
Managing the Natura 2000 network:
between Europeanization
and societal engagement
Irene M. Bouwma
NATURA 2000

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Veluwe

Netherlands
Code: NL3009017 + NL9801023
Surface: 88.436 ha
19 habitats, 17 species

1. Introduction

1.1 Nature conservation trends; Europeanization and societal engagement

In 2015, more than 550,000 thousand responses were received from citizens and businesses during the European Commission's public consultation on the EU's nature conservation legislation. This was, by far, the largest response to any public consultation held by the European Commission to date.

This occasion is illustrative of two trends that have changed protected area management in Europe in the last decade. The first trend has been the development of European-level environmental policy, and nature conservation policy in particular. Since the 1970s, EU policy has increasingly influenced the national policies of its Member States. In the field of nature conservation the Birds Directive (1979) and Habitats Directive (1992), have considerably influenced the nature protection policies of Member States (Blicharska et al. 2016; European Commission, 2016a).

The second trend has been the emergence of co-management of protected areas by various societal actors (Lane, 2001; Stoll-Kleemann & Welp, 2006). This trend has not been restricted to the management of protected areas but reflects a broader societal change that has increased participation, consultation and active involvement of stakeholders in the implementation of governmental policies in many fields (Brandsen & Pestoff, 2006; Reed, 2008). These two trends of Europeanization and societal engagement also interact. Whilst the first protected areas in many Member States of the European Union were established in remote regions and in many cases on land owned by the government, many of the areas protected under EU legislation were established on private land and in densely populated areas. This raised questions of democracy and legitimacy of protected areas and how protected areas contribute to regional development (Ferranti et al., 2014; Keulartz & Leistra, 2008; Mose & Weixlbaumer, 2007). This has led to intensified efforts to increase societal engagement in the management of Natura 2000 sites.

1.2 The Natura 2000 network

The Natura 2000 network denotes the protected areas designated by Member States under EU legislation (i.e. Special Protection Areas under the Birds Directive[1] and Special Areas of Conservation under the Habitats Directive[2]). The Natura 2000 network consists of more than 27,000 sites and covers over 18% of the EU's territory (see Figure 1.1) (European Environment Agency, 2015).

[1] DIRECTIVE 2009/147/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 November 2009 on the conservation of wild birds. The Directive was originally adopted on April 1979 (Directive 79/409/EEC) and amended in 2009.

[2] COUNCIL DIRECTIVE 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

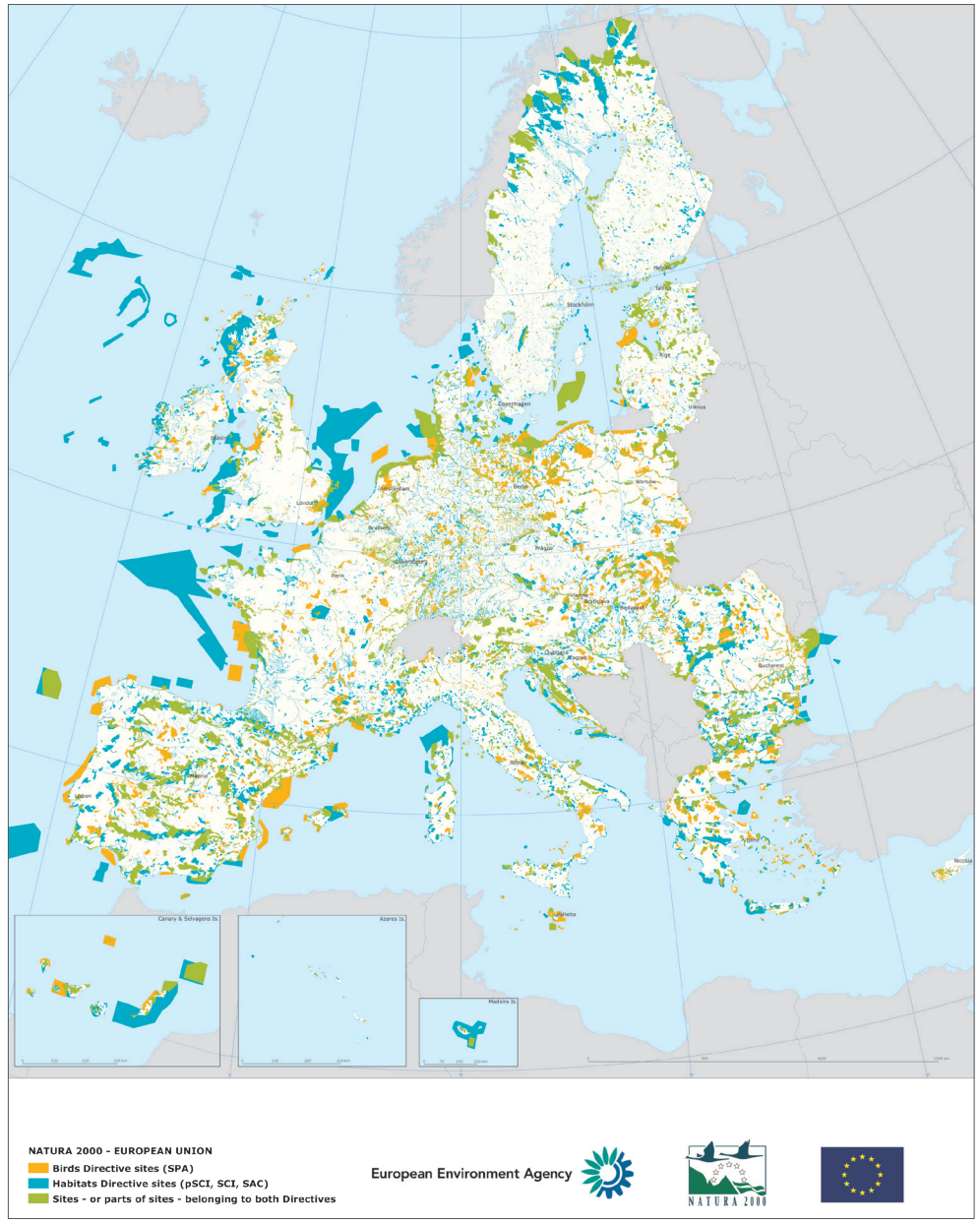

Figure 1.1. The Natura 2000 network, which consists of sites in the European Union designated under the Birds and Habitats Directives (EEA, 2018: https://www.eea.europa.eu/data-and-maps/figures/natura-2000-birds-and-habitat-directives-9/eu28-birds-and-habitats-directives).

The process of identification and designation of Natura 2000 sites was a difficult and lengthy one. In many Member States, areas previously not under any form of legal protection needed to be designated (see Figure 1.2). This increase in protected areas led to political as well

as societal opposition towards the Natura 2000 network, delaying the designation process in many Member States (Court of Accounts of France, 2008; European Commission, 2016a; Frederiksen et al., 2017; National Audit Office of Finland, 2007).

As most Member States have now finalised the identification and designation process for Natura 2000 sites (European Environmental Agency, 2015), the focus of implementing the Directives has shifted towards the actual management of the areas. Given this shift, this thesis concerns itself with how different Member States have arranged the management of the areas that have been designated as Natura 2000 sites.
The management of the Natura 2000 sites is regulated in various articles of the Birds and Habitats Directives. The articles address both the existing management of the sites as well as the assessment of new plans and projects that might affect the sites. The assessment of new plans and projects is primarily a legal process that is strongly influenced by both national and EU case law and leaves little room for discretion for governments at national, regional or local level (Sundseth & Roth, 2013). This is quite different for the existing management of sites, as the articles stipulating such management provide Member States with considerable freedom to arrange the management (Frederiksen et al., 2017). As a result, Member States have chosen to use different policy instruments such as management plans, subsidies and regulations to 'establish the necessary conservation measures' or to take the 'appropriate steps'(see box 1.1). As many of these instruments need to be elaborated and implemented at local level, the implementation process of the management has a multilevel character.

Box 1.1 Articles of the Habitats and Birds Directive dealing with the existing management of Natura 2000 sites

The Birds Directive
Article 4.4 In respect of the protection areas referred to in paragraphs 1 and 2, Member States shall **take appropriate steps** to avoid pollution or deterioration of habitats or any disturbances affecting the birds, in so far as these would be significant having regard to the objectives of this Article. Outside these protection areas, Member States shall also strive to avoid pollution or deterioration of habitats.

Habitats Directive
Article 6.1. For special areas of conservation, Member States shall **establish the necessary conservation measures involving, if need be**, appropriate management plans specifically designed for the sites or integrated into other development plans, and appropriate statutory, administrative or contractual measures which correspond to the ecological requirements of the natural habitat types in Annex I and the species in Annex II present on the sites.

Article 6.2. Member States shall take **appropriate steps** to avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated, in so far as such disturbance could be significant in relation to the objectives of this Directive.

