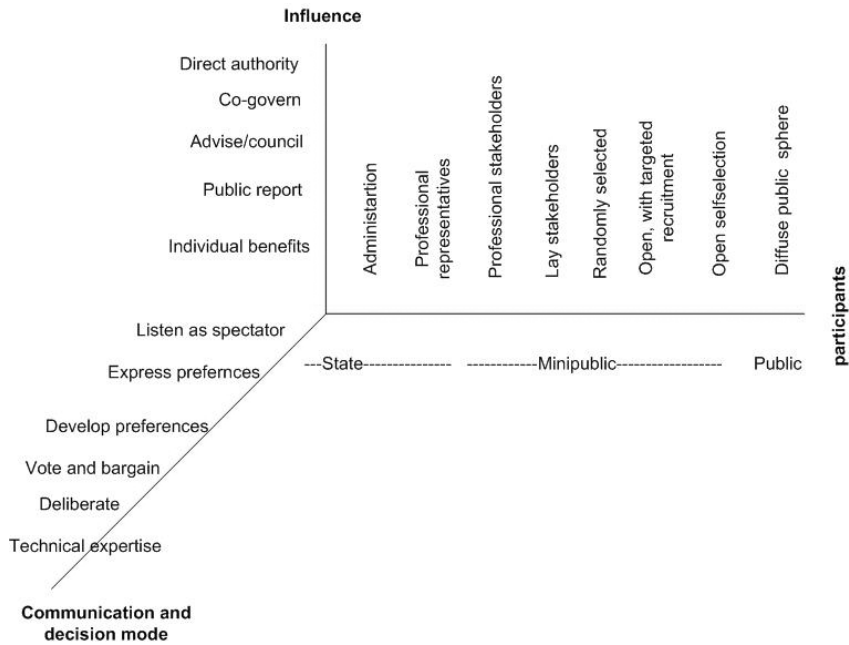
Figure 3. The "participatory democracy cube" according to A. Fung (2006) (figure source: http://www.e-belarus.org/article/images/fig7.jpg).

In general, the concepts of "participation" or "involvement" in this thesis have different, yet interlinked meanings and connotations. On the one hand (mainly in Papers **I**, **II**, **V**), involvement or participation refer to processes organised by different governmental bodies from various administrative levels (i.e. "invited participation", see Cornwall 2008: 281), to interact foremost with the stakeholders from governmental, private and voluntary spheres, and/or with the public at large. Such processes may be designed based on different rationales, and can thus serve different purposes (Fiorino 1990), e.g. the sharing of decision-making power or mutual learning among the participants. On the other hand (certain cases in Paper **III**, but also **IV**, **VI**), participation denotes self-organised involvement through various informal processes (see, e.g. Pahl-Wostl 2009; Moellenkamp *et al.* 2010), such as voluntary bottom-up initiatives, self-organising networks, or open discussions taking place e.g. via media. These interactions are not (only) shaped by formal rules (Pahl-Wostl *et al.* 2007b), and often follow a more open and unstructured format (Newig *et al.* 2008).

Different terms relate to the concept of participation, like "participatory processes", "participatory approaches", "participatory governance", or "communication", "consultations", "cooperation", "collaboration", which are sometimes used as synonyms. Yet, below it is shown why it is useful to treat them as distinct notions. The terms "participatory processes", "participatory approaches", "participatory governance" can be seen as embedding each other in the following way. Participatory processes denote concrete involvement processes. Then, participatory approaches are here understood as a more general term for different involvement mechanisms, often for a specific domain, e.g. participatory approaches for planning. Lastly, participatory governance can be seen as the broadest notion among the three: to denote ways of governance where participatory processes and approaches take a central role, i.e. the focus is "on active partnerships and collaboration between civil society, the private sector and governments" (Reddel and Woolcock 2004: 75). Terms like communication, consultation, or cooperation refer to different forms of participation, e.g. the distinction made above by Arnstein (1969) or Pomeroy and Douvere (2008). Communication mostly refers to one-way information flows from one stakeholder to another (Deverka *et al.* 2012: 6). Communication is thus an essential part of all participatory processes and approaches. Consultations are forms of participation, which create two-way flows of information and sharing of decision-making power to a certain extent: i.e. the stakeholders are asked for their inputs but taking them into account by the decision-makers is not guaranteed (Bruns 2003: 13; Rowe and Frewer 2005: 255). Consultations are widely-used forms of participation (often as a legal requirement), but they often denote the "lowest" step on the participation ladder, since not much decision-making power is granted for those being consulted (Bruns 2003; Cornwall 2008). Collaboration or cooperation also mean two-way interactions, but the participants have here a more continued and active role in the decision-making processes, for example, by participating in gathering and analysing the information, proposing alternatives and solutions (Bruns 2003: 14). However, the final decision lies within the authorities (*ibid.*).

The governance process is often depicted as a cycle that includes multiple steps: from problem identification, planning and decision-making, implementation and enforcement to performance assessment (e.g. Leach *et al.* 2003; Olsen *et al.* 2011). It is debatable, at which stage exactly

participation should occur in this cycle. Yet, many studies suggest that when governance touches upon complex issues, like most environmental problems tend to be – and involves multiple administrative levels – participation of the relevant stakeholders is essential in all stages of the cycle (Leach *et al.* 2002; Pahl-Wostl *et al.* 2007a; Olsen *et al.* 2011), although its function and form are likely to differ in different stages of the cycle. The governance processes in this thesis mostly concern the implementation stage of EU policies (Papers on Natura 2000: **I**, **II**, and partially **III**), or the planning (and to a certain extent the implementation stage) of national policies (Green Network governance cases: **IV**, **V**, and **VI**).

2.1.3. Ecological networks

2.1.3.1. Concepts and implementation patterns on European and national levels

Across Europe, different national ecological network concepts exist. Yet, they share certain common characteristics (Bennett and Mulongoy 2006: 4): by focusing on the conservation of biodiversity on a broader level than a protected area; by aiming at the improvement of ecological coherence; by admitting that certain critical areas need to be buffered from potential harmful external effects; and by encouraging the sustainable use of natural resources. A common application model of such principles is based on the establishment of core areas, corridors and/or stepping-stones, and buffer zones (see Figure 4) (Bennett 2004: 6; Bennett and Mulongoy 2006). Ecological networks thus aim to respond to problems with habitat fragmentation scale-sensitively: by providing policy and legislative solutions that should match the jurisdictional-institutional scale of these problems with their spatial-ecological dimensions.
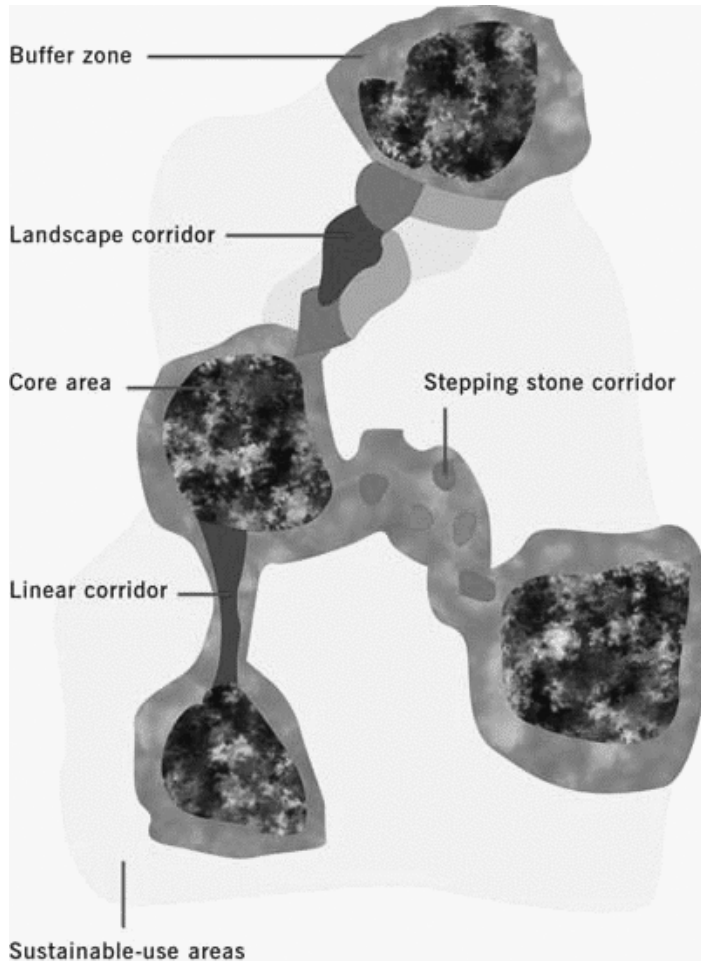
Figure 4. A model of a possible spatial configuration of an ecological network (source: Bennett and Mulongoy 2006: 5).

Ecological networks are planned and implemented at different spatial and jurisdictional levels (Jongman 1995). In Europe, mostly the EU and Pan-European level, national and sub-national levels (e.g. regional and local) are concerned (*ibid*.: 172). On the Pan-European level, the idea of ecological networks has foremost been integrated into biodiversity conservation policies, but some spatial planning policies also refer to them. Table 1 provides an overview of some key Pan-European and EU institutions that relate to ecological networks, e.g. which include specific provisions for promoting (*in-situ*) biodiversity conservation, functional connectivity and spatial connectedness on landscapes. The Pan-European

Ecological Network (PEEN), based on the Pan-European Biodiversity and Landscape Strategy (PEBLDS), endorsed in 1995 by the Council of Europe, UNEP and ECNC, belongs to the most ambitious international ecological network programme (Bennett and Mulongoy 2006: 13). The main aim of the PEEN has been to promote the transboundary cooperation for ecological networks, by providing a voluntary frame for integrating different national and international network programmes, such as the Natura 2000 or the Emerald network (Tillmann 2005: 121-122). Three indicative maps of ecological networks in Central and Eastern Europe (2002), Southern Europe (2006) and Western Europe (2006) have been developed under PEEN (Jongman *et al.* 2011). The launching of PEEN has reinforced the implementation of ecological networks in countries where they were already underway, and stimulated some new initiatives in other countries (Bennett 2007: 23). However, the practical implementation of PEEN has met several challenges, e.g. in combining the different conceptual approaches and datasets of national ecological networks (Jongman *et al.* 2011), or difficulties in facilitating cooperation between different sectors (Jongman 2012: 8).

Within the EU, the Habitats (Council Directive 92/43/EEC) and Birds Directives (Council Directive 79/409/EEC & 2009/149/EC) are the cornerstones of EU's biodiversity legislation, and give the basis for forming Natura 2000 areas for the protection of habitats and species in all member states (Ferranti *et al.* 2013). According to Article 4 in the Habitats Directive, each member state is obliged to propose a list of sites comprising of habitat types (listed in Annex I) and species (Annex II) (Caddell 2009: 318). Based on national lists the European Commission draws up "a draft list of Sites of Community Importance (SCIs)" (*ibid.*). Principles of enhancing ecological coherence and connectivity are recognised in the Birds Directive (preamble, art. 3, 4) and Habitats Directive (preamble, art. 1, 3, 4, 6, and specifically 10) (Bennett 2008: 7). However, no specific measures have been developed for achieving these goals when implementing the directives in the member states, which means in practice that only a "few corridors have been established as a formal part of the Natura 2000 network" (*ibid.*: 8). Yet, the Natura 2000 programme is expected to contribute essentially to protecting the core areas of the PEEN (Bonnin 2007: 51). The PEEN has been regarded as an important tool for enhancing the coherence of the Natura 2000 areas across the EU (Mücher *et al.* 2009: 148-149). However, the nature and extent to which the PEEN and the Natura 2000 network

have actually been integrated is still unclear: methodologies are being developed to combine the datasets of the two networks (Biondi *et al.* 2012), or to determine the connectedness and connectivity between Natura 2000 areas (Opermanis *et al.* 2012). Recently, the EU biodiversity strategy has introduced the Green Infrastructure concept (European Commission 2011a; European Commission 2013), bringing the issue of fragmentation once again into its political agenda. The goals of the Green Infrastructure concept are broadly defined: in addition to preserving interconnected natural areas for ecological purposes, the concept also aims at maintaining healthy ecosystems for human needs, such as delivering ecosystem services (European Commission 2011a). In addition, the EU sees the Green Infrastructure to be implemented mainly via integrated land use and spatial planning (*ibid.*). Spatial planning policies at the EU, e.g. the European Spatial Development Perspective (ESDP) (European Commission 1999), or at the Pan-European level, e.g. the Guiding Principles for Sustainable Spatial Development of the European Continent (Council of Europe 2000), do not go much beyond recognising the fragmentation problem (Bennett 2008). Some of the recent spatial development strategies at the EU level, e.g. the Territorial Agenda of the EU to 2020 (European Commission 2011b) mention the need to address the problems with fragmentation of natural areas, via referring to mostly ecological networks proposed in biodiversity policies.

Table 1. Selected institutions at Pan-European and EU levels that entail specific provisions for ecological networks.

Institution (e.g. policy/ legislative act)	Year of adoption	Spatial-jurisdictional level	Policy sector of origin	References to ecological networks, implementation patterns
PEBLDS (Council of Europe, UNEP and ECNC 1995)	1995	Pan-European	Biodiversity	Pan-European Ecological Network (PEEN): a framework for enhancing transboundary cooperation for (national) ecological networks
Birds (Council Directive 79/409/EEC & 2009/149/EC) **and Habitats Directives** (Council Directive 92/43/ EEC)	1979 / 2009 & 1992	EU	Biodiversity	- Natura 2000 network: sites' and species' protection by establishing an EU-wide network of protected areas (PAs); - Principles of enhancing ecological coherence and connectivity between sites recognised in certain articles of the directives, but no specific implementation measures for them
Biodiversity Strategy (European Commission 2011a) **& EC Communication on Green Infrastructure** (European Commission 2013)	2011 & 2013	EU	Biodiversity	Green Infrastructure: for preserving interconnected natural areas for ecological purposes; to maintain healthy ecosystems for human needs, such as delivering ecosystem services
ESPD (European Commission 1999)	1999	EU	Spatial planning	- Natura 2000 and other ecological networks help to protect valuable biotopes; - Establishment of links between PAs should be encouraged (via, e.g. a broader land-use policy); - Integrated development strategies and planning concepts, spatially coordinated approaches between Community policies and on corresponding national measures
Guiding Principles (Council of Europe 2000)	2000	Pan-European	Spatial planning	Re-establishing and conserving natural ecosystems via the Natura 2000 network
Territorial Agenda to 2020 (European Commission 2011b)	2011	EU	Spatial planning	- Well-functioning ecological systems are needed for sustainable development; - ecological systems and PAs need to be integrated into Green Infrastructure networks on all levels

On national levels, on the whole, two different approaches for developing national ecological networks can be distinguished in Europe (Jongman 1995; Jongman *et al.* 2004). First, the eco-stabilising approach proposes landscape zoning in a way that intensively used areas are balanced with natural areas, to form a coherent, self-regulating system (Bennett and Mulongoy 2006: 4). This approach looks at the landscape from a rather general perspective: by assuming that land use affects the interactions between different landscape elements, and thus it is necessary to achieve the stability of the landscape as a whole (Jongman *et al.* 2004). Concepts for developing ecological networks in several Central and Eastern-European countries follow the eco-stabilising approach (*ibid.*). Hence, ecological network concepts in, e.g. the Czech Republic, Slovakia, Lithuania or Estonia have more functions than nature conservation (*ibid.*). Networks in Eastern Europe are strongly related to the spatial planning sector (*ibid.*: 308; Cil and Jones-Walters 2007: 34).

Second, in Western Europe a different kind of approach to ecological networks is applied. The approach starts from the assumption that habitat fragmentation increases the vulnerability of species populations (Bennett and Mulongoy 2006) and therefore "the biological conductivity in the landscape" needs to be maintained or restored, via supporting the physical connectedness and functional connectivity between various landscape elements (Jongman *et al.* 2004: 308-309). The approach focuses on biodiversity conservation but at a more a general level than species or site protection (Jongman 1995: 310), by "integrating protected areas into linked networks" (Bennett and Mulongoy 2006: 4). Although this approach places more importance on the ecological functions of landscapes, specifically ecological corridors include further goals, e.g. aesthetic, educational, and recreational purposes (Jongman 2003: 177-178).

As can be seen, ecological networks have certain ecological as well as socio-economic dimensions (Bennett and Wit 2001: 23). The implementation of ecological network concepts is ideally foreseen via integrating nature conservation principles into relevant land use sectors, e.g. into agricultural, forestry, tourism practices, where both, environmental and ecological considerations, as well as the socio-economic functions of the landscape are equally considered (Jongman 2003: 180; Jongman 2012: 9). One way to achieve this is to encourage communication and cooperation among and participation of different stakeholders and the

wider public (Jongman 2003; Jones-Walters 2007; Jones-Walters and Cil 2011). Empirical evidence suggests that such approaches have the potential to facilitate the practical implementation of ecological networks (Luz 2000). In fact, some authors (e.g. Opdam *et al.* 2006) see ecological networks as such as useful landscape planning tools, which have the potential to enhance collaboration between different stakeholders.

Participatory processes and their outcomes within ecological network governance on multiple levels, foremost along the spatial-administrative and institutional-policy scales (see also Figure 10 below), stand at the core of this thesis. Broadly defined, ecological network governance includes the planning and implementation of the Estonian national ecological network concept (Paper **IV**, **V**, **VI**), and issues related to designating the Natura 2000 areas foremost in Estonia (Paper **I**, **II**) but also in certain other EU countries (**III**). Some cases in Paper **III** further explore biodiversity governance on a more strategic level, such as the drafting of biodiversity action plans in the UK or in Austria.

2.1.3.2. The Estonian setting: developing the Green and Natura 2000 networks

As the selection and designation of the Natura 2000 network and planning of the national ecological network concept in Estonia – Green Network – constitute two basic examples in the empirical analysis below, this section provides a brief general overview of these processes.

The Estonian Green Network (Sepp and Kaasik 2002: 9-10) carries wider functions than species conservation, e.g. to influence material and energy flows through the landscape, or to guide various land uses and minimise conflicts between them via spatial planning. The concept is among a key instrument for integrating holistic landscape management concerns into sectoral policies in Estonia (Sepp and Kaasik 2002). Thus, the planning and implementation of Green Network touches upon different land uses, creating multiple interdependencies between stakeholders and their individual goals and interests (Kivimaa *et al.* 2009). According to the Planning Act (Estonian Parliament 2003), the Green Network planning is integrated into spatial planning on national, regional and local levels (Figure 5 depicts the timeline of Green Network planning), and is coordinated by the Ministry of Interior, regional

(county) and local governments. The national long-term spatial plan –
"Estonia 2010" – establishes corridors and 12 core areas of national and
international importance (Estonian Ministry of Environment 2001).
The new national spatial plan, "Estonia 2030+" (Estonian Ministry of
Interior 2012b: 42-44) foresees different principles and measures to
ensure the connectivity of the Green Network areas. On the regional
level, the Green Network was a sub-theme of county thematic planning
(initiated in 1999), which obligated each of the 15 counties of Estonia
to prepare a map of Green Network areas on a scale of 1:50 000, and
to define general conditions for land use in those areas. This process on
the regional level was finalised in 2008, and resulted in the specification
of the Green Network areas (Figure 6) that had been outlined in the
national spatial plan. On the local (municipal) level, Green Network
should be addressed as one topic in the comprehensive plans since 2003,
according to the Planning Act. Each comprehensive plan should specify
the boundaries and land use conditions established at regional level.
Comprehensive plans are currently being compiled and/or updated in
Estonia (Sepp and Külvik 2009).

The current spatial planning legislation (Estonian Parliament 2003)
requires informing the public and certain stakeholders when compiling
spatial plans at all three administrative levels (national, regional, local).
Broad, participatory approaches on these levels (Table 2 below) are
either aimed at "cooperation" – meaning a continuous interaction among
certain (mostly governmental) stakeholders, with the aim of reaching a
common ground, or "involving" (consulting) them – meaning that a
right to submit proposals or is granted for the public and all persons
whose interests or rights could be / are affected by the plan (Estonian
Parliament 2013). Papers **IV** and **VI** included in this thesis give some
reflections on the practice of applying participatory approaches on all
levels of spatial planning, and Paper **V** focuses on the participatory
processes at the county level thematic (Green Network) planning.
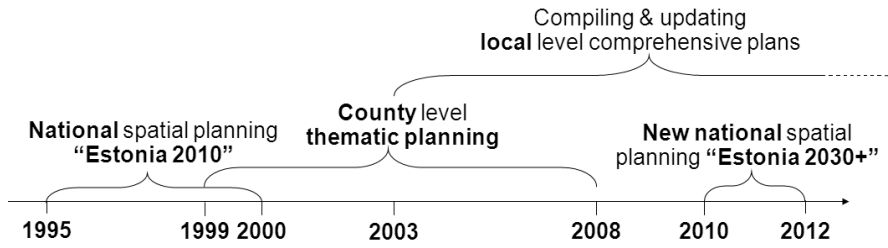
Figure 5. Timeline of planning the Green Network on different governance levels (illustration by the author).

Table 2. General requirements for participation within spatial planning processes on different levels.

Planning level	Requirements for participation according to the Planning Act (2003)
National spatial planning	- cooperation and consultation with different experts - cooperation with county governments, unions of local governments, relevant ministries
County (thematic) planning	- cooperation with certain governmental stakeholders (neighbouring county governments, local governments, MoI, other ministries whose competence areas the planning theme falls into) - consultation with the public and selected stakeholders - opportunities for all interested persons to submit proposals and claims about the plan draft
Local level (comprehensive) planning	- cooperation with the neighbouring local governments, county government, inhabitants of the area and other interested persons, local NGOs - public displays and meetings to introduce the plan drafts - opportunities for all interested persons to submit proposals and claims about the plan draft
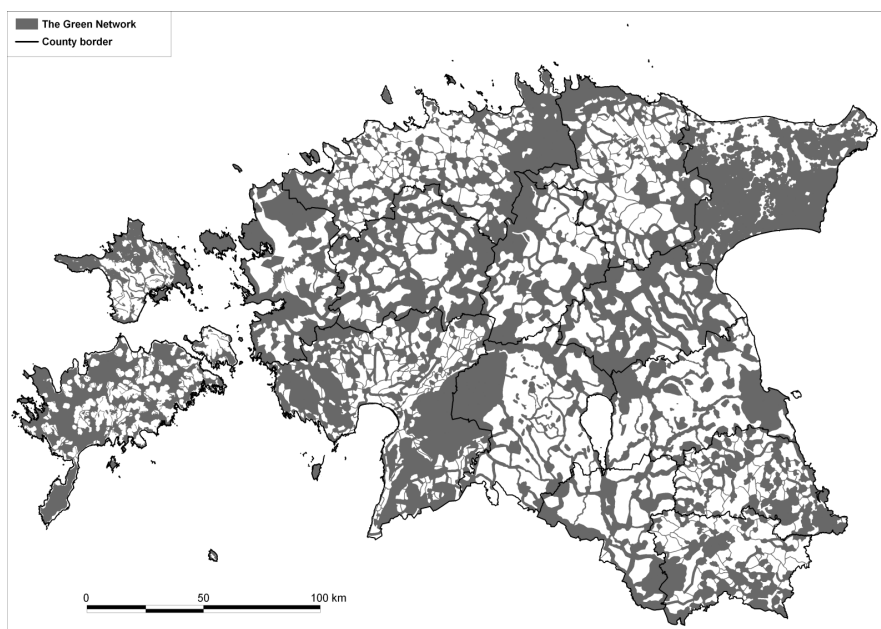
Figure 6. Distribution of Green Network areas in Estonia, as delineated within the county thematic spatial planning (source: Raet *et al.* 2010: 69).

When compared to the planning of the Green Network as described above, the development of the Natura 2000 network provides a somewhat contextually different example, as it constitutes the implementation of a legally binding agreement on (sub)national levels. By the 1st of May 2004, as Estonia accessed the EU, different inventories had been carried out by various experts on the basis of Habitats and Birds Directives, to prepare the selection of potential Natura 2000 areas in Estonia: national lists of SCIs, under the under the Habitats Directive, and Special Protection Areas (SPAs), according to the Birds Directive (Figure 7). The analysis in this thesis focuses foremost on participatory processes (Papers **I** and **II**) that were part of the site selections and designations. These processes included a general communication campaign that was initiated by the Estonian Ministry of Environment (MoE) from 2002, and consultations with key stakeholders, e.g. landowners, local governments, which were held in spring and summer 2004 (for details on this, see Papers **I** and **II**). The Estonian list of pSCIs was confirmed by the EU in 2008, and by now, the country has designated 66 SPAs according to the Birds Directive and 542 SCIs under the Birds Directive.

Natura 2000 areas with different protection regimes now cover about 16.5% of the terrestrial area of the country (Estonian Ministry of Environment 2013). The current Nature Conservation Act (Estonian Parliament 2004) not necessarily excludes economic activities on Natura 2000 areas, but different kinds of conservation regimes, e.g. restrictions to land use, or a statutory environmental impact assessment (EIA) apply, depending foremost on the conservation purpose of a concrete area, and other relevant factors. Participation, in the form of expert and interest groups' consultation and cooperation among them, is also foreseen by the current nature conservation legislation (Estonian Parliament 2004; *Keskkonnaministri...* 2009) in the management phases of Natura 2000 areas. Compiling of management plans for the Estonian Natura 2000 areas is currently still underway.
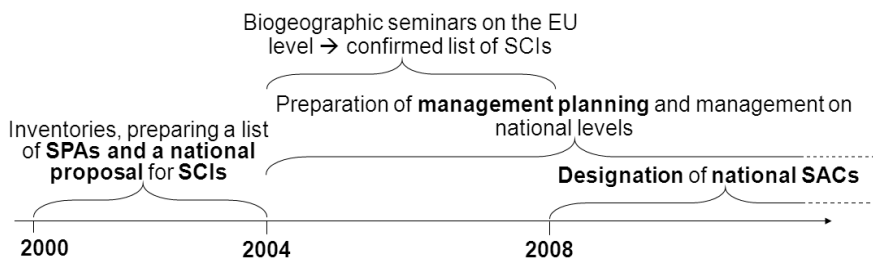
Figure 7. Timeline of selecting, designating and managing areas for the Natura 2000 network (illustration by the author).

The spatial overlapping between the Natura 2000 areas and the Green Network in Estonia is depicted on Figure 8 below. The two networks should complement each other (Raet *et al.* 2010), and this goal has been achieved well in 10 of the 15 Estonian counties, where 95% of the Natura 2000 areas have been included in the Green Network (*ibid.*).
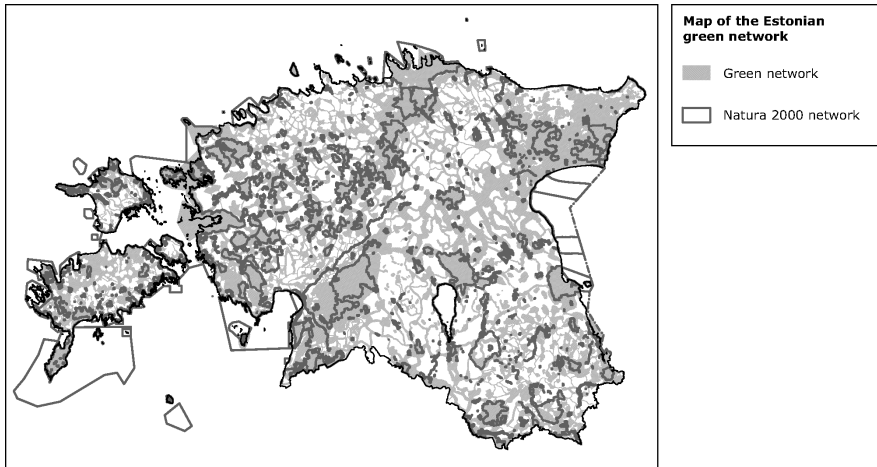
Figure 8. The Estonian Green Network and Natura 2000 areas (source: http://www.eea.europa.eu/data-and-maps/figures/map-of-the-estonian-green-network).

2.2. Background for the conceptual-analytical framework: approaches for analysing and evaluating participation

The practical application of participatory approaches has proven to be ambivalent in nature: it is expected to bring many benefits, but is also claimed to have different drawbacks. Such benefits include certain normative and more general assets, like an increased political equity among citizens through their empowerment, an improved legitimacy of the decision-making processes and their outcomes (Reed 2008: 2420; Dietz and Stern 2009: 48), or some more pragmatic arguments, like the enhanced quality and social robustness of the decisions, or an increased trust in decision-makers (Reed 2008; Dietz and Stern 2009: 50-51). However, if the complexity of existing power relationships is overlooked (Cooke 2001; Brown 2002: 11), overly simplistic assumptions about the empowerment of the public or stakeholders might give rise to unfulfilled expectations for the participants (Stringer *et al*. 2009: 79), the manipulation with the knowledge claims of local people (Mosse 2004: 651), or changing existing power structures might result in unexpected outcomes, such as "participation as the new tyranny" (Cooke and Kothari 2001).

So, given the contradictory evidence from the experiences with participatory approaches, an increasing attention is paid on evaluating these approaches (e.g. Conley and Moote 2003). Analysis and evaluation contributes to the understanding of how, to what extent and under which circumstances participation enables the expected benefits to be gained and contributes to the improvement of implementing strategies, policies, and legislation. Evaluation could also be seen as an inherent part of a performance-based environmental management, both in terms of improved environmental quality, or the social goals related to the process of achieving them (Chess 2000: 772). Both concepts – analysis and evaluation – imply seeking a deeper understanding on the role of participation in decision-making processes and their outcomes, but the latter has a more normative (sometimes also a prescriptive or recommendatory) connotation.

However, analysis and evaluation have remained contested fields that raise several conceptual and methodological questions (Chess 2000). The discussion here seems to revolve around two basic aspects. First, how can we define success, effectiveness or quality of participation? Different stakeholders may have contrasting views about what the process should look like and what kinds of results should it bring (e.g. Webler and Tuler 2006). If so, whose perspectives should be regarded as the most important and legitimate here (Chess and Purcell 1999; Abelson and Gauvin 2006)? Moreover, should the evaluations be done by external bodies (to increase objectivity) or by the participants themselves (Chess 2000)? Second, what is the object of evaluation: outcomes – impacts or results of involvement – (Chess 2000: 774), processes – the way stakeholders or the public are involved – or the context (Abelson and Gauvin 2006: 16, 31): the various situations in which involvement can take place?

Outcomes of participatory processes can relate to certain socio-economic factors: e.g. increased knowledge of participants, built relationships, or to the changes in the environment, such as the improved ecological status of habitats (Conley and Moote 2002). Outcome-based assessments enable the functioning of participation in several respects to be explored, but they may also face several challenges. Uncertainties about the causal linkages between the processes and outcomes constitute the major challenge here (Rauschmayer *et al.* 2009: 164). Process-oriented assessments look at certain normative aspects of process performance,

such as the transparency of the process, or strive to determine the extent to which the process is regarded as just (Conley and Moote 2002). However, this approach requires clearly defining the normative basis for analysis and evaluation, as well as the process boundaries (Rauschmayer *et al.* 2009: 165-166).

A way forward is to combine outcome and process-oriented assessments (Chess and Purcell 1999; Rauschmayer *et al.* 2009; Blackstock *et al.* 2012). This would mean finding a "middle ground", where equal attention is paid to process and outcome characteristics of participatory approaches (Chess and Purcell 1999: 2686). Such integration would, to a certain extent, enable some of the weaknesses of the two approaches to be compensated: e.g. process evaluations can serve as proxies to the quality of outcomes, and can give some evidence about the extent to which the process outcomes are adapted to the specific context (Rauschmayer *et al.* 2009: 168). A combined assessment would also give a more timely evaluation or analysis, than would be the case if focussing only on outcomes (*ibid.*: 169).

Compared with process and outcome-oriented assessments, approaches focusing on contextual aspects of participatory approaches have deserved rather little attention so far (e.g. Abelson *et al.* 2001; Abelson and Gauvin 2006; Gelders *et al.* 2010; Hermans *et al.* 2011). In order to develop a comprehensive understanding of the nature and impacts of participatory approaches, one may ask: "what works best when?" (Rowe and Frewer 2004: 547). The word "when" refers here to the multiplicity of situations where participatory exercises can be applied. No comprehensive understanding exists regarding which contextual aspects matter the most and how (Dietz and Stern 2009). Yet, it is suggested that certain aspects relating to the natural or biophysical environment and to the issue, e.g. the nature of the topics under discussion; type of decision being made; scope of the problem and its spatial and/or temporal scales, but also to the governance context, like the actors, their attributes (their interests, resources to exert power, etc.) and the institutional setting (*ibid.*; Abelson and Gauvin 2006; Pahl-Wostl *et al.* 2007b; Hermans *et al.* 2011), are likely to affect participation.

Any kind of evaluation or analysis starts from "comparing reality to a set of criteria" (Conley and Moote 2002: 375). Such criteria derive either from theory (Chess and Purcell 1999: 2686; Abelson and Gauvin 2006;

Rauschmayer *et al.* 2009) or from empirical studies and stakeholders' goals and expectations (Chess and Purcell 1999; Rauschmayer *et al.* 2009). Several frameworks for analysing and assessing participatory approaches in environmental governance have been developed and applied. Most of them include process and outcome (and more rarely context-oriented) criteria. Wittmer *et al.* (2006), for example, have proposed a framework for evaluating mechanisms of environmental conflict resolution. The frame includes four broad sets of criteria: knowledge management, social dynamics (both mainly process-oriented), legitimacy (process and output-oriented) and effectiveness (consequences-oriented, in terms of ecological and economic effectiveness) (*ibid.*). This framework has been applied to investigate various fields, e.g. the EIA (Rauschmayer and Risse 2005), fisheries management (Berghöfer *et al.* 2008), or biodiversity governance (Falaleeva and Rauschmayer 2013). Another framework for assessing the effectiveness of terrestrial protected areas has been developed by Lockwood (2010). It is more praxis-oriented, including the whole governance cycle, from considering the aspects of a particular context and studying the role of inputs, process characteristics to assessing the outputs and outcomes (*ibid.*: 756). Also, several analytical and evaluative frameworks have attempted to suit the analysis to particular policy domains, such as the EIA (Nadeem and Fischer 2011), forest management (Buchy and Hoverman 2000, Saarikoski *et al.* 2010), water management (Antunes *et al.* 2009; de Stefano 2010; Blackstock *et al.* 2012) or collaborative spatial planning (Faehnle and Tyrväinen 2013).

This thesis, while acknowledging the debates on what extent participatory processes help to improve the ultimate environmental quality (see, e.g. Newig and Fritsch 2009; Young *et al.* 2013b), focuses foremost on analysing and/or evaluating the social aspects of decision-making processes, their outcomes and the wider multi-level governance context.

2.3. Conceptual-analytical framework: awareness, knowledge integration, social learning and legitimacy

The conceptual-analytical framework of the thesis builds on two interconnected domains: knowledge and learning, and legitimacy in participatory multi-level governance contexts (see Figures 9 and 10). The approach combines process-oriented assessments with outcome and context-based analyses.

In exploring the role of knowledge and learning, the thesis focuses on three sets of concepts: *stakeholder awareness*, *knowledge integration* and *social learning* (Figure 10). First, the ability of participatory approaches to function as awareness-raising tools (an outcome indicator, see, e.g. Beierle 1999; Conley and Moote 2003) is studied. Issues of public and stakeholder awareness derive from normative-pragmatic arguments for adequate information provision as a basic right in the environmental domain, for the affected public and the stakeholders, e.g. the Convention on Access to Information, Public Participation and Access to Justice in Environmental Decision-making (the "Århus Convention", UNECE 1998) or the Directive 2003/4/EC on Public Access to Environmental Information and repealing Council Directive 90/313/EEC (EC 2003). Here, on the one hand, information disclosure is one prerequisite and basis for effective participatory processes. On the other hand, participatory processes as such are often expected to build environmental awareness among participants, and support taking more sustainable decisions at the individual level (see, e.g. European Commission 2003; Lee and Abbot 2003: 83; Demetropoulou *et al.* 2010). As the second and third aspects, instances of integrating various knowledge claims (process-based criterion), and examples of social learning (outcome criterion) through participatory approaches are investigated. Calls for recognising and integrating different knowledge claims are rooted in the ideas of post-normal science (e.g. Gallopin *et al.* 2002; Ravetz 2003). Social learning has been suggested as a key intrinsic quality criterion for participatory approaches (Garmendia and Stagl 2010: 1718). Different social learning concepts emphasise certain socio-relational (Pahl-Wostl *et al.* 2007b) or stakeholders' moral advancements (Webler *et al.* 1995), gained through participation.

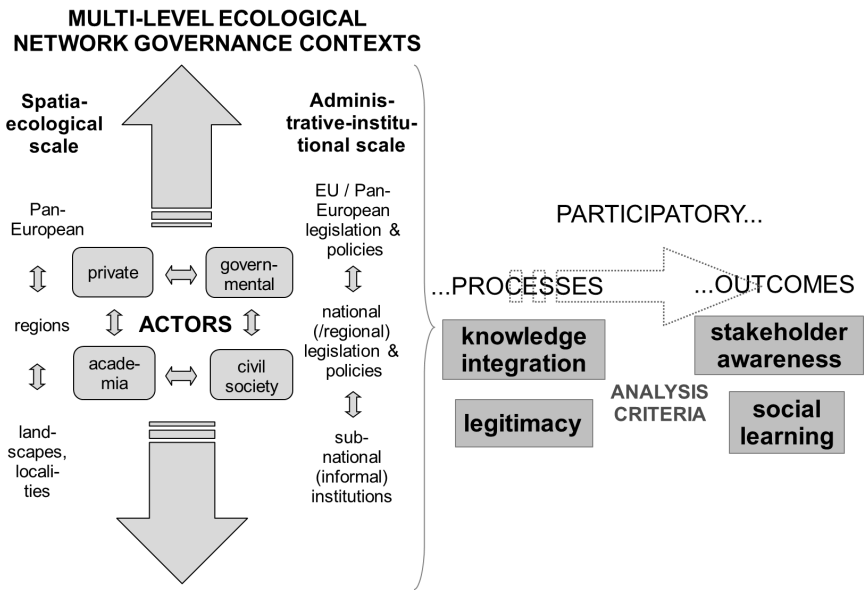**Figure 9**. Schematic illustration of the conceptual-analytical frame (illustration by the author).
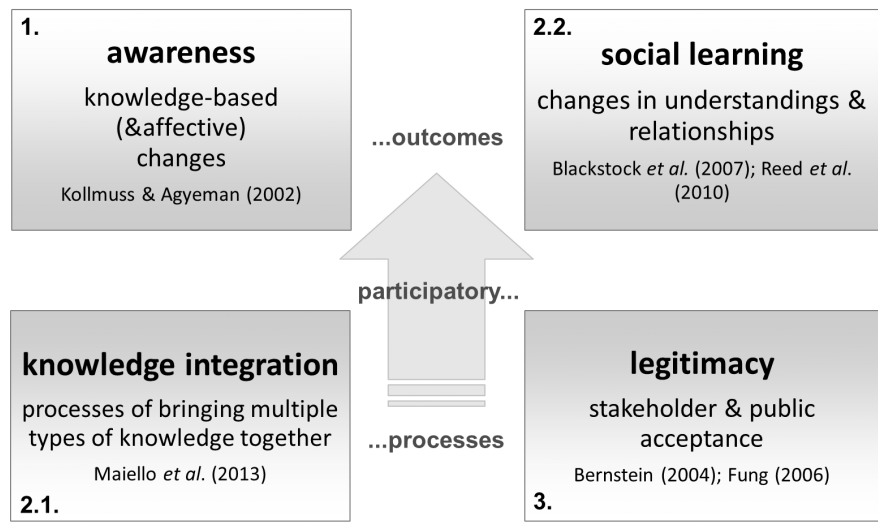
Figure 10. Analysis criteria: stakeholder awareness, knowledge integration and social learning, and legitimacy. The numbers on the corners in the four boxes refer to the respective research questions of the thesis, as formulated in the introduction and chapter 3 below (illustration by the author).

The implementation of biodiversity and spatial planning policies is facilitated to the extent to which such policies are perceived as fair and just by all affected parties (Brechin *et al.* 2002; Laurian and Shaw 2009). However, the ways legitimate decision-making processes and their outcomes can be secured are widely debated. Does legitimacy rely foremost on certain procedural elements of the decision-making process (a question of procedural justice) (Sunshine and Tyler 2003; Paavola 2004), or rather on certain attributes of their outcomes (distributive justice) (Paavola 2004; Paavola *et al.* 2009) or certain contextual factors (Raitio 2013)? The participatory democracy ideal considers legitimacy to derive foremost from the inclusion of all relevant parties (Young 2002a) but also from certain normative qualities, like the accountability or transparency of the decision-making process and/or the wider governance context. Legitimacy has been one key, mostly process-oriented criterion in many studies analysing and evaluating participatory approaches (e.g. Wittmer *et al.* 2006; Saarikoski *et al.* 2010; Valkeapää *et al.* 2013). Thus, *legitimacy* serves as the fourth analysis criterion in this thesis (Figure 10), with the intention to determine and explore key determinants of (il)legitimacy of participatory approaches within multi-level ecological network governance.

Participatory approaches and issues of awareness-building, knowledge integration, social learning and legitimacy are embedded in their multi-level governance contexts (Figure 10). These contexts include different actors with their specific characteristics (Arts *et al.* 2006), operating at different levels along the spatial and jurisdictional-institutional scales (adapted from Cash *et al.* 2006), but can also refer to other socio-cultural aspects that are likely to affect participatory processes. Sections 2.3.1 and 2.3.2 below describe and explain the meaning and rationales behind the selection of each concept in the conceptual-analytical frame in greater detail.

2.3.1. Knowledge and learning

2.3.1.1. Stakeholder awareness

Awareness has been used as an analysis criterion in several domains, such as environmental assessments (Sinclair and Diduck 2000), water governance (Kujinga and Jonker 2006), or urban forest planning (Sipilä and Tyrväinen 2005). In this thesis, awareness is understood foremost

in terms of cognitive, i.e. knowledge-based aspects. However, affective (attitude-based) components are also important aspects (Kollmuss and Agyeman 2002: 253) for indicating the legitimacy of decision-making (these aspects are addressed in more detail in sections 2.3.2 and 5.2 below). On the one hand, "educating" and informing the participants and creating supportive attitudes among them can be one important goal for participatory approaches (Beierle 1999: 81-82). Consequently, an increased awareness on the issue can be treated as one criterion to identify a successful participatory process (Laurian and Shaw 2009: 297). On the other hand, a sound informational basis on participation procedures and on the subject is one prerequisite for any participatory process (UNECE 1998; Janse and Konijendijk 2007), as it allows the public and the concerned stakeholders to make more informed judgements when their inputs are asked for (*ibid.*). Stakeholders' self-perceived poor competence about the issue in question, or a poor provision of information on the procedural issues of participation by the decision-makers, e.g. failing to identify and adequately inform the concerned parties, are substantial barriers to effective participation (Hartley and Wood 2005: 333-334).

Art. 22 in the Habitats Directive encourages educational and informational activities to be arranged on the need to protect species and habitats. Within the site designations on national levels, most of the EU member states organised certain involvement opportunities for the stakeholders and the wider public (Unnerstall 2008). However, the effective provision of information has proven to be challenging in several countries. In Germany, the Natura 2000 designations were regarded as a failure in terms of adequately informing the public and stakeholders (Eben 2006). Farmers and foresters claimed the information about the directive to be lacking, e.g. no specific details were given on the implications of the site designations (*ibid.*: 268; 274). In a similar way, insufficient information provision has been a problem during the designations in Greece (Apostolopoulou and Pantis 2009; Apostolopoulou *et al.* 2012) and in Poland (Grodzinska-Jurczak and Cent 2011), where a low level of awareness among certain stakeholder groups, e.g. farmers and foresters or other specific stakeholders, has been recorded (*ibid.*).

In Estonia, the designation of Natura 2000 areas was accompanied by a communication campaign and consultations which, among other objectives, were aimed at informing the public and certain stakeholders,

mainly landowners (**I, II**). However, it is not clear to what extent this goal has been achieved.

2.3.1.2. Different knowledge claims and their integration

Science has long been regarded as the unchallenged knowledge provider for environmental decision-making (Rauschmayer *et al.* 2009: 4). Consequently, technocratic approaches have dominated in the practice of environmental governance (*ibid.*). However, a recognition that environmental problems are also determined by values, interests or other more subjective instances (Maiello *et al.* 2013) has urged to place an increasing emphasis on participatory democracy models and on the post-normal type of science (Müller 2003), which admit that "facts are debatable in an uncertain world" (Rauschmayer *et al.* 2009: 45). The specific attributes of most environmental issues, such as their complexity, irreversibility, or expansion over wide spatial and long temporal scales (van den Hove 2000) determine that no single actor can handle such problems alone. Thus, as environmental problems are often complex and diverse, so should be the knowledge that guides their governance (Gray *et al.* 2012). Ideally, different knowledge-holders, such as scientists or locals, should come together to "understand, accept and benefit from each other's knowledge and cultural backgrounds" (Young *et al.* 2005: 1656). For example, Fischer and Young (2007: 278) found local people in a Scottish nature park to express rich mental constructs of the concept of biodiversity and its related content, regardless of their knowledge on the respective scientific concepts. The contextually nuanced end experiential perspectives of local people are likely to complement the more general scientific understandings of environment (*ibid.*; Raymond *et al.* 2010).

Different types of knowledge (and their providers or holders) have been distinguished, on the basis of various criteria, e.g. the degree of their specificity or generalisation (Cash *et al.* 2006); their formalisation or articulation; the extent to which they express specific expertise or to which they are embedded in traditional cultural norms (Raymond *et al.* 2010: 1767, 1768). Glicken (1999: 301) divides information (equalised with the concept of knowledge) into cognitive, experiential, and social/political. Cognitive knowledge is mainly based on technical expertise and is presented by scientists or other experts, whereas experiential knowledge derives from common sense and personal experiences (*ibid.*).

It is often provided by residents or users of the environmental resources (*ibid.*). The third type is based on perceptions of social values, being thus highly emotional and most likely to evoke conflict, because discussions here revolve foremost around world-views, values, or beliefs and the consequent preferred types of actions (*ibid.*). Edelenbos *et al.* (2011) similarly describe three types of knowledge: scientific, stakeholder, and bureaucratic or administrative knowledge (the last type is also highlighted by Maiello *et al.* 2013). Stakeholder knowledge is grounded in their practical experiences, or is connected to a specific location, while bureaucratic knowledge derives from governmental practices and is developed by decision-makers and governmental representatives (Edelenbos *et al.* 2011).

All these knowledge claims belong to different practices and have their own languages, norms, values, and rules of game (*ibid.*). Yet, dichotomies between "technical, expert or scientific" and "local" (Negev and Teschner 2013), or "scientific" and "lay" knowledge are claimed to ignore the multiple ways individuals learn and the social contexts that influence people's understandings (Raymond *et al.* 2010: 1769). Such typologies often tend to ignore the growing interdependencies between different knowledge holders and their knowledge, due to media or other influences (Soini and Aakkula 2007). In particular, Negev and Teschner (2013) suggest that stakeholders have and employ multiple types of knowledge simultaneously. For example, local residents' constructions of the concepts related to nature conservation governance are more likely mixes of scientific and lay conceptions, rather than strictly "local" knowledge (Soini and Aakkula 2007: 312). Thus, each knowledge integration attempt should first identify all possibly different types of knowledge and assess their relevance for a particular issue (*ibid.*).

Several concepts have been proposed to denote acts of bringing different knowledge claims together, such as "knowledge exchange", "knowledge integration", and "knowledge co-production or synthesis". Maiello *et al.* (2013: 143) define knowledge integration as processes of "sharing a perspective on common problems" and knowledge co-production as attempts for developing new integrated knowledge through deliberation among various stakeholders. In this thesis, these two terms are treated as synonyms and used interchangeably, to refer to processes of recognising and bringing multiple knowledge claims together via participatory approaches.

Although the benefits of including various knowledge inputs has been recognised in principle, the practice of environmental governance has faced difficulties in designing participatory processes that effectively allow such inclusion (Rauschmayer *et al.* 2009: 4). Some practices at local level show that environmental officers tend to rely more on technical expertise rather than on including the knowledge claims from other stakeholders (Edelenbos *et al.* 2011: 682; Maiello *et al.* 2013: 147-148). Reasons for this can be manifold – Raymond *et al.* (2010: 1770) list three main factors affecting knowledge integration: first, differences in world-views held by different participants (e.g. what is being held as valid); second, power asymmetries between participants, and third, perceptions held by the participants about the potential benefits from knowledge integration. Among other factors, multi-level interactions institutional arrangements that recognise the specifics of multiple knowledge claims in decision-making processes (Rydin 2007) are specifically found to support knowledge integration. The overall scientific basis of the Natura 2000 designations, for example, started from an assumption that lay people do not possess sufficient ecological knowledge to give meaningful input in decision-making about nature conservation policies (Keulartz 2008: 447). This determined the whole design of the process in a way that foremost enabled the inclusion of scientific knowledge, which has, in turn undermined the legitimacy of the designations. Indeed, the conflicts in the Natura 2000 designations in several countries highlighted the importance of recognising the different knowledge claims on biodiversity issues (*ibid.*: 448-449). Not less important are the attitudes and perceptions of decision-makers towards including other types of knowledge: for example, environmental officers who are sceptical towards the knowledge of various stakeholders (e.g. local people) are less motivated to engage with them (Maiello *et al.* 2013: 142, 147).