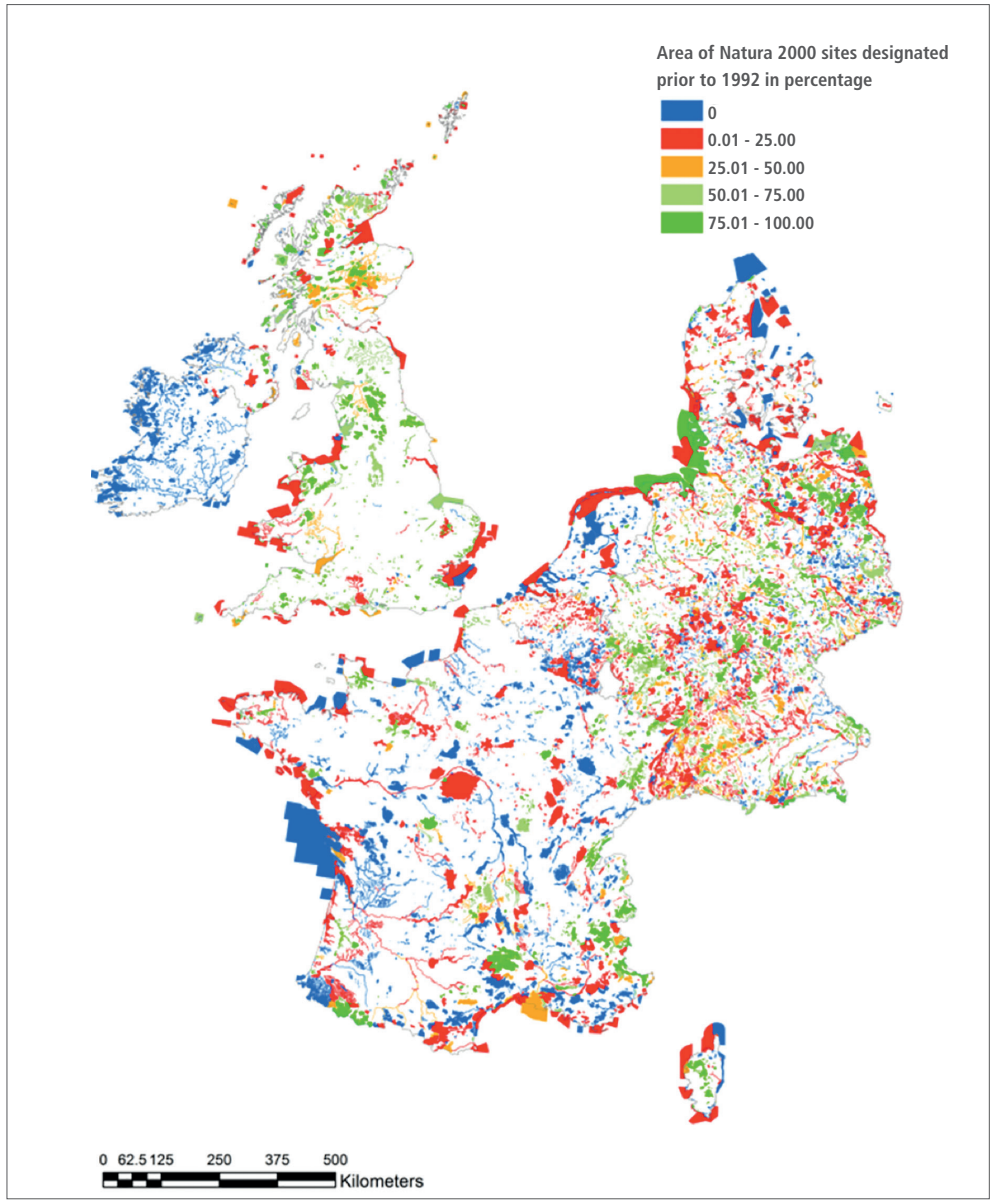

Figure 1.2. Natura 2000 sites which were already legally protected prior to 1992 (Bouwma et al., 2015).

1.3 Objective, research questions and relevance

Research objective and research questions

The Natura 2000 network was set up to conserve and protect biodiversity. The overarching question of this thesis is how Member States have arranged the management of the sites to reach this goal and how people who own, use or live near these sites - or the organisations representing those people - have influenced the way the management is arranged. Therefore, the research objective of this thesis is to analyse, explain and evaluate the influence of discretionary[3] EU nature policy on national and local implementation practices and how increased societal engagement might have influenced these implementation practices. In the framework of this thesis, implementation practices comprise the entire process of policy instrument choice including the further elaboration of the policy in terms of local policy output.

The term 'Natura 2000 network' was mentioned for the first time in the Habitats Directive. Although sites designated under the Birds Directive are also part of the network and that legislation is older, it was the Habitats Directive that gave the biggest impetus to site management through its requirement to establish conservation measures and its requirement to assess the impact of new plans and projects. Therefore, the first step needed in this research was an assessment of how the Habitats Directive had influenced extant national policies for protected natural areas in Member States. In particular, this means examining how it has affected policy instruments for managing protected areas, such as management planning systems, subsidies for nature, or regulations at national level (Step 1). Policy instruments are the focus of this thesis. They are considered the primary mechanism through which the government influences the management of the sites to ensure that conservation measures are taken by owners and no harmful activities occur. The second step in this research was to analyse how (changes in) national policy instruments for management may have in turn affected the management at the local level (Step 2). In the 25 years since the Nature Directives were created, the relation between government and society has changed considerably, therefore the increased influence of stakeholders on policy development and implementation is also reviewed (Step 3).

The following three research questions were formulated, each corresponding with the different steps in the process of implementation.

RQ1 : How did the Habitats Directive influence the national policy - and in particular the associated instrumentation - of Member States for the management of Natura 2000 sites?

RQ2: To what extent did policy instrument choice for Natura 2000 management influence local implementation in Member States?

[3] Discretionary meaning decided by officials and not fixed by rules (Cambridge English Dictionary online edition)

RQ3: To what extent does the need for increased societal involvement influence Natura 2000 policy implementation, the associated instrumentation and evaluation?

Figure 1.3 schematically outlines the steps taken in the implementation of policy for the management of the Natura 2000 network for which a theoretical framework and research questions needed to be formulated.

A wide variety of research fields such as Europeanization studies, policy instrument choice, societal engagement and policy evaluation provided the theoretical insights to analyse the three steps (see section 1.4)

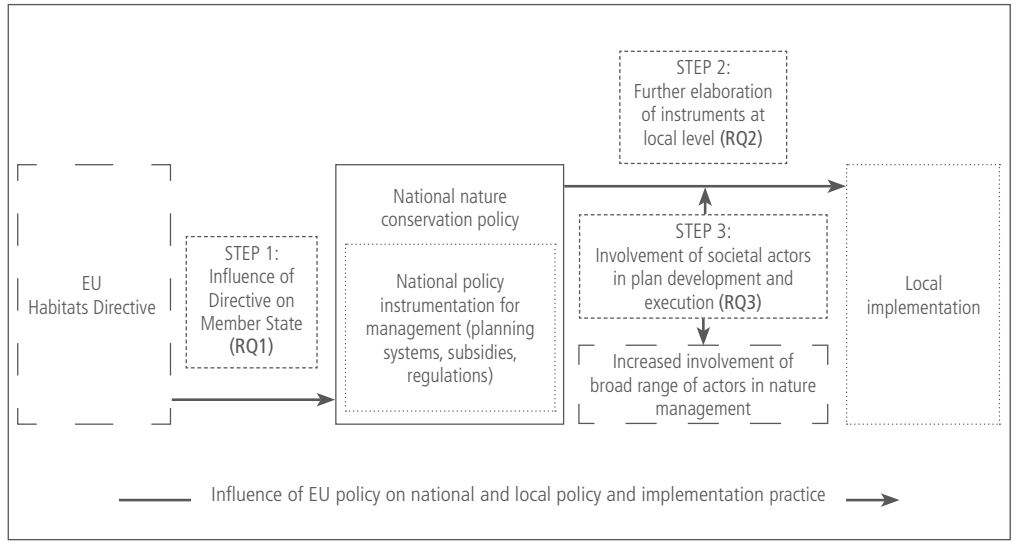

Figure 1.3. Simplified scheme of the research. The bold arrows indicate the steps taken in the process of implementing the policy for Natura 2000 for which the research questions and theoretical framework were developed.