2.3.1.3. Social learning

As compared with the notions of knowledge integration, a slightly different approach is the concept of "social learning". Social learning can be seen as comprising of two basic aspects. On the one hand, learning entails problem solving, processing of factual information or other task-oriented issues (processes) and the consequent technical outcomes of such processes (Pahl-Wostl *et al.* 2007b). As Webler *et al.* (1995: 445) note, social learning includes cognitive changes: e.g. learning about the substance of the problem and its solutions, or about one's own and other's

interests, values, or world-views. For some authors, this facet of social learning practically means the inclusion, integration, and application of different knowledge claims (e.g. Armitage *et al.* 2008; Cheng *et al.* 2011). On the other hand, these substance-oriented issues are closely related to the relational aspects and qualities that participatory processes are claimed to facilitate (Pahl-Wostl *et al.* 2007b). Thus, social learning can be understood as certain moral advancements, e.g. how individuals grow to see how their private interests are connected with the concerns of other stakeholders, learn to take and respect the perspectives of others, and learn to cooperate (Webler *et al.* 1995: 445).

Social learning has mostly been treated as a process-oriented criterion to analyse and evaluate participatory approaches (e.g. Wittmer *et al.* 2006; Rauschmayer *et al.* 2009), but also as an outcome of such approaches (Blackstock *et al.* 2007). Changes in individual cognitive processes in group contexts are important in some social learning conceptualisations, e.g. in the transformative learning concept that entails a reflective process by which individual perceptions change (Armitage *et al.* 2008: 88). However, usually social learning is seen to occur on the level of a social entity, e.g. a group (Pahl-Wostl *et al.* 2007b). Cooperative, collaborative multi-party interactions (Schusler *et al.* 2003; *ibid.*), occurring through participatory approaches stand at the core of social learning processes (Berkes 2009).

A wide array of various factors is found to influence social learning processes (Mostert *et al.* 2007; Pahl-Wostl *et al.* 2007b; Berkes 2009; Wallis *et al.* 2013). Such factors foremost include the wider governance context and other socio-cultural and economic, as well as the biophysical conditions in which social learning processes are embedded (Pahl-Wostl *et al.* 2007b). Governance structures that favour participation are essential factors to foster social learning (Mostert *et al.* 2007; Pahl-Wostl *et al.* 2007b). It has been suggested that participatory processes with clear goals, appropriate means and timing, and appropriate opportunities for interaction and deliberation favour social learning (*ibid.*; Garmendia and Stagl 2010). Based on Reed *et al.* (2010) and Blackstock *et al.* (2007), social learning in this thesis is understood as certain socio-relational outcomes that result from participatory processes. Thus, social learning means certain changes in understandings at the individual and/or group level, and changes in relational qualities (e.g. the building of cooperative

relationships), occurring through social interactions in participatory processes (*ibid.*).

Multi-level interactions can also affect knowledge integration and social learning processes (Pahl-Wostl 2009; Axelsson *et al.* 2013; Knüppe and Pahl-Wostl 2013). For example, the inclusion of knowledge-claims can depend on which levels on the spatial-administrative scale are considered as relevant in a concrete case (Buizer *et al.* 2011), i.e. how the scope of the problem is framed among the stakeholders (Young *et al.* 2013a). Some studies indicate that MLG contexts favour the inclusion of expert and scientific knowledge over other knowledge claims (Hogl *et al.* 2012; Newig and Kvarda 2012). Furthermore, knowledge produced on one level can influence decision-making processes on other levels (Pahl-Wostl 2009). Centralised governance contexts are found to hinder the integration of various knowledge-claims (e.g. Nielsen *et al.* 2013: 444) or social learning (Pahl-Wostl *et al.* 2007b). Conversely, cross-scale interactions and communication are suggested to favour joint knowledge production (Berkes and Seixas 2005).

There have been several calls from the spatial planning practice in Estonia that participatory approaches in this domain should essentially function as learning devices and processes that bring together different knowledge holders (for example: Estonian Parliament 2003; Estonian Ministry of Interior 2012a). Yet, there are very few studies specifically from the CEE region and on the ecological network topic, which have addressed these issues. This thesis aims to make a step forward in fulfilling this gap, by aiming to provide some examples of knowledge integration as well as social learning through participation, and to explore the specific factors that have contributed towards or functioned as barriers for social learning and knowledge integration in the context of ecological network governance.

2.3.2. Legitimacy

2.3.2.1 Concepts: legitimacy and illegitimacy

Legitimacy is foremost understood as the voluntary acceptance of or support towards the exertion of political power, e.g. a political system, authorities, or a single decision. For example, Fung (2006: 70) defines legitimacy as the acceptance of authority when people "have good

reasons to support it" on a voluntary basis. Similarly, Bernstein (2004: 142) understands legitimacy as "the acceptance and justification of a shared rule by a community".

Acceptance is a concept that enables the disposition of an actor – subject of acceptance – to be specified towards an acceptance object, e.g. a nature conservation measure (Sauer 2006: 176; Sattler and Nagel 2010: 70-71). When the actors' disposition towards the acceptance object is defined through the actors' attitudes towards the acceptance object, acceptance can be depicted as a continuum where different levels of (non-)acceptance can be identified, based on the intensity and nature of such attitudes. Sauer (2006: 175), for example, distinguishes seven levels of (non-)acceptance: from an agreement, conditional acceptance, sufferance, indifference, antagonism, to rejection of and an active resistance or opposition towards the acceptance object. On this scale, the latter notions, starting from the concept of indifference, can be understood as the non-acceptance and thus, manifestations of poor or illegitimacy of the exercising of power. A poor legitimacy can ultimately lead to conflicts (Brechin *et al.* 2002; Pahl-Wostl *et al.* 2013). In addition to the attitudinal component, conflicts can also have behavioural elements (Stoll-Kleemann 2001: 375), and ultimately outcome indicators, such as direct or indirect damage to natural resources, or institutional reactions, e.g. decrees adopted (White *et al.* 2009: 243, 245-246). Behavioural manifestations of a conflict can be for example actions demonstrating protest against certain practices, indices of media coverage (*ibid.*).

2.3.2.2. Determinants of legitimacy

Identifying the determinants or sources of legitimacy has long been one key question in studies related to the legitimacy of governance systems (Beetham 1991). Why should people accept the exertion of political power? What are these "good reasons" here, to which Fung (2006: 70) refers?

Broadly speaking, the acceptance of the exercise of power can derive from substantive or procedural grounds (Engelen *et al.* 2008: 10). Substantive bases, e.g. religion, tradition, or scientific expertise, have increasingly lost their legitimation power in modern societies, and instead, procedural aspects have gained importance (*ibid.*). With regard to the latter, two or three further strands are distinguished: input and output legitimacy

(Scharpf 1999: 6) and throughput legitimacy, e.g. Engelen *et al.* (2008: 11) and Schmidt (2013: 2). The first refers to the quality of the process by which collectively binding decisions are reached, and the second to the nature of the decisions: to what extent do they reflect the concerns of people (Scharpf 1999)? Throughput legitimacy largely also denotes certain normative quality criteria of decision-making, such as the inclusiveness, or the accountability and transparency of the processes (Engelen *et al.* 2008; Schmidt 2013).

When analysing procedural sources of legitimacy, scholars have relied on descriptive and/or normative approaches (Hogl *et al.* 2012: 9). In the first approach, empirical measures of legitimacy, such as stakeholder views on, perceptions of, or attitudes towards an acceptance object under study are used (see, e.g. Sunshine and Tyler 2003; Paloniemi and Tikka 2008; Valkeapää *et al.* 2013). The central question here is whether and why the legitimacy subjects accept the authority as just (Hogl *et al.* 2012: 10). Questions about procedural justice link to the input and throughput sides of legitimacy: legitimacy is influenced by the extent to which the processes through which the authority makes decisions are perceived as fair and just (Sunshine and Tyler 2003: 514). So, procedural justice is determined via the extent and quality by which people can express their concerns in the process and/or influence the outcomes (Colquitt 2001: 386; Colquitt *et al.* 2001: 426). The output-side of legitimacy also connects to this, but also builds on the model of instrumental or distributive justice: people's willingness to support the authorities relies on their perceptions of the performance of the authorities, i.e. the effectiveness of their actions in solving public problems (*ibid.*). In the domain of environmental governance, both components – procedural as well as distributive justice – are found to be key determinants for legitimacy (Paavola 2004; Paavola 2007; Paloniemi and Tikka 2008), although a slightly stronger focus is set on the first one (Adger *et al.* 2003; Mascarenas and Scarce 2004; van der Zouwen 2008; Valkeapää *et al.* 2013). Thus, the concept of output legitimacy distinctly refers to the extent to which the concerns of all relevant parties are reflected in public decisions.

The second approach aims to assess legitimacy and determine its sources according to a set of normative criteria (Hogl *et al.* 2012: 9). Here, scholars have relied on different bases. In a framework developed by Wittmer *et al.* (2006: 4-5) legitimacy is understood as an overarching theme for

four broad criteria: legal compatibility; inclusion; accountability; and transparency. In contrast, in the model for assessing the governance of terrestrial protected areas (Lockwood 2010), legitimacy is treated separately from the criteria of accountability, inclusion and transparency. Saarikoski *et al.* (2010: 351) relate the concept of legitimacy foremost to the criteria of fairness (i.e. unconstrained access to the process and information, all views are being heard), but also to inclusiveness (relates to input/throughput legitimacy) and impact (mostly the output strand and the link between input and output). Accountability and transparency are examples of criteria, which in some conceptualisations are foremost attributed to the input strand of legitimacy (Wittmer *et al.* 2006; Hogl *et al.* 2012: 16), but in others to throughput legitimacy (Schmidt 2013: 2). Thus, according to the normative view on legitimacy, it can be assured either by securing access to influence the decision-making for all concerned parties (input or throughput legitimacy), or focusing on the problem-solving capacity of policy-making: how does the final outcome reflect the concerns of the concerned people (output-legitimacy) (Abels 2007: 105-106)?

More recently several scholars have suggested that certain contextual factors of the decision-making processes are also likely to determine the acceptance of a legitimacy object. Such factors relate, for example, to the wider institutional context, or to certain attributes of the actors involved in environmental governance. Different discourses or frames (Arts *et al.* 2006; Raitio 2013) on what actors in MLG rely on, to make sense of the world and of different problems, are examples of such attributes. A frame can be understood as different meanings attributed to the same issue (Soini and Aakkula 2007). Frames consequently influence how people think and act with regard to the issue in question (Raitio 2013). Under certain circumstances, fundamental differences in frames can create misunderstandings between different actors and give rise to "frame conflicts" (Raitio 2013). The institutional context constitutes another set of factors that is likely to influence legitimacy. Rantala (2012) distinguishes between legal and moral legitimacy [see also e.g. Beetham (1991: 5-6), as well as Bekkers and Edwards (2007: 38)]. The first dimension refers to the legality of the concept, i.e. a compliance foremost with formal rules, and the second dimension to the congruence of a political decision, system, etc., with certain established informal rules, norms, based on shared beliefs about rights, duties and liabilities (Rantala 2012). As actors' behaviour in environmental governance is

guided both by informal and formal institutions (Paavola *et al.* 2009), and incompatibilities between these two sets of rules can create legitimacy problems (e.g. Brechin *et al.* 2002).

So far, some studies have explored instances of illegitimacy of biodiversity governance, and the different reasons behind conflicts in biodiversity governance (e.g. Stoll-Kleemann 2001; Schenk *et al.* 2007; White *et al.* 2009). However, MLG systems can pose different challenges to legitimacy, foremost to the inclusion of all relevant concerns, or to accountability and transparency. For example, Paavola (2004: 75) notes that the recognition of different stakeholders and taking their concerns in MLG contexts into account is not easy, primarily due to the high complexity of different MLG contexts. Some studies (e.g. Benz 2003: 86) suggest that MLG settings favour the representation of organised interests over less or non-organised parties, and support power asymmetries between different decision-making levels (Rauschmayer and Behrens 2008: 72). Problems with MLG contexts can also obscure who is accountable, and for what (Rhodes 1996: 662), i.e. the "problem of many hands" (Bovens 2007: 457; van Kersbergen and van Waarden 2004: 158), or "two-level accountability" situations where satisfying both levels at the same time can be challenging (Lockwood 2010: 759–760; Papadopoulos 2008: 41). Few studies have analysed the legitimacy of biodiversity governance in multi-level governance contexts (see, e.g. the compendium by Keulartz and Leistra 2008), and systematically investigated the different sources of legitimacy, by taking into account procedural as well as contextual conditions.

The thesis attempts to make a step further in this regard, by investigating factors affecting legitimacy in the cases of the Natura 2000 designations and Green Network governance in Estonia, but also on the basis of further biodiversity governance cases in other EU countries. The understanding of the concept of "legitimacy" in this thesis builds on both, descriptive – i.e. based on stakeholders' perceptions and attitudes, mainly Papers **I**, **II**, and partially **III** – and on certain normative approaches: the notion of inclusion, Papers **III**, **IV**, **V**, and **VI**, and concepts of accountability and transparency (mainly Paper **III**). In descriptive approaches, the legitimacy of ecological network governance is understood as the acceptance of various stakeholders and the public of ecological network governance, manifested by their positive attitudes, i.e. their (conditional)

agreement, or a lack of antagonism, resistance or conflicts [based on, e.g. Fung (2006) and Bernstein (2004)]. From the normative perspective, legitimacy is foremost understood as the inclusion of all relevant parties and their concerns, but also as compatibility between formal and informal rules, and/or clear lines of accountability and transparency (e.g. Wittmer *et al.* 2006).

3. AIMS OF THE STUDY

Participation is often argued to have several important benefits, and is thus promoted in many spheres of ecological network governance. Notwithstanding its benefits, stakeholder involvement is an inherently malleable concept, having various meanings for the researchers as well as for different stakeholders. Participation has also encountered various challenges in the administrative and civil society practices (specifically in the CEE region) and this has evoked numerous attempts to assess and evaluate participatory approaches.

Estonia, as one of the CEE countries, has integrated many principles of participatory democratic decision-making into its nature conservation and spatial planning legislation, policies and the respective practices. The underlying assumptions behind these principles are oriented towards different expectations about the potential benefits of participation, such as that stakeholder involvement should function as a learning tool for the participants, and bring the knowledge from various stakeholders into decision-making. Furthermore, participation is expected to help the reaching of a common ground between the various goals, aspirations and interests of different actors, enhancing thus ultimately the legitimacy of the decisions. Beyond some more general assessments that have been conducted in the recent years, on the performance of participatory approaches within the environmental domain (e.g. the Aarhus Convention Implementation Reports: Estonian Ministry of Environment 2007; 2010; 2013), little is known about which specific meanings different actors attribute to the concept, what they expect from participatory processes or their outcomes, and what kinds of experiences they have with participatory practices specifically in relation to ecological network governance.

This thesis addresses issues related to knowledge, learning and legitimacy within participatory multi-level ecological network governance contexts, attempting to provide some feedback about the functioning of participatory processes that were embedded within the delineation of the national ecological network – Green Network – and Natura 2000 areas' designations mainly in Estonia, but also building on experiences with participatory approaches in ecological network governance of some other EU countries. The following research questions have guided this thesis:

1. To what extent are participatory approaches able to function as effective awareness-building tools? Which factors facilitate it? (Papers **I**, **II**);
2. What are the instances of and factors contributing towards knowledge integration (**I**, **II**, **IV**, **V**) (sub-question 2.1) and social learning (**III**, **IV**, **V**) (2.2) within participatory processes in ecological network governance?
3. Which process-related and contextual conditions affect the legitimacy of ecological network governance (**I**, **II**, **III**, **IV**, **V**, **VI**)?

The motivation for defining the first objective is based on the assumption that information provision for all relevant stakeholders is a fundamental issue in almost all participatory exercises: adequate information about the problem in question, as well as on the participation procedures is a basic prerequisite for effective involvement, and informing all relevant stakeholders is also considered as an important outcome of participatory processes, including within the consultations of the Natura 2000 areas' designations in Estonia.

Secondly, participatory approaches in general and specifically in the Estonian context (e.g. Estonian Parliament 2003; Hendrikson & Ko 2004; Estonian Ministry of Interior 2012a) are increasingly more expected to function as learning devices, and are supposed to take account of the various knowledge claims of different stakeholders, as well as bring new information and insights into decision-making. However, the practice of participation has encountered several problems in this regard, giving rise to questions such as how participatory processes can best support knowledge integration and social learning.

The reasoning behind the final objective emerges from on-going debates around the relevant sources of legitimacy, specifically in multi-level governance contexts. There are still gaps in the understanding how exactly do procedural sources (i.e. specifics of participatory processes) influence the legitimacy of ecological network governance solutions, and which further contextual factors are likely to affect their legitimacy. The reflections on this matter build on the findings from all papers presented in this dissertation.

4. MATERIALS AND METHODS

This chapter first outlines and discusses the overall methodological choices of the thesis (section 4.1), and then summarises the data gathering and analysis methods used in Papers **I** – **VI** (sections 4.2 and 4.3).

4.1. Qualitative research and the case study approach

The overall methodological approach in the thesis is qualitative (Miles and Huberman 1994). Qualitative research aims at understanding and explaining the phenomena, e.g. human experiences, in context-specific settings (Silverman 1998). The potential strength of qualitative research strategy is to gain a concrete and context-dependent knowledge, which is often more valuable than predictive or universal theories (Flyvberg 2006) to understand issues related to socio-ecological questions, and specifically the human components of it.

Case study approach (Gerring 2007; Yin 2009) was selected to study the role of knowledge, learning and legitimacy in participatory ecological network governance at multiple levels. Case studies are empirical examinations of (mostly) contemporary phenomena, paying attention to the real-life situations in which these occur (Yin 1994: 13). The approach is particularly useful when the boundaries between the phenomenon and context are blurry, and when the emphasis is on understanding and explaining incidents, experiences, processes, etc. as they come about in real life situations (Rowley 2002; Yin 2009: 18). Issues related to public and stakeholder participation in biodiversity and spatial planning domains are often highly dependent on the wider socio-economic and biophysical contexts, embedded in various governance contexts. Thus, to understand how participation functions in such settings may require in-depth investigations of specific examples and instances. Qualitative, case study-based approaches are widely used in social-ecological research (Blackstock *et al.* 2007; Evely *et al.* 2008).

Case study designs vary broadly. Two basic ways to distinguish between case designs are the differentiation between single and multiple cases, and embedded (if a case involves more than one unit of analysis) or holistic cases (Yin 2009: 46-60). Different types of research questions

can also be distinguished. For example, the question may either pursue to find out what is happening, seek for new ideas and insights (an exploratory research question: e.g. "how does something work?"); to portray a phenomenon (a situation, process, etc.) (descriptive); or to aim at explaining a problem, but "not necessarily in the form of a causal relationship" (explanatory research question) (Runeson and Höst 2009: 135; Yin 2009: 9). Data collection in this thesis mostly relied on documents and semi-structured interviews as commonly used sources for evidence in case study research (Yin 2009: 101, 106). The collected textual material was analysed employing different analytical techniques, depending on the case type (see Yin 2009: 136-160). Table 3 below outlines main characteristics of the case studies in this thesis, with regard to general type of the case (single/multiple, holistic/embedded, see, e.g. Yin 2009); topics and governance levels addressed; type of the research question (Yin 2009; Gerring 2004); research approach (analytical and/ or evaluative); nature of the data collection and used materials; and the main analysis technique (Yin 2009: 136-160).

Original cases have been conducted in Papers **I**, **II**, **IV** and **V**. Paper **III** employs the meta-synthesis method (Walsh and Downe 2005, explained below) to analyse original case studies. Paper **VI** partially relies on data collected in primary cases, and partially on the synthesis of certain other case studies.

4.2. Single original case studies

The first two Papers (**I** and **II**) focus on protected areas' designations (as proxies for the governance of core areas within the ecological network concept) under the Natura 2000 areas designations in Estonia. Two case areas[1], the Kõnnumaa Natura 2000 area in North-Central/West and the Otepää Natura 2000 area in South-Eastern Estonia were selected for analysis. Both case study areas follow similar patterns of administrative structure, yet, embedded in different biophysical conditions and land use patterns. Both involve one bigger landscape conservation area that has a longer conservation history (the Kõnnumaa Landscape Reserve, first designated as a protected area during the 1960s and 1980s, and the

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[1] Although the Otepää and Kõnnumaa Natura 2000 areas involve two separate case areas, they are described here as one case, as the general topic and specific research questions were almost the same for both areas.

Otepää Nature Park, first designated in 1950s) and certain smaller areas nearby, which were designated under protection for the first time under the Natura 2000 project: the Kõnnumaa and Kastna Special Conservation Areas (SCAs) (2006), and the Otepää Special Conservation Area (2005). Participatory approaches organised during the Natura 2000 designations followed a slightly different pattern in the landscape conservation areas and special conservation areas. The Otepää and Kõnnumaa cases represent in a way specific cases (i.e. the rationale for selecting the cases was their uniqueness, see, e.g. Flyvberg 2006; Yin 2009: 47) among the Estonian Natura 2000 designations: in both areas, more efforts were made to involve the public and landowners in the designation processes (e.g. more meetings, information events, etc.), than was the average practice in designating other Natura 2000 areas in Estonia.

Semi-structured face-to-face and/or telephone interviews with one key stakeholder group in the Natura 2000 process – landowners – were conducted in these two case study areas. Eighteen landowners from the Otepää SCA and 41 landowners from the Otepää Nature Park were carried out with landowners in spring 2006 (Paper **I**); and additional 13 landowners from the Kõnnumaa and Kastna SCAs (**II**). The topics included landowners' experiences with the decision-making process, as well as their perceptions of and attitudes towards it and about the Natura 2000 as a general notion. In addition, available documents related to the decision-making and participatory processes, such as minutes of meetings, landowner submissions to the protected areas' administrations, etc., were accessed and analysed (**II**). Moreover, the nature conservation authorities who were directly responsible for organising the participatory events in the case study areas were briefly consulted, in order to create a background overview of the design of the consultations. Interview texts and documents were content-analysed (Miles and Huberman 1994), according to the research questions.

Paper **IV** uses Estonia as a case, to illustrate the diversity of stakeholder constellations, embedded within the planning and implementing the national Green Network concept. The Paper is based on data collected in the framework of a master thesis (Suškevičs 2008) and of a research project "KEN: Knowledge for Ecological Networks: Catalysing Stakeholder Involvement in the Practical Implementation of Ecological Networks" (www.ecnc.org). Spatial planning documents in ten Estonian

counties were analysed, aimed at determining the relevant land uses and other responsibility areas related to Green Network. A series of 33 face-to-face or telephone interviews were conducted with key stakeholders from different sectors and governance levels (international, national, regional, local) in 2007 and 2008. Interviews discussed stakeholders' roles in ecological network governance, relationships to each other and their views on decision-making processes. The interview protocols and planning documents were analysed using qualitative content analysis techniques (Graneheim and Lundman 2004).

Table 3. Main characteristics of the cases.

Paper no. and case name / characteristics	I Otepää Natura 2000 areas	II Otepää & Kõnnumaa Natura 2000 areas	III Biodiversity ML governance in the EU	IV Stakeholder analysis (SA) for Green Network in Estonia	V Participation rationales at regional Green Network planning	VI Ecological networks as a multi-level governance tool in Estonia
Case type	Single holistic	Multiple (two) embedded	Multiple (11) embedded	Single holistic	Multiple (10) embedded	Multiple embedded
Topics addressed	Protected areas governance	Protected areas governance	Protected areas governance, biodiversity governance in general	National ecological network concept (Green Network)	National ecological network concept (Green Network)	Green Network, biodiversity conservation governance
Spatial-jurisdictional levels addressed	Mainly local	Mainly local	(global), EU, national, sub-national levels	(international), national, regional, local	Mainly regional	National, regional, local
Research approach: analytical / evaluative	Mostly evaluative	Evaluative (and analytical)	Mainly evaluative	Mostly analytical	Mostly analytical	Mostly analytical
Research question type	Exploratory & exploratory-descriptive	Exploratory & explanatory	Exploratory & explanatory	Exploratory-descriptive	Exploratory & explanatory	Exploratory-descriptive & explanatory
Methods, datasets	Semi-structured interviews with landowners; documents related to decision-making processes at case level; consultation with protected area administration	Semi-structured interviews with landowners; documents related to decision-making processes at case level; consultation with protected area administration	Original case studies conducted in the GoverNat- project	Semi-structured thematic interviews with key stakeholders from multiple governance levels; content analysis of spatial planning documents at regional level	Open-ended in-depth interviews with organisers of participation; documents related to decision-making processes at case level	a) original cases: interviews and document analyses within the TESS and KEN-projects; b) secondary cases: Tani (2007), Kivimaa (2008), Koort (2010)
Type of analysis technique	Pattern matching, explanation building	Pattern matching, explanation building	Meta-synthesis	Pattern matching, logic models, explanation building	Cross-case synthesis	Cross-case synthesis, meta-synthesis

4.3. Cross-case syntheses and meta-syntheses of secondary cases

In case study research, multiple cases are preferred as this is expected to increase the external validity and robustness of the results (Rowley 2002: 21). Syntheses of cases can be performed either as parts of the same study (Paper **V**, and partially Paper **VI** in this thesis), or with a set of individual case studies that have been conducted as independent studies, and/or authored by different persons (Paper **III**) (Yin 2009: 156). The latter approach is also referred to as meta-syntheses (Walsh and Downe 2005).

Paper **V** employs a cross-case synthesis approach (Yin 2009) and analyses 10 cases of participatory regional level Green Network planning in Estonia. The cases in the Paper were selected to cover regions of different biophysical and socio-economic settings, as well as different timelines of the decision-making processes. Fourteen qualitative face-to-face and telephone interviews with spatial planning public officials (organisers of participation) at regional level were conducted in spring 2008. The questions included mainly goals and design principles of the process. All relevant documents associated to the cases, such as minutes of meetings, official letters exchange, etc., were also investigated. Decision-making and participatory processes in each county are treated as separate, individual cases, and the findings are aggregated across them (Yin 2009: 156).

Paper **III** is based on a qualitative meta-synthesis of 11 biodiversity governance cases in eight EU countries (UK, Finland, Germany, Spain, Hungary, Slovakia, Austria, and Greece). The cases have been conducted within a Marie Curie Research Training Network GoverNat "Multi-level Governance of Natural Resources: Tools and Processes for Water and Biodiversity Governance in Europe" (www.governat. eu). The qualitative meta-synthesis method aims to bring together, with the aim of further interpretation, a group of qualitative studies that explore the same or closely related phenomena (Walsh and Downe 2005; Zimmer 2004). Sampling procedures aim to be as inclusive as possible, thus including all relevant studies (Walsh and Downe 2005: 208). This method "analytically amalgamates" individual qualitative studies at a more abstract level through three basic steps (Walsh and Downe 2005: 208): (1) the studies are described and their similarities and differences are identified; (2) the findings of one study are translated to another,

using concepts that could be applied to both; and (3) these translations are synthesised to provide additional understanding. Eleven biodiversity governance cases studies were selected. The studies cover a spectrum of biodiversity issues in various MLG contexts. The cases were first described and compared to reveal their similarities and differences, using four broad topics: biodiversity issues, relevant decision-making levels, actors and the nature of decision-making processes. The cases were then analysed according to the four legitimacy criteria outlined above, by revealing emerging concepts common to several cases, and synthesising them into conclusions.

Meta-studies inevitably encompass multiple levels of interpretation (Walsh and Downe 2005: 209). The GoverNat cases in Paper **III** involve first and second-level, some even third-level interpretations, meaning that this synthesis is either a third- or fourth-level interpretation. To address the problems of validity and credibility arising from multiple interpretations, the respective GoverNat PhD fellows were contacted and asked to comment on the draft synthesis (whether their work has been misinterpreted or extrapolated beyond the limits of the data). Also, as Walsh and Downe (2005) suggest, a review by an expert (GoverNat project coordinator) was sought for the draft.

The approach used in Paper **VI** falls somewhere in between of collecting primary data and synthesising previous studies. It is partially based on some original data collected in the framework of the KEN-project (see above) and the TESS-project (EU FP 7 cooperation project "Transactional Environmental Support System" http://www.tess-project.eu/). The Paper also synthesises cases that have been conducted in certain other qualitative studies (see Table 3).

5. RESULTS AND DISCUSSION

5.1. Interfaces between different knowledge claims and learning

5.1.1. Awareness: effectiveness of communication within the Natura 2000 consultations

The first research question aimed at exploring the extent to which the consultations carried out as part of designating the Natura 2000 areas in Estonia were able to raise landowners' awareness (as one key stakeholder group in this process), and the factors affecting the achievement of this goal.

Similar to several other EU countries, such as Germany (Eben 2006), Poland (Grodzinska-Jurczak and Cent 2011), or Greece (Apostolopoulou and Pantis 2009; Apostolopoulou *et al.* 2012) the question of inadequate information provision proved to be a central issue in the Estonian Kõnnumaa and Otepää cases (**I, II**), where the effects of participatory approaches on the awareness of landowners – as one of the key stakeholder groups in the Estonian Natura 2000 designations – was assessed. In general, a great deal of confusion was associated with issues related to Natura 2000 among the interviewed landowners. Many people were unsure what kind of consequences the designations would mean for their land-use practices, or what was the reason for including their land into the network. Several respondents were also confused about the exact procedure rules of the consultations (**I, II**). Landowners in the cases of Otepää and Kõnnumaa would have liked to have received more site-specific and socio-economically relevant information on the Natura 2000 topic, e.g. about the protection purposes on their land, or the concrete land use restrictions (**I, II**). The problem of local communities being poorly informed about the sites' protection status, or forbidden activities on Natura 2000 areas has been documented elsewhere, for example in Greece (Apostolopoulou *et al.* 2012: 315) or Poland (Grodzinska-Jurczak and Cent 2011). Inadequate information provision (Schenk *et al.* 2007) and local people's low levels of awareness on topics related to protected areas' institutions and activities can also result in legitimacy problems (see section 5.2 below) in protected areas' governance (Sladonja *et al.* 2012: 1125-1126), e.g. the protected areas' administration are struggling for being recognised as the rightful actor

"in charge" by the relevant stakeholders (*ibid.*) which consequently hinders cooperation between the authorities and other stakeholders. As the cases of Otepää and Kõnnumaa have shown, sometimes landowners' vague awareness on decision-making rules, e.g. uncertainties about how to submit written claims, can also result in their non-participation in consultations (**I, II**).

The success of information provision for the stakeholders depends on several factors. First, as Rowe and Frewer (2005) note, the choice and use of involvement methods can influence the success of communication. In the Estonian cases, the way information was transferred (Schenk *et al.* 2007) might have played a central role. Many landowners were unsatisfied with their main information channels (printed media), claiming it to be either too biased or overly general, providing little useful and adequate information. Mass media has its advantages in reaching high numbers of recipients, but does not have much control over, for example, how effectively the information is being processed and understood by the people (Rowe and Frewer 2005: 283). Furthermore, the ways issues are presented (framed) in media can also affect people's perceptions and attitudes towards the issue (see section 5.2.3 below). In addition to printed media, specific information on Natura 2000 was distributed via internet: a central web-page set up by the Ministry of Environment and local or regional web-pages (if present) of protected areas' administrations and regional environmental boards (**I, II**). However, the Internet was seldom considered as a key information channel by the respondents. Similarly, landowners very rarely regarded the specific posters, booklets and brochures that had been prepared for the Natura 2000 communication campaign as important information sources for them (**I, II**). As the success of such information channels basically relies on their administration (Rowe and Frewer 2005: 272), a partial explanation for this pattern might be the poor distribution of these information materials. Moreover, the success of information channels that treat the receiver as a passive information recipient (Narula 2006: 6), such as the mass media, newsletters, brochures, or leaflets, depends much on the level of interest and activeness of the information receiver. However, the Estonian Natura 2000 cases indicate that landowners rarely made attempts to search for additional information themselves, after hearing of the topic for the first time. One reason for this pattern might be fact that at the time of designations, many of the landowners failed to

identify the relevance of the topic for them, e.g. how the designations affect their interests (**I, II**).

However, more personal ways of communication, such as direct contacts with the regional or local nature conservation administration, attendance of public meetings or official letters from the administration, have probably been more effective in raising landowners' awareness on the topic (**I, II**). Indeed, people prefer face-to-face communication, which is less likely to result in information losses and misunderstandings, since non-verbal and other important elements of natural human interactions are included (Rowe and Frewer 2005). Morris *et al.* (2000: 250) suggest that direct communication also motivates stakeholders to search for more information. Many stakeholders in the Estonian ecological network governance preferred public meetings as information distribution channels (**VI**). Although public meetings are often criticised for their poor ability to provide the stakeholders with a meaningful arena to influence the decisions (Adams 2004; see also section 5.2.1.2 below), they can be effective in informing the public or specific stakeholders (Sipilä and Tyrväinen 2005; Halvorsen 2006). However, the information events face sometimes problems of attendance, and the success of info provision tools also rely on the degree of being interested by the potential participants (Janse and Konijendijk 2007).

Some evidence from other EU countries suggests that the multi-level governance context affects the success of communication in participatory processes. For example, due to the absence of specific coordination mechanisms, difficulties have emerged in the communication between the actors from national and local governance levels (Grodzinska-Jurczak and Cent 2011: 23; Apostolopoulou *et al.* 2012: 312-313). As a new member state of the EU, the Natura 2000 designations posed one of the first major challenges for the administrative capacity in Estonia (Drechsler 2004). Thus, a lack of experience to effectively coordinate between different decision-making levels could provide one explanation for the ambiguities that emerged in the communication between the nature park administration and the landowners in the Estonian Otepää Natura 2000 case (**II**): the administration had difficulties in providing concrete answers for landowners' requests concerning the specific land-use requirements or subsidies on Natura 2000 areas.

Existing relationships between nature conservation authorities and local people also influence their communication within participatory processes (Reed 2008: 2420). As the Natura 2000 areas' designations in the Estonian cases were connected to existing protected areas (the Otepää Nature Park and Kõnnumaa Landscape Reserve respectively), the existing relationships between the environmental authorities and landowners, particularly prejudicial attitudes towards the authorities and stereotypes attributed to them (Stoll-Kleemann 2001: 380; Welp and Stoll-Kleemann 2006: 48-49) can further explain the somewhat adversarial attitude towards the authorities and the information that was distributed by them (**I, II**). The interviews indicate that several landowners took a sceptical position towards the authorities, e.g. Natura 2000 was seen as the justification to enlarge the existing protected area; or the conviction that the authorities will not provide any new information, as they are excessively stuck in the conservation goals (**I, II**). Stereotypes can make communication between various groups of people more difficult, since overly attention is paid to certain negative characteristics, and the individual characteristics of a person or group are largely left unconsidered (Welp and Stoll-Kleemann 2006).

The results of Papers **I** and **II** are based on a retrospective analysis of the many participatory approaches that (simultaneously) took place during the Natura 2000 designations in Estonia. The studies referred to general process-attributes, such as the ways communication is arranged during involvement, and some contextual aspects, like the existing relationships between the actors, or the wider MLG context, that have likely affected the functioning of participation as an awareness-raising tool. More detailed assessments, employing *ex-ante* as well as *ex-post* evaluations (e.g. Höppner *et al.* 2007) are needed, to more specifically determine the effects of concrete participatory events, and to reduce the uncertainties about the causal linkages between the process and outcomes in evaluations.

As many landowners were interested in receiving site-specific information, practice-based education (e.g. Van Gossum *et al.* 2005: 596; Serbruyns and Luyssaert 2006) could be one option for the future management of Natura 2000 areas, where landowners could receive more concrete information about the biodiversity on their lands. Such approaches, e.g. in the form of field visits or walking tours on landowners' land (e.g. Soini

and Aakkula 2007), would also constitute a two-way communication platform in a more neutral environment (Dare 2011: 50) for ecology experts and landowners. This could facilitate the understanding of each other's world-views and the building of trust (Pohl *et al.* 2010) among conservation experts and other stakeholders.

5.1.2. Multilateral exchange and co-production of knowledge

The second research question was set to identify examples of knowledge integration and social learning and the factors affecting them. The next two sub-chapters (5.1.2 and 5.1.3) present the main findings answering to this question, based on the synthesis from Papers **I**, **II**, **IV**, and **V** (knowledge integration) and **III**, **IV**, and **V** (social learning).

Following the overall scientific foundations of site designations according to the Habitats Directive, and similar to the experiences in several other countries, foremost France (Alphandery and Fortier 2001; Pinton 2001; McCauley 2008), Greece (Apostolopoulou and Pantis 2009), UK (Ledoux 2000), or Germany (Eben 2006), expert knowledge has set the core basis for designating the Natura 2000 areas in Estonia as well. The initial list of potential Natura 2000 areas was compiled by a set of experts, representing the Ministry of Environment and its regional departments, universities and research centres, and some environmental NGOs (**II**). However, other possible knowledge inputs were also subtly recognised during site designations, as among other aims, the consultations in the Estonian cases were also meant to gather information from the landowners about the local biodiversity (**II**). In practice, this goal was hardly achieved: landowner submissions mostly concerned socio-economic aspects, although, according to the interviews conducted in the Otepää and Kõnnumaa cases, the local landowners knew several species on their lands and many of the interview partners appreciated the surrounding ecosystems much (**I, II**). In contrast, some of the participatory delineations of the Estonian Green Network at regional and local levels have provided a somewhat different example in this regard. Although defining the Green Network areas also started from scientific and other expert-based knowledge (Green Network methodology, Sepp and Kaasik 2002), the processes here often much better recognised and integrated various knowledge claims from the stakeholders acting on different decision-making levels (**V**).

Reasons for the differences between the two examples can be manifold. The overall decision-making contexts, as well as the specific legal provisions for participation have differed in these two occasions. Green Network planning in Estonia is embedded in the spatial planning domain, whereas the designation of Natura 2000 belongs to the nature conservation field. With regard to the wider context, the characteristics of the two domains share some similarities but also have their differences. Worldwide and in Europe, both fields have experienced a paradigm shift during the recent decades: changes towards more inclusive approaches in protected areas governance took place from the 1980s and 1990s (Hutton *et al.* 2005), and a move from an expert-based towards transactive and communicative models of spatial planning started from the 1970s (Healey 1992; Laurian and Shaw 2009). However, these two domains differ in their very nature. If spatial planning is understood as the setting of frameworks and principles to guide development and physical infrastructure (Healey *et al.* 1999: 340) and manage land use in general (Douvere 2008), then taking a "bird-eye" view on different issues, i.e. having to balance various land-uses and considering the space as a whole, is inherent to the essence of spatial planning. This perspective is reflected in the current Estonian spatial planning legislation (Estonian Parliament 2003), according to which spatial planning should foremost be guided by the principle of considering planning issues holistically, integratively and via (participatory) democratic approaches. In contrast, although the overall paradigm shift in protected areas' governance worldwide places increasing importance on different integrative, inclusive and adaptive approaches (Brechin *et al.* 2002; Hutton *et al.* 2005), protected areas by definition focus on nature conservation as one primary goal (Day *et al.* 2012). Thus, *in-situ* conservation specifically has perhaps more explicitly been based on the confrontation of ecological and socio-economic aspects, than the spatial planning domain does. Also, the legal requirements for participation in the Estonian spatial planning legislation (Estonian Parliament 1995; 2003) encompass a somewhat wider room for participation when compiling spatial plans, e.g. in terms of providing certain opportunities for continuous and more interactive dialogue between different stakeholders, than did the nature conservation legislation for designating the Natura 2000 areas in Estonia (Estonian Parliament 1994; 2004).

Public officials are often expected to act as catalysers for knowledge co-production, however, not many studies have investigated to what extent

they actually perform this function (Maiello *et al.* 2013). The findings of Paper **I**, **II** and **V** confirm that the attitudes of the governmental officials towards including other knowledge claims (Maiello *et al.* 2013), and stakeholders' trust in each other's expertise (Edelenbos *et al.* 2011) are crucial to support knowledge integration. In several of the Green Network delineation cases at county level (**V**), spatial planning officials were interested in and willing to bring other stakeholders' perspectives into the process, seeking advice from e.g. foresters and hunting societies, transport planners and administration, nature conservation NGOs, county environmental departments, local governments and scientists (**V**). Edelenbos *et al.* (2011) suggest that when stakeholders perceive themselves as experts, their willingness to collaborate with the others for knowledge exchange and integration purposes is lower. During the last decades, the Estonian administrative system in general has undergone a transition towards a high level of segmentation (Sarapuu 2011), and the spatial planning domain specifically has been subject to several reforms, such as the change in 2000, when the whole spatial planning department was separated from the Ministry of Environment and included under the jurisdiction of the Ministry of Interior (SEI 2000). These changes in the administrative system could have affected the way spatial planning officials perceive expertise, and might have pushed them to seek advice elsewhere, as some of the Green Network delineation cases have illustrated. On the contrary, during the Natura 2000 designations in Estonia and in various other EU countries, ignoring and distrusting each other's expertise (Visser *et al.* 2007: 371) among stakeholders was more evident. In the Estonian Natura 2000 cases (**I, II**), landowners' positions towards scientific expertise within the designations were mixed: some of them trusted expert knowledge on which the inventories were based, whilst others, relying on their own knowledge about the local context, took a sceptical view towards the inventories, questioning for example, whether the sites have been profoundly checked on field. One reason for such distrust might be that scientists and other experts are perceived as having greater symbolic power by other stakeholders, and thus are often viewed as imposing the science-based norms on other stakeholders (Pohl *et al.* 2010). Given the potential significance of the questions of trust (Folke *et al.* 2005) and expertise for successful knowledge integration, these two issues deserve further academic attention, as well as considering in practice. It has been widely recognised that trust is an essential requirement for stakeholder cooperation, but it is not known of which components exactly does trust comprise of with regard to

joint knowledge production (cf. Höppner *et al.* 2009). The issue of trust among different knowledge holders might be especially important in the CEE countries context, because of the historical path-dependency of distrust among different actors, specifically between governmental bodies and the civil society actors (Stringer *et al.* 2009). Furthermore, as stakeholders' conceptions on expertise seem to affect the ways they act with regard to knowledge integration, future research should determine, how the notion of expertise is perceived by different stakeholders and how they personally relate to it.

Participatory forums enabling dialogue, deliberation and discussion among various stakeholders (Pohl *et al.* 2010) are believed to support knowledge integration, since they allow potentially conflicting views and values to be made explicit and debated. The Natura 2000 designations in several countries (e.g. in Germany, Eben 2006) were conducted in a tight time-frame, with little time for organising a meaningful discussion between stakeholders. The Otepää Natura 2000 case indicated that the public meetings (in contrast with the written submissions) allowed for some elaboration of landowners' context-specific knowledge, which was recognised by the park managers, to be considered in the future management planning of the area (**II**). Also, early contacts and continuity of interaction between key stakeholders might favour knowledge integration (Edelenbos *et al.* 2011). In Estonia, the current Planning Act (Estonian Parliament 2003), as well as its predecessor, the Planning and Building Act (Estonian Parliament 1995), require(d) early and continuous cooperation foremost among certain governmental bodies, when compiling county level spatial plans. The input from other possibly relevant stakeholders and from the wider public would mostly be sought in the final phases of county level planning (*ibid.*). However, some cases from the practice of Green Network delineations at county level have shown that if key stakeholders were not identified and contacted in early planning phases, the final stages alone often did not attract all relevant parties (**V**). Continuity and frequency of contact between key stakeholders could also facilitate the building of trust among them (Savage *et al.* 2006: 473, 475). Indeed, certain stakeholders in the Green Network governance (e.g. hunting societies) were interested in having a continuous dialogue with the governmental bodies, suggesting they could help with the practical monitoring of the implementation success of ecological corridors (**IV, VI**). Clarity in goals for involving the public and stakeholders (e.g. Faehnle and Tyrväinen 2013: 338; Young *et*

al. 2013a; see also section 5.2.1.3 below) is a further aspect supporting knowledge integration through participatory processes. As several landowners in the Estonian Otepää and Kõnnumaa cases were confused about the requirements of the consultation procedures in general (**I, II**), it can be suggested that the aims of the consultations in Estonia were also not fully clear for them, i.e. what exactly is expected from them and how they can contribute. In addition to the factors related to the decision-making processes, certain attributes of the relevant actors (like their goals and needs) can also affect knowledge integration. The interviews in the Otepää and Kõnnumaa cases in Estonia (**I, II**), but also some other studies (Hiedanpää 2002; 2005; Eben 2006), suggest that other concerns, such as certain socio-economic issues could have been more important for many landowners at the time of designations, than contributing with their knowledge in the process.

Yet, the exact format of participatory approaches that allows all relevant knowledge claims to be brought in, specifically in multi-level governance contexts (Berghöfer *et al.* 2008; Axelsson *et al.* 2013), is widely debated (Hage *et al.* 2010; Edelenbos *et al.* 2011; Petersen *et al.* 2011). Different knowledge claims have their specific attributes, such as different languages (e.g. Negev *et al.* 2012), or degrees of normativity and value-laddenness (Glicken 1999; Fischer and Young 2007). For example, the specifics of the knowledge claims can be manifested by the differences in perceiving the scope of the problem, i.e. "scale frames" (see, e.g. Young *et al.* 2013a), and in terms of more universal/general and larger scale versus more context-specific knowledge claims (Cash *et al.* 2006). The Estonian Natura 2000 designation cases (**I, II**) indicate that a failure to consider and address such differences in perceiving the ecological scale of the problem can result in misunderstandings between various knowledge holders and thus potentially hinder joint knowledge production. The scale frames of knowledge claims might indeed differ in the case of ecology experts and other stakeholders: for example, some interviewed landowners in the Otepää case (**I, II**) claimed that their surroundings include only "ordinary" species (scale frame of more context-specific knowledge claims), which were often though rare at the wider EU level (at a more broader level, expert scale frame). Thus, participatory approaches intended to elicit and integrate different knowledge claims should be sensitive to such specific characteristics. Knowledge integration that is biased towards certain parties, for example, is more expert-driven: i.e. focus on factual information (data gathering) (Edelenbos *et al.* 2011)

rather than considering stakeholders' knowledge holistically, might evoke frustration among the participants (Ellis and Waterton 2004; **III**) and ultimately pose questions about the legitimacy of the whole exercise. The overall scientific focus of the Natura 2000 designations gave few possibilities to negotiate with stakeholders' ideas and interests during the consultations, and to adjust the processes to local conditions (Stenseke 2009). The Estonian Green Network delineations at county level showed that stakeholders' knowledge on ecological corridors was successfully elicited starting from map-based visualisations via questionnaires, written consultations or stakeholder meetings (**V**). However, this result reflects foremost the views and preferences of public officials, and it is not known which methods the stakeholders would have preferred the most. The specific relationships between different knowledge claims continue to be important issues in the current ecological network governance in Estonia. Gilbert *et al.* (2005) refer to the communication problem that has emerged with regard to the Estonian Green Network concept, as different stakeholders use different languages (formal versus informal language). A new round of county level spatial planning in Estonia (Starting principles for… 2013) will specifically pay attention to the inclusion of "place-based knowledge" into the planning process. Thus, future studies should explore the abilities of different participatory approaches to recognise the specificities of different knowledge claims, and to effectively integrate them.

Several questions around the issue of power within knowledge integration exercises have remained open. Achieving a balanced access to and representation of different knowledge holders and their claims is a central challenge for knowledge integration endeavours (Pohl *et al.* 2010: 271; Raymond *et al.* 2010: 1774). Ideally, knowledge integration would require the contributions from all knowledge holders to be treated equally, and communication within this process is not seen as a one-way transfer of information to "a supposedly ignorant one" (*ibid.*). Though, vertical or horizontal power discrepancies might occur within knowledge integration processes in MLG contexts: sometimes participatory approaches at the national or EU levels tend to focus more on expert knowledge, and would thus often exclude knowledge claims from lower levels (Berghöfer *et al.* 2008: 249). Several of the Green Network delineations on the county level (**V**) have illustrated horizontal power imbalances, stakeholder constellations represented in the process were often biased towards the governmental sphere. This pattern of

biased representation can partially be explained by the overall CEE countries' context: while acknowledging the wide inclusion of different stakeholders in principle, the practice of environmental decision-making still tends to rely on cooperation among governmental bodies (Falaleeva and Rauschmayer 2013). Nevertheless, it is not fully clear what are the specific reasons for power asymmetries in the Estonian cases.

Given the challenges faced in integrating the various knowledge claims in the studied cases in the Estonian spatial planning and nature conservation contexts, a further important research topic is the potential of boundary and bridging organisations to facilitate knowledge exchange and synthesis. Boundary organisations are foremost meant to facilitate the science-policy interfaces, by bringing different stakeholders together on a continuous and face-to-face contact basis (a convening function), by translating between different languages and world-views (translating function) (Pohl *et al.* 2010), and by ensuring fair representation of all relevant interests (a mediating function) (Cash *et al.* 2006; Tribbia and Moser 2008: 317). A similar, but a slightly broader set of tasks could be performed by bridging organisations which are expected to facilitate the building of trust, translating between different knowledge claims, supporting vertical and horizontal collaboration and conflict resolution (Berkes 2009: 1695). Different actors can carry bridging functions, e.g. scientists, NGOs or specific mediating bodies that are particularly comprised for knowledge integration (Folke *et al.* 2005; Berkes 2009).

5.1.3. Social learning among different stakeholders

Learning not only means the exchange of factual information and the subsequent changes at a cognitive level, but can also entail the moral development of stakeholders through their active involvement in decision-making processes, e.g. learning to respect the perspectives of others, and learning to cooperate (Webler *et al.* 1995; Schusler *et al.* 2003).