Scientific relevance

Popescu et al. (2014) have summarised the type of research undertaken on the EU Natura 2000 network; most studies have taken a natural science perspective. The studies available on social science topics deal with a wide range of issues, but only a few studies focus on policy instrumentation, governance and the role of public participation in management (Blicharska et al., 2016). Besides contributing to more social science research on the Natura 2000 network, this thesis furthermore addresses research gaps in two different research fields, that of Europeanization and policy instrumentation. In Europeanization literature, limited attention has been paid thus far to local implementation - in particular how different choices regarding instrumentation are made in a multilevel setting and how this might affect local implementation. In policy instrumentation, considerable attention has been given to

the process of policy instrument choice and the influence of changes in governance on instrument types (Jordan, Wurzel & Zito, 2005; Salamon, 2002). The influence of increased participation in policy instrument design and consecutive implementation has not been a focus of much research (see for a more detailed discussion in the next section.)

From the start of the thesis, it was not the ambition to develop a new overarching theory or a 'grand scheme'. Rather, it was to use existing theories from different fields and to develop a consistent theoretical approach. However, as this thesis focusses on the implementation of the Natura 2000 policy through policy instruments, some theories needed to be further refined to better suit the issue reviewed. In section 1.4 a general overview is provided of the four main research fields that have contributed to the theoretical concepts and analytical framework that are used in this thesis.

Political and societal relevance

In the last two decades the Natura 2000 network has been the centre of considerable political debate as well as societal controversy. In almost all countries political discussions have ensued about the way to implement the network, the policy instruments to use, and how society needed to be involved in the management of the network. Therefore, this thesis has political and societal relevance. This thesis contributes to the political debate by providing a comparative overview of the variation in policy instruments used by Member States to fulfil their obligations to ensure 'good' management of the sites. It compares different policy instruments that have been developed. On the basis of these findings this thesis draws concrete lessons in possible improvements for policy instrumentation for the Natura 2000 network management.

The societal contribution centres on the issue of societal engagement. Much criticism has been voiced on the extent of stakeholder involvement during the designation process. This thesis shows to what extent societal actors have been engaged in implementing the management policy for Natura 2000 sites. Furthermore, it shows that societal actors have not only been 'recipients' of the policy but also have taken steps to influence implementation.

The evaluation of the Birds and Habitats Directives ('the Fitness Check') in the period 2015-2016 found that achieving the objectives of the policy will depend upon substantially improved implementation. The Action Plan for nature, people and the economy (published in 2017) sets out the actions to be taken. The research in this thesis particularly addresses two actions formulated in this action plan, namely:

» **Action 4**: To complete the Natura 2000 network, especially filling gaps for the marine environment, and to put in place the necessary conservation measures for all sites. Policy instruments are the mechanism for Member States to put in place the necessary conservation measures - in particular the management plan instrument. This thesis sheds light on the various approaches taken by Member States and how this might affect local implementation.

» **Action 6**: To bring together public authorities and stakeholders from different Member States at the biogeographical region level to address common challenges, including cross-border issues. One of the main issues to address in the management of Nature 2000 sites is co-management. This thesis sheds light on how these issues are addressed at local level and what lessons can be derived from this for the management process, as well as for the design of policy instruments.

1.4 Theoretical concepts and analytical frameworks

Europeanization: The influence of European policy on Member States

The first research question requires an assessment of how EU Directives have influenced the national policy of Member States. Since the creation of the European Economic Community in 1967 (since 1993 called the European Union), Europeanization studies has developed as a new field of research. One of the issues reviewed in this field is how European Union policies are implemented by the Member States and how this affects national policy. In his review of the historical development of this research, Treib (2014) describes four waves of research on implementation. The first wave considered implementation primarily from a top-down, technocratic perspective and portrayed the domestic implementation of European law as an apolitical process. As long as EU policy was clearly formulated and Member States had an effective administrative organisation with streamlined legislative procedures at the domestic level, implementation problems would not arise. In the second wave, the focus shifted to the degree of compatibility between European demands and domestic policy. The 'fit' or 'misfit' with existing national policy traditions and administrative routines would determine how easily EU policy is incorporated in national policy. Over time, research showed that the theory of fit or misfit did not hold in many cases, and other explanations were provided - in particular focussing on the role of domestic actors (both governmental and societal) in the process of implementation of EU policies. In the second wave of implementation studies, the idea of path dependency has featured strongly, as many implementation problems were ascribed to the existence of national policy traditions and administrative routines that posed obstacles to new policy. This view was derived from studies on the occurrence of path dependency in public policy in general (Pierson, 2000). In public policy research, path dependency is commonly used to describe a situation where the present policy choice is shaped or constrained by institutional paths that result from choices made in the past (Torfing, 2009). Path dependency is used as the leading theory to analyse the influence of the Habitats Directive on policy instruments in this thesis.

The third and fourth waves of research merged many of the insights of earlier research. As a result, there are different theoretical explanations for EU policy implementation in which administrative, institutional, and actor-based factors determine transposition outcomes and the different implementation patterns in the Member States. In the third wave, two divergent developments occurred: qualitative scholars increasingly highlighted the political character of transposition, whilst quantitative scholars highlighted the importance of administrative capacity of Member States. In the fourth wave, qualitative and quantitative studies focussed on different aspects of implementation. Quantitative studies reviewed Member States' reactions to European Court of Justice preliminary rulings. Quantitative research reviewed the impact of EU decision-making processes on the consequent domestic transposition. In all four waves of Europeanization research, most attention was paid to the transposition of EU law - only a limited number of studies deal with the implementation or enforcement of EU policy at national or local level (Treib, 2014). Some of the theoretical insights underlying this thesis clearly are derived from the second wave of implementation studies (such as path dependency). At the same time, the thesis also reviews specific national implementation patterns and a broader set of explanatory factors that are more characteristic of the third and fourth waves.

Policy change

To analyse the influence of the Habitats Directive on national nature policy, the policy arrangement approach was taken as an analytical framework in this thesis (Arts, Leroy, & Tatenhove, 2006). The policy arrangement approach distinguishes four dimensions, i.e. rules, discourse, actors and resources/power.

- The **rule dimension** refers to the formal rules embedded in legislation and official procedures. It also includes informal rules, norms, or shared understandings that are part of everyday practice.
- The **discourse dimension** reviews the ideas, concepts and narratives that are prevalent in a specific policy domain. The discourse dimension relates both to general ideas about the relation between the state, market, and society, as well as to the concrete problem at stake.
- The **actor dimension** reviews which actors are involved in the specific policy field, what their roles and responsibilities are, and how they interact.
- The **power/resources dimension** relates to resources available to the various actors and how this influences their positions of power with respect to one another.

Although four dimensions are distinguished, in reality they are closely interrelated and interdependent (Liefferink, 2006).

Reasons for choosing this analytical framework were twofold. Firstly, the policy arrangement is a comprehensive tool, as it pays attention to various aspects of a policy. Therefore, it is suitable to analyse policy changes from different angles and theoretical insight that can be

institutional/structural or actor-based. As Europeanization studies highlight factors related to rules, discourse, actors, and resources to explain the influence of EU policy on Member States (Treib, 2014), the framework addresses various previously-offered explanations.

Secondly, the policy arrangement approach enables a historical analysis of policy change, as it refers to 'the temporary stabilisation of the organisation and substance of a policy domain, at a specific level of policy making' (Arts, Leroy, & Tatenhove, 2006). Changes in a policy arrangement can occur due to policy initiatives, socio-political trends, shock events, changes in adjacent arrangements (e.g. forestry or agriculture) and policy entrepreneurs (Arnouts, 2010). Therefore, the approach is particularly suited to analyse the influence of the Habitats Directive on national policy and its instrumentation over time.

Policy instrumentation and its change

In addition to analysing the overall change in national policy due to the Habitats Directive, the first research question also examines the influence of a change in national policy on the instruments used or available. Policy instruments are defined as the tools of the government to implement its policies (Hood, 1983; Salamon, 2002). The government uses a multitude of different policy instruments to implement their policies. In order to analyse changes that might have occurred in types of policy instruments to manage Natura 2000 sites, a classification was needed to describe instruments used before and after the introduction of Natura 2000.

The different classifications schemes used for policy instruments reveal that no single classification is perfect for all purposes. Which classification is used will depend on the research question to be answered and the analysis to be undertaken (Salamon, 2002). The classification used in this thesis is derived from Bemelmans-Videc and Rist (1998), who have based their work on Hood (1983). Hood (1983) presented four organising principles that a government uses to implement policy and that are more or less reflected in most policy instruments classifications, namely Nodality, Authority, Treasure and Organisation (NATO). A government can use the information at its disposal (Nodality), its legal powers (Authority), its money (Treasury), or its formal organisational capacity (Organisation).
Three of these mechanisms were aptly renamed by Bemelmans-Videc and Rist (1998) as 'sticks', 'carrots' and 'sermons' and were further elaborated according to their authoritative force.