Social learning with regard to participatory approaches has received much interest regarding natural resource governance in general (e.g. Schusler *et al.* 2003; Garmendia and Stagl 2010), and particularly in certain domains, e.g. water management (Mostert *et al.* 2007). However, not many studies (Brechin *et al.* 2002) have discussed the role of social learning with regard to biodiversity and protected areas' governance. Different cases from the EU multi-level biodiversity governance practice (Paper **III**)

have demonstrated that stakeholders are able to learn via participatory processes. Learning in such cases entailed changes in the understandings and attitudes of key participating stakeholders, but also certain behavioural alterations (Muro and Jeffrey 2012). For example, the conflict in Finland over the Natura 2000 designations eventually led the environmental authorities to understand the needs of local people better, and the whole process functioned as means of learning (*ibid*.; Hiedanpää 2002; Hiedanpää 2005). Also, the various stakeholders in the UK biodiversity action planning were finally better aware of and respectful towards each other's needs, values and interests (**III**). In a similar vein, in the Bavarian Forest National Park bark beetle management conflict, Germany, the protected area managers and environmental NGOs became more aware of how their world-views and attitudes regarding park management differed from those of the local foresters' and farmers' (**III**; Pohl *et al.* 2010), and learned to respect each other's views. An agreement that satisfied all parties and an improved communication culture between the national park administration and the local stakeholders were the overall learning outcomes in this case (**III**).

Similarly, some cases of the regional level Green Network planning in Estonia (**V**) have shown that stakeholders can learn through their experiences in participatory approaches. Specifically, spatial planning officials (organisers of the participatory processes) became more aware of the various knowledge claims, but also of the interests and expectations of other stakeholders, and learned to respect and address them. As such cases demonstrated, changes in officials understandings went beyond cognitive aspects (Muro and Jeffrey 2012), i.e. meaning also a behavioural change. These adjustments were manifested by alterations in the underlying rationale for participation and in the respective modifications in the design of participatory processes, when taking into account the concerns of other stakeholders (**V**).

The cases have demonstrated that participatory processes have the ability to support learning (Pahl-Wostl 2002; Siebenhühner 2004; Mostert *et al.* 2007) and collaboration between key stakeholders is an important aspect facilitating social learning (Folke *et al.* 2005). Nevertheless, certain process characteristics seem to matter here (Muro and Jeffrey 2012). For example, room for active interaction and dialogue between participants tends to foster social learning (*ibid*.; Stringer *et al.* 2006; Garmendia and Stagl 2010). Informality of decision-making processes can also play a role here: the

Bavarian Forest National Park bark beetle management case, Germany (**III**), entailed foremost informal interactions between key stakeholders where different actors could negotiate with each other (Deelstra *et al.* 2003) and finally reach on a common agreement. Participatory processes within the Green Network planning on the county level (**V**) are basically guided by the legal requirements of spatial planning legislation, but in practice also contained some informal aspects, such as the bilateral/ trilateral meetings arranged between certain (conflicting) stakeholders (e.g. between local and county governments), in order to negotiate the mutual interests and other concerns. Informal participation, due to its greater flexibility in rules and negotiation strategies (Pahl-Wostl *et al.* 2007b), is indeed expected to activate and foster learning better than formal processes (Moellenkamp *et al.* 2010). Yet, a possible caveat with informal participation is that the outcomes of such processes might not necessarily be legally binding and are thus less likely to be implemented in practice (*ibid.*).

The cases presented in Papers **III** and **V** have suggested that people often learn through conflict situations (Ison *et al.* 2013), where initially not all stakeholders are well aware of each other's expectations, views and concerns. Yet, the conflicts in such cases have functioned as catalysers for learning processes (Folke *et al.* 2005; Axelsson *et al.* 2013). Schusler *et al.* (2003: 320) talk about "constructive conflicts": an approach where participatory arenas allow for the expression of conflicting views and for the identification of common interests and values, but do not necessarily seek for consensus. The basic idea in this approach is to distinguish those perspectives and topics that are likely to evoke clear disagreement and irreconcilable conflict, from those topics, where achieving a common ground is more likely, and focus then on the last (*ibid.*).

According to the interviews conducted with key stakeholders in the Estonian ecological network governance (**IV**, **VI**), several stakeholder groups tend to have similar stakes, based on different aspects, like their interests, knowledge-claims, or responsibilities. Such aspects can form a potential basis for the cooperation between the stakeholders in the future. Some stakeholders, e.g. the building sector and recreational stakeholders, or transport planning representatives, share certain common interests with the developers of the Green Network concept, and are beginning to see these similarities (**IV**, **VI**). This pattern can potentially facilitate learning in future collaborative processes that

involve these groups, because attitudinal accommodation towards other groups with conflicting views is likely to make people to see undiscovered possibilities of cooperation (Schusler *et al.* 2003: 312; Stringer *et al.* 2006).

5.2. Factors affecting legitimacy in multi-level ecological network governance

The final research question aimed at determining factors that affect the legitimacy of decision-making within multi-level ecological network governance. The synthesis of the cases in all Papers presented in this thesis (**I – VI**) has identified a set of such factors which include (Figure 11): a) inclusion of different concerns, and specifically the object of inclusion; b) nature of participation, e.g. formal versus informal ways of being involved; c) accountability and transparency; d) framing; c) culture of participation; and e) rule compatibility. The following sections below explain the nature and content of each factor, as well as give examples on the different manifestations of (il)legitimacy from the cases.

Figure 11. Factors affecting legitimacy in multi-level ecological network governance. Illustration by the author.

5.2.1. Inclusion: a balancing act between input and output-strands of legitimacy

Inclusion of different stakeholders and their concerns is often referred to as a key determinant for procedural sources of legitimacy. Below, some specific elements of the concept of inclusion and its linkages to input and output legitimacy will be explained.

5.2.1.1. Inclusion and procedural justice: interplays between inputs and outputs

Specifically in multi-level natural resource governance contexts, procedural aspects of legitimacy, foremost the extent to which and nature of the ways different actors are included in decision-making processes, have increasingly gained importance in parallel to substantive sources of legitimacy, e.g. scientific expertise (Engelen *et al.* 2008: 9; van der Zouwen 2008: 178). Empirical studies of the practice of environmental governance generally confirm this line of argumentation (e.g. Brechin *et al.* 2002; Adger *et al.* 2003; Valkeapää and Karppinen 2013): the recognition and inclusion of all relevant concerns importantly affect the acceptance of public decisions.

At large, the cases analysed in this thesis reinforce these statements. Several cases of the Estonian Green Network delineation at county level (**V**) have shown that the inclusion of a wide set of relevant stakeholders in the planning processes can be essential to secure their support for the final plans. Conversely, some other cases in this study (**V**) demonstrated that omitting relevant stakeholders while drafting the plan can create misunderstandings and opposition towards the plan in later phases. Similarly, some of the EU biodiversity governance cases in Paper **III** had initially problems with including all relevant concerns but, through an interactive dialogue between key actors, were evolving towards better recognising the concerns of various relevant stakeholders. Such processes, although often initially conflicting, functioned as means of learning in several cases (see section 5.1.3 above).

Nevertheless, certain cases in Paper **III** have also shown that even if relevant concerns are well represented in decision-making processes, if problems arise on the side of outputs, the ultimate legitimacy of the whole exercise might be undermined. Decision-making within the

Austrian National Biodiversity Commission (**III**) – designed to be a widely inclusive body – has in practice been a state-driven process and the power relations in it were biased towards more resourceful interest groups with good relations to the ministries. The final outcome, the National Biodiversity Strategy is claimed to lack concreteness (i.e. specific measures for implementation), as well as the general acceptance among key stakeholders (Kvarda and Nordbeck 2012: 83-84). Similarly, decision-making processes on forest management in the Tatras' National Park (**III**), Slovakia, represented different interests well, but delays in taking some final decisions have generated dissatisfaction among the many affected parties. A parallel can be drawn with the Estonian Natura 2000 designation processes, where the consultations were open to a wide set of key stakeholders (mainly landowners), but provided little room for discussing and including the socio-economic concerns that many landowners regarded as important, which accordingly resulted in a negative attitude towards the designations by the landowners (**I, II**). These findings reinforce that it is useful to conceptualise legitimacy as an "interdependence and interplay between procedures and outputs" (Leistra *et al.* 2008: 28), and the input and output-dimensions of legitimacy (Scharpf 1999) are closely related to each other. This is specifically relevant in the CEE countries' context, because here, for different reasons, stakeholders might have difficulties in exerting influence on the final decisions (Stringer *et al.* 2009: 86; Falaleeva and Rauschmayer 2013: 151), and power biases might easily emerge between different stakeholders in participatory processes (Niedzialkowski *et al.* 2012). Thus, attention should be paid on the input- as well as to the output-strands of legitimacy when analysing, or designing and implementing participatory decision-making processes in such contexts. In the context of Estonia, future analyses could specifically investigate the extent and nature of impact different stakeholder groups have on the outputs of decision-making processes, e.g. within the management planning of Natura 2000 areas, or the compilation of other documents relating to ecological networks (such as spatial planning, EIA, etc.).

5.2.1.2. Formal and informal participation and inclusion in multi-level governance contexts

Broadly speaking, participation in environmental governance can occur either through the participatory approaches arranged by the governmental actors (Cornwall 2008) or via some more informal instances. The latter

are largely self-initiated and -organised processes where interactions between the stakeholders are not (only) determined by legislation (e.g. Moellenkamp *et al.* 2010), following thus a more open and unstructured format (e.g. Newig *et al.* 2008: 424).

According to the current Estonian spatial planning and nature conservation legislation (e.g. Estonian Parliament 2003; 2004), public information disclosure periods, public meetings and written consultations are among the main ways to involve foremost the wider public, but also the interested stakeholders (**I, II, IV, V, VI**). Yet, several key stakeholders in the Estonian Green Network governance (**IV**) criticise some of these formal channels, especially the public meetings, for not providing genuine opportunities to influence decision-making processes. Interestingly, some more informal ways of involvement, like personal contacts, bilateral meetings, or participation in advisory groups were often seen as more effective ways to exert influence than the official channels (**IV, VI**). Exact reasons for such preferences are not fully clear. Certainly, participation in formal processes requires certain capacities from the participants, such as knowledge and suitability of the meeting times and locations, or facility in talking about the issue (Lee 2007), whereas informal processes might perhaps better allow for certain adaptation of the individual needs by the participants. Moreover, on one hand, public meetings have been criticised for their low capacity to facilitate meaningful discussion, or to influence the final decisions (Adams 2004; Halvorsen 2006). On the other, such meetings are found to be useful for exchanging views between participants and understanding their various perspectives and interests (Lamers *et al.* 2010). Nevertheless, the success of formal participatory approaches might depend more on how the approaches are organised in practice, and suited into the particular context, rather than the choice of a specific technique or method as such (Rowe and Frewer 2004). Important issues here seem to be the general underlying rationales of participatory processes, the specific goals of the meetings, and the extent to which these goals correspond to the expectations of (potential) participants (see also section 5.2.1.3 below). Employing a professional facilitator (or improving the facilitating skills of public officials) – an independent person with a task to support the actors involved (Maiello in press) – for public meetings or other similar occasions could help to structure the meetings more clearly, and to synchronise the different inputs. Yet, as public meetings are among key formal involvement methods in the

Estonian environmental governance, their specific role(s) and functions in the context of spatial planning and nature conservation in Estonia are therefore important topics for future studies.

MLG contexts have often a complex architecture and tend to rely on informal decision-making processes (Rhodes 1996; Peters and Pierre 2004; Papadopoulos 2008). Participatory approaches in such contexts are claimed to favour the inclusion of concerns of those at higher levels and of more organised groups over others (Benz 2003; Peters and Pierre 2004; Rauschmayer and Behrens 2008). Yet, such biases could pose some questions of the legitimacy of decision-making processes for less organised stakeholders, the general public or the actors from lower decision-making levels. Different cases of the multi-level biodiversity governance in the EU (**III**) give mixed evidence in this regard. Certain power imbalances towards organised interests existed in the case of drafting the Austrian National Biodiversity Strategy, and power asymmetries towards national-level interests occurred in the Finnish Natura 2000 designation case (Hiedanpää 2002; 2005), as well as in the management processes in the Slovak Tatras' National Park case (**III**). A similar tendency can be observed in the cases of designating the Estonian Natura 2000 areas: whereas the concern for protecting the biodiversity was represented mostly by the actors from the EU, national and regional levels, local concerns on socio-economic issues were poorly addressed during the consultations in the designation phase (**I, II**). However, the informal nature of participation in some EU biodiversity MLG cases presented in Paper **III**, e.g. within the management of the Hungarian Körös-Maros National Park, even better helped to build trust between different parties and included various concerns, than in those cases where decision-making took a more structured format. Indeed, informal contacts between scientists and the Ministry of Environment have also favoured science-policy interfaces in developing and negotiating the idea and methodologies of the national ecological network in Estonia (**IV, VI**). However, such patterns might partially be explained with the general institutional context in CEE countries, where the tradition from the recent past to considerably rely on (scientific) expertise in decision-making is still affecting the current practices (Falaleeva and Rauschmayer 2013; see also section 5.2.2 below). Though, in general, informal communication can be an essential part of formal participatory processes (Lee 2007) because it facilitates deliberation, knowledge integration and social learning (Moellenkamp *et al.* 2010, also sections 5.1.2 and 5.1.3 above).

So, ideally, a balance should be achieved between informal and formal elements in participatory approaches, to ensure that the final results of the processes are formally binding (Moellenkamp *et al.* 2010).

As to the Estonian national ecological network concept, the EU level has so far not played a significant role in the Green Network governance, partially because there are no common legal frameworks for spatial planning at the EU level (Bennett 2008; Faludi 2010). However, the MLG context at the sub-national levels might have had some influence on participatory practices. The Estonian planning legislation (Estonian Parliament 1995, 2003) encourages arranging cooperation among different concerned stakeholders while drafting spatial plans at regional and local levels. As the concept of cooperation is not defined, and the respective provisions on how to organise cooperation in practice are largely open to various interpretations, it leaves certain room for informal interactions to occur. The cases of the Green Network planning at regional level (**V**) have shown that such a room for manoeuvre has had ambivalent effects in practice. On one hand, the open nature of the legal provisions has fostered the emergence of synergistic partnerships and joint knowledge production among key stakeholders. On the other hand, such cases have also shown that when key stakeholders were not identified and directly contacted at the outset of each planning process, they often did not participate in the latter phases of the decision-making processes (**V**). This consequently meant that on the whole, such processes were somewhat biased towards the representation and inclusion of the concerns by organised groups. In addition, the Green Networks delineations at county level in Paper **V** have also referred to certain difficulties in participation between different governance levels. Participatory processes were arranged at the regional level, but local stakeholders, e.g. local governments, local resource user groups or local people, were in several cases weakly represented in the planning processes (**V**). Here, the participatory processes could have been influenced by differences in the scope by which the problem is defined (van Lieshout *et al.* 2011; Young *et al.* 2013a). From the perspectives of local stakeholders, the regional level could have been too broad for most of them, to consider the issue as relevant for them. Spatial planning officials in some cases (**V**) might also have taken a more general perspective on the issue (i.e. regional level), and paid thus less attention on identifying and involving specific actors from local levels. However, as the cases in Paper V did not systematically investigate the exact configuration of

the MLG structure of Green Network governance and the interplays between governance levels, further analyses are needed to identify these patterns and to assess their impacts on inclusion.

5.2.1.3. What is included: rationales for and expectations towards participation

The analysed cases suggest that inclusion is a complex concept, having multiple facets that all ultimately affect the acceptance of decision-making processes and their outcomes. The actual design of participatory approaches is most likely to influence the ways decision-making processes are perceived by different stakeholders (Dietz and Stern 2009). Here, the underlying rationales for participation (e.g. Fiorino 1990) play a key role in affecting inclusion, because the rationales often determine the whole process design and its boundaries, e.g. the setting of process goals, the choice of involvement methods and techniques, considerations on who the relevant participants would be (and respectively who would be excluded, see, e.g. Renn and Schweizer 2009), and finally the object of inclusion (Wesselink *et al.* 2011).

The overall ecological scientific rationale behind the Habitats Directive (Paavola 2004; Paavola *et al.* 2009; Rauschmayer *et al.* 2009) sets a key contextual constraint for including all relevant concerns. As EU member states were free in deciding how to organise participation during designations, some opportunities for participation, mainly in the form of consultations, have existed in several countries (Unnerstall 2008). However, participation of ENGOs and governmental actors has been foremost promoted (Weber and Christophensen 2002) since their resources, like knowledge inputs, were regarded as most important for the designation processes (Paavola 2004). In turn, such approach meant that the consultations provided few opportunities for meaningful discussion for and inclusion of the diverse set of local stakeholders (Stenseke 2009), and took in several cases a somewhat one-sided manner of information distribution (Apostolopoulou *et al.* 2012).

A mismatch between the rationales for participation, as seen by the decision-makers and process-organisers, and the different expectations towards decision-making processes and their outcomes, from the perspectives of the (potential) participants, can provoke misunderstandings and stir conflicts between these two sets of actors.

In the Estonian Natura 2000 designations (**II**), the consultations at local and regional levels were open for all interested landowners, but the involvement opportunities were mainly meant to inform them about the Natura 2000 program, to provide them an opportunity to express their opinion regarding the designation, and to gather information from them regarding the biodiversity values on their lands. However, many of the interviewed landowners in the Otepää and Kõnnumaa case study areas (**I, II**) were sceptical towards the decision-making processes, as the consultations did not focus on relevant socio-economic concerns that were important for the landowners, e.g. concrete land-use restrictions, financial compensation mechanisms, or on other issues related to the exact implications of designations on the livelihoods of landowners (**II**). Amateur naturalists' had differing expectations towards participatory processes and their outcomes in the UK Biodiversity Action Planning case (Paper **III**). In a similar way, in many cases of the delineation of the regional Green Network in Estonia (**V**), the participatory processes were initially mainly driven from the substantive rationale, i.e. informing the public and certain stakeholders, and gathering knowledge-input from the stakeholders. However, during the process it became clear that the interests, needs and values of different stakeholders also needed to be reconciled and the process design was adapted to it respectively (**V**).

These findings suggest that the object of inclusion (Berghöfer *et al.* 2008) influences legitimacy: whether a balance can be achieved in considering and including different aspects that are important in a particular case, such as knowledge-claims, or interests. During the UK Biodiversity Action planning (Paper **III**), the process organisers, whilst focusing on gathering different knowledge claims, initially paid little attention to some other aspects that were related to stakeholder knowledge claims, such as their personal experiences. Similarly, a stakeholder analysis to identify key stakeholders within the Green Network governance in Estonia (**IV**) has indicated that a wide variety of stakeholders are connected to the Green Network issue through their responsibilities, (potential) knowledge inputs for decision-making processes, or interests. However, some of them are currently marginalised in decision-making processes, such as stakeholders from the forestry or building sector, or NGOs (**IV**).

The object of inclusion is closely connected to the various roles a stakeholder can play in different decision-making processes, i.e. the multiple "hats" a stakeholder is likely to "wear", depending on the

particular situation (e.g. Ramirez and Fernandez 2005; Rastogi *et al.* 2010). The stakeholder analysis conducted for the Estonian Green Network case (Paper **IV**) suggests that recognising such different roles can be important, since depending on the particular role and the concrete decision-making level (from international to local) a stakeholder represents, the involvement opportunities can be different. For example, a stakeholder representing an environmental NGO scored low in terms of influencing certain decision-making processes, but dealing professionally with the issues of Green Network as an EIA expert, his/her influence on decision-making processes was considerably higher (**IV**). According to the legislation, the general focus in the Estonian environmental governance is on involving the "general public" or "interest groups", yet, these approaches can be either too broad or too narrow for identifying all relevant parties (**IV**). For instance, the participatory planning of the Green Network at county levels involved a wide variety of stakeholders in several cases (**V**), but recognised them mostly on the basis of their potential to provide specific knowledge inputs, although the stakeholders also expected their interests to be discussed and heard (**V**).

These results imply that the rationales for participation and the possibly contrasting expectations towards the processes (Wesselink *et al.* 2011: 2699), but also the specific process rules, boundaries and constraints which determine, e.g. who and what will and/or can be included, should be made explicit and clarified from the outset, in order to avoid raising unjustified expectations by the public or the stakeholders (Stoll-Kleemann 2001: 376; Young *et al.* 2013a: 4). Co-designing participatory processes with the participants (Moellenkamp *et al.* 2010) can be a further solution for accommodating different expectations towards participatory approaches. In a co-designed involvement process (e.g. Hare *et al.* 2003), participants jointly determine the design and application of a particular decision-making process. In this way, the participants could have certain influence over the process rules and their implementation and would thus be more likely to accept and act according to them. Additionally, stakeholder analyses (Grimble and Wellard 1997; see for recent applications in biodiversity governance by e.g. Mushove and Vogel 2005; Rastogi *et al.* 2010 and spatial planning by Pomeroy and Douvere 2008) can be useful tools to identify and recognise different stakeholder roles. This can be particularly relevant for the current and future practical spatial planning, as well as for nature conservation governance in Estonia. At

present, a new Planning Act is being drafted (Estonian Parliament 2013) which grants an even greater discretionary power for the decision-makers than the current Planning Act (Estonian Parliament 2003), as to which stakeholders should be specifically paid attention to when arranging participatory processes within spatial planning at county, but also at national and local levels. In the context of the Estonian Green Network governance, stakeholder analyses could help the decision-makers and organisers of participatory processes to specify the relevant set of parties at the outset of each involvement opportunity, and would help them to take wider perspectives on stakeholder roles than is provided by the legislation (**IV**). Also, as currently the management plans are being compiled for many Natura 2000 areas in Estonia, stakeholder analyses could aid the nature conservation administration in identifying the stakeholders, and organising their involvement, which is a compulsory part of each management planning process (*Keskkonnaministri 20. oktoobri määrus...* 2009).

5.2.2. Throughput legitimacy: accountability and transparency in multi-level governance

In some conceptualisations of legitimacy (e.g. Hogl *et al.* 2012: 11; Schmidt 2013: 2), accountability and transparency are important indicators for the input and/or throughput strand of legitimacy. Multi-level governance contexts are often claimed to pose certain challenges for accountability and transparency (Peters and Pierre 2004; van Kersbergen and van Waarden 2004; Papadopoulos 2008).

Several case studies in Paper **III** have demonstrated the complexity of accountability relationships in MLG contexts (Rhodes 1996: 662; Papadopoulos 2008: 40-41; Lockwood 2010). In such settings, difficulties are often encountered in securing effective lines of responsiveness when actors are positioned at different levels. For example, the national governments are expected to be responsive towards the EU (upward-accountability) and at the same time, they should be socially accountable (downward-accountability) towards the stakeholders and the public (Papadopoulos 2008; Lockwood 2010). Such cases, illustrating the problems with "two-level accountability", include the Natura 2000 designations and management in Finland (see also Hiedanpää 2002; 2005), the pan-Parks certification process of the Slovensky Raj National Park (Slovakia) or participation within the designation and management

of Natura 2000 areas in Catalonia and Lleida, Spain (III). Drechsler (2004: 390) refers to a similar problem encountered during the Natura 2000 designations in Estonia: due to weaknesses in the administrative capacity, governmental actors faced difficulties in being accountable towards the EU as well as towards the public.

A second problem with accountability in MLG settings is manifested by difficulties in effectively sharing responsibilities between various actors. This pattern was evident in several cases in Paper **III**, such as in the conflict between foresters and conservationists in the Slovak Tatras' National Park case, or within the Natura 2000 case in Lleida and Catalonia, Spain. Problems with defining and sharing of duties may reflect poorly conducted decentralisation (Ribot *et al.* 2006): a situation where duties are diffused to a wide range of actors who do not have sufficient resources to perform them.

Several cases in Paper **III** have also shown that ensuring transparent decision-making processes might not be a straightforward task in MLG contexts. Transparency for the general public has been questioned in the more informal decision-making processes, as exemplified in the cases of the Ahtialanjärvi lake restoration case in Finland and in the management of the Hungarian Körös-Maros National Park (**III**). However, problems with transparency arose also in some more formal decision-making contexts, such as in the UK amateur naturalists participation or the Finnish Natura 2000 designations case, where the respective processes were not particularly visible for the immediate participants (insiders) (**III**).

Problems with accountability and transparency in MLG contexts can also be found elsewhere. Overlapping duties between management agencies and fuzzy lines of accountability, or a lack of transparency in decision-making rules, have been recorded within the management of Natura 2000 areas in Greece (Apostolopoulou *et al.* 2012: 311, 313). In Estonia, the administrative system is currently characterised by a high degree of segmentation (Sarapuu 2011), and in implementing the national Green Network concept in Estonia, responsibilities between the local and regional decision-making levels were found to be vaguely defined (Gilbert *et al.* 2005), as well as the effective coordination mechanisms to be absent between the regional and local decision-making levels,

but also between different policy sectors (**VI**). Drawing parallels with other cases (**III**; Apostolopoulou *et al.* 2012), such characteristics could pose certain challenges for accountability and transparency, however, further research is required to clarify the nature and extent of these impacts. Moreover, the criteria of accountability and transparency as analysed in this thesis represent foremost normative criteria for analysing legitimacy (Hogl *et al.* 2012). Lee (2007: 87), for example, has shown that stakeholders might not necessarily associate the abstract notions of transparency or accountability with procedural legitimacy. The concept of "accountability" is a contested one among the scholars (e.g. Bovens 2007), and Kvarda and Nordbeck (2012: 82) suggest that also stakeholders' perceptions on accountability and transparency can vary widely and depend on many factors, such as on the ways they were represented and involved in the decision-making process. Thus, the results could have been somewhat different if, for example, stakeholder perceptions on these two criteria would have been used for the analysis instead.

5.2.3. Contextual factors

In addition to the sources and elements of procedural legitimacy described above, three further contextual factors can affect the legitimacy in ecological network governance. These factors relate to the various understandings different stakeholders apply to make sense of the problems (i.e. their framings of the issues); to the informal institutional context (culture of participation), and finally to the interplays between formal and informal institutions. Below, each of these three aspects are explained in greater detail.

5.2.3.1. Frames and legitimacy: role of framing and re-framing

Illegitimacy in environmental governance can result in from situations where issues are perceived fundamentally differently by various persons or groups, and particularly when such differences are not adequately addressed, i.e. the cases of "frame conflicts" (Gray 2004; Arts and Buizer 2009; Raitio 2013). Studying legitimacy and environmental conflicts via discursive perspectives, specifically through frames, is a relatively new proposition (Raitio 2013: 98). Frames reflect the ways people perceive and understand problems, which aspects they regard as more salient, and subsequently which facets of the issue are selected and highlighted

in interacting with the others, to promote a particular perspective of problem definition or interpretation (van Lieshout *et al.* 2011). Different perceptions and judgements affect the acceptance in biodiversity conservation governance (Schenk *et al.* 2007). Some results from the Papers presented in this thesis have already shown how differences in defining the scope of the problem can affect knowledge integration (section 5.1.2 above) and the identification of stakeholders and their participation (section 5.2.1.2). Below, two further aspects relating to frames and framing are discussed with regard to the legitimacy of decision-making processes.

The first aspect concerns framing of issues in biodiversity governance at a more general level. Different groups often tend to have various visions on and preferences for biodiversity conservation management (Keulartz 2008: 449). For example, farmers and foresters are likely to see foremost the functional value of nature, whilst nature conservation experts might value the wilderness idea the most (*ibid.*). Furthermore, even when different stakeholders agree on the importance of biodiversity conservation in general, they tend to prefer different management options (White *et al.* 2009: 250-251). The results from the Papers presented in this thesis suggest that differences in the ways certain stakeholders understand nature conservation issues and what kind of management preferences they have, affect their acceptance of conservation governance to a considerable extent. Nature had different meaning for the landowners and for the environmental administration in the Finnish Natura 2000 designations (Paper **III**; Hiedanpää 2002; 2005): farmers felt disappointed because of the mistrust shown by the environmental authorities, as they believed biodiversity conservation to belong to their ordinary agricultural practices. In the High Tatras' National Park (Slovakia) and the Bavarian Forest National Park (Germany) forest management conflict (Paper **III**), local peoples', farmers' and forest managers' ideas of a well-managed forest and of the impact of bark beetles on forest ecosystems differed radically from the views held by the environmental administration or conservation NGOs. Such differences could partially explain the conflicts that emerged between the various groups in these cases. Similarly, the case study of Otepää, Estonia, indicated that landowners and the nature conservation administration have different views on how the protected area should be managed, e.g. whether old-growth forests have any aesthetic value,

or how do such forests affect the nearby economically managed forests (**I, II**). This is in line with some previous studies (e.g. Soini and Aakkula 2007) which highlight that local peoples conceptualise the notion of biodiversity more broadly than for example, ecology scientists, including also other aspects, such as the aesthetic values of ecosystems.

The second aspect concerns the different ways the issues related to Natura 2000 and Green Network have been framed by key stakeholders in Estonia. Interviews among landowners in the Estonian Natura 2000 cases (**I, II**) indicated that the Natura 2000 concept in general was often associated with negative connotations, e.g. scandals, or severe restrictions to economic activities. In contrast, the concept of "ecological networks" in general and the Green Network notion specifically seem to be received with a rather supportive attitude by the key stakeholders: keywords like "an interconnecting system", "connectivity", or "balancing use and protection" were often used by the interview partners (**IV** and unpublished data from the KEN-project www.ecnc.org). The stakeholders referred to the wider meaning and goals of the Green Network concept, associating it to recreational and aesthetic values or other socio-economic aspects (**IV**). As can be seen, at the conceptual level, the Green Network represents for the stakeholders a somewhat different approach that more easily enables ecological purposes to be combined with socio-economic goals. Partially, differences in how the Natura 2000 and Green Network topics are perceived can be explained by the different nature of the concepts and the ways they are applied: on Natura 2000 areas, usually concrete legally defined land use restrictions apply, whereas the land use conditions on Green Network areas are currently mostly of recommendatory rather than compulsory nature. This might be one reason why the national ecological network concept is not perceived as restrictive to land use as the designation of Natura 2000 areas. However, as information received via mass media can influence peoples' opinions to a considerable extent (Schenk *et al.* 2007), one reason why landowners associated topics related to Natura 2000 mostly with negative connotations might rely on the ways the information was presented in mass media. An analysis conducted on the basis of two main national newspapers between 2002 and 2004 (Veski 2005) has shown that issues related to Natura 2000 designations were largely constructed as a conflict there. The focus was often on confronting different parties, e.g. "us" (i.e. Estonia) versus the EU, or depicting Natura 2000 project

as a *force majeure* (*ibid.*). In contrast, the Green Network topic has so far been a much less controversial issue: a recent overview on the use of the concepts related to Green Network in the search engine Google (Tamm 2012) indicates that issues concerning the national ecological network have not received a considerable attention in the Estonian news media yet.

Substantial differences in the ways problems are framed might make communication and understanding among different stakeholder groups more difficult. Korthals (2008: 252) suggests that the illegitimacy of nature conservation arrangements is often rooted in "competing conceptions of nature" the different stakeholders have, rather than the unjust distribution of power among them. Opposition and conflicts based on different frames might foremost relate to inabilities to constructively address the differences in world-views and values. As values and world-views represent more persistent individual normative beliefs that cannot be easily changed (Sauer 2006: 181), such conflicts might be more difficult to reconcile. Moreover, value-driven conflicts cannot be solved by focusing on objective, factual aspects of the problem because the actors involved disagree in their core beliefs (*ibid.*: 175). Such situations might require a different approach. A more open communication between different stakeholders, in order to make the potentially contrasting perspectives more visible (Korthals 2008: 253) could help the stakeholders to become aware of, respect and take into account each other's views. "Frame conflicts" (Raitio 2013), caused by differences in how issues are understood by key actors concerned, can be addressed by re-framing the issue in a way that would facilitate collaboration rather than opposition (see, e.g. Gray 2004; Arts and Buizer 2009). Re-framing entails reinterpreting the initial positions about other actors, the topics, and/or about the whole problem (Gray 2004: 168). Re-framing might also be needed to overcome negative stereotypes that impede collaboration (section 5.1.1 above), or to facilitate social learning (e.g. Mostert *et al.* 2007) as discussed above (section 5.1.3).

5.2.3.2. Informal institutional context: culture of participation

Different studies (specifically in the CEE countries' context) have highlighted that a lacking tradition of participatory decision-making can affect the ways participation is conceptualised and implemented in these countries (e.g. Stringer *et al.* 2009). However, studies rarely explore what

the "culture of participation" (Jennings and Moore 2000; Leal 2007; Bodorkos and Pataki 2009) means and how does it affect the practices of participatory decision-making.

On one hand, culture of participation can be reflected in the specific attitudes, norms and values attached to the concept of participation and the related practices (Tumusiime and Vedeld 2012). In the case studies in Papers **I** and **II**, a lack of participatory culture was manifested in different ways: for example, in landowners' sceptical views on the opportunities to participate and to influence the decision-making processes during the Natura 2000 consultations, but also landowners' capabilities to meaningfully participate, as well as the consequent high rate of non-participation in the consultations (**I, II**). The cases of Otepää and Kõnnumaa showed that despite the fact that consultations had been taken place during the designations and most of the landowners were aware of them, the Natura 2000 designation process in the Estonian case studies was in general perceived as a top-down initiative. Many landowners had the perception that their opinion will not be listened to and decisions have already been made without taking into account the results of the consultations (**I, II**). Indeed, as Raudsepp *et al.* (2009: 231) note, the attitudes of many people in the former Soviet Union towards participatory approaches differ from those in Western Europe: people in the CEE countries tend to consider themselves still more as subjects to the government rather than active participants. Attempts to empower the stakeholders may fail if the stakeholders themselves are not ready to accept the active role (Paloniemi and Vainio 2011). Although different opportunities for participation exist, the transition context and/or history of many CEE countries can mean that stakeholders are backed up with little experience with active participation in decision-making (Sladonja *et al.* 2012; Stringer and Paavola 2013), and this can also affect their perceptions of and capacities to be involved.

On the other hand, participatory culture also reflects the ways participation is perceived by the public officials – a specific group of stakeholders when considering organised participation – and consequently, how participation is exercised in the administrative practices of decision-making. A dominance of technical and natural scientific approaches, or certain imbalances in stakeholder groups' representation towards governmental actors (Falaleeva and Rauschmayer 2013; Stringer and Paavola 2013) are some characteristic features of the decision-making

processes in several CEE countries. Such examples indicate that the new institutions and practices of participatory approaches in these countries are still influenced by the decision-making patterns from the recent past (Kluvankova-Oravska *et al.* 2009). Some cases from the participatory planning of the Estonian Green Network at regional level (**V**) have provided similar examples as those by Falaleeva and Rauschmayer (2013) or Stringer and Paavola (2013), foremost in terms of the prevailing substantive rationale for participatory approaches. In some cases, employing such approach meant that some relevant stakeholders were either omitted from the process, or not all their concerns, e.g. interests, value positions, were considered (**V**). The overall historical context of the CEE countries might be one possible reason for the preferences and choices of the organisers of participatory approaches, and specifically the important role of expert knowledge under the Soviet rule in these countries (Zacharchenko and Goldenman 2004). However, some other aspects might also have played a role, such as the multiple reforms in the Estonian public administration, which have resulted in a high degree of decentralisation and segmentation of the administrative system (Sarapuu 2011) and achieving high quality outputs thus requires a high degree of cooperation and coordination between various areas of expertise.

5.2.3.3. Rule compatibility: interplays between formal and informal institutions

As actors' behaviour in multi-level governance contexts is guided both by formal and informal governance institutions (Paavola *et al.* 2009), incompatibilities between these two-rule systems can lead to legitimacy problems. Since what is legitimate or not is often socially constructed, different legal norms and other (informal) institutions, such as local customary practices, can easily contradict each other (Brechin *et al.* 2002: 46). This in turn could lead to opposition between different actors in environmental governance (*ibid.*).

Stoll-Kleemann (2001: 376) suggests that people develop negative attitudes towards nature conservation measures when they perceive these measures as authoritative and specifically, as threatening to their personal rights to decide and act. In the cases of Otepää and Kõnnumaa, this can be one reason for causing negative attitudes towards Natura 2000: there was a general fear among the landowners that their right to manage land independently would be considerably constrained, or, in more

extreme cases, designations were regarded as unwarranted restrictions of landowners' rights (**II**). One possible reason why many landowners have regarded their private property rights as inviolable (Paavola 2004: 66) might be rooted in the historical context of CEE countries and the respective collective meanings, beliefs and understandings associated to private property. In the CEE countries context, forests and other land resources were publicly owned and managed by the government for many decades (Nijnik *et al.* 2009: 161). The transition processes after 1991 included the restitution of land to the former owners and privatisation (*ibid.*), as well as the subsequent codification of private use rights in the national legislation. Negative experiences from the recent history and processes of transition can provide one explanation why landowners tend to attach specific meaning to private property, and react negatively to any attempts that are perceived to constrain these rights. Interviews with the landowners in the Estonian Natura 2000 designations (**II**) showed that experiences with top-down decision-making from the recent history seem to have influenced landowners' perceptions: when expressing their opinions about Natura 2000, some interviewees had extreme notions in mind, equating the designations with forced land-expropriation. In the case of the Kiskunsag National Park, Hungary, (**III**) farmers' traditional independence in land use decisions has been confronted with frequent interventions into property rights throughout the history, and coupled with recent top-down implementation of conservation policies (Gómez-Baggethun and Kelemen 2008). Such interferences are examples of factors that possibly hinder cooperation between farmers and the park administration (**III**). Similar examples of treating conservation issues as matters of identity and autonomy can be found elsewhere, in other (CEE) countries. Hiedanpää (2002: 118) proposes that the Natura 2000 designations' conflict in Finland was aggravated by the fact that the landowners perceived the Natura 2000 designations as threatening for the traditional ways they had used to consider their landowners' rights and freedoms. In a similar way, governmental actors at local level in Slovenia oppose the ideas for establishing a national park for the reason that they perceive the idea as coming from "outside" (national level) (Elliott and Udovc 2005: 270). Similarly, Schwartz (2007: 68) notes that a conflict in the management of the Gauja National Park (Latvia) was more an ideological struggle between discourses of national identity and the Western norms of biodiversity protection, i.e. a resistance towards "globalising the ethnoscape" for the farmers, rather than an issue about the use of natural resources. In this case, certain international narratives

of biodiversity conservation were held as threatening to the farmers' traditional notions of the value of rural landscapes and national identity (Schwartz 2006: 68; Schwartz 2007: 288).

These findings suggest that the interplays between the formal institutions and informal institutional context can affect legitimacy. Informal rules in these studied cases included the historically embedded patterns of land use rights as a basis for stakeholders' rights and responsibilities in resource management, and their perceptions on sound nature conservation requirements (**III**). Informal rules determine what is expected from one's behaviour (Helmke and Levitski 2004: 727; Licht *et al.* 2007: 661). The Natura 2000 designations in several countries (Hiedanpää 2002; **III, I, II**) indicated that landowners, while relying on their perceptions and values about the notion of independence in general, as well as about autonomy in land management decisions specifically, expected that the environmental authorities show a respect towards their perceptions and values. Moreover, acceptance of nature conservation measures might not only relate to the ways the people perceive their rights, but also with regard to how they see their duties, e.g. a sense of custodianship over the land and the associated biodiversity in the case of landowners (Pretty and Pimbert 1995; Church and Ravenscroft 2008: 4-5). Thus, initiatives to conserve the nature from "outside" are considered as mistrust and disrespect towards landowners' abilities to conserve the nature on the basis of their everyday land management practices (**III**).

Taken together, this reinforces the need to consider the wider institutional regimes (Paavola *et al.* 2009) – which also include the informal institutional environment of locally relevant social norms and practices. Informal and formal institutions should ideally complement each other in order to pursue legitimate governance solutions (Licht *et al.* 2007: 661; Pahl-Wostl 2009: 356).

6. CONCLUSIONS AND RECOMMENDATIONS

Ecological networks are meant to be key governance solutions for combating the problems with habitat fragmentation and loss, which belong to the main drivers for biodiversity decline worldwide. Ecological networks also increasingly more aim at combining biodiversity conservation with sustainable spatial development. Their governance in Europe encompasses the participation of multiple actors and interplays between various decision-making levels across the spatial as well as jurisdictional-institutional scales. Despite the calls for greater involvement of different stakeholders and their various concerns (e.g. interests, knowledge claims), the implementation of spatial planning and biodiversity policies and legislation in Europe has been facing legitimacy crises and several challenges for building on the knowledge of various stakeholders. So, to what extent are participatory approaches a solution? How does participation contribute to greater legitimacy and mutual learning between stakeholders? How can different knowledge-claims be integrated via participatory approaches, and what are the main drivers behind successful knowledge integration?

The main aim of this thesis has been to provide insights into the functioning of participatory approaches when planning the national ecological network (Green Network) and delineating the Natura 2000 network in Estonia, but also within the wider context of multi-level participatory ecological network governance in Europe. The thesis draws upon a synthesis of a set of qualitative case studies.

This chapter first sums up the answers to the research questions (section 6.1), as were formulated in the introduction and chapter 3. Then, limitations of this study are summarised and recommendations for further research are drawn (section 6.2). The final section (6.3) outlines the main implications that this research has for the practitioners and/ or policy-makers in the nature conservation and spatial planning sector.

6.1. Conclusions

The thesis was guided by three main interrelated research questions, to which the answers are summarised below, based on the qualitative synthesis of the cases from the Papers.

Firstly, the consultations within two cases of the Natura 2000 areas' designations in Estonia (Papers **I**, **II**), allowed analysis of the ability of participatory approaches to function as effective communication tools, and specifically, to build landowners' awareness. Landowners constitute one key stakeholder group within the Natura 2000 designations and management. Yet, as the cases of Otepää and Kõnnumaa in Estonia have shown, their awareness on key topics, like the protection purposes and socio-economic impacts of designations, but also on formal rules of consultations was rather low. Similar problems with informing the relevant stakeholders adequately have been encountered in other EU countries. These results suggest that the way information is exchanged, but also the content of information, are the main factors affecting the effectiveness of communication. Furthermore, existing adversarial relationships between landowners and nature conservation administration, e.g. negative stereotypes, as well as the absence of effective coordination experiences and mechanisms in multi-level governance contexts can hinder the success of communication.

Secondly, instances of and factors contributing towards knowledge integration (**I**, **II**, **IV**, **V**) and social learning (**III**, **IV**, **V**) through participatory processes within ecological network governance were analysed. Consultations during the Natura 2000 designations and participatory delineations of the Green Network in Estonia provided two contrasting examples of the roles different knowledge claims can play within participatory processes. In the first case, mostly scientific knowledge stood at the forefront in decision-making processes. In the second case, the notion of "expertise" was often interpreted more widely by the public officials, and thus allowed the inclusion of knowledge inputs from a broader set of stakeholders. In contrast, the Natura 2000 designation cases in Estonia and abroad have foremost seen distrust towards each other's knowledge claims among different stakeholders. Thus, receptive positions of stakeholders towards considering and recognising each other's knowledge claims and trust in each other's expertise are key factors to facilitate knowledge integration. Some attributes of the overall decision-making context (e.g. the underlying rationales for participation) and certain attributes of the participatory processes (foremost clarity of goal definition, degree of interaction, and continuity of established contacts) also affect knowledge integration. The case studies have provided several examples of social learning, as facilitated by participatory processes. Learning was manifested by

cognitive and attitudinal accommodations (i.e. learning about each other's interests, values and world-views), but also certain behavioural changes (willingness to take into account the perspectives of others, and strive for achieving agreements) among the participants. The cases have also pointed at a fact which has seldom been outlined in earlier studies: in addition to collaborative elements through which stakeholders learn, learning can also occur via conflict situations which often catalyse change more easily.

Finally, factors affecting the legitimacy of ecological network governance were studied (all Papers presented in this thesis). A set of factors were found to affect the legitimacy, including: a) the consideration and inclusion of different concerns from different stakeholders; b) the nature of participation, e.g. informal versus formal ways of being involved; c) accountability and transparency; d) framing; c) culture of participation; and e) rule compatibility. These results add on to studies which have investigated reasons for illegitimacy in biodiversity governance (e.g. Stoll-Kleemann 2001; Schenk *et al.* 2007; White *et al.* 2009), by providing an insight into the factors affecting legitimacy specifically in the context of ecological network governance and in the context of CEE countries. Furthermore, the results by propose that in addition to certain procedural sources for legitimacy (inclusion, accountability and transparency), certain contextual aspects (framing, culture of participation, compatibility between formal and informal rules) are also important to consider when studying legitimacy. Below, the meaning of each factor is specified.

a) Inclusion
The analysis allowed one specific aspect to be determined within the concept of "inclusion", suggesting that the object of inclusion is here the core point affecting legitimacy. Inclusion is also an important issue when assessing the linkages between decision-making processes (input legitimacy) and their outcomes (output legitimacy): processes may be widely inclusive, but if the outcome(s) do(es) not reflect on the concerns of all relevant stakeholders, legitimacy problems arise.

b) Formalised versus more informal ways of being involved
The findings suggest that certain formal participatory approaches, in particular some widely-used tools, such as public meetings, are lacking legitimacy in the views of key Green Network as well as Natura 2000

designations' stakeholders. Certain more informal ways of involvement, such as bilateral contacts between different stakeholders, were sometimes preferred instead of official involvement channels. Informal ways of participation are, however, more likely to engender power asymmetries towards certain decision-making levels or towards more organised stakeholders.

c) Accountability and transparency

The cases of multi-level biodiversity governance in several EU countries have demonstrated certain challenges for accountability and transparency – as normative criteria for assessing the input and/or throughput strand of legitimacy. Such challenges meant difficulties in establishing clear lines of responsibilities and sharing of duties and resources, but also problems in securing the responsiveness of accountability holdees towards multiple levels.

d) Framing

Substantial differences in the ways different stakeholder groups perceive (i.e. frame) nature conservation issues might make communication between these groups more difficult, and give rise to frame-based conflicts. Particularly on topics related to Natura 2000 designations, the Estonian Otepää and Kõnnumaa case studies indicate that landowners tend to frame the issue with negative connotations. This might partially be explained by the way these topics were publicly communicated, specifically through the Estonian news media. However, at a general level, key stakeholders share a common framing of the topics related to the national Green Network with positive connotations.

e) Culture of participation

Two key aspects should be considered when defining the concept of "a culture of participation" and empirically analysing it. Different stakeholders' perceptions of and attitudes towards participatory processes are of key importance – participatory exercises may fail when people are not ready to take an active role. Public officials are one specific set of stakeholders here, since their conceptualisations of participatory approaches and interpretations of legal requirements for participation directly affect the ways participatory processes are set up through the administrative practices of decision-making.

f) Rule compatibility

Incompatibilities between formal institutions from higher governance levels and locally relevant informal rules (e.g. shared meanings attached to private property) in ecological network governance can result in legitimacy problems. In extreme cases, biodiversity conservation issues can become matters of identity for certain stakeholders, rather than questions of procedural or distributive justice.

Overall, this thesis has made a step forward in providing insights into the application of participatory approaches specifically in the context of the CEE region. Stakeholder and public involvement initiatives have been challenging in many countries here. The empirical analysis has revealed a set of problems related to participatory ecological network governance. Below, some ideas are proposed how to address these problems in practice (section 6.3). As participatory approaches in Estonia are playing an increasingly crucial role in several policy domains that touch upon ecological networks, it is relevant to further explore how participation could function best, for which some recommendations are made in the next section (6.2).

6.2. Recommendations for future research

The case studies in the Papers have mainly conducted retrospective analyses on past decision-making processes and key stakeholders' experiences with these processes (Papers **I**, **II**, **IV**, and **V**). Some of the cases also included (among others) examinations of on-going decision-making processes (**III**, **VI**) where the ultimate outcomes of the cases were yet to be revealed at the time of data gathering and analysis. However, if the goal is to determine the effects of participatory processes more specifically, *ex-ante* as well as *ex-post* assessments are needed. Also, it would be interesting to conduct similar cases for example, in the Otepää and Kõnnumaa Natura 2000 case areas, as these areas have recently undergone management planning processes where different participatory approaches were applied to involve the various interest groups and the public.

Many mostly quantitative studies have explored different stakeholders' awareness (consisting of cognitive and affective components) on environmental issues in general and towards conservation measures. Yet,

few studies have qualitatively focused on the linkages between awareness and legitimacy, but the cases here (**I** and **II**) suggest that low levels of awareness on the substance and procedure rules of consultations often result in stakeholders' non-participation and can consequently cause problems with legitimacy. Future studies could explore the linkages between awareness and stakeholders' perceptions and attitudes towards participatory approaches more closely, and the ways this affects the ultimate legitimacy of these decision-making processes. This could be done using both approaches: i.e. descriptive measures of legitimacy (stakeholder perceptions and attitudes) as well as certain normative criteria (e.g. inclusion).

The cases (**V**) have referred to stakeholders' receptive positions, i.e. trust towards each other's expertise as key factors to support knowledge integration. Trust has often been mentioned as one key component or prerequisite for effective participatory processes, as well as an important outcome from such processes, but studies have seldom clarified its meaning (cf. Höppner 2009). Further research is required to specify the dimensions of trust specifically with regard to knowledge integration and the factors that support trust-building via participation, as well as different stakeholders' perceptions on the concept of expertise.

This study did not specifically look at the exact ways (methods, tools) how different knowledge claims can be elicited and integrated via participatory approaches within ecological network governance. As various knowledge claims have their specific attributes (e.g. degree of formalisation and articulation) that affect for example, the ways knowledge can be elicited and synthesised, so that it would give new meaningful insights into decision-making processes, future studies should comparatively analyse various participatory forums' abilities to do this (e.g. to recognise the specifics of different knowledge claims).

The exact reasons why some formal participatory methods, such as public meetings or opportunities to submit written claims to environmental authorities, lack legitimacy in the views of various stakeholders relevant to the Green Network and for the governance of Natura 2000 areas (**I**, **II**, **IV**, **VI**) are not fully clear. As public meetings are among key formal involvement methods in Estonian environmental governance, their specific role(s) and functions in relation to ecological network governance needs to be clarified.