This classification formed the starting point of this thesis. However, this approach incorporates an issue encountered in most literature on policy instrument classification: design and choice are rather government-centred. It reviews the process of policy instrument design and choice primarily from the viewpoint of the government. This governmental perspective on policy instruments has been increasingly challenged under the influence of the governance debate

(Kjaer, 2004; Rhodes, 1997). An alternative view on policy instruments has emerged: the political sociology approach. Policy instruments are not seen as technically neutral devices. Rather, 'every [policy] instrument constitutes a condensed form of knowledge about social control and ways of exercising it' (Lascoumes & Le Gales, 2007). This viewpoint also presumes that actors 'governed by the instruments' would actively influence policy instrument choice and implementation.

Therefore, in addition to the classification solely based on **authoritative force**, this thesis identifies two other key features of policy instruments, namely **action content and governance design.**

» The action content relates to the behaviour of the actor that the government wants to influence (Bemelmans-Videc & Rist, 1998; Salamon, 2002). This includes which action(s) the actor should take or refrain from (e.g. installing solar panels or not driving through a red light). The key feature action content is helpful for analysis, as societal actors might influence the actions that need to be taken or that are forbidden.

» The governance design describes which parties are involved in the development, approval, implementation and enforcement of a particular policy instrument. By distinguishing governance design as a separate key feature of an instrument, more insight can be gained regarding the formal role of societal actors in the implementation of the policy.

» The authoritative force relates to the benefits (if the required behaviour occurs) or the sanctions for the actor (if the required behaviour does not occur) (Vedung, 1998).

The performance of Natura 2000 policy

The second research question of the thesis reviews the issue of local implementation; therefore, a framework was needed to analyse this part of policy implementation. The idea of the policy cycle is a prevalent theory in the field of policy analysis (Crabbé & Leroy, 2012). The policy cycle analytically distinguishes the process of policy in four phases: agenda setting, policy development, policy implementation, and policy evaluation. Policy evaluations can take place before, during or after policy has been implemented (ex-ante, ex-durante or ex-post). Most Member States have now developed their policy instruments for Natura 2000 management; however, in many states, the management planning instrument has been only recently developed or is in the first cycle. As such, any evaluation of this phase has the character of an ex durante evaluation. In ex-durante evaluations different aspects can be reviewed. In this thesis, they are taken together and are described as policy performance: **process, output, outcome and impact** (Crabbé & Leroy, 2012; Koontz & Thomas, 2006; Rauschmayer et al., 2009). Process evaluations focus on *how* the output is produced rather than on the output itself. They assess different aspects of the process, often in terms of legitimacy and equity, and review the opinion(s) of involved actors. Policy output evaluations consist of assessing what is produced by the government and stakeholders in terms of prohibitions, communication

campaigns, procedures, grants, subsidies, taxes, plans, services and goods (Vedung, 2008). However, the existence of plans or a communication campaign, for example, does not guarantee the desired behavioural change of groups targeted by the policy. Therefore, policy outcomes relate to the influence of the policy on the behaviour of targeted groups. For example, this may be judged by whether targeted groups adjust management practices to align with policy requirements. The last step of the framework consists of measuring the policy impact to assess whether the desired ecological, social or economic effects of a policy are indeed realised.

Societal engagement: shifting responsibility for nature protection from the government to society

The third research question of this thesis deals with the involvement of societal actors in implementing the management of Natura 2000. Many different terms have been used to describe the involvement of societal actors in protected area management, such as dialogues for protected areas, co-management, collaborative natural resources management, or participatory management (Conley & Moote, 2003; De Pourcq et al., 2015; Koontz & Thomas, 2006; Lane, 2001; Stoll-Kleemann & Welp, 2006). Overall, in the management of protected areas, there has been a shift towards increased participation of a broad range of actors (Stoll-Kleemann & Welp, 2006). This reflects a much broader discussion on changes in the relations between government and society (Kjaer, 2004; Rhodes, 1997). In the 1960s and 1970s, this discussion centred on the involvement of citizens in the development of governmental plans and programmes (Arnstein, 1969), but in many Western European countries in the past decade, the emphasis on participation in policy and plan development has shifted towards the notion of active citizenship and co-production of public goods and services (Bovaird, 2007; Brandsen & Pestoff, 2006; Pestoff, 2006). In this thesis the term 'societal engagement' is used to indicate both aspects of participation - the involvement of societal actors in plan or programme development - and the pro-active role of societal actors in implementing actions on the ground.

To analyse the involvement of societal actors, the concept of an 'interest group' is used. Some actors share similar concerns, views and characteristics. These groups will organize themselves into interest groups and work together to influence policymaking and implementation (Jordan, Halpin, & Maloney, 2004; Krott, 2005). The idea of interest groups has gained considerable ground in both political theory and everyday policy practice. For example, at EU- and at national level meetings about the management of Natura 2000, civil society organisations are often invited as representatives of certain interest groups (e.g. hunters, farmers, port authorities, etc.).

Framework and leading theories used

Figure 1.4 shows the framework used that combines the policy arrangement approach, the key features of policy instruments and the evaluation framework that reviews the implementation aspects. The analytical framework starts from the premise that change in the overall policy domain can instigate policy instrument development, and this successively influences local implementation (Crabbé & Leroy, 2012; Hall, 1993). To investigate the influence of the Habitats Directive on national policy and instrumentation, the policy arrangement approach and the three key features of policy instruments were used. The leading theory to review the influence of the Habitats Directive on policy instruments was path dependency (step 1).

Four aspects were used to analyse local implementation: process, output, outcome and impact. Furthermore, these four implementation aspects served as the basis for reviewing the influence of societal engagement. Leading theories to explain local implementation were based on path dependency and interest groups. The research has focussed on the influence of EU policy on national and local implementation practices (illustrated in Figure 1.4 from left to right), and in particular on the relationships indicated with the smaller black arrows.

The thesis research also considered the issue of **causality**. A simple case of causality is event A causes B, and event B does not occur without event A. In public policy research, a sequence of parallel events and processes needs to be analysed, thus leading to a complex picture in which many causal relations exist and interdependencies occur. This requires dealing with 'complex causality'. The challenge is to identify which causes are necessary and sufficient conditions in situations of complex causality (Steinberg, 2007).

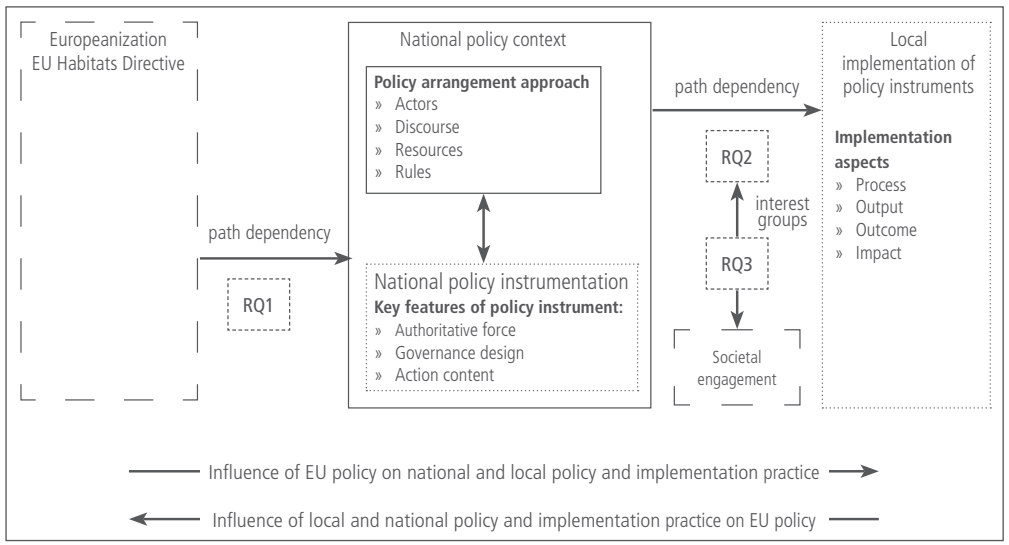

Figure 1.4. Simplified framework of this thesis with scientific concepts and frameworks used.

1.5 Research methodology

Comparative public policy analysis forms the heart of this thesis. 'Comparative public policy should be seen as a commitment to a particular logic of doing research, namely a commitment to the systematic investigation across states, domains and time, not a particular method in terms of research strategies and instruments' (Lodge, 2007 - page 276). Indeed, this thesis uses considerably varied research methods, both quantitative and qualitative, to analyse the relation between policy, management and the implementation of management of the Natura 2000 network.
The main research methods used in this research are as follows:

» **Scientific literature review:** The most commonly used search platforms were Web of Science and Google Scholar. Depending on the topic under investigation, a wide variety of search terms was used. The only difficulty encountered was the rather limited access to books published in the field of public policy. In several cases these books were not available through libraries, so they were only acquired when considered of utmost relevance.
» **Document analysis:** For all chapters, a document analysis was undertaken of so-called 'grey' literature on national and local implementation. Sources included legal acts, financial regulations, implementation reports of the Member States (to both national and EU authorities), and management plans. No software tools were used for text analysis. If a comparative analysis was required, the material was classified manually.
» **Interviews:** In total, 25 semi-structured interviews were held to gather information for the thesis. Prior to each interview a list of questions was developed (see Annex II, III). On the basis of recordings,[4] an interview report was developed and sent to the interviewed person for verification.
» **Statistical analysis:** Parts of the research data were analysed statistically, using either the statistical regression features in Excel (version 2016) or the statistical features in SPSS software (version 22). In the relevant chapters of this thesis, more information is provided on the details of the analysis.
» **On-line survey:** A part of the research was executed through an online survey. The choice of this method was primarily dictated by the number of countries and sites included in the review.

In Chapters 2 - 6 of this thesis the implementation of Natura 2000 in different Member States and Natura 2000 sites is described. What connects these chapters is that each offers a comparative analysis of policy implementation for Natura 2000 management in different Member States and/or Natura 2000 sites, which are considered to be 'cases' of different national or local implementation practices. Case study research often entails an intensive study of a **single unit** for the purpose of understanding a larger class of (similar) units (Gerring,

[4] Recordings were made upon verbal consent of the interviewed person.

2004). The 'cases' in this thesis are studied in different levels of detail. Two different research designs for case studies are used based on the temporal or spatial variation studied (Gerring, 2004). Temporal variation relates to the time period reviewed in the case (e.g. a specific day, year, or decade, or before or after the introduction of the Habitats Directive). Spatial variation relates to the spatial bounds of the unit studied (e.g. Member State, Natura 2000 site, political party, interest group, or person observed). Often units can be further subdivided into smaller units (within the unit of analysis). Based on the temporal and spatial variation reviewed, the research designs in this thesis were classified as follows:

» Cross-sectional time series. The comparison between Member States before and after the introduction of the Habitats Directive, with the Member State as the unit of analysis.
» Hierarchical design. A comparison between sites in different Member States, with the 'site' or the 'interest group' as the unit of analysis.

Table 1.1 provides an overview of the different types of cases that can occur and the research designs available based on a distinction in spatial and temporal variation. It also highlights the ones used for the various chapters in this study.

		No temporal variation		Temporal variation	
		Example		Example	
spatial variation	None (1 unit)	-	-	Case study design I	Change in one Member State over time
	Within -unit	Case study design II	Situation in Natura 2000 sites in one Member State	Case study design III	Change in Natura 2000 sites in one Member State over time
	Across -unit	Cross-sectional	Between Member States	**Time series cross sectional**	**Between Member States over time (Chapter 2; Chapter 3)**
	Across and within-unit	**Hierarchical**	**Between sites in different Member States (Chapter 4; Chapter 5; Chapter 6)**	Hierarchical time series	Between Natura 2000 sites in Member States over time

Table 1.1. Case study research designs (adapted from Gerring, 2004). Those employed in this study are indicated in bold.

Although case study research is a common method for policy analysis (Yin, 2013), the selection of cases remains an intricate aspect of comparative public policy analysis (Collier & Mahoney, 1996; Haverland, 2005; Yin, 2013). The challenge is avoiding selection bias. Different solutions have been proposed to avoid bias in case study research, such as

increasing the number of cases studied (Levi-Faur, 2004), the inclusion of contrasting cases (Collier & Mahoney, 1996; Haverland, 2005), counter factional reasoning (Haverland, 2005), and stratified sampling (Trost, 1986). In this thesis the main approach to avoid selection bias depended on the level reviewed. At Member State level, general knowledge was gathered on how the different Member States implemented Natura 2000 management, so a better selection could be made to ensure inclusion of contrasting cases for the issue under investigation. In addition, counter factional reasoning was applied. At site level this approach was impossible (as there are over 27,000 sites); therefore, the number of cases studied was increased, and a stratified sampling of sites was done to ensure variation based on the issue to be reviewed. In each of the chapters the rationale for the Member States and/or sites included in the research is described.

However, it is also fair to say that there were more mundane reasons for the selection of cases. These included the willingness of Member State governments and site-level stakeholders to participate in the research, the time available for the research, the access to information, and the familiarity of the research team with the language of the respective country.
The comparative analyses undertaken are presented in Chapters 2 - 6 of this thesis. In total, the study reviews the Natura 2000 implementation process in 15 Member States, 3 regions (i.e. below Member State level) and 132 Natura 2000 sites. Table 1.2 provides an overview of the Member States and their respective regions, and Figure 1.5 shows the Natura 2000 sites included in this thesis.

Chapter	Number and Member States/ regions included	Number of sites included
2	15 Member States: Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Latvia, Lithuania, Poland, Slovenia, Sweden, Netherlands, UK.	None
3	Three Member States: Finland, Hungary, Netherlands.	None
4	Two Member states: France and the Netherlands.	30 sites (15 French and 15 Dutch sites)
5	One Member State and two regions: Denmark, England (UK), Schleswig Holsteijn (Germany)	3 Natura 2000 sites in each Member State / region
6	Two Member States (France and the Netherlands) and two regions (Flanders and England).	89 Natura 2000 sites

Table 1.2. Overview of Member States and number of sites reviewed.

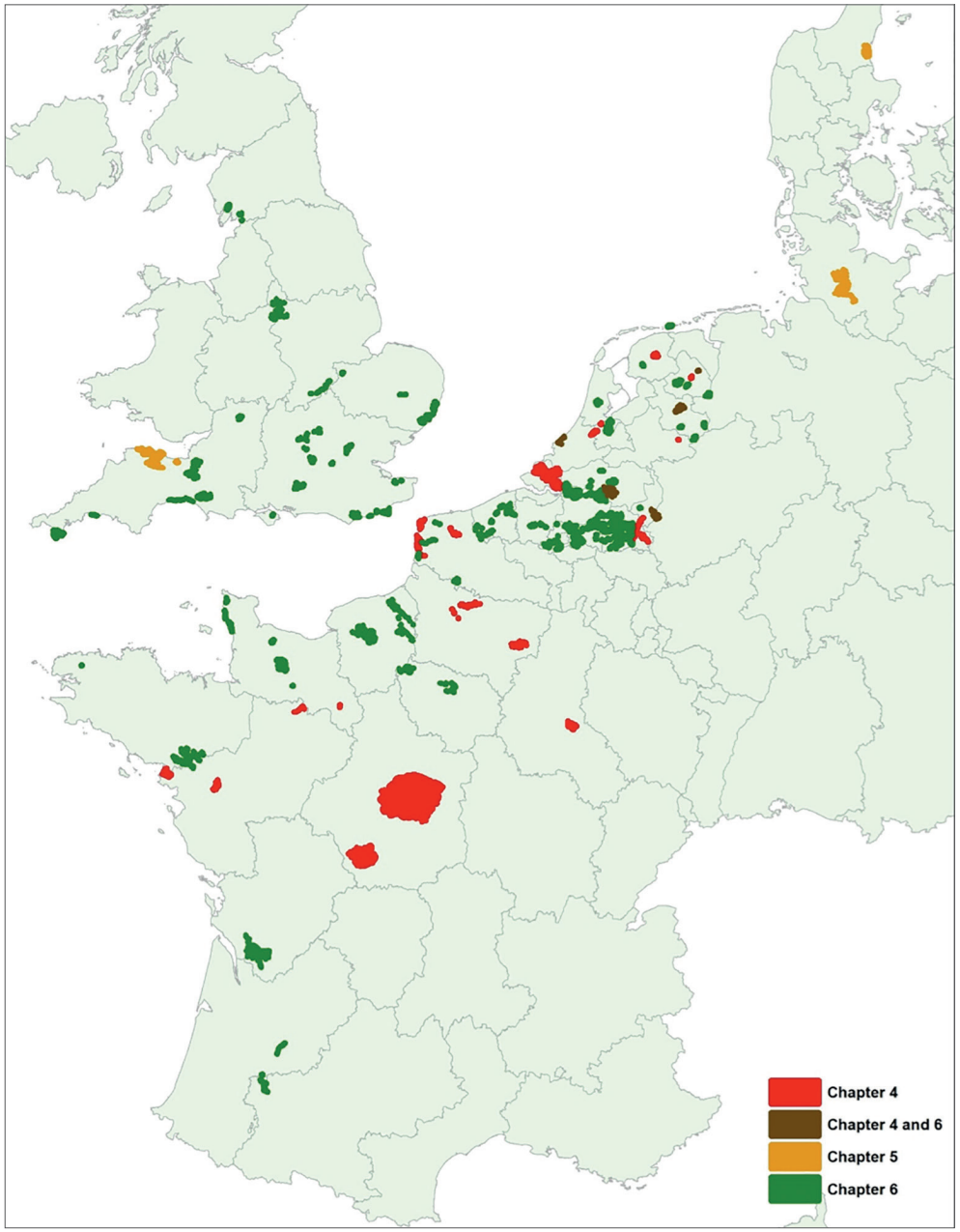

Figure 1.5. Overview of Natura 2000 sites reviewed in the respective chapters of this thesis. A list of all sites is included in Annex I of this thesis.