Current knowledge integration endeavours in the Estonian cases have witnessed certain power imbalances, towards including foremost governmental knowledge-claims (within the county level Green Network delineations), or towards scientific or other expert knowledge (the Natura 2000 designations). Partially, this can be attributed to the overall decision-making or to the CEE countries' context, or to the design and setup of participatory processes. Yet, further analyses need to study the exact reasons behind these power asymmetries, as well as the general role of power within knowledge integration exercises. Also, given the challenges faced in recognising and integrating the various knowledge claims in the studied cases, future studies could investigate what kind of organisations could perform boundary and bridging functions (e.g. research institutes), to facilitate knowledge integration in the Estonian ecological network governance.

This research has mostly focussed on process-based aspects of inclusion (**I**, **II**, **III**, **IV**, and **VI**). More studies are needed to empirically investigate the influence of participatory processes on the outputs of these processes in Estonia. Such analyses would, based on the examples of concrete participatory processes, give more specific evidence to what extent linkages between input and output legitimacy exist and which factors affect it. Paying attention to the mechanisms that affect legitimacy here is specifically relevant in the CEE countries' context, because participatory practices in these countries have often had problems with considering and taking the results of participation into account in the final decisions.

This study was empirically based either on descriptive (**I**, **II**, and partially **IV**, **VI**) or normative bases (**III**, **IV**, **V**, and **VI**) to analyse and assess the legitimacy of participatory governance. Future research could triangulate these two approaches in an opposite way, e.g. by exploring which meanings the different stakeholders attach to the normative concepts of accountability and transparency, specifically in the Estonian ecological network governance context.

6.3. Practical and policy recommendations

Overall, the studied cases have shown that participatory approaches have mainly been applied in the implementation phases of the relevant

governance or policy cycles. Yet, the findings suggest that practitioners could consider integrating participation earlier in the policy cycle, because decision-making occurs at every stage of the cycle (Adger *et al.* 2003), and the role of participation in early phases (e.g. problem definition and planning) is of specific importance, since several problems, e.g. with legitimacy might occur in the later phases (e.g. when implementing the policies) when not all relevant stakeholders have been involved in defining the problem or planning their solutions (e.g. Bäckstrand *et al.* 2010: 230).

The synthesis of the case studies suggests that the practitioners and policy-makers engaged in designing and/or organising participatory approaches in the nature conservation and/or spatial planning domains could consider the following.

- Broad communication campaigns and information distributed via impersonal channels, e.g. information distributed via mass media, are not likely to satisfy the specific information needs of landowners and build their trust towards environmental authorities. More personalised communication and interactive involvement methods are needed to raise stakeholders' awareness. Sometimes, public meetings and similar tools can serve this purpose well. Also, practice-based approaches, e.g. guided tours, could provide two-way communication arenas where landowners can meet with ecology experts in a neutral environment, exchange specific information about a concrete area, as well as build trust towards each other.
- Participatory approaches that define clear goals for involvement, enable deliberation and discussion, establishment of contacts between key stakeholders in early phases of decision-making processes, but also the continuity and frequency of such contacts are likely to bring different knowledge holders together and foster knowledge integration.
- Knowledge inputs from different stakeholders have their specific attributes, such as their specific vocabularies and degrees of articulation. Thus, it is likely that different kinds of ways (methods, tools) are needed to elicit and integrate such knowledge claims, e.g. visualised methods to elicit stakeholder knowledge that is not easily put into words.
- Participatory processes that allow enough room for (informal)

interaction and dialogue among participants facilitate social learning, e.g. the participants will become more aware of each other's concerns and learn to respect them.

- Different stakeholders often wear "multiple hats" – e.g. represent different kinds of interests, or are carriers of various knowledge claims. It often depends on the concrete situation, which one of such "hats" will be most important. Thus, a difference should be made between the various claims stakeholders make in decision-making processes (based on e.g. their knowledge, or interests), since the issue(s) at stake in a concrete case affect stakeholder expectations towards decision-making process and its outcomes. Stakeholder analyses, see, e.g. Ramirez and Fernandez (2005), can help here to identify these different stakeholders, their roles and claims, as well as assess their relevance in the concrete case.

- The legitimacy of decision-making processes and their outcomes depends on the extent to which a balance is achieved between the expectations of different stakeholders towards participation, and the rationales on which the organisers rely when designing and convening participatory processes. So, rationales for designing and expectations towards participation, but also process boundaries should be clarified from the outset in participatory processes, in order to avoid raising unjustified expectations.

- Employing a professional facilitator (or improving the facilitating skills of public officials) – an independent person with a task to support the actors involved – for public meetings or other similar occasions could help to structure the meetings more clearly, and to synchronise different inputs.

- When conflicts within ecological network governance are caused by fundamental differences in frames, i.e. the ways people make sense of problems, re-framing exercises could be one solution to reconcile such conflicts. Re-framing helps stakeholders to focus on common aspects in their views, which would give a basis for their mutual understanding and possible collaboration.

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SUMMARY IN ESTONIAN

Kaasamisprotsesside tõhusus ja tulemuslikkus ökoloogilise võrgustiku planeerimisel ning rakendamisel mitmetasandilises valitsemismudelis

Sissejuhatus

Ökovõrgustike planeerimine ja rakendamine (ehk ökovõrgustike valitsemine, ingl *ecological network governance*) ühendab maastiku ökoloogilised funktsioonid mitmesuguste sotsiaal-majanduslike aspektidega. See hõlmab geograafilisi ja administratiivtasandeid kohalikest omavalitsustest Euroopa Liiduni (EL), samuti nendega seotud asjalisi (*stakeholders*) ja viimaste käitumist mõjutavaid institutsioone (formaalseid ja mitteformaalseid tegutsemisreegleid). Asjaliste kaasamist otsustusprotsessidesse peetakse mitmetel pragmaatilistel ning normatiivsetel kaalutlustel oluliseks ökovõrgustike valitsemise osaks. Käesoleva väitekirja probleemiasetus lähtub kahest olulisemast kaasamisele seatavast ootusest ning nendega seonduvast problemaatikast. Esiteks, millistel tingimustel toimivad kaasamine ja osalus õpi- ning uut teadmist loovate protsessidena? Teiseks, kuidas võimaldab kaasamine tõsta otsustusprotsesside ning nende väljundite aktsepteeritavust (s.t legitiimsust) kõigile antud kontekstis olulistele asjalistele?

Iga osalusprotsess leiab aset konkreetsetes tingimustes ning on seetõttu eeldatavalt unikaalne oma osalejateringi, dünaamika ja tulemuste poolest. Seega tekib põhjendatud küsimus: kuidas toimib osalus erinevates oludes? Postkommunistlikes Ida-Euroopa riikides, kus demokraatlikud institutsioonid on alles hiljuti taastatud, on kaasamispraktikates ilmnenud mitmesuguseid probleeme, nt asjaliste kaardistamises, nende õigeaegses informeerimises või kaasamise tulemuste arvestamises. Paljud neist riikidest on praeguseks liitunud EL-ga, mis lisab olemasolevaile veel ühe valitsemistasandi koos mitmesuguste osapoolte ning institutsioonidega. Millised taustatingimused seab kaasamisprotsessidele valitsemistasandite, asjaliste ning institutsioonide paljusus ning nendevahelised seosed?

Ökovõrgustike valitsemine Eestis väärib siinkohal eraldi käsitlemist mitmel põhjusel. Eesti on pika looduskaitsetraditsiooniga riik, olles Euroopas esirinnas ka esimese riikliku ökovõrgustiku kontseptsiooni väljatöötamise poolest. Viimasel paarikümnel aastal on osalusdemokraatia

põhimõtted muutunud Eesti ruumiplaneerimise ja looduskaitsevaldkonna lahutamatuks osaks. Nende valdkondade kaudu rakendub Eesti rohelise võrgustiku kontseptsioon ja EL loodus- ning linnudirektiivil põhinev Natura 2000 alade võrgustik. Eesti ruumiplaneerimispoliitika ühe läbiva idee kohaselt peaks ruumiline planeerimine olema võimalikult laiapõhjaline, avalik ja eri valdkondi hõlmav koostöö- ning koolitusprotsess, mille lõpptulemusena peaks sündima kõiki osapooli rahuldav planeeringulahendus. Asjaliste kaasamine on oluline ka looduskaitsevaldkonna õigusaktides ja praktikates. Millised tegurid mõjutavad kaasamisprotsesside toimimist Eestis?

Uurimisküsimused

Käesolev väitekiri analüüsib ökovõrgustike valitsemisega seonduvate kaasamisprotsesside tõhusust ja tulemuslikkust Eestis ja mõnedes teistes EL riikides. Väitekirjas otsitakse vastuseid järgmistele küsimustele:

1) Kuidas saab kaasamisega toetada tulemuslikku suhtlust eri osapoolte vahel (sh tõsta maaomanike teadlikkust) Natura 2000 alade määratlemise kontekstis?

2) Millistel juhtudel on / ei ole kaasamine ökovõrgustiku planeerimisel ning rakendamisel toiminud õpi-, koolitus- ning asjaliste teadmisi koondava protsessina? Millised faktorid seda mõjutavad?

3) Millised tegurid mõjutavad otsustusprotsesside ja nende tulemite legitiimsust?

Materjal ja metoodika

Väitekiri koondab põhitulemused kuuest artiklist, mille loend on esitatud eespool lk 7 ja täistekstide koopiad töö lisadena. Artiklid tuginevad juhtumiuuringute kvalitatiivsel analüüsil (nt Miles ja Huberman 1994; Graneheim ja Lundman 2004; Yin 2009).

Kahes esimeses artiklis (**I** ja **II**) on analüüsitud kahe Natura 2000 ala (Otepää ja Kõnnumaa) määratlemisel toimunud kaasamis- ja osalusprotsesse. Analüüsi aluseks on 2006. ja 2007. a läbiviidud pool-struktureeritud intervjuud maaomanikega mõlemas uuringupiirkonnas, samuti otsustusprotsesside menetlusdokumendid. Artikkel **III** tugineb üheteistkümne bioloogilise mitmekesisuse valitsemisjuhtumi kvalitatiivsel meta-sünteesil. Juhtumiuuringud on tehtud EL 7. raamprogrammi uuringu- ja koolitusvõrgustikus GoverNat (2006–2010, www.governat. eu), mille koosseisus väitekirja autor osales aastail 2009–2010.

Artiklites **IV**, **V** ja **VI** analüüsitav andmestik pärineb väitekirja autori magistritöö (2008) ja rahvusvahelise rakendusliku uurimisprojekti KEN (2007–2009, www.ecnc.org/projects/nature-and-society/knowledgefor-ecological-networks) raames kogutud materjalidest. Artikli **IV** jaoks kasutatav andmestik hõlmab 33 Eesti rohevõrgustiku planeerimise ja rakendamise seisukohalt olulisema asjalisega tehtud intervjuud ning eri valitsemistasandite poliitika- ning planeerimisdokumentide ja õigusaktide tekstianalüüsi. Artiklis **V** võrreldakse aastatel 1999–2006 kümnes Eesti maakonnas toimunud rohevõrgustiku planeerimisprotsesse ja kaasamise rolli neis. Artikli **V** tulemused põhinevad osalt kahes eelmises artiklis kirjeldatud materjalidel, millele lisanduvad nende maakondade planeerimisspetsialistidega läbiviidud süvaintervjuud. Artikkel **VI** tugineb ülalnimetatud projekti KEN ning EL 7. raamprogrammi projekti TESS (2008–2011, www.tess-project.eu) tulemuste analüüsil, kuid sünteesib ka mõnede varasemate kvalitatiivsete uuringute tulemusi (Tani 2007; Kivimaa 2008; Koort 2010).

Kokkuvõte tulemustest ja järeldused
Maaomanikud on Natura 2000 alade määratlemisel ning haldamisel üks olulisimaid asjalistegruppe, kuid probleemid nende ja teiste kohalikul tasandil oluliste asjaliste informeerimisega on ilmnenud paljude EL riikide looduskaitsepraktikates. Vaatamata ulatuslikule Eesti Natura 2000 alade piiritlemisel korraldatud avalikustamiskampaaniale oli vaadeldud juhtumiuuringualadel maaomanike teadlikkus Natura 2000 programmi põhiteemadest üsna madal (artiklid **I**, **II**). Paljudele intervjueeritavaile olid ebaselged ala kaitse-eesmärgid ning sotsiaalmajanduslikke küsimusi puudutavad aspektid, nt maakasutuspiirangud ning toetus- ja kompensatsioonimehhanismid, aga ka õigusaktidest tulenevad osalusreeglid. Efektiivset suhtlust maaomanike ja looduskaitseametnike vahel võisid takistada ka nende eelarvamused üksteise suhtes või eri valitsustasandite vahelise infovahetuse puudulik koordineerimine. Analüüsitud juhtumid viitasid ka olulisele seosele asjaliste teadlikkuse ja osalusprotsesside legitiimsuse vahel: maaomanike osalust takistab nende vähene teadlikkus nii kõnealusest teemast kui ka osalusreeglitest.

Eesti Natura 2000 alade määratlemisel läbiviidud konsultatsioonid maaomanikega ning maakondliku tasandi rohevõrgustiku planeerimisel toimunud osalusprotsessid on kaks vastandlikku näidet sellest, missugust rolli võivad kaasamisel mängida eri teadmistüübid (nt teaduslik või nn kohalik teadmine) (**I**, **II**, **IV**, **V**). Esimesel juhul

põhinesid otsustusprotsessid eeskätt teaduslikul teadmisel, teisel juhul aga tõlgendati mõistet „ekspertiis" laiemalt nii, et see võimaldas paljude teadmiste ja oskustega asjaliste kaasamist. Erinevused nende kahe juhtumi vahel tulenevad osalt sisulistest erinevustest looduskaitse- ning ruumiplaneerimisvaldkonna teemakeskmeis, osalustraditsioonides ja -põhimõtetes ning kaasamisele seatavais õigusnõuetes. Juhtumiuuringutest selgus ka, et asjaliste usaldusest üksteise suhtes sõltub suuresti see, kuivõrd edukalt suudetakse kaasamisel koondada asjaliste teadmisi ja oskusi. Rohevõrgustiku planeerimise näites olid määravad edutegurid muu hulgas otsustusprotsessi varases etapis loodud usalduslik kontakt ja järjepidev suhtlus. Teadmiste koondamise seisukohalt on tulemuslikumad selgete eesmärkidega, aktiivset arutelu võimaldavad ning mitmesuguste teadmistüüpide iseärasustega (nt keelekasutus) arvestavad kaasamisprotsessid. Juhtumiuuringute põhjal võib väita, et interaktiivne ja arutelupõhine kaasamine toimib osalejate jaoks õpiprotsessina (**III**, **IV**, **V**). Kui varasemalt on leitud, et kaasamine on õpiprotsess eeskätt koostööliste suhete tingimustes, siis käesolev uurimus kinnitab, et ka konfliktiolukorrad võivad soodustada üksteise seisukohtade ja huvide teadvustamist ning nendega arvestamist.

Analüüsitud juhtumid (tuginedes kõikide käesoleva väitekirja aluseks olevate artiklite tulemustele) viitasid kuuele peamisele otsustusprotsesside ja nende tulemite legitiimsust mõjutavale tegurile, mille võib jagada kahte gruppi. Esiteks, protsessipõhised aktsepteeritavust mõjutavad tegurid: a) kaasatus; b) kaasamis-/osalusvorm; c) otsusetegijate aruandekohuslus ja otsustusprotsesside läbipaistvus, ning teiseks mõned kontekstuaalsed aspektid: d) erinevused probleemikäsitlustes; e) kaasamiskultuur; ja f) institutsioonisüsteemide vaheline kooskõla. Järgnevalt selgitatakse iga teguri olemust ning sellest lähtuvaid järelmeid lähemalt.

a) Kaasatus

Asjaliste laiapõhjaline kaasatus (*inclusion*) otsustusprotsessidesse ei pruugi alati tagada protsessi väljundite ehk lõplike otsuste legitiimsust. Otsuste vastuvõetavust asjalistele mõjutavad siinkohal eeskätt asjaliste endi hinnangud sellele, kuivõrd nende panusega on kaasamisel arvestatud.

b) Kaasamis-/osalusvorm

Paljud intervjueeritud asjalised leiavad, et mõned Eesti ruumiplaneerimis- ja looduskaitsepraktikas laialdaselt kasutatavad kaasamisvormid (nt

avalikud koosolekud) pole otsuste suunamiseks piisava mõjujõuga. Vahel eelistavad asjalised pigem mõnd mitteametlikku osalusvormi, nt kahepoolseid kohtumisi või osalust töörühmades.

c) Otsusetegijate aruandekohuslus ja otsustusprotsesside läbipaistvus
Mõned töös käsitletud juhtumitest viitasid asjaolule, et valitsustasandite paljusus võib raskendada vastutusvaldkondade selget piiritlemist, nende täitmiseks vajaminevate ressurside jaotamist ning võimukeskmete kindlakstegemist. Sellised probleemid võivad lõppkokkuvõttes takistada aruandekohustuse (*accountability*) täitmist samaaegselt paljude eri tasanditel tegutsevate asjaliste ees ning otsustusprotsesside läbipaistvust (*transparency*).

d) Erinevused probleemikäsitlustes
Põhimõttelised erinevused probleemikäsitlustes (*frames*) võivad muuta asjalistevahelise suhtluse keerukamaks. Analüüsitud juhtumid näitavad, et asjalised tajuvad nii üldisemaid looduskaitsega seonduvaid probleeme ja nende lahendusi kui ka spetsiifilisi mõisteid (Natura 2000, rohe- või ökovõrgustik) erinevalt. Näiteks rohe- ja ökovõrgustiku mõistet seostasid küsitletud paremini sotsiaalmajanduslike aspektidega, kuid Natura 2000 temaatika seostus intervjueeritud maaomanikele pigem huvide vastandumisega.

e) Kaasamis- ja osaluskultuur
Osaluskultuur peegeldub asjaliste mentaliteedis ja suhtumistes osalusvõimalustesse. Näiteks Eesti Natura 2000 alade määratlemise juhtumiuuringutes oli maaomanikel osalusvõimaluste ja otsuste mõjutamisvõime suhtes selgelt skeptiline hoiak. Kaasamiskultuur avaldub ka ametnike arusaamades kaasamisest, mis sageli mõjutavad kogu osalusprotsessi ülesehitust.

f) Eri institutsioonisüsteemide vaheline kooskõla
Otsustusprotsesside legitiimsust mõjutab eri institutsioonisüsteemide suhestumine üksteisesse: legitiimsust toetab formaalsete (s.t õigusaktid) ja mitteformaalsete (nt tavad ja normid seoses omandiõigustega) institutsioonide omavaheline kooskõla ning asjaliste tegevuste vastavus neile.

Praktilised soovitused

Käesolev väitekiri peegeldab mõningaid probleeme, mis on ilmnenud asjaliste kaasamisel Eesti ökovõrgustiku planeerimisel ja rakendamisel. Analüüsitud juhtumite põhjal tehakse alljärgnevalt mõned üldisemad ettepanekud, kuidas nimetatud probleemistikku käsitleda ja sellele lahendusi leida.

- Analüüsitud juhtumid näitavad, et laialdaste avalikustamiskampaaniate tulemuslikkus on maaomanike teadlikkuse tõstmise osas suhteliselt väike, kuna need ei suuda rahuldada maaomanike spetsiifilist infovajadust. Samas tõstavad vahetumad ja konkreetsemat sisulist infot pakkuvad suhtlusvormid (nt telefonivestlus looduskaitseametnikuga või osalemine asjaliste koosolekutel) tõenäolisemalt maaomanike teadlikkust ning aitavad ennetada arusaamatusi maaomanike ja looduskaitse-ekspertide vahel.

- Selgete eesmärkidega, aktiivset arutelu võimaldav ning eri teadmistüüpide iseärasustega (nt keelekasutus, kontekstispetsiifilisus) arvestav kaasamine toetab asjaliste teadmiste ja oskuste koondamist ja sünteesi. Määravad on ka otsustusprotsessi varases etapis loodud asjalistevaheline kontakt ja selle järjepidevus.

- Asjalised võivad eri olukordades esindada väga mitmesuguseid rolle, millele vastavalt nad otsustesse panustavad, nt oma teadmiste või huvide kajastamisega. Asjalistel on tihti ka erinevad ootused kaasamisprotsesside ülesehituse ja tulemuste osas. Seega tuleks ekslike ootuste vältimiseks kaasamise aluspõhimõtted, samuti täpsemad protsessireeglid varakult kõigi osapooltega läbi rääkida.

- Asjaliste analüüs (*stakeholder analysis*) on üks võimalike otsustustugesid, mis võimaldab otsusetegijail asjalisi ja nende (potentsiaalseid) rolle kaardistada ning lõppkokkuvõttes hinnata, milliseid osapooli tuleks antud kontekstis esmajoones kaasata.

- Võimalik, et koosolekuid jt sarnaseid kaasamisvorme aitaksid tõhustada ja tulemuslikumaks muuta nende parem organiseeritus, mida soodustaksid näiteks professionaalsed hõlbustajad (*facilitators*) või ametnike koosolekujuhtimisalaste oskuste arendamine.

- Otsuste illegitiimsus võib muuhulgas tuleneda asjaolust, et kaasamisel pole piisavalt arvestatud märkimisväärsete erinevustega asjaliste probleemikäsitlustes (*frames*). Seda tüüpi vastuolude lahendamisel võib abi olla probleemide ümbersõnastamisest (*re-*

framing) nii, et keskendutakse eeskätt seisukohtades peituvaile ühisjoontele, millele ehitada üles edasine arutelu ning võimalik koostöö.

Edasine uuringuvajadus

Käesolevas töös uuriti põhiliselt juba aset leidnud otsustusprotsesside toimimist tagasivaatava pilgu läbi. Edaspidised uuringud võiksid lähtuda nii *ex-ante* kui ka *ex-post* analüüsiperspektiividest, mis võimaldaks teha täpsemalt kindlaks protsesside ja nende tulemite, samuti mõlemaid mõjutavate tegurite vahelised põhjus-tagajärg suhted. Näiteks väitekirjas analüüsitud Otepää ja Kõnnumaa Natura 2000 aladele on koostamisel (uued) kaitsekorralduskavad, milles kaasamine on mänginud olulist rolli. Seega oleks asjakohane analüüsida nende protsesside tõhusust ja tulemuslikkust.

Väitekirjas analüüsitud juhtumiuuringutes selgus, et mitmesuguseid teadmistüüpe esindavate asjaliste kaasamist ja nende teadmiste sünteesi soodustavad eelkõige asjaliste vahel loodud usalduslik kontakt ja ekspertiisi mõiste laiahaardeline käsitlus. Edasised uuringud peaksid selgitama usalduse kujunemist kaasamisel ning ekspertiisi mõiste tõlgendamist mõjutavaid tegureid.

Antud uurimus ei käsitlenud kaasamisviiside ja -vahendite sobivust erinevate eesmärkide täitmiseks (nt asjaliste teadmiste koondamiseks). Edasised uuringud peaksid süstemaatilisemalt analüüsima mitmesuguste kaasamismeetodite ja -reeglistike võimet arvestada asjaliste teadmistüüpide eripäradega. Samuti tuleks hinnata avaliku koosoleku kui Eesti kontekstis ühe keskse õigusaktides ettenähtud kaasamisvormi rolli ja tähendust ökovõrgustiku planeerimis- ja rakenduspraktikas. Väitekirjas analüüsitud juhtumiuuringud näitasid, et mõnel juhul olid vertikaalsed (eri valitsustasandite-vahelised) või horisontaalsed võimusuhted (eri ühiskonnagruppide-vahelised) otsustusprotsessides tasakaalustamata. Osaliselt tuleneb see Ida-Euroopa riikide ajaloolis-poliitilisest taustast, kuid selle nähtuse täpsemad põhjused on ebaselged.

Legitiimsuse analüüsil tugines väitekiri kirjeldavaile (nt asjaliste endi hinnangud) ja normatiivsetele analüüsikriteeriumidele (nt kaasatus, otsusetegijate aruandekohuslus ja protsesside läbipaistvus). Normatiivsete analüüsikriteeriumite tähendus ja asjakohasus mitmesuguste osapoolte jaoks vajab edasist selgitamist.

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I

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Assessing the effects of public participation during the designation of Natura 2000 areas in the Otepää Nature Park area, Estonia

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Summary

The first phase of implementing the Natura 2000 network includes several activities to introduce the concept to different stakeholders and to involve them in the decision-making process. A number of EU member states have experienced considerable opposition from several stakeholders to the designation of Natura 2000 areas. As the next step of the Natura process, management of Natura areas places an increasing emphasis on cooperation with relevant stakeholders, as their knowledge and willingness to collaborate are of central significance. The study investigates the outcomes of public involvement during the designation of Natura 2000 areas concerning two aspects. First, the level of awareness (knowledge and attitudes) about Natura 2000 among landowners, and second, the extent of participation are explored. Furthermore, possible hindrances to participation are determined. The results are based on face-to-face structural interviews conducted with 59 landowners from one Natura 2000 area in South-Estonia. Considerable lack of knowledge on the basic topics concerning Natura 2000, a generally negative attitude towards the issue, as well as the significantly low effect of involvement efforts was identified. In the case of supplementary efforts in addition to normative procedures of public involvement by the Park Administration, a rise in the knowledge base of landowners has been noticed. It is suggested that landowners' low level of interest in the issue, lack of motivation to engage themselves in the discussion about Natura 2000, limited experience of participation and lack of information about the opportunity to influence the decision-making process, prevented landowners from participating.

Keywords

Public participation, Natura 2000, evaluation, awareness, legitimization, non-participation

1. Introduction

Public participation is now considered as one critical factor for the success of nature conservation initiatives (Stoll-Kleemann 2001a; Stoll-Kleemann and O'Riordan 2001). In fact, co-operation and information sharing are found to influence the acceptance of nature conservation measures even more than other factors (e.g. economic incentives) (Shenk *et al.* 2007).

The idea of public participation is supported by the Habitats Directive which, together with the Birds Directive forms the basic framework for biodiversity policy of the European Union. More specifically, the implementation process of the Natura 2000 network should take into account ecological as well as economic and social aspects (art 2(3) of the Habitats Directive), public participation should be encouraged during the assessment of implications of proposed activities to Natura 2000 areas (art 6) and educational and informational activities on the need to protect species and habitats should be promoted (art 22). However, the actual implementation of the Natura 2000 network is criticised of being excessively rigid and therefore not flexible to social, economic and environmental conditions (Ledoux 2000). During the designation of Natura 2000 areas several EU members have encountered considerable opposition from different stakeholders (Alphandery and Fortier 2001; Hiedanpää 2002; Hiedanpää 2004; Stoll-Kleemann 2001b). It is suggested that a lack of genuine inclusion in the designation process was the main driver of these conflicts (Weber and Christophersen 2002). On the European scale, this non-acceptance was first recognized as one central obstacle in achieving the goals of Natura 2000 in 1998 at the Bath conference (Natura 2000 and … 1998), and further officially acknowledged in the El Teide declaration in 2002 (Natura 2000: a … 2002). Since then, public participation has gained importance as a supportive measure to the implementation of the network. Foremost, activities to increase the awareness of stakeholders as well as the general public about the Natura 2000 network (Natura 2000 Networking Programme, Natura 2000 newsletter, Forum Natura 2000) have been initiated. Nevertheless, the main responsibility for designing and carrying out public involvement processes lies with Member States.

In Estonia, public participation during the site designation process was also principally aimed at informing the general public and certain stakeholders. Yet, negotiation with stakeholders was also regarded as a supportive measure to the designation. Information dissemination was mainly carried out via a website prepared by the Ministry of the Environment (MoE) and the press (national, regional and local). Additionally, special newsletters and posters, brochures, as well as two videos and television

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[1] Natura 2000 areas in Estonia include also nature conservation areas that were already under protection at the time of designation. Here, no special efforts were made to involve the landowners because the designation was expected not to affect the landowners' interests since the main protection regulations were already in place.

broadcasts were used to inform the wider public as well as other stakeholders about Natura 2000. In the case of designating new protected areas[1], a more target-group specific approach was employed to involve landowners as one central stakeholder group in the designation process. Official letters to landowners, exhibitions of maps of Natura 2000 areas, information days, public meetings and an opportunity to submit written claims were at the core of the consultation and information process with landowners at regional and local level.

Along with the increasing importance placed on public participation in natural resources management, a growing body of literature has been devoted to the evaluation of participatory processes (Cote and Bouthillier 2002; Konijnendijk 2000; Leskinen 2004; Primmer and Kyllönen 2006; Rosenström and Kyllönen 2007; Sipilä and Tyrväinen 2005). Conversely, the exact criteria for the assessment of public participation processes have remained debatable (Rowe and Frewer 2000). One way is to rely on general benefits from participation delineated in theories of public involvement: e.g. a wider representation of different interests within a community, conflict prevention, promotion of learning processes (Buchy and Hoverman 2000). Tuler and Webler (1999) and Webler *et al.* (2001) have gone even further examining the criteria of good public participation processes from the perspectives of participants. On the other hand, the initial aims of the public involvement process can also serve as the base for evaluation.

A framework for evaluating public participation processes as developed by Beierle (1999) suggests six goals according to which the success of the processes could be assessed: incorporating public values into decisions; increasing the substantive quality of decisions; resolving conflict among competing interests; building trust in institutions; educating and informing the public and achieving cost-effectiveness. Public involvement within the designation of Natura 2000 areas was primarily aimed at increasing the awareness of the public about the idea of Natura 2000 as well as creating stakeholders' support for the areas. Thus, out of the abovementioned goals, building greater awareness and achieving public acceptance are the most applicable to the public participation process during the designation of Natura 2000 areas. Consequently, the research questions of our study were set as follows.
1) To what extent are the landowners (as one fundamental group of stakeholders in this process) aware of the idea of Natura 2000?
2) How effective has the public participation process been in terms of reaching public agreement?
Furthermore, as during the course of interviews it became clear that the extent of non-participation was quite high, the study also explores possible obstacles to participation.

Public participation as an awareness-raising tool addresses the importance of creating environmental understanding among stakeholders. As a minimum, the public should be informed to the extent that enables them to make adequate decisions (Bei-

erle 1999). Awareness is defined as a system of knowledge and positive or negative judgements (attitudes) about phenomena or objects (Heidmets and Raudsepp 2001). In the case of Natura 2000, the awareness about Natura 2000 among different stakeholders is important in several respects. Foremost, it enhances the communication between different actors through the development of a shared language. A common knowledge base is also a precondition of co-operation and partnerships in the future. This is particularly important as the designation process is followed by the management of Natura 2000 areas. Here, if landowners are expected to participate in direct management activities, the purpose of protection as well as protection measures should be understood by all parties.

Achieving public agreement has been stated as one of the most desirable goals of public participation (Webler *et al.* 2001). The concept of public agreement is foremost understood as legitimacy and compliance (Primmer and Kyllönen 2006). Legitimacy in this sense means that the concerned persons express freely their agreement with the decision (Wittmer *et al.* 2006). Gaining public agreement is also a direct precondition to conflict prevention. In the case of Natura 2000, the significance of this goal cannot be overestimated, as the designation process is only one step towards the achievement of favourable conservation status of these areas. The success of practical implementation of the network depends directly on the degree to which different stakeholders accept the designations and are willing to cooperate in the management of Natura 2000 areas.

2. Materials and methods

A case study was conducted in Otepää Natura 2000 area which consists of Otepää Nature Park (224 km^2; 2300 landowners in total) and Special Conservation Area (3,65 km^2; 30 landowners in total). Two different approaches to public involvement were applied in the Otepää Natura 2000 area. The landowners in the Nature Park were not provided additional opportunities to take part in the designation process since the Nature Park was already under protection (see footnote on page 2). Nevertheless, the landowners were expected to obtain information about Natura 2000 via general awareness-raising initiatives (press, media, websites, information days). The Special Conservation Area was designated under protection for the first time in the framework of Natura 2000. Thus, several opportunities were provided for the landowners to take part in the decision-making process before the areas were formally approved (four public meetings including personal invitations in 2003 and 2004, information days, official letters and an opportunity to express opinions).

A qualitative approach was chosen to study the effects of public participation at a local scale. First, a general overview of the public participation process (on national, regional and local level) was created. Then the content of the main information dissemination materials, to which the landowners were likely to be exposed, was analysed. Overall, 59 face-to-face structural interviews were conducted (18 with

landowners from the Special Conservation Area and 41 with landowners from the Nature Park) in spring 2006. The main interview questions are presented in Table 1. As public involvement in the designation of the Special Conservation Area was more comprehensive, the interviews with landowners from the Special Conservation Area were more in-depth regarding the attitudes and extent of participation.

Table 1. Interview discussion guide

Questions for landowners from the Nature Park and Special Conservation Area
– Have you heard about the concept of Natura 2000?
– What does the concept mean?
– What is the purpose of protection on your land?
– Did you know about the public involvement events? Did you take part of them? Why (not)?
Supplementary questions for landowners from Special Conservation Area
– To date, has the designation process had a more positive, more negative influence on your activities or had no influence at all?
– Is there a need for Natura 2000 areas in Europe? Was it necessary to designate your land as a Natura 2000 area?
– How do you evaluate your knowledge base on Natura 2000? Would you like to get more information on Natura 2000?

The discussion was written down and later transcribed for the analysis. The results were analysed using content analysis. To determine the effects of different approaches on public participation, the results from the Special Conservation Area and Nature Park were compared. The study mainly follows the principles of qualitative research. Therefore the figures presented in the next section are not a result of statistical analysis; they rather aim at providing a condensed overview of the respondents' knowledge on Natura 2000 and the extent of participation.

3. Results

3.1. Knowledge and attitudes: level of awareness

As to the content of the information, creating a general overview of the idea of Natura 2000 among a wider public was the main aim of the information dissemination initiatives. More explicit information (e.g. concrete goals and regulations of protection) was provided for those landowners whose land was designated under protection for the first time in the Natura 2000 process.

On the whole, respondents were more able to elaborate on general questions. In the case of more specific questions, rather vague answers were received. As one fifth of the respondents had not heard about the concept of Natura 2000 at all and almost half of them could not explain what the concept means or what the purpose of protection on their land is, the overall acquaintance with the subject can be considered quite low.
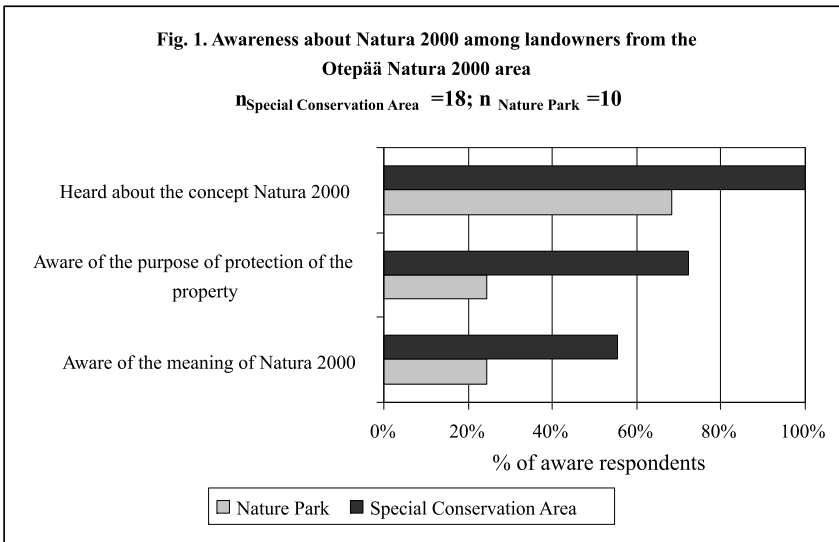
Additionally, there is a lot of confusion regarding several aspects of Natura 2000. Interestingly, several respondents linked the Natura 2000 concept with concepts like "primeval nature", "untouched nature". On the contrary, the content analysis of main information materials revealed that the human role in preserving and enhancing the biodiversity (e.g. in the case of semi-natural habitats) on Natura 2000 areas was highly stressed. In line with this perception, reflections from several respondents indicate that Natura 2000 areas are perceived to exclude all human activities:

Walking is the only activity which I can do on my land without coordinating with the Park Administration! (male, 30, employee in glass industry)

There are particularly strict restrictions to human activities in Natura 2000 areas. Regulations within other areas for nature conservation are more lenient. (female, 60, farmer)

As the land is designated under nature conservation, you cannot do anything there! (male, 30, self-employed tourism manager)

Still, the comparison of the answers from the Nature Park and the Special Conservation Area reveals that the respondents from Special Conservation Area are far more knowledgeable (Figure 1).


Fig. 1. Awareness about Natura 2000 among landowners from the Otepää Natura 2000 area

$n_{\text{Special Conservation Area}} = 18$; $n_{\text{Nature Park}} = 10$

As to the attitudes[2], interviewees were asked whether they considered the involvement of their land in the network to be a positive or negative experience. According to the answers received, the respondents are divided into two categories. Half of the respondents did have neither a positive nor a negative attitude towards their involve-

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[2] In the case of landowners from the Nature Park, it was not possible to distiquish between the attitudes towards Natura 2000 and towards the protection in the context of Nature Park. Therefore, only attitudes of landowners from Special Conservation Area were studied.

ment. The other half spoke about it very emotionally and perceived their involvement to be a very negative experience. Moreover, most of the respondents stated the need for Natura 2000 areas in Europe but only less than half of the respondents acknowledged the designation of their land into the network. This further illustrates a rather negative attitude towards the issue on a local scale.

3.2. The extent of participation and public involvement as a means to achieve public agreement

Most of the respondents were aware of the opportunities to take part in the site designation process. However, the actual extent of participation has turned out to be rather low (figures 2 and 3). It seems that especially those activities that required extra input (in terms of engagement) from stakeholders, e.g. public meetings and submission of written claims, experienced lower participation rates.

Fig. 2. Extent of participation among landowners from the Special Conservation Area (n=18)
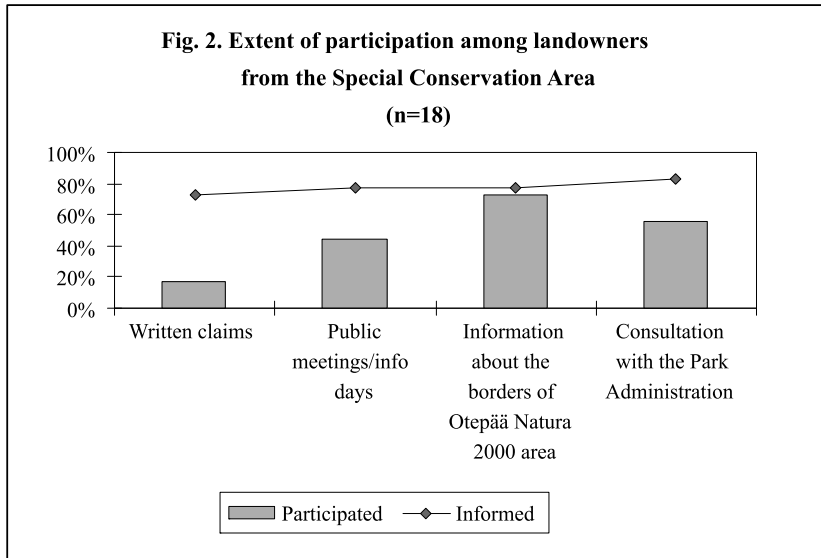
The respondents were asked to express their views about the designation and public participation process. In general, the landowners were rather sceptical towards the public involvement. As several interviewees point out, the participation process was not perceived as a valid opportunity to influence the decisions:

This is pointless, few enterprisers cannot change decisions made by the Park Administration. As the Nature Park has decided to widen its borders, then it definitely does. They are really stuck in their arguments for nature protection. In my opinion, the whole Natura 2000 process is like fighting windmills. Natura 2000 in this sense is really an enforced action on people, (male, 30, self-employed tourism manager).

Fig. 3. Extent of participation among landowners from the Nature Park (n=10)
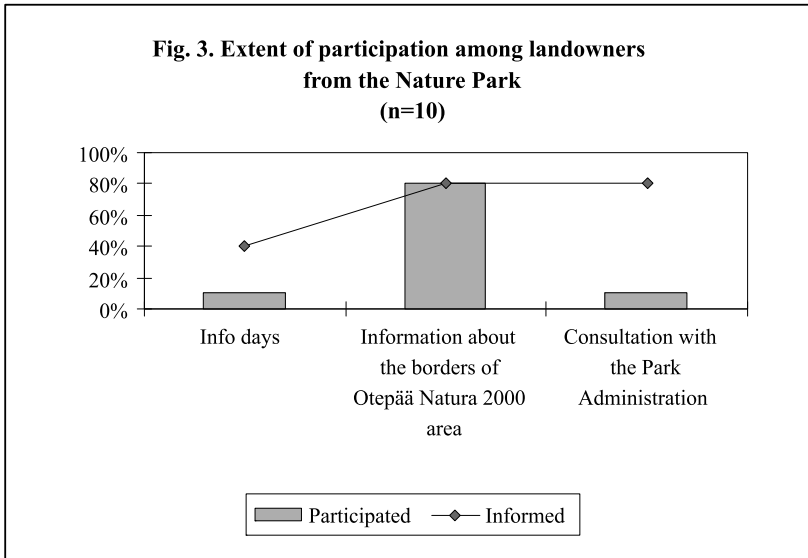
In case of nature conservation issues, as a rule, the decisions are made first and then the opinion of the wider public is obtained. Thus, there's no point for us to argue, (female, 40, farmer).

I have heard that all arguments should be submitted to court. Decision-making in the Natura-process is an undefined process. I think that it is the decision of those, who stand at the top of this process. An application could be made, but does it have any point? (male, 30, employee in glass industry).

On the public meeting, I got the impression that we can say whatever we want but Natura 2000 areas are designated anyway! (male, 60, retired).

We were only notified that our land will be designated to a Natura 2000 area. Our permission was not asked at all, (female, 40, employee at hospital).

It does not change anything – my opinion does not concern anybody. If the decision from above has already been made, then my arguments do not count. To what point can I have my say? (male, 30, public servant at ministry of education and science).

Here it is evident that people perceive that their opinion is not taken into account. In addition, there is a lot of confusion regarding the rules of the consultation process.

Nature conservation specialists are little trusted in the site designation process. Furthermore, several respondents accuse nature conservation authorities of ignoring the knowledge of landowners:

There was no need to designate my land as a Natura 2000 area because I would have protected the nature on my land myself. I once saw a rare bird in my forest and I immediately stopped the cutting. Besides, to date, I have not clear-cut my forest as several of my neighbours have, (male, 60, farmer).

What if those species aren't there at all? They (Park Administration) said that Natura 2000 areas are those where rare species likely occur. But then it is not at all sure that those species certainly are there! (male, 30, employee in glass industry).

Those areas haven't been checked properly in the field. The specialists don't know even themselves exactly what Natura 2000 really means, (male, 50, forester).

Some respondents perceive severe communication problems within the designation process. A feeling that the information about Natura 2000 was presented to landowners in a very one-sided manner that left little room for meaningful discussion was dominant in the responses from several interviewees:

There's no point in asking about nature conservation from Park Administration because they don't say anything new: here are these and these species. That's all (male, 30, self-employed tourism manager).

We have received all kinds of letters from nature conservation authorities. But nearly all of them are only about the restrictions that have been made, nothing more (female, 60, farmer).

Protection regulations on Natura 2000 areas should certainly be coordinated with the landowner. It is not right to set them one-sidedly. Maybe the regulations are not so restrictive but it's a matter of principle – this would be an obvious restriction of my rights! (male, 50, self-employed tourism manager and forester).

The idea of Natura 2000 is good but the way it is implemented is wrong. I respect the laws of nature, but when the restrictions are set by orders from Brussels then it is not right at all! (male, 60, farmer).

In the Natura-process, the foresters have not been properly consulted. Actually, this is a big mistake (male, 50, self-employed tourism manager and forester).

It was also pointed out that there is too little coordination between different institutions dealing with nature conservation.

Nevertheless, in some cases the goal of developing mutual trust between nature conservation specialists and landowners has been achieved:

If the environmental specialists say that the Natura 2000 area should be here, I guess it should be. We are not against it. (male, 40, long-distance lorry driver)

I think it had been necessary when my land was designated. But I haven't gone deeply into this issue, so I don't know exactly. Still, it is clear that not only my land was designated: others' as well. Then it must have been necessary (male, 30, land readjustment advisor at local municipality).

Although the current study primarily aims at highlighting the landowners' views to public participation within the designation of the Special Conservation Area, interesting perceptions about decision-making processes from the respondents from the Nature Park were received as well. The interviewees expressed their frustration with the decision-making process. Here the views of one landowner towards a management zone with stricter regulations are a good example of this dissatisfaction:

I am irritated by the special management zone on my land. It was established "behind my back" which I do not accept. Decisions like this should definitely be discussed with landowners. First, I want to know the exact purpose why it was established there and what the aims of these restrictions are. They (Park Administration) should explain their goals clearly and these should be well-grounded (male, 40, farmer).

The study revealed another aspect which is likely to affect the success of communication initiatives. More particularly, landowners and nature conservation specialists have radically different views about some aspects of nature conservation management. Several opinions about forest management in Nature Park illustrate this argument:

It is not normal that trees are decaying in the forest. The nature park – even the name "park" indicates it – should be well-managed and clean. (female, 60, retired)

This is against common sense – we cannot take even those logs which lie on the ground and are decaying. Once I consulted the parks' nature conservation specialist in this matter. He explained that those trees are beneficial for tree pests which in turn are food for birds. But then we have to create really good conditions for all kinds of tree pests to develop! (male, 60, farmer).

The old forest here is so thick that it is almost impossible to go through it. Even the tourists who visit this place are surprised of this. It is not aesthetical, is it? (male, 60, self-employed tourism manager).

4. Discussion

4.1 Awareness

The results of the current study indicate that public participation can be a useful tool for building stakeholders' awareness about the issue at hand. This is well in line with the findings of Cote and Bouthillier (2002) and Sipilä and Tyrväinen (2005). However, it seems to be true only if more interactive methods in communicating with landowners are applied. Personal channels are more effective awareness raising tools for various reasons, i.e. target group feels more affected by the message (Shenk *et al.* 2007). Our case confirms this finding, as the awareness among landowners who received info via more personal channels (public meetings, personal letters) was far higher. Even so, it remains debatable to what extent the awareness on Natura 2000 actually determines the acceptance of nature conservation in concrete circumstances. Our results do not provide a straightforward answer to this question, as the results are somewhat contradictory: some of the respondents knowledgeable about Natura 2000 still held a quite negative attitude towards the issue.

In addition to the information channel, the content of the information is another aspect to consider. People show mistrust of information that tends to be overly scientific

(Johnston and Soulsby 2006); therefore the information does not contribute to rising of the receivers' awareness. In the case of the current study, the problem seems not to lie in the content of information in terms of being excessively complicated and therefore hard to comprehend. Rather, the respondents perceived the information as being too general and therefore not applicable to the real situation. For example, the purpose of protection on private properties turned out to be a fundamental issue in the Natura 2000 debate, since it is the argument on which the designation is grounded. Therefore achieving understanding between different stakeholders in this matter directly affects the acceptance of Natura 2000 by landowners. Practice-based education concerning the natural values on landowners' property as suggested by Van Gossum *et al.* (2005) and Uliczka *et al.* (2004) can help stakeholders to relate the received information directly to the actual biophysical setting. Nevertheless, the ultimate goal of awareness building during the designation of Natura 2000 areas is to prepare an arena for cooperation between different stakeholders within the management of these areas. Taking forward the notion that knowledge is associated with a variety of actors in diverse contexts rather than seen only as a domain of experts (scientists, specialists) (Rydin 2007), awareness is here seen as an outcome of open debates between a range of stakeholders. Consequently, we understand education as a forum for discussion and an opportunity to build mutual trust, where learning is a multi-way process between different parties. Foremost, awareness building should initiate exchange of understandings and promote stakeholders to take advantage of each other's knowledge and experience.

Applying the proposed approach, a multitude of stakeholders with various perspectives is brought together. At this point, different perceptions of the issue are an essential aspect to consider as they are found to be one key factor determining the acceptance of nature conservation measures (Shenk *et al.* 2007). Our case showed that even those landowners who were more knowledgeable about the issue express very different views about Natura 2000 in particular as well as about nature conservation measures in general. Landowners' views on forest management are one extreme example of these contradicting understandings. Here, discursive approaches (Fisher and Young 2007; Soini and Aakkula 2007) would help to gain deeper insight into the motives behind various positions and understandings, providing a basis for the development of more effective awareness building tools.

4.2 The achievement of public agreement

The participation process as a tool for achieving public agreement in this particular case has been rather ineffective. Most of the respondents had a very critical view of the implementation process at a local level. The results of Primmer and Kyllönen (2006) support this finding. Conversely, in the views of stakeholders in collaborative forest planning and outlining sustainable development indicators, the risk of conflicts was significantly reduced by public participation (Cote and Bouthillier 2002; Sipilä and Tyrväinen 2005; Rosenström and Kyllönen 2007). It can be assumed that the

abovementioned topics were perceived to be more general by the stakeholders and therefore reaching public agreement through participation was less complicated. On the contrary, previous studies (e.g. Alphandery and Fortier 2001) confirm that, as a rule, Natura 2000 awakens critical public discussion, which is more difficult to reconcile. Our case indicates also that, as many landowners are vocal in expressing their dissatisfaction with several aspects of the site designation, the issue can be considered to be intriguing.