1.6 Reading guide

This thesis consists of seven chapters. Chapter 1 provides an overall introduction on the topic and research undertaken. Chapters 2 and 3 focus on Research Question 1, as they review the influence of the Habitats Directive on the national policy and the associated instrumentation of Member States for the management of Natura 2000 sites. Chapter 4 focusses on Research Question 2, as it reviews the influence of the national choice for a particular management planning system on the local implementation for 30 Natura 2000 sites in two Member States. Chapter 6 also concerns itself with Research Question 2 as it reviews the differences in local level stakeholders' perception in two Member States and two regions. Chapter 5 and Chapter 6 focus on Research Question 3, as they review the influence of increased societal involvement in Natura 2000 policy implementation and the associated instrumentation and evaluation. Figure 1.6 outlines the relation between the framework of this thesis, the research questions and the five succeeding chapters (2-6). Chapter 7 begins with a synthesis of the thesis based on the three research questions and a reflection on the research method and scientific contribution. It ends with the lessons learned for EU policy and how future political changes might affect Natura 2000.

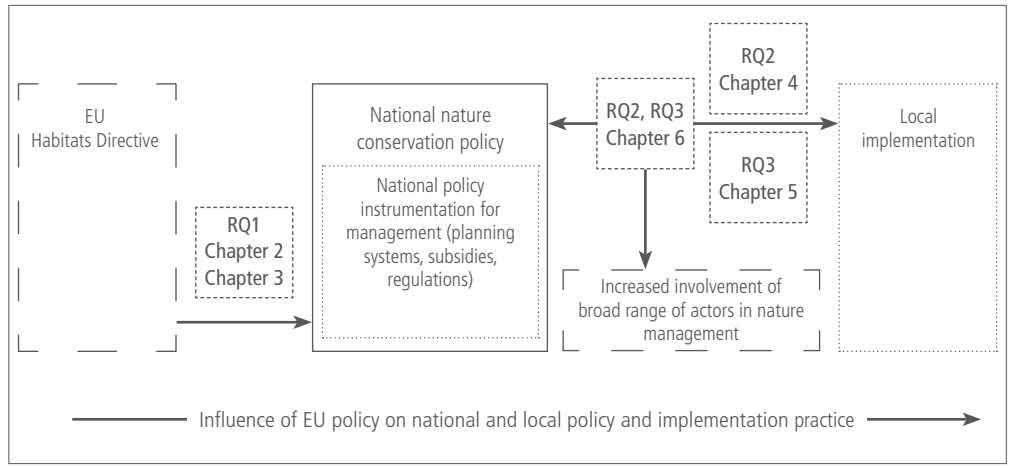

Figure 1.6. Overview of the relation between the research questions and chapters of this thesis.

Le Mercantour

France
Code: FR9301559/ FR9310035
Surface: 67.947/ 68.073 ha
10 habitats, 36 species

2. Following old paths or shaping new ones in Natura 2000 implementation? Mapping path dependency in instrument choice

This chapter has been published as:
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Following Old Paths or Shaping New Ones in Natura 2000 Implementation?
Mapping Path Dependency in Instrument Choice, Journal of Environmental Policy & Planning,
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Abstract

This chapter reviews the influence of two specific European Union (EU) laws, the Birds and Habitats Directives, on the choice of national policy instruments by Member States. Both Directives leave the choice for policy instruments to manage the sites designated under the Directives to the Member States. Using path dependency as a leading concept, the chapter analyses the continuity or changes in policy instruments due to the implementation of the Directives in 15 countries. This chapter shows that the tendency to use existing instruments to implement EU policy is limited, as in almost all countries new instruments were developed. Yet, states do tend to choose instruments from their predominant policy instrument mix and preferred implementation style to address the management requirements of the Directives. Additionally, in Central and Eastern European countries where the implementation of EU policy coincided with a process of transition to a market economy, new instruments were introduced outside the existing implementation style. The introduction of new policy instruments is the result of historical turns, domestic pressure and a shift to new modes of governance. National case studies are needed to shed more light on the interaction between EU policy and domestic factors during the process of instrument choice.

2.1 Introduction

As part of its ambitious goal to halt the loss of biodiversity the European Union (EU) developed the network of Natura 2000 sites, which at present covers approximately 18.4 % of the European territory (European Commission, 2014). After the phase of site designation all Member States are now in the challenging phase of organizing the management of the sites.

In order to derive lessons for future policy development it is important to consider how they address this challenge and whether they are using their existing planning, financial and regulatory instruments to manage the Natura 2000 sites, are adapting these or developing new ones. The requirement to designate Natura 2000 sites stems from two European Directives, the Birds Directive (79/409/EEC)[5] and the Habitats Directive (92/43/EEC). Contrary to some other directives, the two Directives do not prescribe the use of specific policy instruments. The Birds Directive only states that measures need to be taken without providing any guidance on which policy instruments to apply. The Habitats Directive suggests a wide array of instruments for implementation from which Member States can choose freely.

Available literature on the effect of EU policy on national policy suggests that Member States prefer to follow their existing national repertoire of institutional procedures and organizational forms (Kirk, Reeves, & Blackstock, 2007; Knill, 2001; Lenschow, Liefferink, & Veenman, 2005). It is not often that a policy choice is made that breaks with established rules, procedures and policy instruments. This phenomenon in public policy is referred to as 'path dependency' (Davis & North, 1971; Lipset & Rokkan, 1967; Pierson, 2000). However, descriptive studies on the implementation practice of Natura 2000 in EU Member States show that some countries have developed new policy instruments although there is no obligation to do so (Kruk et al., 2010). At first glance, this seems to contradict mainstream and empirically grounded theories explaining the influence of EU law on national administrations. Given the cost (in social, political or economic terms) associated with the development of new policy instruments, this behaviour would not be expected (Howlett & Rayner, 2006). Therefore, one may wonder whether the instrument choice made by these Member States is an exception to the 'path dependency rule', or that the majority of the Member States have indeed changed their policy instrumentation. Therefore the question this chapter addresses is whether Member States tend to use their existing instruments, that is, show path dependent behaviour when implementing the Birds and Habitats Directives. Based on the results of this study, more general conclusions on instrument choice by Member States under the influence of EU policy are formulated.

[5] In the Habitats Directive, the term 'Natura 2000' is used for the first time. It also encompasses the special protection areas under the Birds Directive.

In policy instrument choice, the monitoring and enforcement of policy instruments plays a role (Tosun, 2012). The expected level of compliance to new regulations as well as costs of enforcement might determine the choice for regulation versus other instruments. However, as this paper deals with the initial choice of governments for policy instruments, the issue of monitoring and enforcement is not elaborated further.

This chapter is structured as follows. After a presentation of the relevant theories, the key hypothesis for this chapter is presented. This chapter then tests this hypothesis through an analysis of policy instrument choices for the management of Natura 2000 sites in 15 Member States. Following the presentation of the results, the discussion puts the findings in a broader context of path dependency research.

2.2 Policy instrument choice, Europeanization and policy change

In order to develop a hypothesis about whether EU policy influences the choice of Member States at the level of policy instruments, we combine insights from three fields of research: studies on instrument choice, on policy change including path dependency and Europeanization studies. In so doing, this chapter takes a historic institutional viewpoint on policy instrument development. Policy instruments are defined as the tools at the disposal of the government to implement their policy objectives (Bemelmans-Videc & Rist, 1998; Howlett, 1991). However, policy instruments are part of a larger framework of established governance modes and policy regime logics (Howlett, 2009). The historical policy context has shaped the present policy instrument mix and will influence its further development. As such, this chapter pays less attention to sociological arguments explaining the selection process of policy instruments (Dolowitz & Marsh, 2000; Hall, 1993).

The literature describes a broad array of policy instruments and typologies (Bemelmans-Videc & Rist, 1998; Bressers & O'Toole, 1998; Gunningham, Grabosky, & Sinclair, 1998; Salamon, 2002) such as legal and regulatory instruments, economic and fiscal instruments as well as policy instruments based on information, communication or agreement (Lascoumes & Le Gales, 2007). One of the major challenges in assessing policy instrument change is that policy instruments are multifaceted. This has resulted in a multitude of typologies using different ordering principles (Salamon, 2002).

In this study a distinction is made between *individual instruments, types of instruments* and *policy instrument mix. Individual instruments* are detailed in a law or particular regulation, such as a subsidy, tax, planning system or certification standard. In the existing classifications, individual instruments are grouped in different *types* based on a particular analytical perspective. Each type consists of 'families' of individual instruments sharing similar characteristics. As a result, the variety within a type can still be high. Consequently, only major

changes of instruments will result in a shift of an instrument from one type to another type. We opted for the classification as presented by Vedung (1998). This typology distinguishes three types of instruments based on their coercive nature, being (1) legal and regulatory instruments, (2) economic instruments and (3) information instruments and communication-based instruments[6].