In searching for the reasons why public participation has not contributed to reaching public agreement in this particular case, several explanations can be applied. First, few landowners actually took part in the involvement initiatives. Therefore, those people who did not use the opportunities to influence the decisions could not develop mutual trust, which is found to be one central precondition of reaching legitimate decisions (Wittmer *et al.* 2006). Second, the public involvement initiative, especially in the case of the Nature Park, can be considered as lacking interactivity**.** The participation process was designed more as an information dissemination procedure rather than a genuine negotiation. Several landowners from the Nature Park also expressed their wish to be involved in debates about management issues in the park. However, they were only provided with marginal opportunities to do so. Thus, the process did not result in an interactive forum where stakeholders can discuss about their interests and perceptions. Third, the opposition between experts and farmers in the Natura 2000 debate has been explained as ignorance of each others' expertise (Visser 2007). This is likely to be one reason for non-participation here as well. Several respondents were very sceptical of the conservation values proposed by park administration as they felt that their own expertise was overlooked by nature conservation authorities.

4.3 Obstacles to public involvement

Most of the respondents from the Special Conservation Area were aware of the opportunities to take part in the site designation process. Thus, not being informed about those opportunities was unlikely to be the main reason preventing them from participating. Rather, the most relevant explanations for non-participation in this case may be participants' low interest towards the issue and accordingly not relating themselves to the issue and little experience of public participation.

First, stakeholders are found to be more willing to participate when the issue awakens controversy (Janse and Konijnendijk 2007). Here, the problem is more complex as nearly half of the respondents were very sceptical about the site designation process and also seemed to be interested in engaging themselves in the discussions about Natura 2000. At the same time, the other half of the interviewees were either on a rather indifferent position about it or took a critical view of the designation, but were nevertheless not ready to get involved. In the case of this group of respondents, their lack of information about the consequences arising

from Natura 2000 might have been the first obstacle to participation. Stakeholders did not consider the issue to be relevant enough to themselves, which together with the landowners' low level of interest prevented them from getting involved (Weber and Christophersen 2002; Bille 2006).

Second, the landowners apparently have only little experience with participatory democracy as participatory planning and management has only recently become important in Estonia. A great confusion about the procedural norms prevalent in the views of many landowners further confirms this argument. Additionally, it means that being involved requires much engagement and effort from the participants (e.g. in terms of time, skills). This may be a serious obstacle to participation but resolvable through the development of general skills of argumentation and participation (Yli-Pelkonen and Kohl 2005). In line with this, our results show that stakeholders lack trust in decision-makers and hold the perception that their opportunities to influence the decisions are almost non-existent. As the wish to influence the decisions can be considered as one of the main drivers for participation, the feeling of frustration would be a serious hindrance to participation.

Dependence on the local community, more precisely the fear of risking conflicts and of being excluded from the local community, is claimed to be one central reason for non-participation (Buchecker *et al.* 2000). Our results show that, in the designation process of Natura 2000 areas, landowners seem to form a rather unified group with shared perceptions towards the issue. Therefore, conflicts within this group, at least in the site designation process, hardly occurred. Consequently, it is unlikely to be a significant obstacle to participation in this case.

5. Conclusions

Although the awareness among stakeholders as a whole (Special Conservation Area and Nature Park) can be considered quite low, more interactive forms of participation have proved to be useful tools in informing the landowners about Natura 2000. Especially, the purpose of the protection turned out to be a critical topic in the Natura 2000 debate. At the same time, unlocking the puzzle of how to implement meaningful discussion about this issue seems to be a promising theme from which to start the negotiations. In this point, more personal channels and practice-based education are suggested to be favourable for achieving a rise in the stakeholders' knowledge base. Furthermore, discursive approaches would also be relevant in the case of developing new communication tools with landowners in the Natura 2000 process.

Public involvement initiatives in the current case study have not contributed much to achieving public agreement. In fact, the problem of non-agreement is suggested to

become even more serious as many landowners are now in a "wait-and-see" position. These people, currently showing a rather indifferent attitude, may become active opponents as the circumstances change (e.g. new regulations on Natura 2000 areas are laid down). Therefore, the current situation can be described as a latent conflict where the discussion has only started but not all actors have had the opportunity to have their say. The main reason for this can be considered to be a low participation rate. In turn, an arena for discussion was provided but not realised.

The current study indicates that there is a need for wider and meaningful public involvement not only within the Special Conservation Area but in the Nature Park as well. Otepää Nature Park also belongs to a Natura 2000 area and the goals of conservation are hardly achievable as long as the positions of different stakeholders are ignored.

Acknowledgement

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II

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Chapter 14
The Role of Information, Knowledge, and Acceptance During Landowner Participation in the Natura 2000 Designations: The Cases of Otepää and Kõnnumaa, Estonia

Monika Suškevičs and Mart Külvik

Abstract Across the European Union, the Natura 2000 network is among the most important measures for preventing the biological degradation of landscapes. However, land-use conflicts in several member states show that the designation of Natura 2000 areas has not been an effective process, foremost due to insufficient public and stakeholder involvement. This chapter presents an investigation of landowner involvement during the Natura 2000 designations in Estonia, focusing on two aspects: first, the role of information and knowledge in the participatory process; and second, the acceptance of Natura 2000 among landowners. Insights gained from two case studies in northern Estonia (Kõnnumaa) and southern Estonia (Otepää) indicate that despite extensive communication processes during designations, many landowners lacked basic knowledge on Natura 2000 issues and on consultation procedure at the beginning of involvement processes and afterwards. Our results additionally suggest that addressing the needs, expectations and knowledge claims of different stakeholders within participatory processes is a necessary precondition for gained acceptance in biodiversity-related landscape planning.

Keywords Natura 2000 · Site selections and designations · Knowledge · Acceptance · Landowner participation

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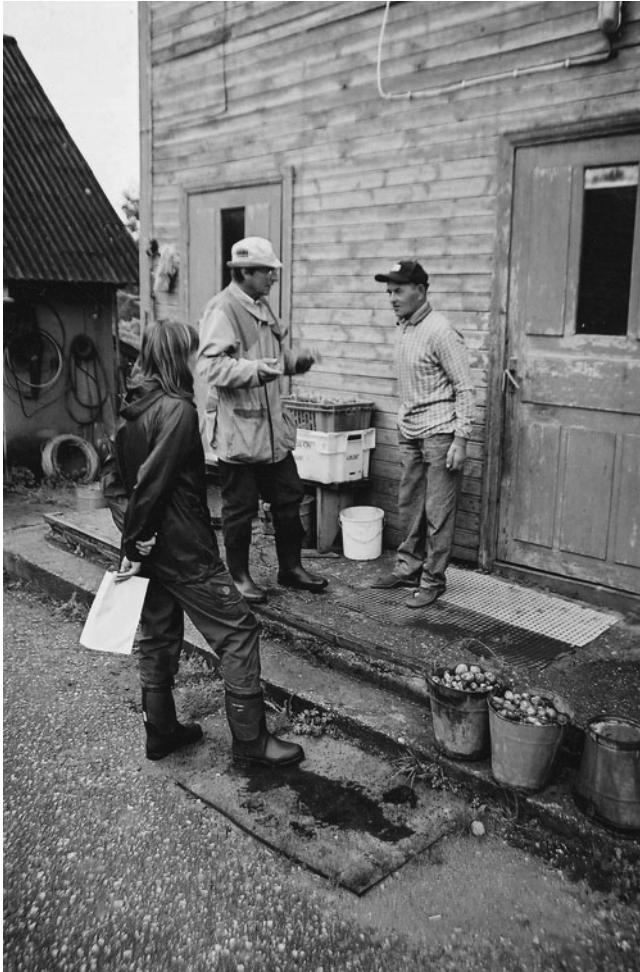EE-51014 Tartu, Estonia
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Photo: Courtesy of Voldemar Rannap

14.1 Introduction

14.1.1 Participation in Landscape and Nature Conservation Issues

The European Landscape Convention (ELC) aims to bring together natural and cultural approaches in landscape protection, management, and planning (Council of Europe, 2000). Participatory approaches are promising ways to bridge the gap between different disciplines in landscape and environmental research, and are intended to tackle several inherent deficiencies of hierarchical top-down decision-making, for example the democratic legitimacy crisis (Luz, 2000; Biermann et al., 2007; Reed, 2008). Broadly defined, participation denotes those processes that enable non-elected citizens to incorporate their concerns into political

decision-making (see e.g. Creighton, 2005) but also cooperation between academia and lay people in applied research (Tress et al., 2006). The ELC acknowledges the principles of the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (UNECE, 1998) and calls for the active involvement of the public and interested parties in defining and implementing landscape policies.

Estonia is currently among the few European countries that have not signed the ELC, mainly because of a mismatch between the interpretations of the term 'landscape' in the ELC and in the Estonian language, and due to the vague definition of responsibilities between the governmental stakeholders about who should take the lead in implementing the Convention (Palang, 2009). However, several trends and processes that could lead to signing the Convention are already on the way. During the past two decades, Estonia has developed a democratic decision-making system and adopted several international regulations (e.g. ratification of the Aarhus Convention in 2001) that require introducing principles of public participation into national legislation. Thus, participatory approaches have become important elements of environmental decision-making in Estonia.

A nation-wide participatory delineation of valuable landscapes was carried out from the late 1990s to 2007 as part of a larger spatial planning initiative. Public discussions, surveys, and interviews with different stakeholders were undertaken in order to gain insights into local people's landscape preferences and to motivate them to participate in discussions about landscape, especially concerning its cultural-historical, recreational, aesthetic, and identity aspects (Alumäe et al., 2003).

In addition to social dimensions of landscapes, biodiversity conservation is also an essential aspect of sustainable landscape policies (Naveh, 2000; Antrop, 2006). Selecting and designating Natura 2000 areas in Estonia, based on the Birds Directive (EEC, 1979) and the Habitats Directive (EEC, 1992) of the European Union (EU), was accompanied by a set of informational activities for the general public and formal consultations for certain stakeholders (landowners, and regional and local governments). As the Natura 2000 network is among the main measures to preserve and enhance the ecological qualities of landscapes at the EU scale, it is relevant to explore participatory approaches within Natura 2000 in the wider context of Estonia's possible accession to the ELC.

In this chapter, the term 'participation' refers to processes organized by nature conservation authorities for members of the public and certain stakeholders to allow for their contribution to the selection and designation of Natura 2000 areas. Although it was not required in the Habitats Directive, the practice of site selections included consultations with the public and stakeholders in several EU member states (EC, 2004b) – although participation remained controversial in several countries, e.g. France (Alphandery and Fortier, 2001; Pinton, 2001), Finland (Hiedanpää, 2002, 2005), and Germany (Stoll-Kleemann, 2001b; Eben, 2006). Among other issues, debates during the site selections and designations have gathered around two questions: how to ensure adequate information dissemination and effective knowledge management; and how to gain public acceptance for the designation processes.

14.1.2 Information and Knowledge in Participatory Processes During Natura 2000 Designations

Although the provision of information on the issue in question and on the partic-
ipatory procedure does not in itself empower the public or other stakeholders, it
allows people to make informed judgements when their opinions are sought by
the authorities (Konisky and Beierle, 2001; Diduck and Sinclair, 2002; Hartley
and Wood, 2005; Kujinga and Jonker, 2006). During the Natura 2000 designations,
the stakeholders have not always been provided with advice and information early
and sufficiently enough (Eben, 2006). However, not only is adequate information
flow from experts to lay people needed – other stakeholders might also have rele-
vant knowledge to contribute to decision-making (Soini and Aakkula, 2007; Soliva
et al., 2008; Collier and Scott, 2009). We understand knowledge here as cognitive
factual information (e.g. scientific knowledge), as well as knowledge based on per-
sonal experiences (e.g. local knowledge) (Glicken, 1999). The French experience
of Natura 2000 designations suggests that not acknowledging some knowledge-
holders, for example the local people, can result in their strong resistance towards
designations (Alphandery and Fortier, 2001; Pinton, 2001). Further, participatory
approaches can help to create common awareness among participants on the issue
under discussion (e.g. Cote and Bouthillier, 2002; Sipilä and Tyrväinen, 2005).
This awareness has the potential to build a mutual understanding and shared lan-
guage among different parties, which is a necessary precondition for successful
participation in further steps in the management of Natura 2000 areas.

14.1.3 The Role of Acceptance in Natura 2000 Designations

According to Sattler and Nagel (2010), acceptance in relation to nature conserva-
tion measures (in agriculture) has three components: *object* of acceptance, *subject*
of acceptance, and *context*. The designation of protected areas is an example of an
acceptance object. The subject of acceptance can be farmers and their personal atti-
tudes or, in a more general sense, other stakeholders who are affected by nature
conservation measures (like landowners). The attitudes of people show how they
perceive and evaluate some kind of environmental management measure (Seeland
et al., 2002). In the Natura 2000 site selections and designations, fundamental dif-
ferences in stakeholders' worldviews and values triggered opposing attitudes to the
designations. For example, some stakeholders felt their personal freedom to decide
on land-use issues to be threatened by the designations (Stoll-Kleemann, 2001a;
Hiedanpää, 2005). Certain attributes of participatory processes, for example the
quality of deliberation (Schenk et al., 2007), can be the most significant contextual
factors influencing peoples' attitudes towards nature conservation policies. Lack of
deliberation during the consultations over site designations and insufficient empow-
erment of stakeholders caused the decision-processes to be regarded as unfair by
many stakeholders (Stoll-Kleemann, 2001a; Paavola, 2004; Hiedanpää, 2005; Eben,
2006).

14.1.4 Aims of the Study

This chapter takes a retrospective look at participatory processes during the Natura 2000 site selections and designations in Estonia. The focus is on landowners, as they have been among the largest and most diverse stakeholder groups within the Natura 2000 designations across several countries in the EU. On the basis of two cases, the study aims to:

- explore the role of information and knowledge within participatory processes during the Natura 2000 designations
- examine acceptance of Natura 2000 designations among landowners.

We explore participatory processes targeted at landowners within: (1) selection of potential Natura 2000 areas for submission to the European Commission (EC) from the start of preparatory work for site identifications in Estonia in the mid-1990s up to the spring of 2004; and (2) designation of these areas as under national protection, starting from summer 2004.

14.2 Participation Within Natura 2000 Site Selections and Designations in Estonia: Providing Information and Consulting the Landowners

The first draft list of potential Natura 2000 areas in Estonia was compiled by a set of experts representing the Estonian Ministry of Environment (MoE) and its regional departments, universities and research centres, and non-governmental organizations (NGOs) in conservation (e.g. the Estonian Ornithological Society and Estonian Fund for Nature). According to the national strategy and action plan (2000–2007) for implementing the Natura 2000 network in Estonia (Riikliku programmi, 2000), one task for the environmental authorities was to introduce the concept of Natura 2000 to the public and certain stakeholders, including landowners. Accordingly, the MoE as the main actor responsible for the designations initiated a general information campaign in 2002. The campaign included the launching of a national Natura 2000 webpage (Eesti Vabariigi Keskkonnaministeerium, 2009), production of several posters, booklets and leaflets, and some radio and television broadcasts. Information days, mainly targeted at landowners, were arranged by county environmental departments and protected areas' administrations. These information events also served as the main means for distributing the booklets and leaflets on Natura 2000. The information campaign and the following consultation periods were accompanied by printed media coverage of Natura 2000 issues.

Two formal consultations were organized in 2004, mostly based on the Law on Protected Natural Objects (in force 1994) and the Nature Conservation Act, developed on the basis of the previous Act and entering into force in spring 2004. The core aim of these consultations was to negotiate the boundaries of the selected

areas with the landowners, who were expected to comment on the lists of potential Natura 2000 areas. The landowners were invited to express their consent for the pre-selections and designations, or give their reasoning in case they did not agree with them. Landowners could also propose additional areas to the pre-selection list. Only those landowners whose land did not have a conservation status of any kind by the beginning of the Natura 2000 process in Estonia were consulted. This was because their interests were expected to be those most infringed upon by the designations (e.g. through the introduction of new land-use restrictions).

In the first official consultation period (spring 2004), landowners were invited to submit written comments on the preliminary list of Natura 2000 areas, and on the temporary land-use restrictions on those areas. This period is not included in the case descriptions and analyses below since the relevant documents were unavailable to the authors. The temporary land-use restrictions were the same for all new Natura 2000 areas in Estonia and were enforced for a maximum of 1 year, i.e. until the final protection status of each new area was clarified. Landowners were notified about the opportunity to make submissions via national printed media because the circle of the landowners to be consulted was considered (in accordance with the Administrative Procedure Act of 2001) to be too wide to contact them personally. However, some county environmental departments and protected areas' administrations also sent personal notifications to landowners in addition to the newspaper announcement.

The second consultation round (starting from summer 2004) concerned designating the initially selected areas as under national conservation. Administrative acts outlining the planned land use conditions and paper-based maps of potential Natura 2000 sites were made publicly available in county environmental departments, municipalities, and protected areas' administrations. In addition, starting from 2002, maps of potential Natura 2000 areas were permanently available on the national Natura 2000 website, though it was not a legal requirement. All concerned landowners received an official letter from nature conservation authorities with basic information about Natura 2000 and an invitation to comment on the issue. The results of this commenting period were discussed at public meetings arranged by protected areas' administrations or county environmental departments. The meetings aimed at introducing the basic information on Natura 2000 to the landowners, answering their questions, and clarifying misunderstandings.

Prior to the official consultations in 2004 and separately from the national information campaign, informal negotiations and several information events took place in the framework of different projects and which contributed to the selection list for the Estonian Natura 2000 areas.

14.3 Materials and Methods: The Cases of Otepää and Kõnnumaa

The case study approach (Gerring, 2007) was selected in order to study the role of information, knowledge and acceptance in landowner participation during selection
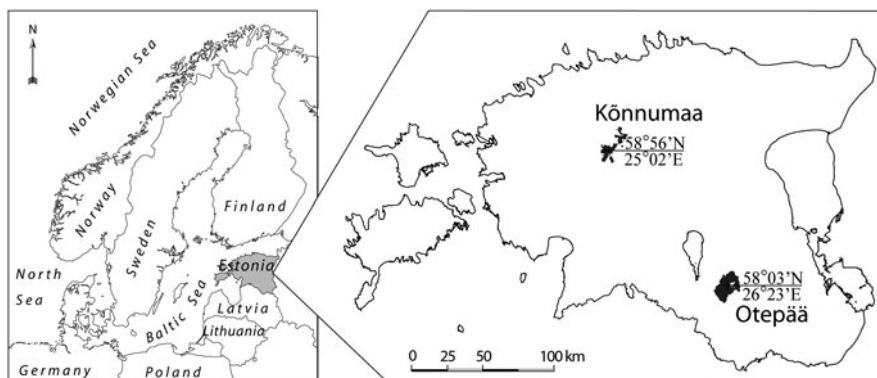
Fig. 14.1 Location of the Otepää and Kõnnumaa case study areas in Estonia

and designation of the Otepää Special Conservation Area, southern Estonia, and Kõnnumaa and Kastna Special Conservation Areas, northern Estonia (Fig. 14.1).

The Special Conservation Area is a new type of protected area that was first introduced into the Estonian legal system through the Nature Conservation Act of 2004, which transposed the principles of the Habitats and Birds Directives into national law. Special Conservation Areas do not have concrete land use restrictions; however, all private owners are required to concert their land management decisions with the nature conservation authorities, for example when changing land use, conducting land readjustment, building, or undertaking forestry actions. Each Special Conservation Area has a specific purpose of protection, which serves as the basis for the nature conservation authorities to decide whether the planned actions interfere with the purpose of protection or not.

14.3.1 Participation in the Designation of Otepää Special Conservation Area

Otepää Special Conservation Area (3.64 km^2), situated in Valga County, was designated in 2005 to secure certain types of semi-natural communities and old-growth forests as habitats for particular bird species listed in the Habitats and Birds Directives. The area is situated next to the Otepää Nature Park, which due to its interesting landscape and good accessibility is a popular tourist destination and subject to recreational development. At the time of designation, most of the land in the Special Conservation Area was in private ownership, divided into c.30 land parcels which were owned by approximately the same number of landowners. Roughly half of the landowners were not local people, and several parcels were owned by real-estate development firms and small-size forestry, agriculture, or tourism enterprises.

The decision process regarding designation was coordinated by the local administration of the Otepää Nature Park. At the time of Natura 2000 designations, the

administration of protected areas in Estonia was divided between two divisions of the MoE: some protected areas, such as the Otepää Nature Park, had their own local management boards, whereas the other conservation areas were administered by county environmental boards, which were the regional departments of the MoE. The first public events in Otepää began in 2002 in the framework of a pilot project aimed at informing the local people and landowners as well as informally negotiating the selected sites. Information was also distributed via the protected area's administration website and leaflets. Three public discussions with personal invitations to landowners served as arenas for negotiating the borders and some management issues of the Otepää Special Conservation Area. As a result of these meetings, the administration received necessary information from landowners regarding local ecological values. Accordingly, some adjustments to the borders of the Natura 2000 area were made. The negotiations functioned as a preparatory phase for the official consultation period starting from 2004.

14.3.2 Participation in the Kõnnumaa Case Study

The Kõnnumaa case study included both the Kõnnumaa (5.96 km^2) and Kastna (8.37 km^2) Special Conservation Areas (both in Rapla County), which were first designated in 2006, mainly for the conservation of certain mire habitats and forest types listed in the Habitats Directive. At the time of the designations, there were 13 private landowners altogether, but only two or three were local in the true sense, i.e. living there the whole year. Less than 20% of the land in the two areas was privately owned. Several parcels in both areas were owned by peat-extraction and forestry companies, as well as real-estate development firms. As neither of the areas had a local administration, the designation process (including participation) was coordinated by the county environmental board, which operated at a regional level for the management of all protected areas in the region. Since there were no participatory activities arranged specifically for the areas addressed in this study, participatory approaches were organized on a county-wide basis.

The informal communication process regarding Natura 2000 designations in the Kõnnumaa case began in 2000 during an international cooperation project between the Estonian MoE and the Danish Environmental Protection Agency. The aim was to prepare a list of Natura 2000 areas in Rapla and Lääne Counties. However, promoting public and stakeholder awareness about Natura 2000 was among the main goals of the project. A detailed investigation of stakeholders in the area was carried out, with the result that landowners were identified as one of the key stakeholder groups. The Natura 2000 concept was communicated mainly through information days at local municipalities, where posters and pamphlets were distributed and a video film on Natura 2000 was shown. Information was also distributed via a Natura 2000 homepage.

Following the requirements in the Nature Conservation Law, the design of the consultation processes in the summer of 2004 was in principle the same in both the Otepää and Kõnnumaa cases. Landowners were notified by an official letter

from the nature conservation authorities about the basics of the Natura 2000 concept and the opportunities to be involved in the designation process. During a 2-week public display of maps of the areas and the draft of the Nature Conservation Act, and in the course of the following public discussions, the borders of the Natura 2000 areas were negotiated. In both cases, approximately half of the landowners made submissions to the nature conservation authorities. Most of the submissions were negative towards designation. The Special Conservation Areas in both cases were finally designated with a slightly reduced size of area compared to the initial selection.

14.3.3 Interviews and Document Analysis

The study relied mainly on semi-structured face-to-face or telephone interviews with landowners from both case study areas and on document analysis. Eighteen landowners from Otepää Special Conservation Area were interviewed in 2006 and 13 interviews were made in 2007 with landowners from Kõnnumaa and Kastna Special Conservation Areas. The interview partners were chosen randomly, although the choice of participants depended on the availability of respondents. The main topics covered during the interviews (see Box 14.1) included landowners' perceptions of Natura 2000 as a concept as well as of the designation process and their experiences with it. For the analysis, interview protocols were written.

Box 14.1 Discussion Guide for Interviews with Landowners from Special Conservation Areas

– Have you heard about the concept of Natura 2000?
– How would you explain the concept? What does it mean?
– What is the purpose of protection on your land and near surroundings?
– What were the main information channels for you regarding Natura 2000? How do you evaluate your knowledge base on Natura 2000? Would you like to receive more information on Natura 2000?
– How would you describe your experience with the designation process? Did you know about the public in-volvement events? Did you take part of them? Why (not)?
– To date, has the designation process had a more positive influence on your activities, a more negative influence, or no influence at all?

   Additionally, in order to create a systematic overview of the design of the landowner participation processes, the nature conservation authorities who had been directly responsible for organising the participatory events in the case study areas were consulted. The authorities were asked about the principles of designing the events and about general responses from the landowners to those events.

All available documents concerning participatory process at the case level were accessed, e.g. minutes of public meetings, written submissions from landowners to the nature conservation authorities regarding designation, as well as relevant national documentation regarding participation. Interview protocols and other documentation were content-analysed. The texts were screened in order to detect: statements regarding landowners' perceptions of the whole process and of key decisions that were taken within it; landowners' knowledge of the Natura 2000 topic and consultation procedures; and how information and knowledge were treated in the process. The main statements found were categorized according to the core research questions, along with key issues that emerged from the data.

14.4 The Role of Information and Knowledge Concerning Designations

14.4.1 Landowners' Perceptions of Information Provision

In general, landowners were aware of the information sources on Natura 2000 and the consultations that had taken place during the designations. Still, they were often uncertain about the exact rules of the consultation procedures, e.g. what the aims of public discussions were, how to make written submissions, and what responsibilities the authorities had to respond to the submissions. Many landowners were unsatisfied with their main information source (printed media), claiming it was not specific enough and too biased. In contrast, targeted and personal ways of communication, such as direct contact with the nature conservation authorities or the official letters to landowners, were much more appreciated.

Most of the respondents in both cases were interested in receiving more information about the content of Natura 2000, especially its socio-economic aspects (concrete land-use restrictions, financial compensation mechanisms, subsidies, etc.). The socio-economic implications of designations turned out to be the main concern of landowners during the consultation process as well. However, the following excerpts from a public meeting in the Otepää case indicate that a great deal of uncertainty and ambiguity surrounded the discussions on those issues, and that the nature conservation authorities were far from providing clear answers to landowners' questions:

> Will there be some kind of restrictions in the planned Special Conservation Area? Could you just name the conditions of land use? And how will the state compensate the reduction of economic revenue for the landowners? I think we should find some kind of a compromise here (Landowner, male, tourism entrepreneur).
>
> Well, concerning the land around the river, our aim is to manage and restore the meadows. In other parts of the Special Conservation Area, the purpose is to protect valuable forest habitats which are necessary for several rare bird species (Nature conservation manager).
>
> Maybe we should discuss what the exact land use restrictions are? (Landowner, female, local government employee).

> For us it is important that important habitats will be preserved. It means managing the meadows in case of semi-natural communities (Nature conservation manager).
>
> Does this constrain the activities of landowners? (Landowner, female, local government employee).
>
> In general, the purpose of land use shouldn't be changed. There are also some restrictions to building. Forest management conditions are probably the strictest (Nature conservation manager).

Interviewees also requested more site-specific information about the justifications for why their land had been selected, for instance what the specific biological value of their land was. This is illustrated in the following excerpt from a written submission from a landowner addressed to the county environmental department:

> In the letter I received from the county environmental board it was noted that my land was incorporated into the European network of protected areas, Natura 2000. But the explanations why the land had been selected were missing. During the public display of Natura 2000 areas in the Rapla County the nature conservation authorities couldn't explain to me which habitats, plant or animal species need protection on my land, or which parts of the land would be included into the network. So I have the impression that my land has been incorporated into this network for 'just in case'. I regard this as unwarranted restriction of my owner rights and therefore I don't approve the designation (Landowner, female, Kõnnumaa case study).

In both cases, the question of inadequate information provision was repeatedly raised by the landowners at public meetings and in written submissions to the nature conservation authorities. In the Kõnnumaa case, several landowners did not know by the time of the consultations that their land had been selected to be included into the Natura 2000 network, or what the exact boundaries of the selected areas were.

14.4.2 Landowners' Knowledge and Information Management in the Consultations

Interview partners were asked to describe their familiarity with and understandings of the Natura 2000 concept. In general, a great deal of confusion was associated with the concept. Even when the respondents had heard of Natura 2000, they admitted that the content of the concept had remained rather vague for them. Thus, many of our respondents could not give specific explanations about the meaning of the concept (Fig. 14.2). When elaborating on the issue, keywords often used in the communication campaigns, such as 'European Union-wide network of protected areas' or 'protected areas based on European Union directives', were known to few respondents.

Although many landowners claimed to be unaware of the exact conservation purposes of the Natura 2000 area in question (Fig. 14.2), most of them, especially local landowners, nevertheless had multi-faceted ideas of the local biodiversity in their mind. Some publicly well-known species characteristic of the case regions, e.g.
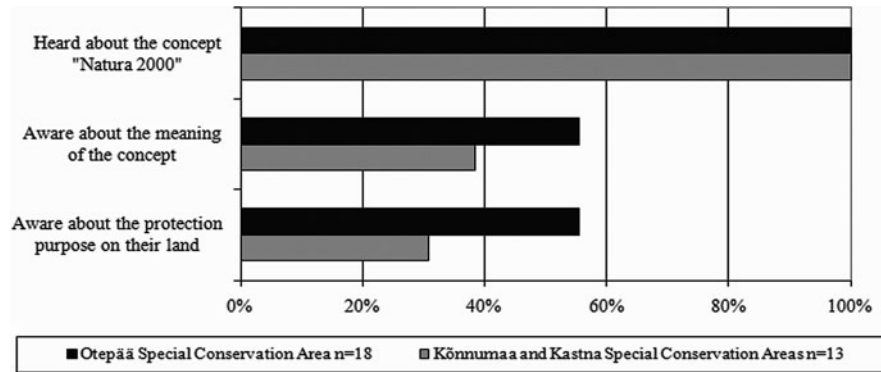
Fig. 14.2 Landowners' general knowledge about the concept of Natura 2000

hawk species in the Otepää case and ant species in the Kõnnumaa case, as well as certain types of ecosystems (semi-natural grasslands, forests) were highlighted by the interviewees as significant components of the local biodiversity. Perceived landscape values were highly appreciated and some respondents revealed their concerns about activities such as intensive tourism, logging, and building, which they considered as threats to these values. However, several landowners took a critical view towards the scientific inventories (the underlying basis for designations), relying on their own expertise about the local biodiversity. An interview quote from a local landowner in the Otepää case shows that the judgements of the nature conservation authorities were hardly trusted:

> The question of what is really the purpose of protection on my land came up several times during the public meeting. They said that it is the corncrake but I don't believe it, this bird just does not live here! I have seen several other species here, like moose, lynx, or hazel grouses, but not the corncrake (Landowner from Otepää case, male, retired farmer).

One of the aims of consultation with landowners during the designations was to gain information from them regarding ecological values on their land. Our cases showed that in practice this goal was barely achieved – landowner submissions concerned mainly socio-economic aspects rather than information on local biodiversity. When reviewing and responding to the submissions, the nature conservation authorities relied on the scientific information gained from ecological inventories. However, in the case of Otepää, several landowners suggested various management options for the Special Conservation Area. In the final designation document, it was specified that their opinions were to be taken into account during management planning of the areas concerned.

14.5 Acceptance: Landowners' Attitudes Towards the Designation Process and the Final Decision

The overall impression gained from the interviews was that landowners rather unenthusiastically responded to the Natura 2000 as a general notion. When we asked them to describe their mental associations to designations in general, their first reactions were mostly negative connotations, e.g. 'restrictions', 'constraints', and in more extreme cases 'nothing can be done on designated areas' or 'scandals', even when this was not the case in reality. While discussing their experiences with the designation process more specifically, many landowners from both cases perceived it as imposing the EU laws while paying little attention to local conditions (e.g. imprecise inventories, unclear compensation measures). The nature conservation authorities were blamed for not listening to landowners' views, and decisions about designations were believed already to have been made. In the case of Kõnnumaa, landowners continuously stressed during public meetings that their land had been designated without asking their opinions. Thus, the process was in general regarded as a top-down initiative:

> The principle of Natura 2000 is right but the way it is implemented is wrong. Designation of Natura 2000 areas should be negotiated with landowners and followed by mutually beneficial agreements between landowners and nature conservation authorities (Landowner from Otepää case, male, retired farmer).
>
> I had the impression from the public meeting that Natura 2000 areas will be designated regardless of what we think of it (Landowner from Otepää case, male, employee in glass industry).

Some landowners had more extreme notions in mind, comparing the designation process with certain characteristics of decision-making processes during the Soviet period (e.g. land expropriation). The following excerpt from a written submission by a landowner addressed to the county environmental department illustrates this:

> Natura 2000 equals a new expropriation. Therefore we categorically reject the decision to designate our land as a Natura 2000 area. For me, the Natura 2000 network does not exist, there's only our farmland! (Landowner, male, Kõnnumaa case study).

However, when discussing the final designation decision, about half of our interview partners from both cases held a quite indifferent position regarding the designation of their land (Fig. 14.3), either because the designations had neither significant negative nor significant positive implications on their land management decisions, or their land was not their main source of income:

> Natura 2000 may be problematic for those who intend to divide their land into parcels, build houses, or do something else. For me it is not a problem, I just have the land and that's all. I haven't got any economic plans for it (Landowner from Otepää, male, local government administration).
>
> No, I haven't had any problems and probably won't have them in the future either because I don't plan to cut forest there, build something, or construct roads, so everything will remain there as it is now (Landowner from Otepää, female, higher education administration).
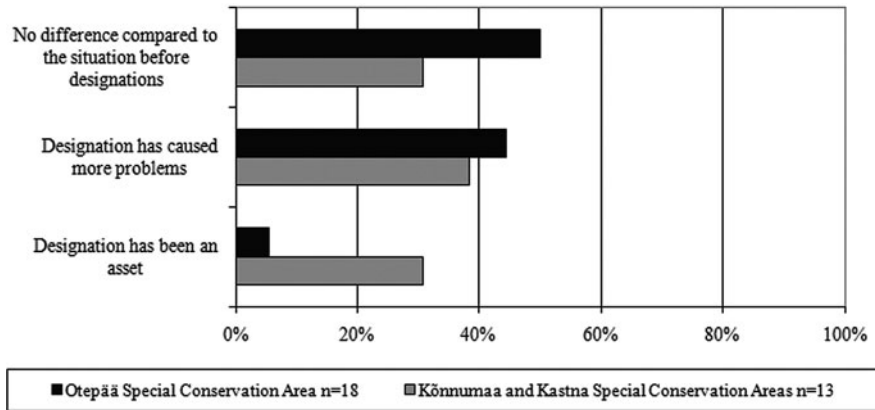
Fig. 14.3 Landowner perceptions of the current experience with Natura 2000 designations

However, most of the landowners did not perceive the future as very promising. Interviewees referred to their right to manage the land independently and were concerned that this right would be constrained without their being consulted. The designations were perceived as taking away the landowners' right-to-decide:

> I can't decide anything entirely on my own; I will have to concert everything with the conservation authorities. But in this way I will no longer be a master of my actions (Landowner from Otepää case, male, employee in glass industry).

Natura 2000 as an asset was mentioned a few times, with compensation being among the most important reasons, as well as the preservation of beautiful landscape.

14.6 Discussion

Initiating the implementation of the EU Birds and Habitats Directives was one of the widest nature conservation projects in recent decade in Estonia, affecting many social groups, especially landowners. The following section discusses the main lessons learned from our two cases regarding information dissemination and knowledge management, and the factors that appear to have influenced acceptance by landowners. The results will be compared to similar studies, including results gained from a project on the delimitation of valuable landscapes in Estonia.

14.6.1 Lessons Learned from Knowledge and Information Management in the Natura 2000 Designations

Despite the relatively extensive communication campaign during the Natura 2000 site selections and designations, information dissemination was still perceived as

insufficient by most landowners in our case areas. One reason for this might be that the information was mostly disseminated in an untargeted and impersonal manner (e.g. through media or leaflets in public meetings). As Schenk et al. (2007) note, direct information channels can far more effectively convey messages. Many landowners in the cases of Kõnnumaa and Otepää appreciated the personal sources of communication (for example, public meetings or directly addressed letters to landowners) in terms of concreteness and clarity.

In order to contribute effectively in participatory processes, people need adequate information about the opportunities to participate (Hartley and Wood, 2005), as well as sufficient information about the content of the issue in question (Kujinga and Jonker, 2006). Landowners' low awareness of the specific meaning of the designation of Natura 2000 areas might have been one barrier for them to formulate informed judgements regarding designations. Our cases have shown that by the time landowners were expected to submit their final opinion towards designation (written claims in summer 2004), many landowners did not have at their disposal enough information about some basic issues regarding designations, for example, the socio-economic implications of designations, how to participate in the consultations, or even whether their land has been selected for designation or not. In addition to the information deficiencies, an earlier analysis of the Otepää case study (Suškevičs and Külvik, 2007) and some other studies (e.g. Diduck and Sinclair, 2002) suggest that expectations of having limited impact on the ultimate decision can also prevent people from participating.

However, local people and other stakeholders can also potentially give relevant input to decision-making with their experiential knowledge (Soini and Aakkula, 2007; Soliva et al., 2008). The lay people–expert interface (Palang and Fry, 2003) was evident in our cases, especially highlighted by the question of who were holders of legitimate knowledge. Many landowners were opposed to expert judgements, questioning the validity and relevance of scientific expertise. In contrast – although one of the aims of landowner involvement was to complement the scientific inventories with their knowledge of local biodiversity – the nature conservation authorities implicitly regarded scientific ecological expertise as the only true knowledge (Collier and Scott, 2009). An exception was in some instances in the Otepää case, where landowners' propositions concerning biodiversity management were acknowledged by the authorities (although in the future and not in the designation phase). The discussions held in conjunction with the selection and designation of Natura 2000 areas in Estonia, similarly to some other EU countries (Alphandery and Fortier, 2001; Pinton, 2001), were subtly designed as scientific talks, which made it difficult for the landowners to contribute with their knowledge, and for the authorities to accept these knowledge claims as legitimate for the designations. However, considering that stakeholder participation, for example in the format of public-private partnerships, is encouraged by the European Commission in the management of Natura 2000 areas (EC, 2004a), we find that the perspectives of different actors and the knowledge management issues deserve further attention (both academic and in practice) in the actions towards ensuring that the Natura 2000 areas are received favourably.

14.6.2 Factors Influencing Landowners' Acceptance

The cases show that expectations regarding participatory processes play a leading role in determining attitudes towards the whole decision process. As Sauer (2006) notes, conflicts over Natura 2000 designations in Germany have partially resulted from the fact that nature conservation authorities and affected actors, such as foresters or farmers, had different understandings about what to expect from the process. The information provision and consultation processes in the cases of Otepää and Kõnnumaa were designed to inform the landowners about the importance of Natura 2000 (mainly in ecological terms), to provide them an opportunity to express their opinions towards the designations, and to gather information from them about habitat types and other conservation values of the land. In contrast, landowners mainly regarded the consultations as an arena in which to discuss socio-economic issues. Since the involvement opportunities had been created for other purposes, misunderstandings regarding decision processes between landowners and nature conservation authorities occurred, resulting in a mainly negative perception by the landowners about the participatory process.

One reason why these differing expectations could not be met lies in the contextual constraints to free deliberation in the participatory processes of Natura 2000 designations. As the Habitats Directive requires, the topics of discussion in our two cases were mainly limited to ecological issues. Yet, the socio-economic aspects were the main concerns for landowners, who brought them continuously on to the consultations' agenda. Nevertheless, due to the ambiguity of land-use restrictions in the case of Special Conservation Areas and the unclear financial compensation mechanisms and subsidies, the discussions on socio-economic issues remained rather abstract, increasing uncertainty about the exact implications of the designations for the livelihoods of landowners. The delineation of valuable landscapes in Estonia, for example, had a different nature, leaving much more room for the participants to elaborate on their personal experiences and views about human-nature-culture relationships. The valuable landscapes project had a wider scope, where natural values of landscapes (rare species and communities) were only one aspect among cultural-historical, aesthetical, recreational, and identity values of landscapes (Alumäe et al., 2003). One can suppose that this difference in the process design – Natura 2000 being restricted to ecological issues only and the valuable landscapes project having a wider thematic scope – could be one reason why no considerable conflict situations have been registered in the case of the latter project. It can be further suggested that adopting the landscape approach to nature conservation, integrating community involvement, spatial planning, and biodiversity management (Mitchell et al., 2004), could be useful as a means of making the management of Natura 2000 areas more flexible.

Despite the fact that the designation process in the Kõnnumaa and Otepää cases was not well-accepted by most landowners, quite a remarkable proportion of landowners did not strongly criticize the final decision to designate their land. Several explanations can apply. According to Wallner et al. (2007), landowners' perceptions of protected areas are mostly determined by individual interests and

aims. Many landowners in our cases claimed that they lacked direct personal interest in the issue since using their properties for economic purposes was currently not their primary interest. Thus, they were indifferent about the designation at that time, although their perceptions of the future reflected rather negative attitudes towards Natura 2000. However, we did not systematically examine the exact role of the economic situation of the landowners in determining their attitudes towards conservation. Although economic considerations are not suggested as the primary determinants of stakeholders' attitudes towards nature conservation measures (Schenk et al., 2007; Wallner et al., 2007), further investigation is needed to find out in what respects and to what extent economic factors influence the attitudes of the landowners towards Natura 2000 issues.

14.7 Conclusions

The study revealed two main aspects that play a crucial role in the participatory processes concerning the Natura 2000 designations. First, the cases suggest that the rules of the participation process as well as expectations of different stakeholders regarding the process should be made more explicit. Our results also indicate that the specific information regarding Natura 2000, which is relevant for stakeholders in order to formulate their own opinion, should have been communicated in due time, in a targeted manner, and in a context-specific format to the landowners. This would have helped clarify misunderstandings between participants and allowed stakeholders to contribute more effectively in the consultations.

Second, the results of the Otepää and Kõnnumaa cases show that room for deliberation and decision alternatives in participatory processes are critical factors for acceptance among landowners. The Natura 2000 designations were exclusively based on scientific knowledge which left little leeway for discussing the issues that landowners regarded as important. However, the next steps in implementing the Birds and Habitats Directives, i.e. managing the Natura 2000 areas, tend to take a more flexible approach towards stakeholder partnerships and sustainable use of natural resources on those areas. This trend seems to acknowledge several principles outlined in the ELC, for example multiple uses of landscapes, the ability of landscapes to enhance peoples' quality of life, and encouraging cooperation between stakeholders, and can thus be an important step towards setting the EU's nature conservation policy in the wider landscape and participatory context.

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III

Legitimacy Analysis of Multi-Level Governance of Biodiversity: Evidence from 11 Case Studies across the EU

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ABSTRACT

Legitimacy is one critical aspect of effective biodiversity governance. However, multi-level governance contexts can pose several challenges to achieving legitimate governance solutions. This paper reviews some legitimacy challenges in multi-level governance contexts, and analyzes eleven biodiversity governance case studies from different EU countries in the light of these challenges. Four legitimacy criteria – rule compatibility, accountability, inclusion, and transparency – serve as a framework for the theoretical review and for the empirical analysis. The results indicate that several legitimacy challenges can be observed in the cases: specifically the poor inclusion of relevant concerns in certain phases of decision-making processes; difficulties in being simultaneously accountable to parties representing different governance levels; or the weak visibility of the decision-making process either to the general public or to the immediate participants. Copyright © 2012 John Wiley & Sons, Ltd and ERP Environment.

Introduction

SINCE ITS EMERGENCE IN THE 1990S IN RELATION TO EU STUDIES, THE CONCEPT OF MULTI-LEVEL GOVERNANCE (MLG) HAS gained momentum in many policy areas, including the environmental field. MLG can be viewed as a two-dimensional notion. The term 'governance' refers to the increasingly influential role of different non-state actors in addition to governmental bodies in policy-making (Bache and Flinders, 2004: 197; Peters and Pierre, 2004: 77, 82; Buizer *et al.*, 2011). The word 'multi-level' denotes the multiplicity of levels within jurisdictional, spatial, administrative, etc., scales, and the sharing of power across and within them, so that the result is often a non-hierarchical governing system with no centre of accumulated authority (Hogl, 2002: 302; Peters and Pierre, 2004: 79, 83). As environmental disturbances (e.g. biodiversity loss) usually intertwine across spatial-territorial levels (Cash *et al.*, 2006), policy responses allowing these issues to be addressed on scales that correspond to their wider physical and social impacts are expected to form a more flexible and resilient governance system (Meadowcroft, 2002: 173–174, 176). Thus, biodiversity governance in general encompasses wider governance regimes, ranging from international agreements to local resource management rules, and more specific governance frameworks (e.g. the

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Habitats and Birds Directives in the EU) (Paavola *et al.*, 2009: 149). If levels are considered as any analytical units across scales (Cash *et al.*, 2006), this paper understands MLG as the interplay between various actors from private, governmental and voluntary sectors, representing different levels foremost within the jurisdictional (i.e. decision-making) scale, where local, regional, national, EU and international levels can be distinguished.

Legitimacy is the acceptance of authority when people have good reasons to support it voluntarily (Fung, 2006: 70). On the one hand, legitimacy concerns the compliance with legal norms: a decision is legitimate if its content is in accordance with law (Bekkers and Edwards, 2007: 37). On the other hand, legitimacy usually goes beyond legality: rules cannot justify themselves simply as rules, but also have to correspond to some moral principles in order to be accepted (Jentoft, 2000: 142). Thus, power is legitimate to the extent that it is acquired and exercised in accordance with the formalized legal codes, as well as with contextually relevant informal rules, such as shared norms, values and beliefs (Beetham, 1991: 16). From the perspectives of participatory and deliberative democracy, the main source for legitimate power acquisition and exercise lies in the provision of direct opportunities for participation (in contrast to representative democracy) for all affected parties (Young, 2002: 19–23). Participation in this paper is therefore regarded as one critical aspect for achieving legitimate biodiversity governance arrangements. Adopting an authoritarian protectionist approach could easily lead to morally and pragmatically questionable prescriptions that most likely will not safeguard biodiversity conservation and sustainable management in the long term (Brechin *et al.*, 2002: 42). Participation, if conceptualized through the 'lower steps' along a continuum of the power-sharing 'ladder' (e.g. Arnstein, 1969), essentially differs from governance in being narrower (power is in the hands of government) (Brechin *et al.*, 2002: 47); however, if power is shared among various actors to any great extent, participation can become assimilated with governance (co-governance, partnerships).

Increasingly, debates revolve around the interfaces between different MLG settings and various aspects of legitimacy (Benz, 2003; van Kersbergen and van Waarden, 2004; Peters and Pierre, 2004; Bekkers and Edwards, 2007; Papadopoulos, 2008; Rauschmayer and Behrens, 2008). The legitimacy of EU biodiversity governance has suffered from various problems (Paavola, 2004), but few studies have systematically addressed legitimacy issues in biodiversity MLG contexts (see, for example, Rauschmayer and Behrens, 2008). This paper aims to analyse the legitimacy of biodiversity governance, synthesizing the results of a set of case studies[1] across different MLG contexts. To this end, four legitimacy criteria – compatibility with legal frames and informal rules, inclusion and representation, accountability, and transparency – proposed by Wittmer *et al.* (2006: 4–5) in a slightly modified format[2] – are employed. Each of these criteria relate to the above-cited debates of legitimacy challenges in MLG contexts. The role of the first criterion (rule compatibility) in understanding legitimacy has been briefly introduced above. The remaining three – inclusiveness, accountability and transparency – have been widely acknowledged as core concepts for achieving legitimate (biodiversity) governance (Dingwerth, 2005: 72; Lockwood, 2010: 756). Based on a review of academic literature on participatory democracy and MLG, the paper starts with an explanation of these criteria, distinguishing between input-legitimacy (the quality of processes by which collective decisions are reached) and output-legitimacy (the extent to which political decisions actually reflect the concerns of people, promoting common welfare) (Scharpf, 1999: 6), and a discussion of their challenges in MLG contexts. After introducing the research design, the findings from the cases are presented and discussed. The last section summarizes my conclusions.

Framework of Analysis

Legitimacy Criteria and their Challenges in Multi-level Governance Contexts

Based on a literature review, the four legitimacy criteria are defined and some of their potential challenges in various contexts of MLG are discussed below (for an overview, see Table 1).

Criterion	Includes. . .	Some examples of its challenges in MLG contexts
Compatibility with legal frames and informal rules	. . .consistency of a decision and the process of reaching it with the relevant formal and informal rules in a given context	• Difficult to consider simultaneously multiple legal frameworks and informal rules from different levels • Possible gaps in support for participation in the legal frameworks and by informal rules across levels
Inclusiveness	. . .the reflection of all relevant (i.e. affected) concerns in the final decisions, or at least their balanced representation in the decision-making process	• MLG favours organized interests – formally less organized concerns are less represented and included • National/international levels tend to be better represented and included – power is shifted away from sub-national levels
Accountability	. . .democratic control mechanisms which, as a basis, require defining clear lines of responsibilities	• Responsibilities shared between actors across different levels – less clarity, who is responsible for what (the problem of 'many hands') • Accountability holders are accountable towards forums at different levels – difficult to 'satisfy' multiple levels (problem of 'two-level' accountability)
Transparency	. . .ensuring that decision-making processes and their outcomes are visible and clearly understandable to all relevant parties (insiders and outsiders)	• Transparency might be weakened – issues are clearly visible for mostly those actors who stand close to network members

Table 1. Legitimacy criteria and some examples of their challenges in multi-level governance contexts

Compatibility with Legal Frames and Informal Rules

Broadly speaking, compatibility means that parts of a system work smoothly together (Adams, 1996: 367). The process of decision-making and its outcomes can be considered as legitimate when they comply with formal and informal procedures recognized as adequate in the respective context by all affected parties (Rauschmayer and Behrens, 2008: 67). These procedures may include legal regulations, as well as informal governance institutions, such as social norms, or traditions (Licht *et al.*, 2007: 661–662).

Ensuring such compatibility has been challenging in several cases of European multi-level biodiversity governance. For example, current legal frameworks at national and at EU levels are less conducive to species management than to species conservation (Rauschmayer and Behrens, 2008; Rauschmayer *et al.*, 2008: 183–184). This mismatch has caused conflicts between different resource users and conservation-oriented stakeholders (ibid.). Viewing participation as a key source for legitimacy raises another issue: how do legal frameworks and informal rules relate to participatory approaches at different decision-making levels? Legal frameworks and some informal institutions, i.e. the prevailing culture of participation, consisting of attitudes and norms regarding participatory approaches (Leal, 2007), can play key roles in influencing the participation by affected parties. How do, for example, participatory arenas developed at different levels relate to each other in terms of power distribution (Berghöfer *et al.*, 2008: 247)? The implementation of the ecosystem approach in fisheries management in the EU has shown that participatory settings at lower levels have had little influence on relevant policies at higher levels (ibid.).

Inclusion and Representation

From the perspectives of deliberative and participatory democracy, a decision and the process of reaching it is normatively legitimate to the extent that it succeeds to include all affected parties (Young, 2002: 23). Inclusion refers to input-legitimacy: all concerned parties should have equal access to express their interest in participatory decision-making arenas (they should be represented in the process) (Bekkers and Edwards, 2007: 43–44). Inclusion also concerns output-legitimacy: the relevant parties should have equal opportunities to exert influence on process results, which eventually should meet popular expectations (Curtin, 2010: 35). Conversely, legitimacy deficits arise from situations where either the decision-making process has failed to respond to the preferences

of those affected (poor input-legitimacy), and/or their preferences are not properly reflected in the results (weak output-legitimacy).

Referring to the increasingly substantial role of non-governmental actors in policy-making, MLG by its definition (e.g. Peters and Pierre, 2004: 77, 82, 86; Bache and Flinders, 2004: 197; Buizer *et al.*, 2011) seems to denote a highly inclusive governance system. Indeed, in discussing the EU MLG, Benz (2003: 86) found that multiple access points exist for organized interests. However, this may mean less opportunities for non-/less organized parties to have their views heard or represented in decision-making processes. One possible reason for decreased inclusiveness in some MLG practices might be their reliance on informality. Formal arrangements, such as legislation, are considered as too rigid for policy-making in various MLG settings (Peters and Pierre, 2004: 87). However, formal rules ensure equal rights for all groups to be heard; to what extent therefore does informality mean inequality (ibid.)? The EU MLG system may favour national levels as more influential entities over structurally less powerful sub-national actors (ibid.: 86). Interests from national levels have indeed dominated in decision-making processes concerning the EU-wide cormorant action plan (Rauschmayer and Behrens, 2008: 72). However, as many affected parties in natural resource governance might not be formally organized (Billgren and Holmén, 2008: 553, 556), and actors at different policy levels may pursue substantially different interests, there is clearly a need for a wide and equitable inclusion in biodiversity policies (Brechin *et al.*, 2002: 58).

Accountability

As no person can be present for all decisions that affect his or her life, representation is both necessary and desirable in modern politics, including participatory governance (Young, 2002: 124, 133). And because representation inevitably generates some concentration of political power, there is a danger of its misuse by those in control (van Kersbergen and van Waarden, 2004: 156). Accountability refers to the need to control misuses of power for those who might not be able to directly participate in decision-making. As policies aiming at common good should arise from deliberative interactions in the shared public space (Scharpf, 2009: 188–189), accountability relates to input-legitimacy. It also concerns output-legitimacy: governors need to justify their actions, showing how the powers are used to attain a common good (ibid.). Bovens (2007: 450–452) defines accountability as a relationship between an actor (accountability holdee) and a forum (accountability holder), in which the actor has an obligation to inform the forum, to explain his or her conduct, the forum can pose questions and the actor may face consequences. Specific accountability mechanisms vary in different notions of collective decision-making (Bexell *et al.*, 2010: 83–85). However, if responsibility is seen as one component of accountability (cf. Mulgan, 2000: 557–558), clear lines of responsibilities of accountability holdees and the clarity of those responsibilities for the accountability holders can be viewed as key components of any effective accountability mechanism (Goode and Keiner, 2004: 301; Lockwood, 2010: 759), as such clarity is one of the basic preconditions for accountability holders to question the performance of actors.

However, in describing the consequences of multi-level networks in the British government, Rhodes (1998: 662) concludes that the institutional complexity resulting from the changing role of the state in decision-making processes and the transfer of functions from national level to EU level can obscure who is accountable, and for what. The 'problem of many hands' might make accountability relationships unclear for the forums (Bovens, 2007: 457): because decisions pass on from many actors, it may be less easy to locate the *loci* of power and to identify where decisions are being taken and who is responsible for them (van Kersbergen and van Waarden, 2004: 158). A closely related challenge concerns the ultimate performance of accountability holdees in 'two-level accountability' situations. As accountability holders in MLG settings are usually positioned at different policy levels, accountability should function both upwardly (governing bodies are responsive towards upper levels) and downwardly (constituencies can hold governing bodies accountable) (Lockwood, 2010: 759–760). However, satisfying both levels at the same time can be a challenge (Papadopoulos, 2008: 41).

Transparency

This refers to the visibility of decision-making processes (relating to input-legitimacy) for the immediate participants (insiders) and for those not being able to participate (outsiders), and of its outcomes (output-legitimacy) (Lockwood, 2010). As inclusiveness, transparency is a normative requirement, deriving from pragmatic and ethical considerations: participants have to understand the decision rules and decision-making

structures in order to contribute meaningfully, and those parties who are not involved should have at least the right to know about the issues that affect them. Therefore, if decision-making processes cannot ensure that all relevant concerns are taken into account, they should at least be understandable for both the immediate participants and for those outside (Rauschmayer and Behrens, 2008; Rauschmayer and Risse, 2005; Wittmer *et al.*, 2006).

However, in several MLG notions, the complexity behind decision-making structures might impede achieving this ideal. Because decision-making processes in various MLG settings are often informal (e.g. networked interactions), they can also be poorly visible (Papadopoulos, 2008: 35, 41). Policy processes are claimed to be well-visible largely for those principal participants who stand closer to the actors directly involved in decision-making (ibid.). Thus, internal transparency of decision-making in various MLG settings may be higher than transparency for those on the outside, i.e. for the general public or media.

Methodology

Study Approach

The following subsections are based on a qualitative meta-synthesis of case studies conducted as part of the GoverNat project (2006–2010, www.governat.eu) which investigated the use of participatory approaches in MLG of natural resources. A series of biodiversity and water governance cases were conducted, guided by the framework proposed by Wittmer *et al.* (2006), where legitimacy is one of the four interdisciplinary research fields (Rauschmayer *et al.*, 2007). The frame of analysis paid particular attention to scale effects, and to the social, cultural and economic contexts of natural resource governance (ibid.).

The qualitative meta-synthesis method aims to bring together, with the aim of further interpretation, a group of qualitative studies that explore the same or closely related phenomena (Walsh and Downe, 2005; Zimmer, 2004). Sampling procedures aim to be as inclusive as possible, thus including all relevant studies (Walsh and Downe, 2005: 208). This method 'analytically amalgamates' individual qualitative studies at a more abstract level through three basic steps (Walsh and Downe, 2005: 208): (1) the studies are described and their similarities and differences are identified; (2) the findings of one study are translated to another, using concepts that could be applied to both; and (3) these translations are synthesized to provide additional understanding.

Eleven biodiversity governance cases studies were selected.[3] The studies cover a spectrum of biodiversity issues in various MLG contexts. The cases were first described and compared to reveal their similarities and differences, using four broad topics: biodiversity issues, relevant decision-making levels, actors and the nature of decision-making processes (Table 2). The cases were then analysed according to the four legitimacy criteria outlined above, by revealing emerging concepts common to several cases, and synthesizing them into conclusions.

Meta-studies inevitably encompass multiple levels of interpretation (Walsh and Downe, 2005: 209). The GoverNat cases involve first- and second-level, some even third-level interpretations, meaning that this synthesis is either a third- or fourth-level interpretation. To address the problems of validity and credibility arising from multiple interpretations, the respective GoverNat PhD fellows were contacted and asked to comment on the draft synthesis (whether their work has been misinterpreted or extrapolated beyond the limits of the data). Also, as Walsh and Downe (2005) suggest, a review by an expert (GoverNat project coordinator) was sought for the draft.

Overview of the Cases

Eleven cases are summarized (Table 2) on the basis of country, topic, governance levels, nature of the decision-making processes, relevant actors and time period. Many concern ongoing decision-making processes; however,

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[3]The following GoverNat PhD fellows supported to the compilation of the respective cases: Minna Santaoja – cases 1–3; Sonja Trifunovova – cases 4 and 5; Mireia Pecurul – cases 6–8; and Cordula Mertens – cases 9–11. This work involved integrating information from different sources (e.g. interviews, document analysis) that were available at the time of analysis and their own analysis. The intellectual rights regarding case 7 belong to Papageorgiou *et al.* (2008) and regarding case 8 to Nordbeck and Pregernig (2008).

No.	Country	Central issue	Time period	Key decision-making level; main other levels involved	Nature of the decision-making processes	References used by the GoverNat fellows
[1]	UK	Different knowledge claims in the national biodiversity action planning according to the (?) CBD	1994–2002	National;international, EU, local	Organized process, initiative from national governmental actors who directly contacted certain local-level stakeholders (amateur naturalists)	Department for Environment, Food and Rural Affairs (Defra). 2007. *Conserving Biodiversity – the UK Approach.* http://www.ukbap.org.uk/library/UKSC/DEF-PB12772-ConBio-UK.pdf. Ellis, R., Grove-White, R., Vogel, J. and Waterton, C. 2005. *Nature: Who Knows?* English Nature/CSEC/Natural History Museum Publication. http://www.lancs.ac.uk/fass/centres/csec/pubs.htm. Ellis, R. & Waterton, C. 2004. Environmental citizenship in the making: the participation of volunteer naturalists in UK biological recording and biodiversity policy. Science and Public Policy. Volume 31, number 2. Ellis, R. & Waterton, C. 2005. Caught between the cartographic and the ethnographic imagination: the whereabouts of amateurs, professionals, and nature in knowing biodiversity. Environment and Planning D: Society and Space, volume 23, pages 673 – 693. Waterton, C. & Ellis, R. 2003. 'Anglers, Ramblers and British Naturalists: the creation of records and much, much more'. Paper for presentation at the Workshop 'Science and Democracy', JF Kennedy School of Government, Harvard University, USA, 29 June – 1 July 2003. Waterton, C and Ellis, R (2006) *Amateurs as Experts: Harnessing New Networks for Biodiversity, End of Award Report, Lancaster.* CSEC, Lancaster University. http://www.lancs.ac.uk/fass/centres/csec/pubs.htm.

| [2] | Finland | Participation and conflicts during Natura 2000 designations | 1994–2003 | National; EU, regional, local | Organized consultations by national governmental actors for national-level organized interest groups, opposition from local landowners (complaints, hunger strike) | Heikkinen, 2007; Hiedanpää, 2002; 2004; Hilden *et al*., 2005; 1998; Kangas *et al*., 2005; Malmsten, 2007; Oksanen, 2003; Sairinen *et al*., 1999; Veistola, 1997; Heikkinen, I. (ed.) and interministerial group of editors. 2007. Saving nature for people. National strategy and action plan for conservation and sustainable use of biodiversity in Finland 2006–2016. Ministry of the Environment. Edita Publishing, Helsinki. [In Finnish; with English abstract.] Hiedanpää, J. 2004. *Making Environmental Policies Reasonable. A Study of the Consequences of Social Diversity for Regional Forest Policy of SW Finland*. Academic dissertation. Acta Universitatis Tamperensis 1030. Tampere University Press, Tampere. Hiedanpää, J. 2002. European-wide conservation versus local well-being: the reception of the Natura 2000 Reserve Network in Karvia, SW Finland. Landscape and Urban Planning 61 (2002) 113–123. Hildén, M., Auvinen, A.-P. & Primmer, E. 2005. *Evaluation of the Finnish National Action Plan for Biodiversity*. Ministry of the Environment, The Finnish Environment 770. Edita Publishing, Helsinki. [In Finnish; with English abstract.] Hildén, M., Tahvonen, O., Valsta, L., Ostamo, E., Niininen, I., Leppänen, J. & Herkiä, L. 1998. *Impacts of the Natura 2000 network in Finland*. The Finnish Environment 201, Finnish Environment Institute. Edita, Helsinki. [In Finnish; with English abstract.] Kangas, P., Jäppinen, J.-P. & von Weissenberg, M. (ed.) 2005. *The Implementation of the National Action Plan for Biodiversity in Finland 2002–2004*. Third Progress Report. Ministry of the |

(Continues)

Table 2 (Continued)

No.	Country	Central issue	Time period	Key decision-making level; main other levels involved	Nature of the decision-making processes	References used by the GoverNat fellows
						Environment. Edita Prima Ltd, Helsinki. [In Finnish; with English abstract.] Malmsten, A. 2007. Rajaaminen. In: *Tapaustutkimuksen taito.* Laine, M., Bamberg, J. & Jokinen, P. (eds.) Gaudeamus, Helsinki. Oksanen, A. 2003. *Confrontation between local and international interests in matters of nature conservation. A case study of the Natura 2000 controversy in South-Western Finland.* Academic dissertation, Annales Universitatis Turkuensis C 192. University of Turku, Department of Geography. [In Finnish; with English abstract.] Sairinen, R., Viinikainen, T., Kanninen, V. & Lindholm, A. 1999. *Suomen ympäristöpolitiikan tulevaisuuskuvat.* Ympäristöministeriö, Yhdyskuntasuunnittelun tutkimus- ja koulutuskeskus. Gaudeamus, Helsinki. Veistola, T. 1997. Miten Natura-soppa oikein keitettiin? Luonnonsuojelija No. 8/1997.
[3]	Finland	Cooperation initiative to restore the lake of Ahtialanjärvi	2001 – present	Local; international, EU, national, regional, local	Self-organized informal cooperation between local amateur naturalists and regional, local partners, open to all interested parties	Itkonen, T. 2008. Lempäälän Ahtialanjärvelle suunniteltavasta lintutornista. E-mail posted on the Pirkanmaan lintutieteellinen yhdistys, BirdLife's regional association's, email list, 30.5.2008. Mäkelä, R. 2005. Lintuveden tarina. Lempäälän Ahtialanjärven kehityksestä. In: *Pirkanmaan lintutornit ja luontopolut,* Aro, S. *et al.* Suomen luonnonsuojeluliiton Pirkanmaan luonnonsuojelupiiri ry, Tampere. Mäkelä, R. 2005. Pirkanmaan muuttuvat lintuvedet. In: *Pirkanmaan lintutornit ja luontopolut,* Aro, S. *et al.* Suomen

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[4]	Slovakia	Conflict about forest management regimes and practice in the Tatras National Park (TANAP)	2004 – present	National; international, EU, regional, local	Conflicts between foresters and conservationists at various levels, creation of a non-governmental body in contrast to a powerful governmental committee	luonnonsuojeluliiton Pirkanmaan luonnonsuojelupiiri ry, Tampere. Pitkänen, M.-L. 2005. *Pirkanmaan Natura 2000 -verkoston hoidon ja käytön yleissuunnitelma. Alueelliset ympäristöjulkaisut 373.* Pirkanmaan ympäristökeskus, Tampere. Pitkänen, M.-L. and Tavast, M. 2005. Lintuvesien hoito. In: *Pirkanmaan lintutornit ja luontopolut,* Aro, S. *et al.* Suomen luonnonsuojeluliiton Pirkanmaan luonnonsuojelupiiri ry, Tampere. Ruokonen, P. and Laurinolli, T. 2005. Lintuvesien suojelu. In: *Pirkanmaan lintutornit ja luontopolut,* Aro, S. *et al.* Suomen luonnonsuojeluliiton Pirkanmaan luonnonsuojelupiiri ry, Tampere. Salo, E. 2003, *Lempäälässä pyöritään nyt Ahtialanjärvellä. Tampereen seudun luonto 1/2003.* Tampereen ympäristönsuojeluyhdistys ry, Tampere. Www.lempaala.fi. The web pages of the municipality of Lempäälä. Kluvánková-Oravská, T., Kozová, M. a ostatný 2005. Smerom k Trvalo Udržateľnému Tatranskému Regiónu (nezávislá štúdia strategického charakteru), REC Slovensko v spolupráci so spoločnosťou pre trvalo udržateľný život v Slovenskej Republike, Bratislava. Krenová, Z., Polák, P. 2007. Hodnotenie Dokumentu, NPR Tichá a Kôprová-Štúdia Posúdenia Vplyvu Navrhovanej Činnosti na Priaznivý Stav Predmetu Ochrany, Štátna Ochrana Prírody, SR. Renn, O., 2007. *Glossary for GoverNat* (manuscript). Vološčuk, I. 2000. Trvalo Udržateľný Rozvoj v Biosférickej Rezervácii Tatry, Vydavateľstvo Technickej Univerzity vo Zvolene.

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No.	Country	Central issue	Time period	Key decision-making level; main other levels involved	Nature of the decision-making processes	References used by the GoverNat fellows
[5]	Slovakia	PAN-Parks certification in the Slovensky Raj National Park (SRNAP)	1999 – present	Local; international, local	Self-organized cooperation initiative from SRNAP administration to join with the PAN-Parks certification system, opposition from foresters and local tourism entrepreneurs to the initiative	Kluvánková-Oravská, T., Chobotova, V. 2006. Shifting governance. Managing the commons: the case of Slovensky Raj National Park. Sociologia 38: 221–244.
[6]	Spain	Participation in Natura 2000 designations and management in Catalonia and Lleida	1995 – present	Sub-national (autonomous region); international, EU, regional, local	Organized consultations and information disclosure for the public at national (Spain) and sub-national level (Catalonia); cooperative agri-environmental measure launched by a sub-national governmental body, involving local farmers and irrigation company at local level (Lleida)	Aubin, A. 2004. *Owners Escape Unharmed. Activation of Institutional Rules in Rivalries between Heterogenous Water Users.* Paper presentation in 'The commons in Age of Global Transition: Challenges, Risks and Oportunities'. 10th IASCP Biennial Conference Oaxaca (Mexico), 9–10 August. Brown, K. 2003. Integrating conservation and development: a case of institutional misfit. Frontiers in Ecology and the Environment 1:479–487. Fernandez-Aguilar, S. 2008. *Legitimacy Problems in Spanish Nature Policy. Legitimacy in European Nature Conservation Policy: Case studies in Multilevel Governance.* J. K. a. G. Leistra, Springer: 83–100. Eichener, V. 1997. Effective European problem-soving: lessons from the regulation of occupational safety and environment protection. Journal of European Public Policy 4.4: 591–608. Muniz, S. & Batalla, G. 2006. El canal segarra-garrigues i xarxa Natura 2000. Una anàlisi participativa des de les Garrigues baixes. Ed. Fundacio Territori i Paisatge (Unpublished).

[7]	Greece	Participation in the restructuring of protected areas' governance	1994 – present	National; EU, regional, local	Organized participation of stakeholders in the form of national park management boards (problems with representativeness); increased number of scientific advisory bodies; participation of general public in the environmental impact assessment on protected areas	Papageorgiou, K., Kassioumis, K., Vakkas, M. 2008. *Restructuring of management bodies for protected areas in Greece.* Universität für Bodenkultur Wien, Department für Wirtschafts- und Sozialwissenschaften. http://www.boku.ac.at/sfh/reports/Research_report_3_2008.pdf.
[8]	Austria	Drafting of the Austrian Biodiversity Strategy	1994–2007	National; international, EU, sub-national (federal provinces), regional, local	Organized participation in the form of: (a) meetings of the National Biodiversity Commission; (b) involvement in the editorial group; and (c) commenting on the drafts of the Biodiversity Strategy. In addition, some activities to introduce the process to the wider public were arranged.	Nordbeck, R., Pregernig, M. 2008. *The Austrian Biodiversity Strategy: A Blocked Governance Process.* Universität für Bodenkultur Wien, Department für Wirtschafts- und Sozialwissenschaften. http://www.boku.ac.at/sfh/reports/Research_report_2_2008.pdf.
[9]	Germany	Conflict over bark beetle management in the Bavarian Forest National Park	1983 – present	Sub-national (state); international, EU, national, local	Opposition from local stakeholders (local dwellers, tourism companies, municipalities) and their negotiations with nature conservation authorities from different levels. Open discussions from which everybody could take part	Nationalparkverwaltung Bayerischer Wald 1999a. Nationalparkplan; Leitbild, Ziele (draft). Nationalparkverwaltung Bayerischer Wald 1999b. Nationalparkplan; Walderhaltungs-, und Waldpflegemaßnahmen (draft). Nationalparkverwaltung Bayerischer Wald 2001a. Nationalparkplan; Bildungs-, Informations-, und Öffentlichkeitsarbeit (draft). Nationalparkverwaltung Bayerischer Wald 2001b. Waldentwicklung im Bergwald nach Windwurf und Borkenkäferbefall; Wissenschaftliche Reihe, Heft 14.

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No.	Country	Central issue	Time period	Key decision-making level; main other levels involved	Nature of the decision-making processes	References used by the GoverNat fellows
						Nationalparkverwaltung Bayerischer Wald 2005. Wilde Waldnatur. Nationalparkverwaltung Bayerischer Wald 2007. Jahresbericht 2006. Renn, O., (2007) *Glossary for GoverNat* (manuscript). Rauschmayer, F., Wittmer, H., Paavola, J. 2007. *Multi-level Governance of Natural Resources: Tools and Processes for Water and Biodiversity Governance in Europe – A European Research and Training Network.* UFZ-Discussion Papers 3/2007 – GoverNat 1, March 2007. RUBICODE 2008. D 7.1 Web report on the effectiveness and appropriateness of existing conservation policies and their integration into other policy sectors; case study on Biodiversity policy in Germany (unpublished draft). Wittmer, H., Raushmayer, F., Klauer, B. (2006). How to select instruments for the resolution of environmental conflicts?. Land Use Policy, 23, 1–9. http://www.freyung-grafenau.de/ http://www.iap2.org/associations/4748/files/Spectrum.pdf http://www.landkreis-regen.de/leben/index.html http://www.nationalpark-bayerischer-wald.de/
[10]	Hungary	Land-use conflicts in the Kiskunság National Park	1975 – present	National; international, EU, local	Opposition from local stakeholders (mostly farmers) about the rights to use the land under the conditions of poor financing and water scarcity; informal cooperation among stakeholders	Flachner, Zs., Kovács, E. 2003. *Cooperation between the Kiskunság National Park Directorate and a local farmer.* Case study for the OECD Working Group on Economic Aspects of Biodiversity, Budapest. Gilly, Zs. 1999. The Mosaic of alkaline plains and moving sand dunes – The Kiskunság National Park. In: *Conserving*

					References
[11]	Hungary	Participation in the foundation and governance of the Körös-Maros National Park	1980s – present	Local; international, EU, national, regional	Negotiation between ENGOs and national park administration, informal cooperation between farmers and national park administration (farmers and national park administrators attend each others' meetings, national park directorate consults farmers regarding agri-environmental schemes)	*Hungary's Heritage – The National Parks and World Heritage Sites*, Tardy, J. (chief ed.). TermészetBÚVÁR Alapítvány Kiadó: Budapest; pp.155-166. Gómez-Baggethun, E., Kelemen, E. 2008. *Linking Institutional Change and the Flows of Ecosystem Services: Case Studies from Spain and Hungary*. Proceedings of the 2ndTHEMES Summer School: 118–145 (draft version). Renn, O. 2007. *Glossary for GoverNat* (manuscript). Homepage of the Kiskunság National Park http://www.knp.hu/. http://en.wikipedia.org/wiki/Cumans Kiskunság Biosphere Reserve: http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?mode=all&code=HUN+03. Bird Life Hungary: http://www.mme.hu/. Bolno-Takács, K. 1997. Körös-Maros National Park Directorate. Brochure by: European Centre for Nature Conservation; The European Union PHARE programme; Ministry for the Environment, Hungary; National Authority for Nature Conservation, Hungary. Domokos, A. 1999. An oasis wedged among cultivated lands – The Körös-Maros National Park. In: *Conserving Hungary's Heritage – The National Parks and World Heritage Sites*, Tardy, J. (chief ed.). TermészetBÚVÁR Alapítvány Kiadó: Budapest; pp.167-178. Fehér, I. Review of the land market and institutions in Hungary. PowerPoint presentation. GTK, SZIE. Hungarian Central Statistical Office: http://portal.ksh.hu. Kalotás, Zs. 2004. Körös-Maros National Park. In: *Hungary's National Parks –*

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No.	Country	Central issue	Time period	Key decision-making level; main other levels involved	Nature of the decision-making processes	References used by the GoverNat fellows
						Nature and landscape, Kalotás, Zs. (ed.). Alexandra Kiadó: Pécs; pp.130-151. Körös-Maros National Park: http://kmnp. nemzetipark.gov.hu/. Körös-Maros Nemzeti Park Igazgatóság, Szarvas, current flyer, 2008. Renn, O. 2007.: Glossary for GoverNat (manuscript). State Secretariat for Nature and Environment Protection: http://www. termeszetvedelem.hu/.

Table 2. Case descriptions

they have already provided essential information on certain aspects that has allowed some conclusions to be drawn, which could be used for this study.

The case studies represent eight EU countries: UK, Finland, Slovakia, Spain, Greece, Austria, Germany and Hungary, including older member states and some recently accessed countries, such as Slovakia (cases [4] and [5]) and Hungary (cases [10] and [11]). Most cases, for example [2], [4], [5], [6], [10] and [11], concern governance of protected areas, such as Natura 2000 designations or management. However they differ in terms of specificity and their focus on administrative level: case [2], the Finnish Natura 2000, examines designations at national level, whereas case [6], implementing the Habitats and Birds Directives in Spain, analyses designations and management at national, regional and local level. Some other cases examine biodiversity governance at a more abstract level, for example drafting biodiversity strategies and action plans ([1], [8]). Among other issues, cases [4] and [9] investigate the role of species management in protected area governance.

Decision-making in the cases takes place in a cross-level context. The relevant levels depend on the administrative structure of the country, but across the jurisdictional scale, four main levels can be distinguished: international, EU, national (or federal) and sub-national (regional, local). In many cases, ultimate decisions tend to be taken by national institutions; however, other levels are involved as well or indirectly affect governance processes. In fewer cases, key decisions were made at the local level. In most cases, relevant actor settings are numerous and heterogeneous, representing different levels, policy sectors and public–private affiliations. Biodiversity Action Planning in the UK (case [1]), drafting of the Austrian Biodiversity Strategy ([8]) or bark beetle management in the Bavarian Forest National Park ([9]) are good examples of biodiversity issues spanning different policy levels and the various parties associated with them.

The nature of decision-making processes differs from case to case. All have some attributes of participatory governance, but power sharing in decision-making varies: more hierarchical decision-making structures in some cases, for example [1], [5] and [6], are mixed with partnership-alike initiatives, for example [3]. Several, such as cases [1], [2], [6], [7] and [8], represent more formally organized processes, initiated and/or led by an (external) convenor. In contrast, some others, such as [3], [4], [5], [9], [10] and [11], are quite unstructured and open discussions, cooperation initiatives or opposition movements, without a central coordinator/organizer.

Results

Compatibility with Legal Frameworks and Informal Rules

Guaranteeing compatibility between international/EU requirements, national and sub-national legal frameworks does not appear to be a particular problem. Instead, implementing supra-national requirements in a way that the informal rules in a given context are respected has proven to be challenging. Decisions taken by governmental actors in case [9], the Bavarian Forest National Park, Germany, were compatible with legal frameworks but were not accepted by local people, until their concerns were considered. Conflicts between environmental authorities and landowners in the Finnish Natura 2000 case ([2]) were in part caused by inadequate consideration of the historically important autonomy of local landowners, when communicating the messages about Natura 2000 to them. Likewise, farmers' traditional independence in land-use decisions in the Kiskunság National Park (Hungary), case [10], has probably been one factor hindering effective cooperation among them and with the park administration. Incompatibilities between the formal biodiversity protection rules and the informal institutional setting tend to result in further problems with formal legal compliance, as with meeting the deadlines for submitting the national lists of Natura 2000 areas, and the sufficiency of those proposals in Finland ([2]) and Spain ([6]), or European Community court cases about the impact of development projects on the favourable status of Natura 2000 areas in the Slovak Tatras National Park ([4]) or in Catalonia ([6]).

Due to the prevailing impact of the informal institutional environment on decision-making in some cases, e.g. [4], [5] and [9], it is difficult to examine the exact role of legal requirements on the practice of participatory approaches. Other cases with a more formalized decision-making context provide mixed results in this regard. The guidance document for national biodiversity strategies and action plans of the Convention on Biological

Diversity (CBD) (COP, 2008: 4–5) encourages the broad participation of all affected parties. However, participatory platforms, mainly the National Biodiversity Commission (NBC), to draft the National Biodiversity Strategy in Austria, case [8], included many actors from multiple levels, but their participation did not have much influence on the final decisions, and most of the NBC outputs were not legally binding. This could be one reason for the recent decline in participation in the NBC. The nature of decision-making in some of the Natura 2000 cases, e.g. in [2] or [6], was compatible with the legal requirements for participation at EU and national levels. However, these obligations were insufficient in practice, leaving little room for deliberation between stakeholders, resulting in antagonism between the parties.

Inclusion and Representation

Inclusion and representation were problematic in a number of cases, for example [2], [4], [5], [6] and [9], which began with antagonistic relationships or conflicts between key stakeholders, indicating that the concerns of some parties have not been adequately considered.

The decision-making process in the UK Biodiversity Action Planning (BAP) (case [1]) was initially organized for a specific purpose (to fill the expert knowledge gaps on certain species), and thus only knowledge claims in a pre-defined format were included, leaving the concerns of the participants (e.g. their personal experiences) largely ignored. Similarly, although the administration of the Körös-Maros National Park ([11]), Hungary, has become more open to the concerns of various stakeholders in recent decades, due to the traditional importance of expert knowledge in the Hungarian nature conservation policy, the interests of scientists, experts and environmental non-governmental organizations tend to dominate management decisions compared with the concerns of local farmers. Several cases demonstrate power disparities between decision-making levels. Ideas from the Slovensky Raj National Park administration to join the PAN-parks certification scheme ([5]) has not yet found support at the national level. Also, participatory processes during the Finnish Natura 2000 designations, case [2], were initially targeted mainly at the national level and for organized interests only, resulting in dissatisfaction from local and/or disorganized landowners. In a similar way, the concerns of local people were initially not adequately considered in decision-making processes of the bark beetle management case ([9]) in Germany.

Relevant concerns were sometimes well represented in decision-making processes, but problems arose on the output side. Decision-making in the Austrian NBC ([8]), designed to be a widely inclusive body, has in practice been a state-driven process and the power relations in it are biased towards more resourceful interest groups with good relations to the ministries. Similarly, governance processes concerning forest management in the Tatras National Park ([4]), Slovakia, represented different interests well, but delays in taking some final decisions have generated dissatisfaction among many affected parties.

However, several cases in which initially either the process or the final decisions did not reflect all relevant concerns, evolved towards better acknowledgement of different interests, values or knowledge claims. Conflict in Finland over the Natura 2000 designations, case [2], eventually led the environmental authorities to understand the needs of locals rather better, and the whole process functioned as a means of learning. Also, various stakeholders in the UK BAP process ([1]) were finally better aware of and respectful about each others' expectations. Likewise, through an interactive public discussion, the conflict over bark beetle management in the Bavarian Forest National Park ([9]) led to an agreement, balancing local concerns as well as conservation interests.

Accountability

The complexity of accountability relationships is illustrated by several cases. The central decision in the UK BAP process ([1]) regarding the validity of biodiversity knowledge, is made across several policy levels. However, the national government has the final mandate for decision-making, and can be held accountable towards international institutions. In those cases focusing on Natura 2000 designations and management in Finland ([2]), Slovakia ([4]) or Spain ([6]), national and sub-national governmental bodies (depending on the country-specific administrative structure) can be held legally accountable towards EU institutions. Thus, these cases suggest that in addition to being democratically accountable to their electorates, and socially accountable to their stakeholders (e.g. local people, economic actors and other interest groups) (downward accountability), governmental bodies are also expected to be accountable to supra-nationa bodies (upward accountability).

Several cases, for example [5], [6] and [7], point to problems with defining responsibilities for biodiversity governance, sometimes coupled to inadequate sharing of implementation resources. In the Slovak PAN-Parks certification process, case [5], some responsibilities for nature conservation are not clearly defined between the State Nature Conservancy and the State Forests (two major governmental actors dealing with biodiversity and forestry issues, respectively). Moreover, the State Nature Conservancy has much less resources to perform its duties than the forestry body. In the Spanish Natura 2000 case ([6]) responsibilities are somewhat ill-defined and resources are ineffectively allocated between two sub-national governmental bodies: the Department of Environment and Housing (DMAiH, the main body responsible for implementing the Natura 2000 network in Catalonia) shares some responsibilities with the Department of Agriculture, Cattle Farming and Fishing (DAR). However, the latter has much greater financial resources, including finances for biodiversity governance, to fulfil its responsibilities. This, together with their competing interests (biodiversity conservation versus agricultural production respectively), has caused conflict between the two departments. Likewise, responsibilities for protected areas' management are vaguely defined in case [7] between the newly established Greek Ministry of Environment, Planning and Public Works (MoEPPW) and the Ministry of Rural Development and Foods, which has long carried the primary duty for biodiversity issues.

Transparency

Ensuring reasonable visibility of decision-making processes and their outcomes for the participants and for those outside is problematic in several cases. Misunderstandings among amateur naturalists, governmental actors and scientists in the UK BAP process ([1]) regarding each others' expectations towards the process led the amateur naturalists to feel dissatisfied with the whole initiative. Rules and assumptions in the Ahtialanjärvi lake restoration initiative in Finland, case [3], were clearly communicated among the network of naturalists (directly involved in the restoration works), but the visibility of the process was somewhat poor for the wider public and for the environmental administration. Problems with transparency also emerged regarding the outputs of some decision-making processes. In the Finnish Natura 2000 case, [2], landowners' opposition was primarily caused by farmers' misunderstandings of the nature conservation requirements being stricter than they actually were. The farmers in the Körös-Maros National Park, case [11], initially did not clearly understand the exact requirements of the agri-environmental schemes, and were thus dissatisfied with the governance process.

Nevertheless, in several cases the problems appeared to be caused by the inability to acknowledge and to communicate the perceptions or expectations of different stakeholders. For example, in cases [2], [4] and [9], the stakeholders initially opposed each other's notions of sustainable forestry and biodiversity management, and this non-recognition of each other's perspectives has been one of the causes for their antagonistic relationships.

However, like the criterion of inclusion, decision-making processes tend to become more transparent in the latter phases of several cases: the processes of conflict, such as in cases [1] or [9], functioned as learning devices that helped the parties better recognize each other's problem perceptions, needs and values.

Discussion: Revisiting Legitimacy Challenges in Multi-level Context

Compatibility with Legal Frameworks and Informal Rules

Incompatibilities between informal norms and formal rules, rather than legal compatibility per se, were problematic in several cases. Informal rules included the historically embedded patterns of land-use rights as a basis for stakeholders' rights and duties regarding resource management, and for their perceptions on nature conservation requirements. This reinforces the need to give equal weight to formal and informal institutions: in an ideal case, the goals of the two should complement each other (Pahl-Wostl, 2009). However, because informal rules tend not to be documented and are usually enforced outside of legally sanctioned channels (ibid.), being aware of these rules and taking them into account might be more difficult than complying with formal rules.

The cases do not provide a straightforward answer to the question of how legal frameworks and actual participatory practice most meaningfully relate to each other in multi-level contexts. One may argue that because the Habitats and Birds Directives are in principle not compatible with the ideal of interactive decision-making, implementation of the Natura 2000 network has triggered many conflicts in various EU member states, as in the Finnish and Spanish Natura 2000 cases analysed here, and some previous studies (e.g. Alphandery and Fortier, 2001; Eben, 2006) have shown. However, some cases based on informal interactions brought various parties together quite well (e.g. [9] and [11]), suggesting that legislative support for participation might not always be the most important factor to ensure meaningful interaction.

Inclusion and Representation

Legitimacy problems tend to be most visible when tensions between particular and general concerns appear: if people in a political system share key values and beliefs, they more easily accept collectively binding decisions (Bekkers and Edwards, 2007: 39). This was evident in several cases analysed in this paper: conflicts were aggravated because of the inability of different parties to address their differences in world-views and perceptions of the problems. 'Nature' had different meanings for local landowners and for environmental authorities in the Finnish Natura 2000 designations ([2]): the landowners were disappointed with the lack of trust shown by the environmental administration towards their ability to conserve natural values as part of their normal agricultural practices. In the Slovakian forest management debate, case [4], foresters argued that bark beetles constitute a considerable risk for the forest ecosystems, whereas nature conservationists claimed the bark beetles were an everlasting natural phenomenon. Similarly, in the bark beetle management conflict in Germany, case [9], locals' ideas of a well-managed forest differed considerably from that of the nature conservation authorities, but this difference was initially not adequately addressed in decision-making.

MLG settings are often claimed to favour the concerns of those at higher levels and of organized interests (Peters and Pierre, 2004: 87). As many of the cases analysed here deal with stakeholder participation and much less with public participation (i.e. with fully non-organized interests), it is difficult to examine the role of the latter in decision-making processes. However, power imbalances towards organized interests have been illustrated in the Austrian NBC case ([8]). Also, power asymmetries between policy levels are seen in several cases: in the Finnish Natura 2000 designations ([2]), the arenas for decision-making initially tended to concentrate at national level, or in the current debates about forest management in the Tatras National Park ([4]) where national governmental interests dominate. However, the cases do not provide a straightforward answer to the question of what role does informality play in favouring or hindering inclusion. Some informal decision-making processes, as in cases [9], [10] and [11], even better include different concerns than cases where decision-making follows a more structured format. Decision-making in more informalized contexts has helped to build trust and mutual understanding between local stakeholders and nature conservation authorities in the Körös-Maros National Park ([11]). This tends to support the idea that informal communication can form a crucial part of formal participatory decision-making (Lee, 2007).

In their analysis of legitimacy of the EU-wide cormorant action planning, Rauschmayer and Behrens (2008: 70) found that various interests were better included in latter phases of the decision-making process than in the beginning. Inclusion has proven to be a dynamic process in most of the current cases as well: the conflicts, when addressed constructively, had the potential to function as learning processes, providing a good basis for mutual understanding and acknowledgement of concerns, as cases [2] and [9] have shown. The object of inclusion can be a significant issue, too: some cases, for example the UK BAP process, suggest that what matters is not inclusion per se but rather what is included [values, interests, knowledge claims, etc. (Berghöfer et al., 2008)].

Accountability

The complexity of accountability webs in various MLG systems – diversity of relevant policy levels, different accountability forums (Lockwood, 2010; Papadopoulos, 2008: 40–41; Rhodes, 1998: 662) – is well illustrated by some case results. Many have problems with defining and/or sharing of responsibilities between different actors from various levels. This may reflect poorly conducted decentralization (Ribot et al., 2006) – duties are diffused to a wide range of actors who do not have much control over them. Under such conditions, accountability may ultimately be weakened

(ibid.), because the actors may not be able to perform their duties. Some cases (e.g. the Slovak PAN-Parks certification process [5]) show how those at lower levels, under conditions of weak distribution of resources, are searching for new ways of exerting influence to achieve their aims.

As noted by previous studies (Lockwood, 2010; Papadopoulos, 2008), some cases suggest that maintaining effective accountability relationships simultaneously in two directions might be a considerable challenge. Regarding the Natura 2000 designations in Finland, case [2], national governmental bodies can now be held accountable towards EU authorities with regard to complying with the requirements of the directives. The national governmental bodies in this case struggled to comply with the requirement of submitting a national proposal of Natura 2000 areas to the EU Commission within a given time frame. At the same time, they did not have enough resources to organize a proper communication and consultation campaign for stakeholders at lower levels. In this case, upward and downward accountability was initially weak: the national government did not meet the deadline of submitting the Natura 2000 areas' proposal, and failed to inform local and regional stakeholders adequately.

Transparency

As with inclusion, transparency in some MLG contexts is claimed to be weak, mainly because of the informality of decision-making processes (Papadopoulos, 2008: 35; 41). Several cases have shown that ensuring transparent decision-making is not straightforward. Transparency for the general public has been questionable in the more informal decision-making processes, as exemplified in cases [3] and [11], but also in some more structured contexts, such as in cases [1] or [2], where the respective processes were not particularly visible for the immediate participants (insiders).

Causes of poor transparency in these cases seem to be rooted in different perceptions of the problem (cases [2], [4] and [11]) and expectations (case [1]). These perceptions provide a basis for the assumptions of what the stakeholders regard as adequate solutions to the problem, how the participants relate to each other and how they communicate their assumptions and world-views.

Conclusions

Because decision-making in many of the cases analysed is still ongoing, and the cases differ from each other to a remarkable extent regarding some key characteristics (e.g. in terms of country-specific political-administrative context, or the nature of the decision process), it would be not appropriate to make deep generalizations on the basis of all cases. Nevertheless, the 11 cases have illustrated several instances of legitimacy deficits: namely, weaknesses in complying with the contextually relevant informal rule-settings, problems with including all relevant concerns and ensuring clear visibility of the decision-making processes and their outcomes, or clarifying accountability relationships. However, the cases also provide examples where there were no major problems with fulfilling these four criteria.

The synthesis suggests three key aspects which could have central meaning in understanding the legitimacy of biodiversity governance. The first relates to informal rules. The compatibility between legal frameworks and informal rules can play a crucial role in determining the overall acceptance of biodiversity governance practices. This was illustrated by several cases. Considering and respecting the informal institutional environment of the particular decision-making context (such as prevailing world-views and traditions relating to resource management) has been a key factor determining the achievement of support by different parties regarding biodiversity policies. Ensuring compatibility with the informal rule-setting might, however, constitute a remarkable challenge, as considering the informal rule settings can be more difficult than ensuring compatibility between legal frameworks.

Secondly, the cases suggest that input and output dimensions of legitimacy tend to be closely interrelated. This was most evidently illustrated by the criterion of inclusiveness: several cases have referred to the insufficiency of the representation of all relevant concerns only in the decision-making process when the outcome does not adequately reflect them – claims will be raised by relevant parties and the outcome will eventually not be regarded as acceptable by them. This reinforces the need to give equal attention to input- as well as output-legitimacy.

Finally, the cases have demonstrated the importance of collective learning in achieving legitimate decision-making processes and their outcomes. Several demonstrated that conflict governance situations can lead to agreements where

different concerns are better acknowledged and included, and processes are more clearly visible for those affected by them. Here, social learning seems to be a crucial keyword: achieving acceptable outcomes in such decision-making processes requires openness and willingness to learn from the process as well as from each other from all participants. Developing shared values and norms also appears to be important: problems with, for example, inclusion and transparency in several cases were aggravated because the different parties failed to communicate and acknowledge their contrasting world-views and problem perceptions. However, as the cases did not explore the exact mechanisms by which meaningful learning processes are started and maintained, this could be a relevant topic for future investigation.

Acknowledgements

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IV

Assessing the relevance of stakeholder analysis for national ecological network governance: The case of the Green Network in Estonia

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ABSTRACT

Ecological network planning and implementation touches upon different land use and policy sectors, thus, creating multiple interdependencies between the respective stakeholders associated to these spheres. Stakeholder analysis (SA) is a widely promoted approach to understand the interfaces between natural and social systems in environmental governance. Yet, the applications of SA in relation to ecological networks are scarce. This study explores the usefulness of SA for the planning and implementation of the national ecological network concept – Green Network – in Estonia. Based on an analysis of relevant documents and a set of semi-structured interviews, we have (i) revealed a set of various roles stakeholders can play in Green Network governance and (ii) highlighted stakeholders' experiences with involvement practices, as well as traced certain cooperation and conflict trajectories between different parties. We conclude that encouraging the use of the stakeholder concept in the national ecological network governance could potentially make decision-makers more aware of different claims stakeholders might have in Green Network governance. We further suggest that for complex governance tools such as Green Network planning and implementation, schematic-analytical and descriptive approaches of SA could be integrated, to gain a more adequate overview of the concrete situation.

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Introduction

Fragmentation of natural areas due to pressures from intensive agriculture, forestry, building of infrastructure networks, or expansion of urban settlement, have made the conservation of interconnected areas more important (Jongman et al. 2004). The concept of 'ecological networks' aims to preserve the physical connectedness and functional connectivity on landscapes for species dispersal, migration and for the continuation of material and energy flows (Bennett 2004; Jongman 2006; Jongman et al. 2004). Ideas for developing national networks were initiated already in the 1980s in Central and Eastern Europe (CEE) (Jongman et al. 2004) and nowadays, ecological networks are implemented and/or under development in many European countries (Boitani et al. 2007; Jongman et al. 2004). The Pan-European Ecological Network (PEEN), as one of the priorities of the Pan-European Biological and Landscape Diversity Strategy, to a certain degree coordinates national initiatives for ecological networks (Bennett & Mulongoy 2006). At the EU level, the concept of Green Infrastructure (GI) has been introduced recently (European Commission 2011). In

addition to preserving interconnected natural areas for ecological purposes, this approach also aims to maintain healthy ecosystems for human needs, such as delivering ecosystem services, and will mainly be implemented via integrated land use and spatial planning (European Commission 2011).

Despite the common attention on connectivity issues, national network concepts vary in their aims and scope (Bennett & Mulongoy 2006). Two broad approaches can be distinguished across Europe. In Western Europe, ecological networks have been mainly pursued to protect valuable sites and threatened species (Jongman et al. 2004). In contrast, the CEE countries have followed an ecostabilisation principle which focuses on processes at landscape scale, such as the ability of nature to purify and restore itself (Jongman et al. 2004). Among some other eastern European examples, the Estonian *Green Network* (Jongman et al. 2004; Sepp & Kaasik 2002, p. 9–10) carries wider functions than species conservation, e.g. to minimise conflicts between different land uses through spatial planning, or to guide settlement and land use. The concept is among a number of key instruments for integrating holistic landscape management concerns into sectoral policies in Estonia (Sepp & Kaasik 2002). Thus, the planning and implementation of Green Network touches upon different land uses, creating multiple interdependencies between the respective stakeholders associated with these spheres (Kivimaa et al. 2009). The Green Network *planning* is integrated into spatial planning at national,

regional and local levels. The national long-term spatial plan – 'Estonia 2010' – approved by the government in 2000, delineates basic principles of Green Network by establishing corridors and 12 core areas of national and international importance (Estonian Ministry of Environment 2001). At regional level, the Green Network was one sub-theme of county thematic planning (initiated in 1999) which obligated each of the 15 counties to prepare a map of Green Network areas at a scale of 1:50,000, and to define general land use conditions on those areas. This process at regional level was finalised in 2008. At local (municipal) level, Green Network is required as one topic in the comprehensive plans since 2003, according to the Planning Act. Each comprehensive plan should specify the boundaries and land use conditions established at regional level. Comprehensive plans are currently being compiled and/or updated in Estonia (Sepp & Külvik 2009). We understand the *implementation* of the Green Network concept as the enforcement of the respective spatial plans at all three governance levels, via the enactment of land use conditions that concern Green Network outlined in these plans.

An increasing social and physical complexity of environmental problems requires a comprehensive understanding about the functioning of natural and societal systems, their boundaries and impact factors. Stakeholder analysis (SA) refers to a set of tools allowing to gain an overview of "a system, and for assessing the impact of changes to that system, by means of identifying the key stakeholders and assessing their respective interests" (Grimble 1998, p. 1). One of the main motivations for conducting a SA is its expected aid for participatory processes (Mushove & Vogel 2005). Indeed, public and stakeholder participation are considered crucial preconditions for sustainable and legitimate biodiversity governance (Jones-Walters & Cil 2011). However, participation can have various goals (Appelstrand 2002), and according to the extent power is shared between decision-makers and participants, participation can take various forms from consultation to shared-decision-making and collaborative natural resource governance (Pomeroy & Douvere 2008). Yet, not focusing on the exact form of involvement, the general participatory-democratic ideal suggests that all those whose interests are somehow concerned by an issue in the political agenda should have the chance to influence relevant decisions (Buanes et al. 2004). In Estonia, an increasing emphasis is placed on involving the general public in decision-making on environmental issues, but stakeholder approaches are currently not main-streamed. However, a recent report on the implementation of the Convention on Access to Information, Public Participation and Access to Justice in Environmental Matters in Estonia highlights some problems in the participatory decision-making practice, e.g. the challenge of informing all relevant parties early and sufficiently enough about involvement opportunities (Estonian Ministry of Environment 2010).

Opdam et al. (2006, p. 327) suggest that ecological networks, as flexible tools for biodiversity conservation, can facilitate the communication among and decision-making by various actors, allowing them to negotiate about goal-setting and design options of biodiversity management in the planning area. Yet, we are not aware of studies exploring specifically the interfaces between stakeholder analysis and ecological network governance. This paper intends to explore the relevance of stakeholder analysis for the planning and implementation of the Estonian ecological network concept, by (i) studying the roles stakeholders (could) play in relation to the Green Network topic, and identifying some examples of stakeholders relevant for this policy issue; (ii) investigating their (a) experiences with involvement practices and (b) relationships.

After defining some key analytical concepts in the next section, we describe our methodological approach (interviews and an analysis of spatial planning documents), presenting the findings thereafter. We conclude with discussing the relevance of SA for the

Green Network decision-making processes in Estonia, within the wider context of ecological network governance across the Europe.