A *policy instrument mix* is a combination of individual policy instruments applied within a particular policy field, which may belong to different types of instruments. Existing instrument choice theories assume that administrators can choose from a wide variety of policy instruments to implement a specific policy and adapt them over time to improve policy implementation (Gunningham et al., 1998; Salamon, 2002). In practice, their choice is often limited by the historically determined policy context (Baldwin & Black, 2008; Gossum, Arts, & Verheyen, 2010; Howlett, 2009). Often, the choice for particular policy instruments follows more general governance patterns in a country such as the type of state-society relations, the level of state intervention or the importance attached to the law (Lenschow et al., 2005) Recently, much attention has been paid to agreement-based policy instruments. Several authors have suggested that these instruments result from a shift to new modes of governance (Eliadis, Hill, & Howlett, 2005; Jordan, Wurzel & Zito, 2005; Pierre, 2000; Salamon, 2002). Although the extent of the shift is debated, the shift itself has been generally acknowledged (Jordan et al., 2003; Kohler-Koch & Rittberger, 2006; Rhodes, 2007).

Besides generic national governance systems or governance modes, the socio-economic development also has been proposed to influence policy instrument choice, particularly in the field of the environment. Also in Europeanization literature the socio-economic development of Member States has been used to explain the response to EU policy (Holzinger, Knill, & Arts, 2008; Lenschow et al., 2005; Liefferink et al., 2009). Bulmer and Padgett (2005) provide another explanation by underlining the importance of policy transfer in the EU. States, which were Members of the EU when the Directive was drafted, were able to influence the EU policy to include or reflect their own policy goals and instrumentation, thus limiting the need to revise their instruments.

Over time, governments usually develop a preference for specific policy instruments and a specific policy mix to implement their policy (Bressers & O'Toole, 1998; Howlett, 2009; Jordan, Wurzel, & Zito, 2003). Howlett (2009) has introduced the term 'implementation style' to describe this process. 'An implementation style is usually composed of a combination, or mix, of substantive and procedural instruments, at minimum two' (Howlett, 2009: page 81). Despite this preference for a specific implementation style, changes to policy instruments may occur during the recurrent process of policy instrument selection. Hall (1993) defined different sorts of changes: at the level of settings, at the level of the type of instruments and

[6] Ringeling (2002) describes that 'new planning' instruments as developed in Western Europe have as their main objective to stimulate communication between the state, public sector and broader society.

at the level of the goals underlying the policy instruments. Changes at the level of settings usually refer to small incremental changes, for instance the maximum permissible concentration of a toxic substance. Changes regarding the type of instruments may for instance involve a shift from regulatory instruments to voluntary ones. Changes at the level of policy goals, finally, may impact both the level of settings as well as the type of instruments applied.

Based on Hall's definition of instrument change, the EU through its policy may influence settings, types of instruments or underlying goals. Although EU directives, according to the EU Treaty, set common goals and leave the choice of means to achieve them to the Member States, in practice this can also involve the prescription of certain policy instruments (Jordan & Adelle, 2012; Jordan, Liefferink & Fairbrass, 2004) and even settings. Furthermore, the EU may not set legal requirements but promote the use of particular policy instruments, such as market-based instruments or voluntary agreements (Jordan et al., 2003).

The influence of the EU on the policy instrument choice of Member States has not received much scholarly attention so far. The majority of the existing studies on the influence of EU law on the policies of the Member States have focused on the stage of formal transposition (Börzel, 2000; Falkner, Hartlapp, & Treib, 2007; Haverland & Romeijn, 2007; Mastenbroek, 2005; Treib, 2014). Only a few case studies for individual countries and for a limited number of policy fields on the practical side of implementation of EU-law exist (cf. Kirk et al., 2007; cf Knill & Tosun, 2009; Treib, 2014).

Nevertheless, Europeanization studies provide important insights on how Member States might respond to EU influence. In general, Member States prefer to follow their existing national repertoire of institutional procedures and organizational forms (Knill, 2001; Lenschow et al., 2005). In case of binding requirements, often Member States struggle to implement EU policy. Various explanations have been provided for this delay in implementation such as institutional misfit (Bailey, 2002; Börzel, 2000; Heritier et al., 2001; Knill & Lenschow, 1998; Liefferink & Jordan, 2005) domestic power struggles (Dimitrova & Steunenberg, 2000; Treib, 2003) or domestic norms, beliefs or attitudes (Falkner et al., 2007). Implementing a policy that requires breaking with established rules, procedures, policy instruments or ideology proves difficult.

Many of the explanations for the alleged lack of change provided in instrument choice literature and Europeanization literature are derived from historical institutionalism. Institutions, being the formal or informal rules, procedures, routines, norms and conventions, are often seen as relatively persistent features shaped by historical processes and events. This view has merged with arguments on the occurrence of path dependency in public policy (Pierson, 2000). In public policy research, path dependency is commonly used to describe a situation where the present policy choice is shaped or constrained by institutional paths that result from choices made in the past (Torfing, 2009). Following the 'punctuated equilibrium' model by Baumgartner and Jones (1993), policies are marked by periods of continuity in which path-dependent tendencies are dominant and periods of substantial policy change that occur as a result of particular events, such as catastrophes or revolutions. Proponents of path dependency in policies argue that institutions do not only distribute power unevenly across social groups but also play a major role in retaining this distribution and thus limit change (Hall & Taylor, 1996; Pierson, 2000).

In a recent review, Torfing (2009) highlighted several challenges that the concept of path dependency is facing in policy studies. Amongst others, Torfing (2009) points out the difficulty of finding coherence and stability in a policy path which in itself is already dynamic and heterogeneous. As most policies are implemented using a variety of policy instruments, this inevitably leads to a complex policy path with a multitude of instruments. So the question one should ask is not which path is followed, but which paths (in plural) are followed?

More recently, scholars have argued that institutional change might not only come about by abrupt change (as outlined in the punctuated equilibrium model) but due to an incremental process resulting in gradual change or transformation (Mahoney & Thelen, 2009; Streeck & Thelen, 2005). Such a gradual change follows from the observation that institutions are negotiated arrangements between different coalitions of actors and that, due to a process of continuous renegotiation, shifts in the balance of power may occur. Four broad models of gradual but nevertheless transformative change have been distinguished; displacement, layering, conversion and drift. Displacement is marked by the removal of existing rules and the introduction of new ones over a longer period. Layering occurs when new rules are introduced on top of or alongside existing ones. Conversion occurs when existing rules are interpreted differently due to their strategic redeployment. Drift happens when shifts in the environment lead to a change of the impact of existing rules. Which model of gradual change occurs depends amongst others on the political context and, in particular, the options it provides for actors to block or promote change (Mahoney & Thelen, 2009). Europeanization studies also underline the influence of domestic actors on the implementation process of EU policies and the opportunities domestic 'veto players' have to influence policy change (Dimitrova & Steunenberg, 2000; Treib, 2003). Policy change therefore is dependent on whether the political context allows actors to create sufficient domestic pressure to promote change.

So what can we conclude regarding the variables leading to path dependency in policy instrument choice? Based on the existing literature, the choice for particular instruments is determined by socio-economic development and overall patterns of governance. Path dependent behaviour can be expected in situations in which *historical turns,* for instance of an economic or political kind, are absent, prevalent institutions continue to affirm the existing power relations between involved actors and the political or economic context does not provide disadvantaged actors with opportunities to exert *domestic pressure* to change institutions in their favour. Stability in the existing power relations does not only concern the

relationship amongst different non-state actors, but the relationship between state and society too. Stability in the relationship between state and society may express itself at the level of the national governance systems or within a particular policy field. Specifically for policy instruments, this stability may express itself through the absence of policy instruments that mark a *shift towards new forms of governance*.

2.3 Path dependency and the influence of the EU on policy instruments

For policy instruments, path-dependent behaviour may become manifest at the three earlier identified levels: settings, types or goals. Member States may refrain from adapting the settings of their policy instruments to EU requirements or refrain from introducing policy instruments requested or promoted by the EU. They may also show a preference for a particular implementation style, whilst selecting policy instruments for implementation of EU policy. At the level of goals, they may refrain from adapting their policy to the goals set by the EU policy.