Stakeholders and stakeholder analysis

The use of the term 'stakeholder', originating from business management (Ramirez 1999, p. 101), and the applications of SA have expanded to various disciplines, e.g. information management (Rowley 2011), and to several fields of environmental governance: waste management (Heidrich et al. 2009); marine planning (Buanes et al. 2004; Mikalsen & Jentoft 2001; Pomeroy & Douvere 2008); forest governance (Salam & Noguchi 2006); protected area management (Mushove & Vogel 2005; Rastogi et al. 2010); or, environmental impact assessment (EIA) (Sovacool 2010). Despite its wide usage, the meaning of the term is contested. Perhaps the most known definition is the one by Freeman (2010, p. 46): "stakeholders are any group or individual who can affect or is affected by the achievement of organisations' objectives". Billgren and Holmen (2008) compare a variety of stakeholder definitions across several disciplines, concluding that natural resource management literature defines the concept more broadly than other spheres. Indeed, in some definitions, stakeholders can include any naturally occurring entity and even a mental construct, such as future generations (Reed et al. 2009, p. 1934).

This conceptual confusion has its roots in the multiplicity of views about what constitutes a legitimate stake (Reed et al. 2009). A range of criteria has been suggested by Pomeroy and Douvere (2008) and applied by Maguire et al. (2012) to identify and characterise marine planning stakeholders: their interests and statutory roles in marine planning; their historical relations, and existing rights to marine resources. Salam and Noguchi (2006) have used a similar approach to determine forest governance stakeholders. Several studies have investigated the relations between the goals of a project, and stakeholder interests: e.g. 'winners' and 'losers' in nature conservation management (Mushove & Vogel 2005), or costs and benefits of a development project for stakeholders (Sovacool 2010). Thus, a common approach to identify (and classify) stakeholders is to detect and compare their interests in the issue, and power to influence decisions (see an application by Rastogi et al. (2010)).

Taking the 'affect criterion' proposed by Freeman (2010); (see for a recent application by Heidrich et al. (2009)) as a basis, we define *stakeholders* as individuals, groups of people or organisations who are somehow related to the Estonian Green Network planning and implementation, i.e. who are affected (positively or negatively) by decisions regarding Green Network, or who can affect these decisions. Departing from this, we are interested in what kind of stakes they (could) have in Green Network governance, e.g. having a professional duty regarding to, or an interest in the issue. Once we will have identified these (possible) roles, and given examples of relevant stakeholders, we aim to describe their (a) *involvement* in Green Network governance and perceived *influence* on decisions and (b) *relationships*: existing and potential patterns of cooperation and conflicts.

SA can be a valuable tool to reveal power relations with a reference to past or existing decision-making processes (Evans 2009; Heidrich et al. 2009). We explore stakeholders' perceptions about their involvement experiences, and their self-stated level of satisfaction with them, as well as with the level of influence they perceive to have had on decisions. *Influence* refers to the power stakeholders claim to have over the issue: to control what decisions are made, or to facilitate their implementation (Salam & Noguchi 2006). We acknowledge that studying respondents' perceptions gives a picture of their relative, not absolute positions (Evans 2009, p. 785). Though, it might help to understand the differences in perceived positions within governance processes (Evans 2009).

Relationships, a common dimension in SA (Rastogi et al. 2010; Rockloff & Lockie 2004; Salam & Noguchi 2006), can indicate how stakeholders (could) work together. We explore stakeholder *relationships* in terms of potential and existing (Reed et al. 2009, p. 1944) co-operation and conflicting interaction patterns. Potential relationships are identified analysing stakeholders' positions – the level of support people express towards the Green Network topic – and the similarities and differences in their stakes. Existing relationships are determined through examples of situations where stakeholders claim to have experienced cooperative or conflicting interactions.

Materials and methods

Reed et al. (2009) suggest interviews, surveys or focus groups to be among the most common methods for SA in natural resource management. Our study follows a qualitative research design (Miles & Huberman 1994), and combines an analysis of planning documents and semi-structured interviews (see examples in Evans (2009) and Rastogi et al. (2010)).

Data gathering: Green Network planning documents and interviews

First, Green Network plans in ten Estonian regions (Fig. 1) were accessed via the websites of the respective county governments and prepared for the analysis (Suškevičs 2008: analysis principles are described below). Each regional Green Network plan consists of a network map and text explaining the map and outlining the land use conditions. For this study, the textual part of the planning documents in each of the selected counties was analysed. The regions were chosen to cover a broad range of areas of different biophysical and socio-economic status.

Second, a series of 33 face-to-face or telephone interviews with key informants mostly coming from the Harju County were conducted in 2007 and 2008, as part of the research project 'KEN: *K*nowledge for *E*cological *N*etworks: Catalysing Stakeholder Involvement in the Practical Implementation of Ecological Networks' (http://www.ecnc.org/). The Harju region was selected due to its vicinity to the Estonian capital city Tallinn, and because of the consequent intensity of land use development and resultant social reflections. Interviews were conducted in two phases. Six pilot interviews according to a questionnaire were made between November 2007 and January 2008, in order to test the relevance of the questions. The remaining interviews (27) were conducted between July and August 2008, according to the same questionnaire in a slightly refined format, divided into the first (with open questions) and second sections (structured questions). The final list of interviewees was compiled strategically by the research group after the analysis of the planning documents and pilot interviews. The interviewees were selected so that they would act as key informants, representing various governance levels and policy sectors, such as spatial planning, agriculture, nature conservation, or forestry. The interviews began with discussing interviewees' roles regarding to the Green Network topic, relationships with other relevant stakeholders, and experiences with participatory approaches. Finally, the interviewees were asked to summarise their views according to the structured questions in the second part of the interview guide. Interviews were not recorded but detailed protocols were made. The total number of interviews can be considered small in quantitative terms, but since a qualitative study rather focuses on meanings and lessons learned from individual cases (Miles & Huberman 1994), a set of purposefully selected interviewees can be regarded as sufficient to answer the research questions.

Data analysis

To reveal common themes and patterns in the data, qualitative content analysis (Graneheim & Lundman 2004) was used for processing the Green Network planning documents and interview protocols.

Analysis of planning documents

The analysis aimed at determining relevant land-uses as well as other responsibility areas most related to the Green Network. First, full texts of the ten planning documents (analysis units) were read through repeatedly, to become familiar with the data and to obtain a sense of the whole. Texts were sorted into two content areas: land use conditions of Green Network and conflict areas between Green Network areas and other land uses, such as forestry, agriculture, building, etc. Then, texts were screened through section-by-section, keeping in mind the content areas, and formulating codes and categories with a key question: "To which land use and policy sectors do Green Network land use conditions and delineated conflict areas refer to?" Codes were assigned to words, phrases or sentences (meaning units) referring to those land use and policy sectors, and were further synthesised into more general categories. Document analysis results also helped us to identify relevant interviewees, as well as provided additional information to understand interview responses.

Analysis of interview protocols

Interview protocols were treated as another set of analysis units. Each protocol was first read through several times. Then, texts were read through sentence-by-sentence, and codes and categories were derived according to the research questions as well as issues emerging from the data. Codes were assigned to words or phrases that referred to: (a) interviewee's roles (e.g. professional duties, interests) related to the Green Network; (b) experiences with participatory decision-making; and (c) existing and future interaction patterns. According to similarities and differences in roles, categories were developed from codes, referring to stakeholders' stakes. This also enabled us to give examples of stakeholders relevant to the Green Network (see Table 1). An involvement-influence map (Fig. 2) was prepared to depict stakeholders' experiences with participatory decision-making. Stakeholder maps based on matrices are common ways to analytically classify stakeholders according to their certain characteristics (Reed et al. 2009), e.g. levels of interest (or support for) and influence on an issue (Bryson 2004; Evans 2009; Grimble & Wellard 1997). Our analysis intends to provide a more general feedback on the pros and cons of an existing institutional setting of participatory decision-making (cf. Reed et al. 2009), where *involvement* refers to interviewees' self-stated level of satisfaction on their experiences with participation, and *influence* to their level of contentment with the impact on decision-making processes. The map was drawn based on certain structured questions in the questionnaire, but stakeholder responses to open questions were also used to interpret the diagram.

Results and discussion

What is at stake: identifying stakeholders and analysing their roles

The aspect at stake is a core issue that needs to be addressed when defining the stakeholder concept (Billgren & Holmen 2008). This study aimed at exploring the roles stakeholders (could) play in relation to Green Network, and at identifying some examples of relevant stakeholder groups. Based on an analysis of planning documents and interviews, we suggest the following roles to function
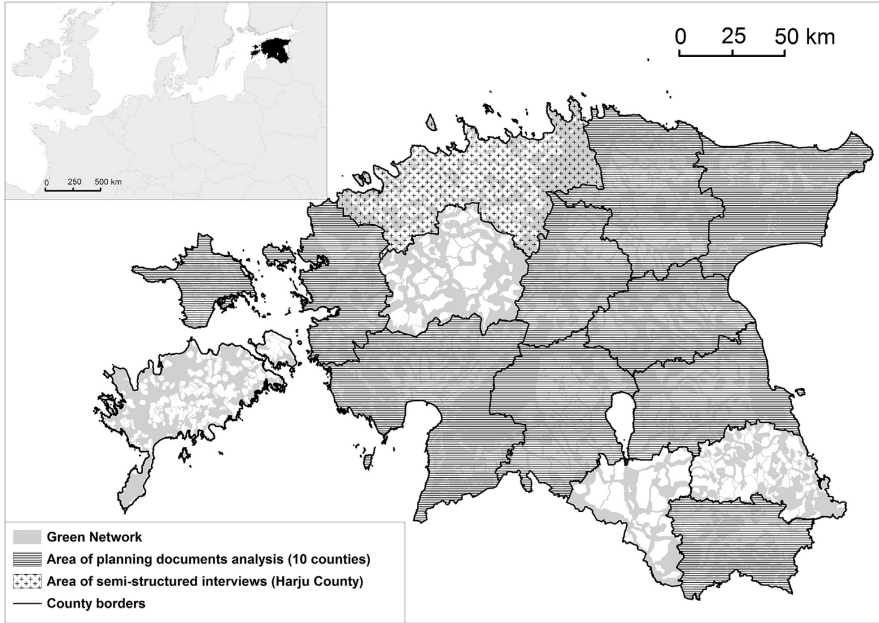
as key stakes in the Green Network governance (see Table 1): (a) stakeholder responsibility areas and professional duties regarding the Green Network; (b) (the potential for) providing some kind of input, mostly knowledge, into decision-making processes; and, (c) stakeholder interests being positively or negatively affected by the Green Network land use plans. Table 1 also proposes some

examples of stakeholders from governmental, private, and civil society spheres and from different governance levels.

However, the boundaries between these stakeholder examples should be treated as dynamic and in many cases overlapping, as different kinds of stakeholders tend to perceive appropriate stakes differently (Billgren & Holmen 2008). For example, one of
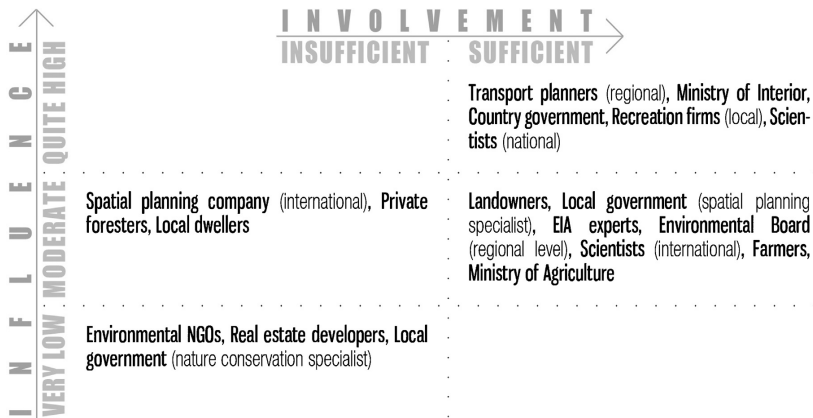

Fig. 2. Involvement-influence map: stakeholders' experiences with participatory decision-making in relation to the national ecological network governance in Estonia.

Table 1
Examples of identified stakeholders and their roles related to Green Network in Estonia.

Governance level	Social sphere	Stakeholder example	Role/stake
From national to local	Governmental	Ministry of Interior (MoI), county governments, local governments	–*Responsible* (according to the Planning Act) for delineating the Green Network in the respective spatial plans –*Responsible* for balancing different land use interests in spatial planning processes
From international to local	Private	Spatial planning companies/experts	–*Advisory duties* in assisting governmental spatial planners in Green Network planning
National; regional	Governmental	Ministry of Environment (MoE), Environmental Board and its regional offices	–*Advisory duties* in assisting governmental spatial planners in Green Network planning
From international to local	Private	Environmental impact assessment (EIA) and strategic impact assessment (SEA) experts	–*Responsible* (not legally) for *advising* governmental spatial planners in issuing permits for development projects under the EIA or SEA processes
National	Public	Scientists (ecologists), universities, research centres	–*Knowledge input*: have elaborated the national ecological network methodology (Sepp & Jagomägi 2002) which is applied at regional and local spatial planning processes
From national to local	Public	Environmental NGOs (ENGOs)	–*Positively affected*: Green Network as a notion relating to nature conservation can be considered as being in principle in line with their interests
From national to local	Private	Private forest owners and their unions	–Their interests are likely to be *affected* by the land use conditions of the Green Network plans negatively (e.g. through restrictions on their activities), or positively (benefits from the expected preservation of healthy forest ecosystems)
National; regional	Governmental	State Forest Management Centre and its regional offices	
Regional; local	Private	Nature tourism/recreation enterprises and NGOs	–Are/might be *affected* by the land use restrictions negatively or. . . –. . .*Positively*: can benefit from Green Network, since they need natural areas as capital for realising their interests (e.g. providing opportunities for nature-recreation)
From national to local	Private	Hunters and their unions	–Have *contributed* with their *knowledge* in Green Network planning for delineating migration routes for game species in many planning cases at county and municipality levels –Are/might be *affected* by the Green Network plans positively (Green Network supposedly supports the favourable ecological status of game species) or negatively (via certain land use restrictions)
From national to local	Private	Farmers and their unions	–might be *affected* by the Green Network planning negatively: intensive agriculture was considered as conflicting with Green Network in several regional plans, and conditions were set to agricultural land use, or. . .
National; regional	Governmental	Ministry of Agriculture, Estonian agricultural Registers and Information Board	–. . .Positively: farmers may also indirectly benefit from certain agricultural subsidies relating to the idea of an ecological network (established by the Estonian Rural Development Plan 2007–2013)
National; regional	Governmental	Ministry of Economic Affairs; Road Administration and its regional departments	–*Affected* by certain land use restrictions in Green Network plans, e.g. by the duty to establish migration corridors for animals in cases where a road (reconstruction) project conflicts with the network
From national to local	Private	Real estate developers, actors related to building, housing	–*Affected* by certain conditions to building actions, e.g. minimal distance between new houses or the prohibition to build new houses on delineated network areas
From national to local	Private	Energy companies (non-renewable and renewable energy)	–*Affected* by certain land use restrictions, e.g. conditions to forest clear-cuts under electric lines; to the establishment of oil-shale quarries or the expansion of existing ones
From national to local	Public and private	Water management: e.g. the water department in the MoE, or water companies	–*Affected* by some conditions of Green Network plans, e.g. the protection zones on water bodies, or the creation of watercourses on rivers
Local	Private	Local dwellers and landowners	–Their interests may be negatively *affected* by several types of land use conditions, such as the restrictions to building actions, or conditions for the use of forests or agricultural areas, but also positively, e.g. through the preservation of green areas

our respondents had been active in Green Network issues as a landowner, as a member of the local government council, and as a tourism entrepreneur. All these roles proved to be different, having various aspects at stake and ultimately different channels to participate and degrees to influence decisions. Relevant stakes can, indeed, vary: in the case of local people and landowners, aspects such as the geographic proximity to the policy problem; rights to use the resources, and ownership issues, can play a role in defining the stake. This confirms that stakeholders often 'wear multiple hats': one stakeholder represents different roles, depending on the actual situation (Ramirez & Fernandez 2005; Rastogi et al. 2010). Thus, the term 'stakeholder roles' (Rowley 2011, p. 54) – with its emphasis on the dynamic nature of the stakeholder

concept – might better depict the reality than the notion of 'stakeholder groups'.

Stakeholder experiences with decision-making processes: perceptions about involvement and influence

Our analysis suggests two aspects to be considered when using similar methods for stakeholder classification. First, on a stakeholder map (Fig. 2) certain stakeholders tend to score low in terms of involvement as well as influence (environmental NGOs, the building sector). This might refer to their marginalised position in the current decision-making setting. Hence, to ensure that they would be recognised as legitimate stakeholders (Heidrich

et al. 2009), more attention should be paid to these parties when designing future participatory processes. Additionally, distinguishing between various governance levels can be useful: although some groups have similar stakes, e.g. spatial planning stakeholders, their views on involvement experiences are different.

Second, such analytical stakeholder classifications (e.g. Bryson 2004) are sometimes criticised for their potential to ignore the concerns of some marginalised groups (Reed et al. 2009, p. 1939). Although this seemed not to be problematic in our analysis, the map alone might not give a full picture of stakeholder positions. Instead, a detailed description of stakeholder roles and a stakeholder map could complement each other. For example, certain stakeholders could not be positioned on the graph, since they were unsure about their involvement and/or influence levels, e.g. representatives from the water management and energy sectors, national recreation firms and spatial planning enterprises, and hunting organisations. However, as the analysis revealing their roles in the Green Network governance has shown, they are nevertheless shown to be important as relevant stakeholders. Moreover, the importance of considering the multiple roles of stakeholders (Ramirez & Fernandez 2005; Rowley 2011) is illustrated again by several examples. A stakeholder representing a local recreation firm scores high in terms of influence and involvement, but its role in the local government council has been more important in terms of exerting influence than its position as a nature tourism entrepreneur. Similarly, an environmental NGO representative can have a low position in decision-making processes, but as s/he might also professionally deal with the Green Network topic (e.g. as an EIA expert), her/his influence could be considerably higher. Finally, involvement channels might have had an impact on respondents' satisfaction with their involvement practices. Formal decision-making processes of spatial planning, EIA, nature conservation, etc. where participation takes place via public meetings and written consultations, are criticised by many respondents as insufficient ways to genuinely influence decision-making. In fact, some stakeholders regard informal communication and decision-making channels as more important than formal processes, e.g. for scientists and private forest owners, informal cooperation with the Ministry of Interior (MoI) or with the Ministry of Environment (MoE) was very important.

Stakeholder relationships

Potential cooperation and conflict patterns

The quality of relationships between relevant stakeholders can potentially affect decision-making processes (Salam & Noguchi 2006). We investigated stakeholders' potential cooperation and conflict patterns, in terms of respondent's position (attitude) towards the concept, as well as analysing similarities and differences in their roles in Green Network governance.

Almost all respondents expressed their support towards the concept. Many stakeholders saw advantages from the Green Network: social benefits, e.g. the recreational importance of green areas, but also ecological considerations; the Green Network concept as an important part of the overall spatial organisation theory, or preserved migration routes for species. Some spatial planners found the concept attractive because of its perceived broader approach to nature conservation:

> As the Green Network concept was introduced in Estonia, the planning department in the ministry/*Ministry of Environment*/fully supported the approach, whereas the nature conservation department was not so keen on the concept. Up to that point, the planners had been a bit irritated by nature conservationists' approaches to environmental protection – they always aim to protect something very specific: species or certain

areas. The Green Network, on the contrary, encourages viewing nature as a system where protected areas play just one part. [Estonian Ministry of the Interior, head of the spatial planning department]

Still, certain stakeholders, such as representatives from transport planning, or the recreational, forestry, and energy sectors were sceptical of the concept, expressing their support conditionally, i.e. they approve it only as long as it does not conflict with their interests. Several stakeholders stressed that land use requirements on Green Network areas should be more concise, preferably legally defined, because the recommendation nature of these conditions disfavours achieving the aims of the network:

> It should be more clearly stated in the legislation what does it mean for the land use to be included in a Green Network area./—/Maybe it would be reasonable to give a partial protection status to Green Network areas? Something like an EIA pre-assessment? Some kind of a clearer regulation is needed, because the expert who issues a permit for environment-use must justify the decision. [Estonian Wetland Society, chairman of the board]
>
> The implementation process has not started yet. It should be more clearly stated in the Planning Law what it means to own land in a Green Network area, how the building activities should be restricted and how local governments could find compromises with the landowners. [Stockholm Environment Institute – Tallinn Centre (SEIT), programme director]
>
> For the implementation process, the conceptual requirements must be translated using legally correct language of landscape planning and nature exploitation. [Estonian University of Life Sciences, professor]

Similar to the findings of Rockloff and Lockie (2004, p. 85), a closer scrutiny of the similarities and differences in stakeholder roles reveals some further issues. First, certain stakeholders seem to have contradictory responsibilities. For example, the MoI, county and local governments, or spatial planning firms, are responsible for delineating the network and for defining land use conditions to guarantee its functioning. Yet, at the same time, planners have to balance various land use interests in spatial plans, which may, in some cases, mean making compromises not in favour of preserving green areas. Moreover, the interests of some stakeholders could potentially conflict with each other. Certain land use conditions of Green Network plans may negatively affect the interests of many resource users, like foresters, farmers, real estate developers, transport planners, or the energy sector, who therefore could be in conflict with those parties whose interest and/or duty is to enforce those land use conditions, e.g. the governmental and private spatial planners, EIA experts, MoE, or environmental NGOs.

Second, although some stakeholders' roles at first sight seem to contradict, they have similar interests as well. Examples of such stakeholders include the real estate developers who recognise benefits from the preservation of green areas, such as higher market prices for the estate objects due to the vicinity of green areas. Similarly, nature tourism stakeholders acknowledge synergies between recreation routes and preserving green areas.

Existing relationships: cooperation

Environmental authorities and NGOs are perceived by almost all other stakeholders as key players, and several bodies would like to cooperate more closely with them. They are seen as key knowledge-providers regarding the Green Network topic:

> County environmental boards and local governments' environmental specialists should be the main stakeholders who

guarantee that all environmental aspects will be addressed. [Road construction enterprise, director]
All governmental stakeholders whose work is connected to nature in some way should be involved. [State Forest Management Centre, landscape protection specialist]

Scientists have been the initiators of the Green Network idea and cooperated with governmental spatial planners for the delineation of the Green Network at various administrative levels in Estonia. Their input is appreciated by several other stakeholders.

Cooperative relationships also exist between several resource users, e.g. foresters and hunting societies, and spatial planning stakeholders during delineation of the Green Network at county and municipality levels. Those stakeholders have contributed with their knowledge to the planning processes:

At regional level, examples of good cooperation include foresters who were constructive in distinguishing ecological corridors in forest areas, and in determining the maintenance requirements for different Green Network elements in forests. [Estonian University of Life Sciences, professor]

Existing relationships: conflicts

Although the analysis revealed certain potentially conflicting roles of different stakeholders, the Green Network governance in practice cannot be described by considerable conflicts. One reason for this might rely on the vagueness and considerable lenience of the land use conditions of Green Network plans, i.e. most of those conditions are in the form of recommendations. As several stakeholders put it:

The public interest in the Green Network issue has not been so high. One reason can be the fact that as we delineate the Green Network, no specific change occurs in the reality – it is more like mapping the current situation than planning something new. [Estonian Ministry of the Interior, head of the spatial planning department]
Cooperation regarding ecological network seems quite peaceful to me – no major conflicts. Maybe because the network has not affected economic interests so much (yet?). [landowner]
My position towards the concept is positive. As my farm is in midst of nature, I have had no particular part to play so far in its implementation. The network just exists around my farm. [Farmer, member of the Estonian Chamber of Agriculture and Commerce]

Still, some cases have revealed certain occasions of conflicting interactions between local people and transport planners during road construction projects; or between local people or local governments and real estate developers in real estate development initiatives at local level spatial planning processes.

Conclusions

Stakeholder analysis (SA) can be a useful tool for understanding various complex interfaces between natural and social systems in environmental governance. However, the applications of SA specifically in relation to ecological network governance are not widespread. By taking Estonia as an example, this study explored the relevance of SA for the planning and implementation of the national ecological network concept – Green Network. As the aims (combining species conservation with the wider functions of ecosystems for various purposes) and the implementation strategy (integrated spatial planning) of the Green Network and the EUs Green Infrastructure approach share some similarities, the Estonian case could provide a wider interest in the context of implementing the Green Infrastructure concept across the EU.

The focus of participatory approaches in Estonian environmental governance is mostly on involving the 'general public' or 'interest groups'. Yet, we suggest the concept of 'general public' to be too abstract (i.e. not defining the stake), while the term 'interest groups' could be too specific, referring mainly to interests at stake, to capture the multiple relations stakeholders can have to the issue under question. Our study indicates that the aspect at stake in the case of Green Network governance can be quite specific and in several occasions broader than just interests: in addition to stakeholders' interests, their responsibilities, or their potential to give some kind of input into decision-making proved to be important. These are all different kinds of stakes, and organisers of participation are likely to have different opinions than the (potential) participants about the most relevant stakes in a concrete case. Some Green Network stakeholders, such as foresters and hunting societies, were foremost involved as knowledge-providers in Green Network decision-making processes. Yet, our analysis indicates that certain other aspects of their roles, like their interests or livelihoods being positively or negatively affected, are also important which however tended to be neglected in those processes. Mikalsen and Jentoft (2001) in analysing fisheries governance, call for the replacement of the concept of 'user groups' with the stakeholder-concept, as the last is believed better to capture the multiple relationships people can have with regard to an issue. This could be relevant for the Estonian ecological network governance as well: SA could urge decision-makers to take a wider perspective on stakeholder roles related to the Green Network.

An involvement-influence map provided a broad overview of stakeholders' experiences with participatory Green Network governance. However, certain stakeholders perceived their involvement and influence levels as insufficient, and some stakeholders were uncertain in their judgements, and could thus not be positioned on the map. These stakeholders are however important, since several of them, such as state and private forest users, local dwellers, or hunting associations, are directly affected by Green Network decisions, and would hence have a genuine right to be involved and heard in these processes. Therefore, we propose that stakeholder maps and other schematic analysis methods could best be combined with more descriptive approaches, since a map alone might not be very informative and could potentially lead to an oversimplified picture of the real situation, e.g. not taking into account the multiple roles stakeholders might play and the consequently different experiences with participation.

Finally, the study pointed at certain potential and existing cooperation as well as conflict trajectories between Green Network stakeholders. We discovered certain similarities in the roles of, for example, real estate developers, nature tourism sector, spatial planners or environmental NGOs. This might give potential for their future cooperation. However, we also detected some potentially conflicting stakes. Even though there are no acute conflicts between key stakeholders in the current Green Network governance, the future situation of cooperation and conflicts will probably depend on certain policy developments, such as on the stringency of Green Network land use conditions. One possible reason why the Green Network topic is currently not very controversial – although several stakeholders' interests are (potentially) negatively affected by them – might be that the land use conditions are mostly in the form of recommendations and/or key stakeholders probably do not fully realise the exact implications of the delineated Green Network would have on their interests.

We have seen that the national ecological network governance can be relevant for a genuinely broad set of stakeholders. Involving a wider set of stakeholders could, though, encounter various challenges. In Estonia, one obstacle might come from a relatively low public attention on Green Network issues, which might come from the recommendation nature of Green Network land use

conditions, but also from the relative abundance of natural areas in Estonia, as compared to some Western European countries with higher population numbers and the consequent pressure on the natural environment. Another challenge might arise from institutional constraints to decision-making: direct participation of all relevant stakeholders could be a participatory democratic ideal, but is probably not possible because of the sheer number of those having a legitimate stake in the Green Network issue. Thus, how could those stakeholders be represented? Here, SA could help to distinguish between primary, secondary, etc. stakeholders, but this can omit some stakeholders with relevant roles, and therefore, care should be taken to make the analysis detailed enough.

This study investigated the potential usefulness of SA as an analytical method at a broad scale – the national ecological network governance. Yet, if SA is expected to aid concrete participatory processes, more detailed analyses are needed to determine the exact set of relevant stakeholders, because of the high-context dependency of stakeholder constellations in practice (Reed et al. 2009, p. 1946). Additionally, studying stakeholders' viewpoints and relationships with a quantitatively more representative sample of respondents (see examples from Buanes et al. 2004; Evans 2009; Reed et al. 2009) might reveal some general trends in stakeholder views.

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V

Legitimate processes or informed outcomes: Rationales for participation within regional ecological network planning in Estonia

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Abstract

Participation can be conceptualised in contradictory ways by public officials and other stakeholders. Rationales for participation often determine the goal of involvement, the subjects and objects of inclusion and the design of participation. The study explores rationales for participatory planning of the Estonian national ecological network – Green Network – at regional level, relying on a qualitative synthesis of 10 cases. A struggle for balance between the substantive (decision quality) and instrumental (legitimating) rationale is documented. Contradictions between the various expectations of stakeholders towards decision-making processes, and the rationales of public officials can be addressed via social learning through participation.

Keywords: participation rationales; ecological networks; legitimacy; substantive quality; stakeholder learning

1. Introduction

Participation has become an integral keyword in many international, EU and national environmental policies. Yet, involvement is an infinitely contested notion in the academia (see, e.g. Chilvers 2009, p. 401), and may also have multiple meanings for public officials and other stakeholders (Wesselink et al. 2011). Their motivations to organise participation or take part in it, their understandings of and expectations towards the outcomes of participation (Holmes-Watts and Watts 2008), as well as on the process design (Webler and Tuler, 2006, Tuler and Webler 2010) can substantially differ. This paper provides some reflections on the fundamental reasons and motivations for exercising participatory approaches – i.e. participation rationales – within ecological network planning in Estonia.

The concept of ecological networks aims at preserving the physical connectedness and functional connectivity of landscapes for species dispersal and migration, and at ensuring the continuation of material and energy flows (Bennett 2004). In practice, the concept is endorsed on multiple decision-making levels, and concerns various policy domains, such as biodiversity conservation, spatial planning, water management, or transport planning (Jones-Walters 2007, Bennett 2008). As in several other Central and Eastern European (CEE) countries, the implementation of an ecological network in Estonia – the Green Network (Sepp and Kaasik 2002) – is related to spatial and landscape planning traditions (Jongman 2003). On county (regional) level, the Green Network was one sub-theme of county thematic planning, initiated by the Estonian government in 1999, with the task for each of the 15 counties to delineate ecological network areas (a map on a scale of 1:50 000), and to define environmental land use conditions for these areas. By the end of 2008, all counties have finished the preparation of these plans. Although land use conditions in the Green Network plans are mostly of recommendable nature, they touch upon different land use sectors, creating thus multiple interdependencies between the stakeholders associated to

these spheres (Kivimaa et al. 2009).

After regaining independence in 1991, Estonia has witnessed a transition from centralised decision-making towards the recognition of democratic and participatory principles, including in the planning and environmental sector. By law, the regional governments in Estonia are obliged to promote participation in spatial planning. However, many legal provisions for participation leave a considerable leeway on how to organise it in practice. Participation in this context refers to those processes designed by the county governments to interact with the public and/or stakeholders, who may also include other governmental bodies (cf. Wesselink et al. 2011).

The principal aim of this study is to clarify the rationales for participatory planning of the Estonian ecological network at regional level, within the context of European spatial planning and biodiversity policies. The environmental governance literature has rarely explored the specific underlying meanings attributed to participatory approaches (e.g. Bickerstaff and Walker 2001), especially in the CEE countries context (Blicharska et al. 2011, Wesselink et al. 2011), although several studies have reflected upon this topic more generally (e.g. Primmer and Kyllönen 2006, Newig and Fritsch 2009). The practice of participation is to a great extent guided by the underlying rationales (Renn and Schweizer 2009, Wesselink et al. 2011, p. 2690). As the participatory practices of biodiversity governance in several CEE countries, such as in Poland or Romania (Niedzialkowski et al. 2012, Stringer and Paavola 2013) have encountered different problems, and given the constantly growing policy relevance of the ecological network topic at the EU level (European Commission 2011, European Commission 2013), revealing differences how various stakeholders conceptualise participation within this policy domain can help to address the encountered practical challenges.

The next section introduces three main types of participation rationales for the general analytical framework of the study. Then, the methodology and results of a qualitative analysis of selected policy texts (European level) and spatial planning legislation (national level), and of 10 Estonian Green Network planning case materials are presented (**Table 2** below). Discussion and conclusions follow on the implications of these rationales on the practical design of participation, as well as within the wider context of European ecological network governance.

2. Rationales for participation

The analytical approach in this study has mostly been inspired by Fiorino's (1990) and Stirling's (2006, 2008) three types of rationales for participation: normative, instrumental, and substantive. Together with other factors, such as the social and political context, capacities, time, and finance, rationales are believed to guide the basic choices for designing participatory processes (Wesselink et al. 2011). These choices concern basically three aspects: the goal(s) of involvement; who (and what) is included; and how inclusion is organised (**Table 1**). Below, the content of each rationale is summarised with regard to these aspects.

Table 1. Rationales and their implications for the practical design of participation, adapted from Wesselink et al. (2011) on the basis of a literature review

	Normative	**Instrumental**	**Substantive**
Goal	focus on *processes*:	focus on *outcomes* (and	focus mainly on *outcomes*:

	participation is a basic right of every citizen and is *an end in itself*	*processes*): participation helps to achieve public agreement, resolves conflict and builds trust	participation should enhance the *informational quality* of decisions
Who / what	all affected parties (stakeholders), the wider public; participants' concerns and views	those who are needed for implementation; mainly new *interests, selected knowledge and views*	those who have additional knowledge, all knowledge carriers; valuable *new information*
How	all concerned parties should be included in all stages and issues	only in those stages where it ensures smooth implementation	only when it adds value substantively: integration of systematic, experiential and local knowledge

The normative rationale posits that public participation is essential to healthy democratic governance (Holmes 2008). Participation is seen as a right for citizens – an end in itself, referring to the intrinsic desirability of equality in accessing and exercising decision-making power (Stirling 2006). The foundations of this rationale lie in theories of deliberative democracy (Stirling 2008), but elements of it can also be found in radical democracy (e.g. Fung 2006). The normative rationale aims to maximise participation (Wesselink et al. 2011): the affected population should have equal access to policy processes, should be encouraged to take up that access, and care should be taken that the concerns of all relevant parties make a difference to policy outcomes (Bickerstaff and Walker 2001), throughout the decision-making process.

Instrumental justifications for participation emphasise the legitimacy of decision-making processes and their outcomes (Appelstrand 2002, p. 282-284, Holmes 2008). Participation facilitates policy formulation and implementation by including new interests into decision-making and/or altering existing power structures, helping to achieve public agreement, resolving conflict, or building trust (Fiorino 1990, Holmes 2008, Dietz and Stern 2009). Included are the concerns from those, whose acceptance is needed for the implementation of a policy or a plan (Wesselink et al. 2011). Legitimacy can be achieved by ensuring the compatibility of the decision-making process and its outcomes with the relevant legal requirements, but also with the wider informal institutional context, e.g. shared social norms (Beetham 1991, Pahl-Wostl 2009).

According to a substantive rationale, public participation leads to objectively superior decisions, by bringing in valuable new information, a deeper understanding of the problem, or creative thinking in solving a particular problem (Fiorino 1990, Dietz and Stern 2009). It is expected to improve the quality of decision output via the representation and integration of scientific, experiential and local knowledge (Renn and Schweizer 2009, p. 180). According to Beierle (1999, p. 81) participation carries, among other aims, a social "goal" of educating and informing the public. This can also refer to the substantive rationale (Holmes 2008), although the information flow (from decision-makers to the public) is opposite in this case.

In practice, instrumental rationales (Bickerstaff and Walker 2001, Wesselink et al. 2011) or substantive arguments for participation (e.g. Renn and Schweizer 2009) seem to motivate the public administration the most. Yet, rationales can differ across various decision-making levels, even within the same policy sector. For example, legitimation (i.e. the instrumental rationale) prevails in the national forestry decision-making in Finland (Primmer and Kyllönen 2006), whereas at regional and local level, participation is foremost meant to gather information from the relevant stakeholders (Leskinen 2004). The principles for

participation in certain international multilateral agreements (like the Aarhus Convention) or EU's legislation (e.g. the Water Framework Directive) refer to several substantive arguments, e.g. decision quality (Newig and Fritsch 2009). However, the international sustainable development discourse supports both, substantive and instrumental motivations for participation (Primmer and Kyllönen 2006). At the local level, although being a democratic ideal, the normative rationale has seldom inspired the public officials (Wesselink et al. 2011).

This paper takes an analytical perspective, trying to understand the underlying principles guiding participatory processes within cases of Estonian Green Network planning, rather than evaluating the performance of participation (cf. for example, Blackstock et al. 2012). Additionally, the paper starts with an assumption that social or policy learning (Webler et al. 1995, Pahl-Wostl 2009, Cheng et al. 2013, Ison et al. 2013) can occur through participation under certain conditions (see, e.g. Mostert et al. 2007). Learning entails the sharing of experiences, ideas (Armitage et al. 2008), knowledge or information by the stakeholders through their interaction in participatory arenas (Cheng et al. 2011). Via continuous reflection on one's own and other's interests, values or goals, participatory processes can trigger changes in individuals' perceptions and viewpoints (Armitage et al. 2008). Thus, it is hypothesised that participatory processes within ecological network planning can trigger certain changes in the stakeholder's mind-sets, such as making different expectations more visible, and also foster a dynamic rather than fixed process design.

3. Materials and methods
First, to outline a brief background for the case analysis, the possible meanings behind the key provisions related to participation within the relevant European-level policy documents and within the Estonian Planning and Building Act (1995) and the Planning Act (2003) (which guided the planning processes at the times of the selected cases), were accessed and content-analysed.

Then, to investigate the rationales in the regional ecological network planning practice, a cross-case synthesis approach (Yin 2009) was applied. This technique "aggregates findings across a series of individual studies", treated as separate cases (ibid., p. 156), allowing to analyse issues within as well as across various contexts and to understand similarities and differences between the cases. Green Network planning processes that took place between 1999 and 2006 in ten Estonian counties (**Table 2**), were selected for the analysis. These cases cover regions of different biophysical and socio-economic status, share of the delineated Green Network, from 45% to 76% of the county surface area (Raet et al. 2010), and different timelines of the decision-making processes.

Case materials cover semi-structured interviews according to a non-standardized interview guide, and documents associated to the planning processes in each county. 14 semi-structured interviews with public officials from the county governments – organisers of the planning processes and participation – were held between April and May 2008. During the interviews, basic principles that the organisers had followed when designing the processes, such as the goals, invited/involved parties, used methods, and the main motivations for using the selected approach were discussed. Interviews were not recorded, but detailed protocols were written. In addition, all relevant documents, such as minutes of meetings, attendance sheets, or official letters that concerned participatory processes in these counties were accessed and analysed.

Policy/legislative texts and the case materials were qualitatively content-analysed (Miles and Huberman 1994). The analysis began with reading the interview texts as a whole, to get familiar with the data and to obtain a sense of the whole. This was followed by a search for keywords which could be associated with the rationales for participatory approaches. Then, the keywords were read in context, bearing in mind the following key questions [a similar approach has been applied by Del Furia and Wallace-Jones (2000)]:

   a) which goals are associated to participation and what has been / should be the main goal of each process?
   b) which parties (should be) were invited and involved and for which reasons?
   c) who and what (should be) was included?
   d) how were / should they (be) involved?

Sentences and paragraphs were assigned with codes and categories denoting rationales for participation, mainly derived from the literature review (see section 2 above). A summary of the results from the cross-case analysis is provided in **Table 2** below, where each case is described in based on the above questions (who, what, how and for which reasons were involved) and associated with the main participation rationales based on Fiorino's (1990) typology: normative, instrumental and substantive.

4. Results

4.1. Setting the scene: participation and rationales in the European and Estonian ecological network policies and legislation

No common legal framework at the EU or pan-European level regulates ecological network governance, but ecological networks are considered as key themes in various biodiversity policies, such as the Pan-European Biological and Landscape Diversity Strategy (PEBLDS) (Council of Europe and UNEP 1995), or the Biodiversity Strategy of the EU to 2020 (European Commission 2011). Some key spatial planning policies, like the guiding principles for sustainable spatial development of the European continent (Council of Europe, 2000; hereafter referred to as "the Guiding Principles"), the European Spatial Development Perspective (ESDP) (European Commission 1999), or the Territorial Agenda of the EU (European Commission 2007) refer to connectivity issues more generally.

With the ratification of the Torremolinos Charter (Council of Europe 1983), participation has entered into the European spatial planning policy discourse. Biodiversity governance in general (Mose and Weixlbaumer 2007) and in the EU (Rauschmayer et al. 2009) has experienced a shift from a static-preservationist approach towards a more people-centred view on biodiversity issues. The PEBLDS, the Torremolinos Charter, and the EU's Biodiversity Strategy refer to substantive arguments for participation, foremost in terms of information distribution and awareness-raising of different stakeholders. The ESDP and the Guiding Principles argument mostly from the instrumental perspective: broad participation of the society would increase the planning processes' chances for success and helps to achieve societal consensus (guiding principles), and public participation is expected to assist in protecting habitats and ecosystems (ESDP). Although the PEBLDS aims to assure "full public involvement in conservation of biological and landscape diversity", and according to the Torremolinos Charter, "any planning policy at whatever level should enable active citizen participation by all concerned citizens", normative justifications for participation are scarce in European policies.

At national level, according to the Estonian Planning Act (2003), each plan is seen as a public agreement on how a particular area should be developed (Pehk 2008). The general part of the Planning Act predominantly focuses on normative arguments for participation, by

stressing the public and democratic nature of all planning activities and the need to involve all interested persons (§§ 1, 3, 20). However, the act also refers to substantive grounds: the need to integrate various disciplines within the planning process and the timely provision of information for all interested persons (§§ 1 and 3). Specific provisions for participation at regional level (**Figure 1**) stress the need to consult with the public and certain stakeholders: the draft plan is to be compiled by the county government or a hired consultant (§ 13), in cooperation with certain governmental stakeholders (§ 16), after which an official approval by those stakeholders (concertation, § 17) is sought for the plan draft, before it can be put into a public disclosure period, which entails a public display of the planning materials, a subsequent public discussion and an opportunity to submit written claims on the draft plan (§ 18). Several of these specific requirements for participation foremost emphasise the substantive rationale in terms of information distribution. However, the exact meaning of the concept of cooperation in the Planning Act is the most open to interpretation, specifically about the goal of cooperation, and how to organise it. Thus, cooperation could refer to all three rationales. Yet, since the focus is on involving specific parties, instrumental arguments could dominate here.
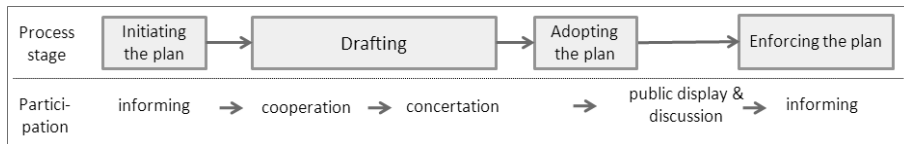

Figure 1. Main forms of participation within the key stages of the regional level planning process, according to the Estonian planning legislation

4.2. Rationales in the participatory practice: the regional Green Network planning

The design of participatory processes in most of the cases was foremost guided by substantive arguments (Table 2) which included mainly two aspects: a) raising the quality of final decisions, and b) building public and stakeholder awareness. First, the processes were set up to enhance the quality of decision outcomes, i.e. the final Green Network plan. This was a common feature for almost all cases. The county government, while admitting a lack of self-competence, searched for strategic partners who could help with drafting different topics under the Green Network plan. Thus, stakeholders were often given advisory roles in these processes and were acknowledged foremost for their potential to provide expertise in decision-making:

> We selected those people who know something about this topic and are thus able to speak along. We were not guided by their professional positions, but foremost by their interests and hobbies. [case 4]

> Why did we cooperate with the State Forest Management Centre and county environmental board? Well, they are connected to this topic content wisely – it would be weird if we "passed them by" – the outcome would be something like one institution is logging and the other is protecting the forest. It's like playing football: the State Forest Management Centre is a specialist in this issue, thus a main "player" in the game, so it would be weird, if only the environmental specialists assisted them, from a bystander position, what they should do! [case 10]

> We cooperated closely with the county environmental board and protected areas' administration, because in the county government, we didn't have such specialists who dealt with environmental issues. So this plan was just on the right topic for these specialists! [case 1]

Interestingly, the notion of "expert" was understood rather broadly in many of the cases: including various stakeholders from other governmental, but also from voluntary and private

sectors. In some cases, e.g. [2], [7], [8] and [10], these stakeholders were given a rather influential position by the county government: i.e. being hired as an official consultant for the plan, which, according to the Estonian planning legislation (Estonian Parliament 1995, 2003) means that they could draft the plan in close cooperation with the county government and advise on key issues.

Table 2. Main features of the participatory Green Network planning in the cases and rationales for involvement

Case no., county name & planning period	Basic features of the participatory decision-making processes			Rationale(s) for involvement
	Main goal of involvement	*Who / what was involved*	*How involvement was arranged*	
1. Võru 2001-2005	To improve the quality of the plan.	Key knowledge holders and their knowledge claims: mainly hunting societies, but also protected areas' (PAs) administrations, neighbouring county governments, the county environmental board (CEB), local governments.	The county government focused on *early cooperation* with selected stakeholders: a partnership status, in the form of regular working groups, was given to selected stakeholders, e.g. PAs' administrations, local governments, and certain private actors. A survey was conducted among hunting societies to obtain info on green corridors. Concertations were sought from two PAs' administrations (beyond the minimum legal requirement). Approved plan drafts' displays and public discussions were organised in 2004 and 2005, with local governments, county environmental board (CEB), and one layperson attending. After the plan was officially enforced, *complaints* were received from the State Forest Management Centre (about not being adequately informed and consulted), and from one landowner (objecting the network delineation and complaining about not being properly consulted).	SUBSTANTIVE
2. Tartu 2001-2006	- To inform the public - To improve the quality of the plan	- Selected scientists as key knowledge holders to provide expert input. - The wider public as information recipients.	The overall focus was on *informing* the public and certain stakeholders and on fulfilling the minimum legal requirements on participation. In the cooperation phase, *advice* was sought from the *scientists* (hired as consultants for compiling the plan), otherwise no specific effort to identify and involve other possibly relevant parties. In the public display, 2 responses from an environmental NGO (ENGO) and 1 scientist were received and in the public discussion, only county government representatives (organisers) were present. After the plan was enforced, *complaints* were received from the State Forest Management Centre.	SUBSTANTIVE
3. Jõgeva 2000-2004	- First, to draft a high-quality plan, and to inform the public.	- The wider public as information recipients. - Knowledge inputs mainly	First, the county government attempts to compile the plan with own resources, and also seeks *advice* from hunting societies on green corridors (via a survey). Concertation is also sent to the regional road administration (beyond minimum legal requirements). A *conflict* emerges during the	From SUBSTANTIVE to INSTRUMENTAL

	Objectives	Stakeholders	Description	Type
	- Then – after the conflict emerges – to achieve an agreement among certain stakeholders.	from hunting societies; later on also the CEB and local governments with their interests and knowledge claims.	concertation period: the CEB and 2 local governments do not approve the plan and request for more information and discussion on the topic. Subsequently, bilateral meetings with local governments and with CEB specialists are held. After these discussions, all bodies give their approval (concertation) to the plan. In the public discussion, 1 scientist was present, otherwise no responses from the public or other stakeholders. *The plan was highlighted by the supervisor, Ministry of Interior (MoI) as being one of the best quality.	
4. Järva 1999-2003	- To achieve a broad-based agreement about the plan. - To involve all affected and knowledgeable persons and organisations.	All interested persons and knowledge carriers (e.g. county government, CEB, relevant ENGOs, forestry stakeholders) and the wider public.	The focus was on early and close cooperation with municipalities and other selected stakeholders, who were given a partner status (by forming a coordinating committee from their representatives). Also, public meetings were held in the cooperation phase. All local governments and neighbour county governments were specifically invited to comment on the draft plan in written, and many insightful responses were received from them). The concertation and public disclosure periods were aimed to check the validity of the pre-achieved agreement among main stakeholders and the public.	SUBSTANTIVE, NORMATIVE & INSTRUMENTAL
5. Viljandi 1999-2005	- To reach an agreement with every relevant stakeholder. - To compile a high-quality plan. - To comply with all legal requirements for participation.	Key knowledge holders, and "implementers" of the plan, e.g. the CEB, hunting societies, State Forest Management Centre, local governments.	The county government focused on searching strategic partners from the outset and on including key knowledge holders (e.g. hunting societies, State Forest Management Centre). Informal cooperation with these key stakeholders was organised.	INSTRUMENTAL & SUBSTANTIVE
6. Lääne-Viru 1999-2006	- To enhance the quality of the plan. - To inform the public.	- Certain specialists, e.g. local governments, county environmental board (knowledge input). - The wider public (information recipients).	Much attention was paid on early cooperation with local governments (e.g. opportunities to comment on the draft plan in writing, responses from 7 municipalities). Informal cooperation with the CEB was also an essential part of the cooperation phase. Concertation sent also to a PA administration (goes beyond the minimum legal requirements on concertation). The public display & discussions were arranged three times (in different years, because the plan approval was delayed several times from the MoI). In none of them, no other participants than county government representatives were present and no written submissions were	SUBSTANTIVE

Case	Goals	Stakeholders	Description	Classification
7. Ida-Viru 2000-2003	- To cooperate closely with certain stakeholders – local governments, to discuss the plan, to inform them and to reach consensus. - To enhance the quality of the plan.	Selected stakeholders, mainly the future cooperation partners regarding Green Network implementation, e.g. local governments.	received. Special attention was paid to introducing the plan draft in local and county news media. The focus was on informing and cooperating foremost with local governments (i.e. the main "implementers" of the plan at local level). Scientists (from the Tallinn University Ecology Institute) were hired as consultants for compiling the plan draft. Local governments were intensively consulted after the official concertation period: two rounds of meetings (also open to the public) in local governments (in 2002 and 2003): to introduce the plan draft to them and give them an opportunity to comment. One response on the Green Network topic was received from a municipality, but no responses from the public. No submissions were received during the public display period. At the public discussion, only one local government was present.	INSTRUMENTAL & SUBSTANTIVE
8. Lääne 1999-2005	- First: to involve specific knowledge holders and to inform relevant stakeholders and the public. - After the conflict turns visible: to reach an agreement with relevant stakeholders.	- Key knowledge holders, e.g. local PAs' administration. - The wider public (information recipients). - All other stakeholders whose agreement is needed.	The overall focus was first on cooperating with key knowledge holders. A local PAs' administration was hired as a planning consultant. Information days were held for the public and local governments. During the concertation period, a conflict emerges: 3 municipalities refused to approve the plan. After this, the county government organised bilateral negotiations with those municipalities, and agreements were reached with two of them. During the public display period & discussion, a submission from one landowner was received (opposing the network delineation). * The plan was highlighted by the supervisor, Ministry of Interior (MoI) as being one of the best quality.	From SUBSTANTIVE to INSTRUMENTAL
9. Pärnu 2000-2002	- To enhance the quality of the plan and to introduce the plan to the widest possible set of relevant stakeholders. - To achieve strategic agreements with key stakeholders. - To give them an opportunity to	- All knowledge holders and affected parties. - The wider public, both as information recipients and potential stakeholders.	The process began with a strategic search for key stakeholders and much attention was given on forming early cooperative relationships with them. The stakeholders were personally contacted and treated as partners, e.g. the regional State Forest Management Centre was invited to comment on the draft plan in writing (responses from 3 regions), and meetings with selected stakeholders were held, e.g. the State Forest Management Centre, the CEB, regional department of the road administration, hunting unions. These meetings resulted in 59 amendment proposals, which were used in further processing the draft plan. Additionally, two public meetings were held, with invitations in the regional and local newspapers and in the local radio (+ specific invitations to the municipalities, regional State Forest Management Centre, and some further selected stakeholders, e.g. farmers' unions, CEB, environmental inspectorate, road administration). Almost all	SUBSTANTIVE, INSTRUMENTAL & NORMATIVE

		invited stakeholders participated. During the concertation period, several submissions were received from the local governments and one neighbouring county. The concertation period also included information days for local governments: to assist them on arranging public displays and meetings locally. The public display & discussion attracted many participants, e.g. 17 representatives from State Forest Management Centre, 8 local governments, one PA administration and CEB, and one journalist. Many responses were received from the municipalities, and from the CEB.	
10. Hiiu 2001-2004	- To enhance the quality of the plan. - To give main stakeholders an opportunity to express their interests.	- Key knowledge carriers and affected stakeholders.	A local NGO was hired as a consultant, to prepare the initial Green Network plan draft. Also, forestry stakeholders and the CEB, PAs' administrations were continuously consulted and treated as strategic partners during the whole process. Within the public display period & discussion, 8 stakeholders were present, but no submissions were received on the Green Network topic.	SUBSTANTIVE & NORMATIVE

The second aspect under the substantive rationale included the widening of public and stakeholder awareness about the plan topic and the planning process in general. So, the other main goal to set up participatory processes in several cases, like cases [2], [3], [6], or [9], was to introduce the topic to the public and to the widest set of relevant stakeholders:

> It is necessary, in order to introduce the plan to the public, so that they would fully understand what this plan would mean to their lives. [case 6]

Some processes were based on the instrumental rationale, in addition to the substantive one. For example, in cases [4], [7] and [9], equal attention was paid to cooperating with selected stakeholders and to reaching an agreement or consensus among them. Here, the county governments selected certain stakeholders to cooperate: often foremost local governments, who were seen as the main implementers of the regional plan, but sometimes also a wider set of stakeholders, e.g. in cases [4] and [9]. Additionally, in some cases, like [4], [7] or [9], the cooperation phase was considered to be much more important than in some other cases. Here, cooperation was organised to reach agreements between the actors whom the public officials regarded as key stakeholders, and the consequent public disclosure period in those cases was respectively regarded as "a validity check" for the reached agreements:

> The purpose of the public disclosure period is to check whether this result that was made in cooperation with the stakeholders is acceptable for them and for the wider public. No process should be built upon the principle that you will start gathering the opinions and cooperate only in the public disclosure time – then the process fails. [case 4]

> A good public decision cannot be made behind closed doors... the spatial planning practice rests on the principle that the plans are made for people – so the more they participate, the better the outcome will be and the smoother its implementation will be. [case 7]

> Most of our county is covered with forest, so that you just cannot pass the foresters by. The plan just touches upon their interests. We also achieved several multi-lateral agreements with the State Forest Management Centre, local governments, and road administration to avoid cutting the green corridors through transport networks and avoiding building on Green Network areas. [case 9]

Normative grounds for participation guided fewer processes, e.g. in cases [2] and [9]:

> We live in a democratic country, so this means that every citizen has a basic right to express and defend his/her interests. Spatial planning processes are wholly based on this idea. [case 9]

In some cases, the goals that the organisers pursued seemed to contradict with the expectations of other stakeholders. In case [1], the organisers were foremost interested in eliciting certain stakeholders' knowledge, but the conflicts that appeared after the plan was legally approved suggest that the forestry stakeholders, for example, would have liked to be involved differently: to have had their interests heard, since the plan touched upon those. Similarly, in case [3], the organisers aimed at gathering all relevant information to compile the plan, but during the process it became clear that some stakeholders (local governments and the county environmental board) wanted to have had more information and discussion on the topic. However, in some cases, where such issues were raised, the organisers changed the participation rationales during the process, e.g. in cases [3] and [8]: from substantive to instrumental, in order to resolve the tensions between such multiple expectations.

5. Discussion

Rationales have often served as evaluation criteria for participatory processes (e.g. Blackstock et al. 2012). This paper aimed at shedding light on the underlying principles that have guided concrete participatory processes in the cases of Estonian regional level ecological network delineation. Having an analytical rather than evaluative perspective can be essential to understand the design and functioning of participatory processes (Renn and Schweizer 2009).

5.1. A focus on substantive-instrumental rationales

A mixture of substantive-instrumental rationales seems to dominate in several European biodiversity and spatial planning policies, as well as in the Estonian spatial planning legislation. Notably, the European planning policies tend to refer more to instrumental justifications for participation, whereas the biodiversity policies rely more on the awareness-raising discourse. The different contexts and origins of these two policy domains provide one possible explanation for this, e.g. worldwide and in Europe, the spatial planning sector has perhaps longer traditions of communicative planning (Healey 1992, Laurian and Shaw 2009, p. 293), but the need to integrate protection and sustainable resource use, including the active involvement of stakeholders has entered into the conservation policy discourse more recently (Mose and Weixlbaumer 2007). Normative arguments for participation are scarce in policies and even less abundant in the participatory practice. This could be partially attributed to the nature of this rationale: to a great extent, the normative justification is a theoretical concept (Bickerstaff and Walker 2001), one of the ideals about the core of participatory processes and their outcomes. This, however, poses significant challenges for the planning practice (Holmes 2008, p. 181), e.g. how to design a process that is able to deal with and accommodate all relevant concerns.

The cases showed that the concept of cooperation is of key importance in the Estonian spatial planning legislation and practice. The term "cooperation in the Planning Act (Estonian Parliament 2003) and its predecessor, the Planning and Building Act (Estonian Parliament 1995) leaves a considerable leeway for the public officials to decide on how to organise the process, and the potential participants can expect different outcomes from it. So, cooperation was organised most differently across the cases. In several counties, the cooperation phase began with a strategic search for partners who then played key roles in the whole delineation process, and important alliances were formed in this stage. Some other cases, like [2], [3], [6] or [8], showed that when key parties were not contacted in this phase, misunderstandings and tensions between the contradicting concerns of the stakeholders emerged later on. Several cases, like [2], [4], or [6], also indicated that the public disclosure period alone might not attract all relevant parties, if they are not specifically invited to participate earlier. In such cases, involvement was cumulatively limited to certain, mostly governmental stakeholders. This could, however, undermine the legitimacy of the process from the perspectives of the public, as well as of other possibly relevant stakeholders (e.g. Rauschmayer et al. 2009).

Wesselink et al. (2011, p. 2698) argue that a focus on instrumental arguments is a logical choice for the practitioners who aim to involve foremost those parties, whose acceptance they need for the implementation of the policies. Yet, Renn and Schweizer (2009, p. 181) note that environmental agencies also often follow a functionalist (substantive) approach, being interested in gathering inputs from relevant stakeholders to improve the quality of the decisions. The substantive rationale inspired many county governments in the Estonian regional Green Network planning as well. Public officials were eager to draft a high-quality plan, and this goal prompted participants' selection – certain stakeholders who were

perceived as experts in the area. Several explanations can apply here. First, the historical context of the CEE countries plays a role, specifically in influencing the way expertise is perceived. As in the recent past under the Soviet rule, the professional officials were acknowledged by their knowledge and rich experience in the area in question, which probably makes it difficult for the officials to understand, how somebody without specific expertise would contribute with something valuable to the planning process (Zaharchenko and Goldenman 2004). The ideas for planning and implementing the national ecological network in Estonia were initiated by scientists and other experts in the field, who often had good connections to policy-makers (Suškevičs et al. 2013). Yet, as compared to some other CEE countries, such as in Poland (e.g. Blicharska et al. 2011, Niedzialkowski et al. 2012) or Romania (Stringer and Paavola 2013) where involvement tended to be biased towards governmental actors, and mostly instrumental reasons for participation dominated, the Estonian Green Network planning cases included the actors from voluntary and private sectors as well. The fact that the Estonian history of nature and landscape conservation has witnessed a high scientific and public interest, and in certain periods, conservation was based on private and voluntary initiatives (Sepp et al. 1999) might provide one explanation to this phenomenon. Lastly, the administrative reform in Estonia in 2000 (SEI 2000), by which county governments and county environmental departments were separated, might also be a partial reason why the county government felt a lack of expertise on environmental topics and sought advice elsewhere.

5.2. Learning through the process

The cases have provided several examples of how participation can foster learning, and enabled to determine some factors that affect it. Firstly, in several cases with a focus on the substantive rationale, e.g. [4], [5], or [9], a mutual sharing of information among various stakeholders, and a synthesis of different types of knowledge (Armitage et al. 2008, p. 93, Cheng et al. 2011, p. 90) took place. The public officials' supportive positions towards multiple knowledge holders facilitated the inclusion of other knowledge claims in such cases. Conversely, in some other cases, the organisers either took the one-sided approach of informing the stakeholders and the public, or focused mostly on enhancing the substantive quality of the plan. Furthermore, a "legalistic rationale" (Wesselink et al. 2011) prevailed in some of such case studies: i.e. the fulfilment of legal requirements for participation was taken as the main basis and goal for involvement. However, as legal compliance is only one component of legitimate decision-making processes (Beetham 1991), this approach could pose some challenges for achieving legitimacy from the perspectives of reaching a wider public agreement through the planning processes.

Secondly, a change occurred in the process designs of several cases, which basically meant a shift from the substantive rationale for participation to instrumental grounds. Even within similar decision-making contexts, people can have very different preferences for participatory approaches in a concrete case (Webler and Tuler 2006). In some cases of Green Network planning, the aims of the organisers – to enhance the substantive quality of the plan – contradicted with the goals of the participants, who were also interested in discussing and putting forward their interests (i.e. referring to the instrumental and/or normative rationale). Through the processes, as the public officials learned to know and respect the expectations and interests of different stakeholders, they also began to realise that negotiation between the various concerns is necessary to gain the support for the Green Network plans from the stakeholders who are supposed to implement the plans.

The claim that learning mostly occurs via collaboration has been criticised to ignore situations where people can effectively learn through conflicts (Ison et al. 2013, p. 36).

Indeed, within the conflict situations, the public officials in several of the Green Network planning cases, e.g. [3] and [8], became more aware of and respectful towards the different expectations of the relevant stakeholders for participation, and changed the process design accordingly, which eventually led to a balance between different perspectives. This highlights the need to make the rationales more explicit at the outset of each process (Wesselink et al. 2011, p. 2699). Also, stakeholders' willingness to change their initial viewpoints, by continuously re-framing the issues (Mostert et al. 2007) can facilitate learning. The public officials in the Green Network cases became more sensitive towards the interests and goals of the participants, and changed the process designs respectively. Hence, learning in the studied cases can be seen as a transformative reflection on ones' experience (Armitage et al. 2008, p. 87): an initially unconscious process of reacting to social changes (Cheng et al. 2011, p. 91) that gave impetus for reflecting upon the underlying principles of participatory approaches the public officials were organising and engaged in. Yet, it remains an open question whether this change remains an one-shot occasion of adjusting to the practice (single-loop learning, see e.g. Pahl-Wostl 2009, p. 359), or includes further, more fundamental changes in the ways organisers think about participatory processes in general (multiple-loop-learning, Armitage et al. 2008, p. 90, ibid.).

5.3. Legitimate processes or informed outcomes?

Tensions between various stakeholders' differing expectations towards participatory processes refer to a need to incorporate other rationales beyond substantive arguments into the decision-making of the Estonian Green Network planning. Several cases demonstrated a struggle for balance between substantive – an informed decision – and instrumental justifications for participation: a legitimate process that would involve all concerned parties and reach an agreement among them.

Indeed, practitioners often face a two-fold challenge: on one hand, having to compile a policy document of good substantive quality, but on the other hand they also need the acceptance from all relevant parties. Nevertheless, the practice of environmental governance usually tends to pursue fewer than multiple goals at a time, due to resource and other constraints (Dietz and Stern 2009). Thus, there is a potential for trade-offs between achieving different goals within one process (ibid.). The Green Network planning however shows that in certain cases, e.g. [4] or [9], pursuing multiple goals and combining different rationales at the same time is not an impossible task and ultimately the whole process can benefit, as the planning initiative would consider different justifications for participation from the outset. Pursuing multiple goals in those cases was not only desirable but also necessary: it helped to clarify the misunderstandings between the parties and contributed to the ultimate policy goal of the decision-making process: to implement the Green Network plan. Earlier research suggests that many people indeed prefer "mixed" processes which combine multiple perspectives and people are likely to develop their preferences through learning and negotiation (Webler and Tuler 2006). Thus, trade-offs between different rationales do not necessarily exist, but rather depend on the willingness and capacities of the organisers to integrate multiple perspectives into the process.

6. Conclusions

Participation is an important keyword in several European policies relating to ecological network planning. The Estonian national spatial planning legislation includes several provisions for the public and certain stakeholders to participate in the regional Green Network planning. A mixture of substantive-instrumental rationales for participation dominates in the European- as well as national-level policy and legislative texts. When

arranging participatory processes in the Green Network planning practices at regional level, public officials have mostly been motivated by substantive reasons, i.e. improving the quality of the Green Network plan and/or informing the public and stakeholders. However, such a deep focus on the substantive rationale has in several cases contradicted with the expectations of the participants.

In order to address such contradictions and build the legitimacy of decision-making processes, normative and instrumental reasons for participation could also be considered in the Estonian ecological network planning when organising participation. Here, legitimacy seems to particularly rest on the object of inclusion: i.e. processes should allow expressing and including different kinds of concerns (e.g. not only knowledge claims) that various stakeholder groups regard as relevant in the particular case.

The Green Network planning practices have reinforced the importance of stakeholder learning through participation. In several cases, misunderstandings were clarified and conflicts turned into agreements as the public officials become better to see and respect the perspectives of other stakeholders, and changed the process designs accordingly. Interestingly, these changes were often catalysed through conflictive situations. Future studies would need to investigate more closely the conflictive conditions under which such changes occur, specifically in ecological network governance contexts.

The study mainly focused on the views of the public officials (organisers of participation) and cannot thus draw specific conclusions on the opinions of other stakeholders or the public, i.e. the (potential) participants. Further research should investigate more closely, e.g. what different stakeholders expect from the processes or from their outcomes, and what aspects of participants' inputs considered and included in the decision-making processes. The qualitative comparative analysis of cases suited well for grasping a general outline about the rationales behind participatory approaches within regional Green Network planning, but more detailed discourse analyses would provide deeper insights into the perspectives held by different stakeholders, and the ways participation is being conceptualised in the various recent guidance documents for the spatial planning and environmental sectors in Estonia.

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VI

Tillemann, K., **Suškevics, M.**, Külvik, M.
ECOLOGICAL NETWORK PLANNING AND
IMPLEMENTATION AS A MULTI-LEVEL BIODIVERSITY
CONSERVATION TOOL: AN ANALYSIS OF THE ESTONIAN
CASE STUDY.
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Ecological network implementation as a multi-level biodiversity conservation tool: an analysis of the Estonian case study

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Abstract
The Estonian concept of ecological networks (the Green Network) is implemented on different administrative levels by including multiple stakeholders. Building ecologically coherent Green Infrastructure is also one strategic aim of the European Union's environmental policy.
We evaluate ecological network implementation in terms of their administrative effectiveness by assessing:
1. the inclusion of relevant stakeholders;
2. the mutual adjustment of network delineation in the land use plans at regional and local levels.

An embedded case study forms the empirical basis of our analysis. We found that contradictions between different governance levels and ineffective measures of stakeholder involvement have negatively influenced land use decision-making processes on local level. We further identified that the process of integrating the ecological network concept into the land use planning system has characteristics of vertical decentralisation, but the lack of relevant coordination to support local-level decision-making mechanisms have precluded achieving satisfactory results regarding stakeholder involvement and co-operation.

Keywords: governance implementation; Green Infrastructure; stakeholder participation; biodiversity governance; spatial planning

1. Introduction
Spatial planning can help to deliver economic, social and environmental benefits. Correctly administered, it is an important tool for promoting investment, development, environmental improvements and the quality of life (United Nations…, 2008). Having a significant impact on economy, environment and social welfare, it has obtained a crucial role in policy-making with regard to all governance levels. Routine policy-making occurs through a variety of different modes and combinations of modes. It deploys a myriad of different policy instruments and engages different constellations of member states within

diverse institutional frameworks (Wallace et al, 2010). It is especially the case if spatial planning deals with biodiversity conservation issues. Sustainable management of biological diversity is one part of sound land use decisions at different policy levels. 'Ecological network' is a concept deriving from landscape ecology; it aims at preserving the connectivity between natural areas in order to guarantee the migration and dispersal opportunities for species, as well as to ensure the continuation of material and energy flows (Bennett, 2004; Jongman et al, 2004). The national concept of ecological networks in Estonia – Green Network – is among the most important tools for integrating holistic landscape management concerns into sectoral policies (Mander et al, 1988, Sepp and Kaasik, 2002, Külvik et al, 2003).

As spatial planning is now widely understood as an interactive process, undertaken in a social context, rather than being a purely technical process of design, analysis and management (Healey, 1997) it has became clear that a sustainable implementation of ecological networks needs the involvement of stakeholder in all phases of policy cycle, to ensure the acceptance by the various stakeholder groups (Tiemann and Siebert, 2009).

Taking into account the significant influence of spatial planning decisions, one cannot imagine that policy-making in this area could be carried out without taking into account the interconnections between various policy areas, territories and all relevant stakeholders. The essence of analysing policy and governance networks derives from the assumption that the structure and nature of relationships between the stakeholders are likely to influence the outcomes of policy processes (Rhodes, 2007). Relations and interactions between governmental levels in multilevel governance system affect public organizations, their tasks, functioning and autonomy. Through various means stakeholders and external scrutinisers can also effect relations of horizontal and vertical accountability and control, and the governance and autonomy of public organizations (Lægreid et al, 2008). The administrative bodies responsible for qualitative spatial planning decisions face great challenges as stakeholder involvement cannot be characterized as uncomplicated and uniform tool to guarantee success in spatial planning processes: the scale, governance level, stakeholders' type and other characteristics have to be considered. The degree of stakeholder participation may vary in intensity – from passive participation to self-initiated mobilization (Pretty et al, 1995).

During the planning process, local stakeholders should be seen as experts for planning in the same way as scientists and landscape planners because of their expertise on the local conditions (Erdmann et al., 2004). This principle could be brought into practice through vertical decentralisation of governance, which includes the transfer of authority, functions, responsibilities and resources from the central government to local government structures (Niikawa, 2006). It is relevant to consider the vertical decentralisation in case of biodiversity governance as well, as local governance, especially when strongly participatory, is more likely to lead to ecologically rational outcomes than governance on higher spatial scales (Leach et al, 2002).

The current paper explores the integration processes of the ecological network concept into the Estonian planning system as an example of the vertical decentralisation and

specialisation by describing and evaluating the efficiency of planning processes and observing the outcomes on the local level implementation phase.

Therefore, within an embedded case study, several case studies from all three governance levels (national, regional, local) have been completed. At first the integration of ecological network from the national legislation into regional and local levels in Estonia is explored. Also, the regional level is more closely observed by analysing (Harju County, regional level) regional planning documents' influence on local planning as well as with stakeholder networks and knowledge exchange within the planning and implementation of the Estonian ecological network concept. In order to analyse the local implementation phase, the case study (Keila Rural Municipality) concerning stakeholder relations and information flows in integrating biodiversity knowledge into local decision-making was conducted as well as the relevant building and planning activities by local governance level was thoroughly analysed.

The relevance of the concept in European Union policies has been significantly increased when European Commission in May 2011 adopted a strategy to halt the loss of biodiversity and ecosystem services in the EU by 2020 with a strategic target to maintain and enhance the ecosystems and their services by establishing green infrastructure by 2020 (European Commission, 2011). To that effect, in May 2013 the European Commission has adopted a Green Infrastructure (GI) Strategy in the form of a Communication from the Commission: "Green Infrastructure – Enhancing Europe's Natural Capital" (European Commission, 2013). This document outlines the strategy to maintain and enhance Europe's ecosystems and their services and is in line with the Commission's efforts towards their mapping and assessment (MAES), and restoring of degraded ecosystems. The need to include all governance levels into the process of GI is recognized in EU level – EU Committee of the Regions (CoR) in it's opinion "Green infrastructure – enhancing Europe's natural capital" (Committee of the Regions, 2013: p. 5) highlights that "the key to successful GI deployment lies in the cooperation between all governance levels and in the effective implementation of multilevel governance (MLG) principles as well as in the participation of all parties and stakeholders, including local residents, in its development and implementation". The CoR further "urges local and regional authorities to take steps in all the relevant sectoral policies, in particular through their spatial and urban planning responsibilities, to plan and organise green infrastructure" (ibid.: p. 4). Therefore, relevant knowledge about the governance challenges of the implementation of this biodiversity preservation tool with a specific emphasis on local and regional governance levels will be essential for further activities in other member states as well.

The general objective of this study is to observe and analyse the integration processes of the ecological network concept into the Estonian planning system in various vertical governance levels. The focus is on local and regional governance levels and the aim is to identify and describe the strengths and weaknesses of the processes and to associate them with the relevant public administration theories.

2. Methods

An embedded case study about the integration of the ecological network concept into the Estonian planning system forms the basis of the current paper. Within this study, five case studies were carried out in order to gather data from all relevant administrative levels and to describe biodiversity governance while implementing the Green Network concept in Estonia. The objective is to study the ecological network implementation processes within and between governance levels including:

- the content analysis of the national ecological network planning system and two case studies about national guidelines' implementation in regional and local levels (Tani, 2007; Kivimaa 2008);
- two case studies about stakeholder involvement from different levels and identify main sources and ways to use environmental information (TESS and KEN projects, see below);
- local level implementation analysis in one rural municipality (Koort, 2010).

At first, an overview of the national ecological network planning and implementation from perspective of stakeholder participation is presented, and it's influence to the regional and local governance levels is analysed. To assess the mutual adjustment of ecological network delineation in the land use plans at regional and local levels, a comparative study of planning documents was carried out by a meta-analysis of two topical studies analysing and comparing Green Network planning practices at county and municipality levels (Kivimaa, 2008), and focusing on examples of network implementation in a particular county (Tani, 2007). These studies have integrated comparative reviews of textual and cartographical planning documents and interviews with representatives of the key stakeholder groups. The first study assessed the thematic planning of 5 Estonian counties and the comprehensive planning of 8 municipalities. The second one focused on Harju county and all of its 18 rural municipalities. The region embraces surrounding areas of the Estonian capital city Tallinn. Harju County includes 24 local administrative units – 6 towns and 18 rural municipalities – and has been during the recent decade under intense pressure from building and real estate developers. In 2003 a county level thematic plan "Environmental conditions determining the settlement and land use" came into force; this plan also includes the Green Network plan. Local administrative units should specify land use restrictions in their planning documents as well as follow the implementation of the plan. The case study region has been selected due to its vicinity to the capital city and because of the consequent distinctive intensity of land use development, land conversion and resultant social reactions and reflections, especially in the context of Green Network and nature conservation requirements. An in-depth GIS analysis was carried out to find out differences between county level and municipality level Green Network elements.

In order to evaluate the stakeholder involvement from different levels and identify main sources and ways to use environmental information two case studies about participatory decision-making in pursuing sustainable land use policies were carried out. The first case

study is about the implementation of ecological networks in Harju County[1]. The study included 33 face-to-face or telephone interviews with key stakeholders from different decision-making levels (national, regional, local) and land-use sectors (spatial planning, agriculture, nature conservation, forestry, hunting, transport, construction), together with textual analysis of documents regarding participation. Interviews were conducted according to an interview form which included mostly open-ended questions for discussing interviewees' duties and interests with regard to the Green Network and other relevant stakeholders, experiences with participatory approaches and participants' views on the effectiveness of those events.

The second case study[2] explores the environmental information needs of local authorities and other actors, and identifies paths and trajectories of cooperation in local land use governance. Keila Rural Municipality in the Harju County was chosen for the case study area due to its high varieties of natural resource capital and land use options. Nine in-depth structured interviews were carried out with the representatives of the following stakeholder categories: local government, forest business, civic groups, recreation business, state nature reserve management, fisheries and angling, hunting.

The final step was to analyse all land use decisions regarding planned ecological network within local case study area (Keila Rural Municipality) in order to observe and evaluate the impact of the national and regional level decision making on the ground, therefore all the construction permits and detailed planning documents within period of 2003 to 2010 were analysed and the ones directly affecting Green Network structural elements were selected out - there were 73 issued building permits and 36 initiated detailed plans. The selected administrative documents were processed by map analysis, tabular analysis and observation. The GIS analysis based on CORINE land cover map, Estonian Basic Map and Estonian Land Price Zones Map (Koort, 2010).

In addition to empirical data referred in this chapter above the fact that one of the authors has been working with environmental and spatial planning issues in one case study area since 2001 is relevant to mention.

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[1] The case study in Harju County was conducted as part of an international research project about stakeholder relations in ecological network implementation, entitled "Knowledge for Ecological Networks: Catalysing Stakeholder Involvement in the Practical Implementation of Ecological Networks (KEN)". The project involved six case studies from the UK, the Netherlands, Estonia, Germany, Croatia, and Switzerland. It was coordinated by the European Centre for Nature Conservation (ECNC) from 2007-2009.

[2] The case study of Keila Rural Municipality was conducted as a part of EU FP 7 Cooperation project TESS (Transactional Environmental Support System) with an aim to assist policy makers to integrate knowledge from the EU, national, regional and local level in the decision making process while also encouraging local people to maintain and restore biodiversity ecosystem services. The project is coordinated by Aristotle University of Thessaloniki and partners cover nine European countries (Greece, Estonia, Hungary, Poland, Portugal, Romania, Slovenia, Turkey, and France).

3. Results

3.1. Stakeholder networks and knowledge exchange in the Green Network development

3.1.1. Structure of Green Network development

The Green Network development in Estonia is integrated into the spatial planning system which is organized around basic administrative units of Estonia: country – national plan; counties (regional level) – county plans; municipalities (local level) – comprehensive plans. The Green Network is, at various degrees of specification, addressed at all these levels of land use planning. First, the national long-term spatial plan – 'Estonia 2010', approved by the government in 2000 – delineates basic principles of the Estonian ecological network (Estonian… 2001) by establishing ecological corridors and 12 core areas of national and international importance. Second, at county level, the Green Network is one sub-theme of county thematic planning. In 1999, the second phase of county planning (thematic planning) was initiated which aims at defining environmental conditions for the development of land use and settlement. By December 2002, each of the 15 counties in Estonia were obliged to prepare a map of ecological networks on a scale of 1:50 000, as one of the layers of thematic spatial planning. However, only by the end of 2007 had all counties finished the preparation of these plans. Third, at the municipal level, according to the Act on Planning (came into force in 2003), Green Network is required as one topic in the comprehensive plan – the latter is the planning document for a whole municipality which sets general land use and building conditions. The plan should specify the boundaries of Green Network delineated in county thematic plans and lay down requirements for land use within Green Network at local level. Within this paper the cases of Harju County and Keila Rural Municipality will be analysed further. Harju County's thematic planning – including the Green Network map – came into force in March 2003. In the beginning of 2004, Keila Rural Municipality Government started to prepare its' current comprehensive planning document to come into force in October 2005. Keila Rural Municipality planning included adapted and specified maps of Green Network and some minor requirements for land use.

3.1.2. Identifying stakeholders and analysing their relationships

Content analysis of the interviews with stakeholders revealed that a wide variety of actors from governmental, private, and civil society spheres and from different policy levels are connected to Green Network issues through their responsibilities, interests and various other ways that affected the development of the network.

According to Estonian planning law, the spatial planning sector is responsible for sustainable land use planning at national, regional and local levels. Spatial planning sector include the Estonian Ministry of Interior (MoI), the related governmental institutions at lower administrative levels (county and local governments), and spatial planning companies who advise governmental spatial planners technically and content-wise on ecological network issues. The relationships between the MoI (national level), county governments (regional level) and municipalities (local level) are hierarchical. Each level is responsible for compiling land use plans where Green Network is delineated. The higher levels of government are responsible for observing the conformity of lower levels' spatial plans.

The Ministry of Environment (MoE) and its subdivisions (county environmental departments, State Nature Conservation Centre) act as environmental advisors for spatial planning stakeholders regarding the processing of detailed or comprehensive plans. Scientists have elaborated the national ecological network methodology which is applied at regional and local level to incorporate connectivity issues into land use plans at respective levels (Sepp et al 2002). Environmental impact assessors evaluate the sustainability of land use plans and different development projects, and also pay attention to ecological network issues. Whilst local people and landowners are affected by the restrictions to land use they benefit from the preservation of green areas in their surroundings at the same time. What is more, the stakeholder group 'locals and landowners' often include representatives of other actors so that this group comprises individuals and groups with mixed interests and differing goals.

The position of the identified stakeholders in the whole actor setting in relation to the Green Network can be very different from one stakeholder group to another. The Green Network is a central issue in the everyday work of spatial planners at different levels. The planners also organise participatory events regarding ecological network issues which connects them to many other actors and gives them a central position in the whole stakeholder setting. In contrast, the Estonian MoE and related governmental nature conservation stakeholders and environmental NGOs are in a somewhat marginal position as regards Green Network development in Estonia, perhaps because of their limited legal power regarding Green Network decisions (in the case of governmental nature conservation stakeholders), or their low activity and awareness in connectivity issues specifically (in the case of environmental NGOs). This is despite the fact that these actors were regarded as very important by our respondents, because the ecological network issues are perceived to be their area of expertise. Similarly, our respondents regarded local people as very important actors in Green Network issues but in reality they are not very active participants or, if they are, they have not been given much power by the decision-makers. Moreover, the main stakeholders with rather conflicting interests regarding Green Network, representing infrastructure development, building, forestry and other resource use sectors are currently rather weakly involved in the discussions on the Green Network topic.

Our respondents considered the public hearings effective in terms of information distribution from the ecological network experts to other stakeholders. However, in general, the formal participatory processes required by law were seen as quite ineffective because of several reasons, e.g. time constraints, low commitment by the conveners of the process to involve the public, lack of proper facilitation of public meetings (in order to encourage dialogue and to produce meaningful outcome), or poor information distribution about the opportunities to participate.

The interviews revealed that from a number of stakeholders connected to the Green Network issues a lot of them have diverging interests or are not closely involved into the Green Network planning and implementation. However, most of these stakeholders see some common aspects of their work in terms of ecological networks, despite their

generally differing interests. For example, nature tourism enterprises have some interest in preserving landscape connectivity but they have not yet been involved in Green Network issues to any degree. Likewise, the real estate developers see, even with the likely restrictions to building, a positive link between green corridors and building development (e.g. through higher prices for the objects on the real estate market).

3.2. Environmental information delivery and stakeholder cooperation in land use governance in the Keila Rural Municipality
3.2.1. Decision-making framework at local level

A brief introduction to the structure of spatial planning and environmental decision-making processes in Estonia and in the case study area is given below (Figure 1). The government at regional level (County Government) supervises the decisions on comprehensive planning at local level (Local Government). Regional offices of the Estonian Environmental Board (national level) have an advisory role. Decisions concerning other environmental subjects (Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA), protected areas, environmental management) are made by local government or local council depending on the subject and importance of the decision. Generally in decision-making processes concerning environment impact assessment and spatial planning, some public consultation is obligatory, enabling village associations and other non-governmental organizations and interested individuals to influence the process. There are a number of different methods used for community engagement in formal assessments and planning decisions:

- involving the media in the decision-making process,
- formal public meetings,
- regulated in EIA and SEA processes and planning law,
- informal public meetings, e.g. organized by different NGOs or activists,
- information provided to local citizens about problematic processes or decisions and to influence local public opinion).

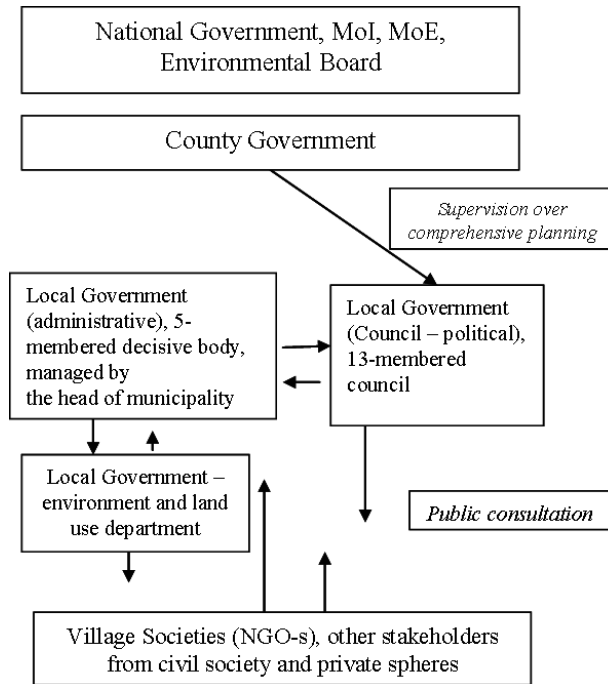Written announcements and enquiries are also used.

Figure 1. Local governance framework in Estonia

3.2.2. Results from the local government representatives' interviews

In the first part of the interview, the local government representatives were asked about their awareness on other individuals or groups (the list of those stakeholder groups was the same for all studied countries in the project) resident in their administrative area engaged in exploiting, managing, protecting or restoring wild species and habitats. It appeared that foresters and hunters were the best-known stakeholders, followed by farmers. When the interviewees were asked to evaluate their rate of confidence about the answers they gave, they were rather uncertain (the average confidence rate was 2.6 on the scale from 1 (lowest) to 5 (highest)).

The next part of the interview involved listing the determinants for information needs when making decisions affecting the environment. The most important factors of information needs for the local government were statutory requirements, policy formulations within the local area, land management and management explicitly for nature conservation. Policy requirements and control of wild species for economic or social benefit were not rated so highly. It means that local government mainly sees their field of work within the legislative borders and needs information to fulfil tasks set by law, for instance, the information needed to compose planning documents and environmental assessment documents. Information used to consult NGOs and private

persons on environmental matters (not a statutory requirement) is not perceived to be very important.

The third block of questions dealt with participatory processes. The local government considers its efficiency in participatory processes as quite high. Consultations with private individuals, enterprises etc. are held regularly when considering environmental decisions. Engagement of government conservation agencies when considering environmental decisions for designated areas was said to be mandatory. The engagement with relevant NGOs was said to be occasional.

The respondents were asked to evaluate how local environmental decisions are influenced by other organizations and social / economic considerations. Higher-level government or its agencies were said to be occasionally more influential than local administrations in relation to local environmental decisions. Occasionally, economic and social considerations were said to take precedence over the natural environment. In making environmental decisions, the local government representatives allocate about 40% of their work time for environmental considerations and the same percentage for social considerations; job/cost considerations take 20% of the time.

3.2.3. Results from the interviews with other stakeholders
The seven interviewed stakeholders claimed to be "often" (3 respondents), "occasionally" (3), or "always" (1) aware that the local government in their area engages in managing, protecting, or restoring wild species and habitats. Statutory requirements were perceived as being the most important reason for obtaining information for all interviewees.

The majority of respondents said that they only occasionally engage in consultations when local government considers environmental decisions; "always" and "often" were both mentioned only once. Similarly, the governments' attempts to engage other stakeholders in the decision making process were also mostly evaluated as "occasional. Engagement with conservation NGOs was not rated high – the most common answer was "occasionally"; "never" and "usually" was mentioned equally. The engagement of conservation NGOs was evaluated in the context of designated conservation areas as well as of other areas and there were no significant difference between the results.

3.3 Results from a comparative study of planning documents
The formal method for specifying the Green Network in thematic plans was followed in all counties studied and its implementation was found to be reasonably uniform, as methodological material 'Environmental conditions for settlement and land use' (Sepp, Jagomägi, 2002) was used in all counties to compose a thematic planning document. Minor differences between counties occur in chapters reflecting the basic reference data and in sections specifying the requirements and restrictions for land use.

Clear differences in methodology were distinguishable between comprehensive plans set up by municipalities. In several cases the method for specifying the Green Network had not been applied and the contents of the explanatory section often contradicted the maps. Frequently, the structural elements of the network (*i.e.* core areas, corridors, neutral

areas) had not been distinguished from one another. There was no reference in comprehensive plan documents to the formal method for specifying the Green Network. However, 'environmental conditions for settlement and land use' have been considered in most of the cases. The adaptations made to thematic county plans in municipality's comprehensive plans were mostly enlargement or diminution of core areas or corridors or, less often, displacement of corridors. No displacement of core areas was recorded (Figure 2).
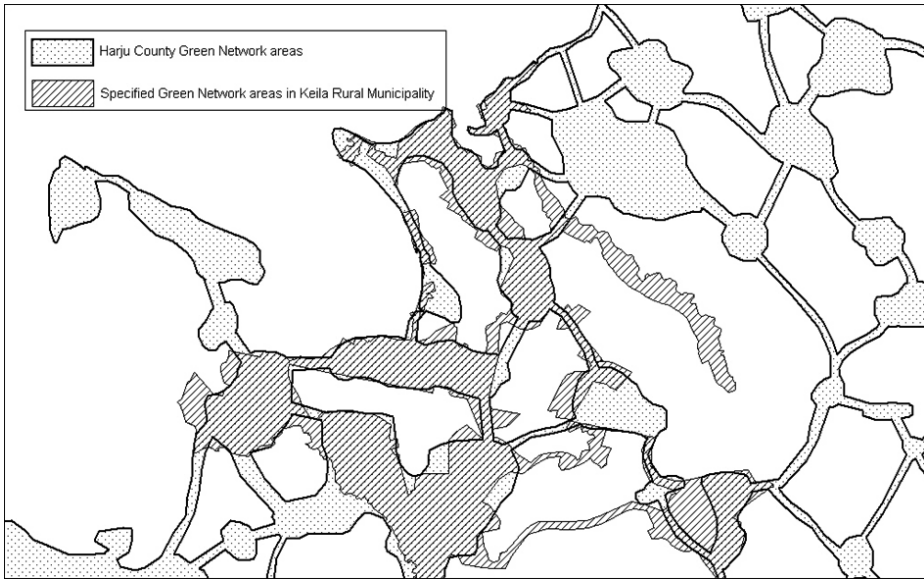

Figure 2. The comprehensive plan at municipal level specifies the boundaries of the Green Network delineated in county thematic plans and lays down requirements for land use within the Green Network at the local level. Example of Keila Rural Municipality, Harju County, Estonia.

The range of ways in which the Green Network was addressed by municipalities in comprehensive plans reflected the variety of consultants involved by different local authorities. However, the absence of a specific methodology for identifying the Green Network as a component of comprehensive plans could be considered as the main reason for inconsistencies in planning practice at municipality level. This result reflected from the more general analysis from all counties as well as from the in-depth analysis of one (Harju) county where similar variety and problems occurred within the smaller region. In addition to the results from general analysis the case of Harju County showed that local municipalities are relatively unmotivated to be actively involved in Green Network planning. A closer look at one municipality (Keila Rural Municipality) with a GIS analysis showed the presence and necessity of specification of Green Network planning on local level scale. Using locally available data and knowledge for the comprehensive

planning document in order to accurately meet the needs of local level decision-making, is of paramount importance.

3.4. Results from an analysis of land use decisions

In the case of Harju County the thematic planning 'Environmental conditions for settlement and land use' came into force in 2003 and from there to 2005 when Green Network was adapted and integrated into the local level comprehensive planning document, all construction permits as well as detailed planning documents had to be in accordance of county thematic plan. After 2005, when Keila rural municipality comprehensive planning document with extensive improvements and specification regarding Green Network elements became valid, construction permits and detailed planning documents were based on the updated legislative basis. The analysis of land use decisions made at local level showed that 57% of those within the Green Network were adopted before a local level planning document came into force within the period 2003 - 2005. The rest of the 43% of the decisions were made during the longer period (2006-2010), therefore it could be concluded that local authorities were more willing to implement the planning document adapted and specified by themselves.

4. Discussion

The attempt to identify the inclusion of relevant stakeholders from different levels was based on a regional-level case study in Harju County. The results of the study give a general overview of stakeholder groups that are of relevance to Green Network development in Estonia. The identification of stakeholders and their relationships on the basis of the study in Harju County shows that there are various interactions between the actors gathered around Green Network development in Estonia. In the case of the Green Network development many of the affected stakeholders do not know much about the concept and have so far remained rather far from the central discussions about it. At the same time, for those stakeholders directly responsible for the planning and implementation of the Green Network, participating in discussions on the Green Network topic is an inherent part of their regular activities. However, the latter actors still have difficulties in defining and sharing their exact responsibilities regarding Green Network. Despite the rather low cohesion of the stakeholder network around the Green Network topic, many of the stakeholders with contradictory interests still see some common points in each other's activities. Examples are real estate developers, recreation companies, and foresters.

The Keila case study shows that the awareness of governmental representatives from all governance level about the various stakeholders in the field of nature conservation is lower than other stakeholders' awareness about the government's activities. This can be explained by the fact that the stakeholder groups listed in the pre-given answer options in the interview-guides did not represent all the most active groups in the case study area, usually formal (e.g. village societies) and informal civic groups. Local stakeholders' awareness about government activities is quite high although the decision-making processes could seem rather complicated within the governance structures.

The study in Harju County provides an overview of participatory arenas most common in the Green Network issues. It also shows how these arenas are evaluated by the stakeholders in terms of their general effectiveness (e.g. to provide a genuine arena for deliberation). The study identified some positive examples in terms of knowledge transfer between different stakeholders, such as, between scientists and policymakers and between some resource user groups and spatial planners. Personal and informal contacts are important catalysts for mutual cooperation between local government and other stakeholders but the content of this cooperation might not be easy to capture with a standard-format enquiry tool, as the case study in Keila Municipality demonstrated.

The determinants for information needs in local land use governance as exemplified with the Keila case study are similar if it comes to governmental and other stakeholders (statutory requirements for both groups). However, for governmental stakeholders, policy formulations are much more important than for other groups. This shows that, fortunately, environmental decisions taken outside local government are not strongly influenced by politics. Although the governmental interviewees did not assess themselves to be very aware of local interest groups, they still regarded themselves to be effective in participatory processes. This particularly concerns involving private individuals and enterprises. Rating the influence in environmental decision-making, the government representatives positioned themselves between the governmental (national level) agencies and other stakeholder groups. One reason for this is the supervisory function of the county government over lower levels of government. Another justification could be the fact that some relevant decisions cannot be made without the central governments' approval. Local government representatives perceive a need for more accurate and useful sources of information to make environmental decisions, but other stakeholder groups mainly regard their current information supply and quality as sufficient.

Integrating the new task of Green Network planning into the Estonian planning system has clear characteristics of vertical specialization in terms of public management as the 'differentiation of responsibility on hierarchical levels, describing how political and administrative tasks and authority are allocated between forms of affiliation' (Lægreid et al., 2003) are present in the process. Vertical decentralisation requires shifts in central government policy, laws as well as institutional and structural arrangements to provide for the sharing of powers, authority, functions and resources, thus enabling local governments to perform fully (Niikawa, 2006).

The connection and balance between specialization and coordination is important. Increasing specialization implies a need for greater efforts at coordination, at least if the level of overall coherence of policy and services is to be maintained. Otherwise, the danger is that newly specialized agencies will go their own ways (Bouckaert and Pollitt, 2004). Coordination in a public sector inter-organizational context is understood as 'the instruments and mechanisms that aim to enhance the voluntary or forced alignment of tasks and efforts of organizations within the public sector. These are used in order to create a greater coherence, and to reduce redundancy, lacunae and contradictions within and between policies, implementation or management' (Peters, 1998). The case study's results about the planning and implementation of ecological network concept revealed

some gaps which precluded achieving satisfactory results regarding stakeholder involvement and co-operation between governance levels. From the description of Estonian spatial planning system and the integration of ecological network concept into the relevant legislation and guidelines we saw that the coordination from national level was almost fully neglected after the legislation came into force and regional thematic planning documents were compiled in accordance with methodological guidelines. The system does not include any effective coordination mechanism between regional and local level– the supervisory function of county government over local authorities are dealing mostly with consequences rather than putting an input into effective policy making. As a result, local authorities' admit their need for more accurate and wider range of information for environmental decisions and they are not highly motivated to deal with specific issues such as Green Network planning. Regarding implementation, our analysis shows that if ecological network was effectively integrated into local comprehensive planning documents, less land use decisions interfering the network were made.

5. Conclusions

Our study shows that the ecological network concept is integrated into all levels of the Estonian spatial planning system – national, regional and local – mainly in legal terms. However, as it becomes apparent, not only legislative requirements determine the efficiency of ecological network planning and implementation. Our analysis shows certain gaps when it comes to stakeholder involvement and co-operation within and between governance levels during the planning phase: stakeholders' dissatisfaction with the participatory tools used, the varying quality of local level Green Network planning documents, as well as the inadequate inclusion of particular stakeholders such as the Ministry of Environment or environmental NGO's. This is also reflected in the subsequent implementation. We further found that contradictions between different governance levels, and ineffective measures for stakeholder involvement have negatively influenced the land use decision-making processes on local level.

The main driving forces in local government's decision-making are statutory requirements – being also the most common determinants for both environmental information needs and for organizing participatory events. This practice can bring about two threats to efficient administrative decentralisation:
- the local government representatives find the fulfilment of legal prescriptions to be sufficient and effective, and such attitude can be an impediment for committing themselves to improve participatory approaches at the local level;
- being aware and following the rather narrow range of statutory requirements only, local authorities are distanced or even unaware about the conceptual essence and objectives of the Green Network concept, and are therefore unable to effectively implement it.
In contrast to the views held by local government representatives, on a country-wide scale, several stakeholders of the Green Network planning consider the formal participatory measures in land use governance as ineffective. These contradicting positions refer to the insufficient coordination and flows of information within the components of multilevel environmental governance structures in Estonia.

Sustainable land use governance extends over different administrative levels. The Estonian planning system is decentralised in the way that local governments have major responsibilities regarding the planning and implementation of the ecological network concept. A well-functioning stakeholder network and an adequate basis of relevant information are among key factors to safeguard the environmental quality of the land use decisions of local governments. Local level decision-makers have the most direct access to relevant stakeholders, but here information and knowledge basis could be inadequate due to the lack of administrative coordination between governance levels. As a result, the studied municipalities were not motivated to integrate the ecological network concept into their comprehensive planning documents. In some cases, local governments were motivated and had sufficient administrative capacities, and the implementation proved to be more effective, once the ecological network concept was included into the local spatial planning legislation.

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Training courses on participatory approaches & qualitative research

2012	Tallinn University, Estonia: training course in group work techniques
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2012	Norwegian University of Life Sciences, Ås, Norway: Thor Heyerdahl Summer School on global environmental governance
2012	Tallinn University, Estonia: training course in doing and supervising qualitative research projects

2011	EURA (European Urban Research Association) & EUROLOC Vouliagmeni, Greece: summer school on public administration and governance
2008	Humboldt University of Berlin & Agricultural University of Nitra, Slovakia: Marie Curie Training Course on institutional analysis
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2006	REC Estonia: Grundtvig training course on public participation in environmental decision-making

Professional employment

2010 – 2012	Estonian University of Life Sciences, Institute of Agricultural and Environmental Sciences; specialist
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Field of research

environmental policy: effectiveness of participatory decision-making models, stakeholder analysis, ecological networks

Membership in organisations, volunteering work

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Awards

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Projects

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Teaching experience

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2012 Tallinna Ülikool: täienduskoolitus kvalitatiivsete uurimistööde juhendamisest

2011 EURA (European Urban Research Association) & EUROLOC, Vouliagmeni, Kreeka: suvekursus avaliku halduse reformimisest

2008 Berliini Humboldt'i Ülikool & Nitra Põllumajandusülikool, Slovakkia: Marie Curie programmi institutsioonianalüüsi kursus

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