When focusing on instrument choice, an administration can make a number of choices when faced with the need to incorporate a new (EU) policy and no specific instrument is prescribed. Hypothetically, three different types of response can occur. *Firstly,* the administration can choose to use an existing instrument to address the new requirement ('follow the path'). Often, Member States have already developed policy instruments in the policy field to which the new EU policy applies. They may need to change the calibration levels or 'settings' of the instruments, but the instruments themselves remain the same (Hall, 1993). In this case path-dependent behaviour occurs at the level of individual instrument. *Secondly*, the administration can decide that an existing instrument is useful for implementing the new policy, but that it does not and cannot address all the requirements of the new policy. Therefore an additional instrument belonging to the same type, is required which is used alongside with an existing one ('broadening the path') (Howlett & Rayner, 2007; Jordan et al., 2003). This leads to an expansion of the number of individual policy instruments present in the policy instrument mix. Path-dependent behaviour does partly occur, as existing instruments and their settings are used, yet new policy instruments are added. *Finally*, an administration can decide that none of the available policy instruments is suitable for implementing the new EU policy and that a new instrument is warranted ('shaping a new path'). This new instrument might fit into the existing implementation style or constitute an entirely new type of instrument that can only be chosen because of an overall change in policy context (Hall, 1993). In this situation, no path-dependent behaviour at the level of policy instrument or setting occurs. When the new instrument belongs to the type of instruments usually employed by the government in question, then path-dependent behaviour at the level of policy mix and implementation style still occurs.

The development of new instruments alongside existing ones ('broadening the path') or on top of them ('shaping a new path') can be seen as a process of *layering* as defined by Streeck and Thelen (2005).

The general hypothesis underlying this study is that in the absence of legal requirements, Member States will prefer to use pre-existing individual instruments to implement a new EU policy. The development of new policy instruments is unlikely, due to the embedding of policy instruments in existing institutional context and the cost associated with the development of alternatives. Furthermore, in order to maximize the cost-effectiveness of implementation, governments will consider the appropriateness of all relevant pre-existing individual instruments (Howlett & Rayner, 2007). To phrase our hypothesis in path dependency terms: *In the absence of an EU obligation for the adoption of a particular policy instrument, Member States will prefer to follow their available instrumental paths.*

Based on the outcome of our study, we will review possible explanatory factors for the occurrence of path dependency - or path formation - in policy instrument choice, as presented in the previous section (e.g. socio-economic development, historical turns, domestic pressure and (new) modes of governance). Studies on the selection of policy instruments in Europeanization studies are increasingly relevant as 'new generation' environmental directives provide more freedom in policy instrument choice (Knill & Liefferink, 2007; Schout, Jordan, & Twena, 2010). The success of EU policy then largely depends on the choice of appropriate policy instruments by Member States (Jordan, 1999). This study, therefore, aims to unravel the influence of EU policy on the choice of policy instruments by Member States in the absence of a legal requirement, focusing on the implementation of Natura 2000.

2.4 Mapping path dependency in policy instruments: the case of managing the Natura 2000 network

Together the Birds Directive (79/409/EEC) and the Habitats Directive (92/43/EEC) form the cornerstone of European biodiversity policy. All Member States have transposed the requirements of both directives in their national laws. Besides changing national law, another obligation arising from the two Directives is the designation of Special Protection Areas (SPA) and Special Areas for Conservation (SAC), jointly referred to as Natura 2000 sites. In these sites Member States have to ensure that the necessary management measures are taken in order to keep the species and habitats for which the sites were designated in, or to restore them to a favourable conservation status.[7] The selection and designation of the sites is a process following clearly outlined criteria leaving little freedom for the interpretation of Member States. Member States that fail to designate enough sites are facing infringement procedures.

[7] Sites also need to be protected against the adverse effects of new plans and projects developed within or in the vicinity of the site. An assessment is obligatory in these cases. This aspect is excluded from the chapter.

Whereas the site selection and designation process itself is strictly regulated, the Directives grant Member States considerable freedom in how to arrange the necessary conservation measures within Natura 2000 sites. The text of the Habitats Directive provides the following guidance to Member States: *for special areas of conservation the Member States shall establish the necessary conservation measures involving, if need be, appropriate management plans specifically designed for the site or integrated into other development plans and appropriate statuary, administrative or contractual measures* (Art. 6.1).

For unravelling the Member States' choice of policy instruments for managing Natura 2000 sites, a period of almost 20 years needs to be reviewed. The Habitats Directive was signed in 1992, but compliance has severely lagged behind (European Environment Agency, 2005). In some Member States, in fact, the decision on policy instruments for arranging the management of the sites has still not been taken or is being reviewed. The situation was further complicated by the accession of new Member States. Since the adoption of the Habitats Directive, a further 16 Member States have joined the EU.

To assess the influence of the Birds and Habitats Directives on national policy instruments a comparison between the present policy instruments used to manage the Natura 2000 sites and policy instruments in place prior to the adoption of the Birds and Habitats Directives was made. Based on a literature review, an inventory was made of the various policy instruments used to arrange conservation measures for terrestrial[8] areas in the 15 Member States reviewed.[9] The inventory resulted in a grouping of policy instruments into three types[10] . The following three types of policy instruments to implement the necessary conservation measures for Natura 2000 were distinguished:

» *Regulations prescribing or forbidding certain management practices in protected areas*. All countries have prohibitions on the killing of Natura 2000 species or the destruction of Natura 2000 habitats. Only a few countries have also forbidden certain management practices that do not immediately lead to habitat destruction but will have adverse effects indirectly (in the short or long term). A good example is the Hungarian regulation on grassland management (Hungarian Government, 2007) (Type 1, legal and regulatory).

» *Subsidies*. Since the mid-1980s several Member States have developed subsidy schemes with private landowners to ensure that nature protection is taken into account in farming and forestry. As part of the 1992 reform of the Common Agricultural Policy (CAP) specific measures to protect the environment ('agri-environmental measures') became obligatory (Primdahl et al., 2003) (Type 2, economic).

[8] The instruments for marine areas sites were excluded, as the discussion on the designation and management of the marine sites is still ongoing in most EU Member States

[9] Luxembourg, Cyprus, Croatia, Malta, Bulgaria, Slovakia and Portugal have been excluded due to lack of information. Austria, Germany, Belgium, Italy and Spain were excluded due to their federal or semi-federal structure in which the decision on policy instruments for Natura 2000 management is allocated at the regional level. A review of these states would have to analyse the situation for each region. The UK was included as the devolution of Scotland and Wales occurred in 1998.

[10] The typology is based on the study of Vedung (1998)

» *Management planning*. Prior to Natura 2000 site designation all EU Member States already had a national system of protected areas. For many of these sites, a management planning system was already in place. There is a considerable overlap between the newly designated Natura 2000 sites and the existing national protected areas (Type 3, information/communication).

The inventory identified four other policy instruments which have the potential to arrange conservation measures for species and habitats, being water management plans, hunting plans, forestry management plans and voluntary measures (e.g. codes of conduct). After the first step of the assessment they were excluded although for different reasons. Water management plans were excluded as the EU Water Framework Directive (2000/60/EC) specifies that water management plans are obliged to consider the management requirements for Natura 2000. Neither the development of the plans nor the inclusion of Natura 2000 requirements is a national choice. The hunting plans, forest management plans and voluntary measures were excluded as the literature review showed that in only two of the reviewed countries[11] are these instruments independently used for attaining the Natura 2000 goals.

For all 15 Member States, through literature review and personal contacts (email and/or short interviews) with government officials of the Member States responsible for Natura 2000 implementation, an assessment was then made as to whether new policy instruments were introduced or whether pre-existing instruments were used for the management of Natura 2000. Based on this assessment, a path dependency score was assigned for the different types of policy instruments in each Member State.

For each type of policy instrument and each country a score was determined as follows:

» Score 1: 'Following the path': no new instrument(s) have been developed; hence, one uses the pre-existing instrument(s). This situation is considered fully path-dependent.

» Score 0.5: 'Broadening the path': in addition to pre-existing instrument(s), a similar type of instrument has been developed and the instruments are complementary (used next to each other, but nor replacing each other). This situation is regarded as partly path-dependent and partly path formation.

» Score 0.25 or Score 0: 'Shaping a new path': whilst reviewing the new policy instruments developed, we noticed two possible changes in policy instruments. The first change consists of the introduction of a new policy instrument in nature conservation policy *similar* to the instrument types already in use in the country under consideration, in the given policy field. The other change consists of an introduction of a policy instrument belonging to an

[11] In several countries Natura 2000 management plans, forestry plans and hunting plans apply to the same territory. In these cases, the forestry and hunting plans need to adhere to the management requirements as stipulated in the Natura 2000 management plans. In Slovenia this layering of plans does not occur and forest management plans and hunting plans are used directly to implement Natura 2000 management requirements (Bibic, 2008). In France a Natura 2000 Charter can be signed by private owners making them eligible for a tax exemption.

instrument type *not* yet in use in the country, in *the given* policy field. Both responses can be considered as forms of 'shaping a new path' but as the introduction of a different type of policy instrument not yet in use signals a change in the implementation *style*, we want to distinguish them analytically. Two different scores were, therefore, developed:

- »» Score 0.25: A new policy instrument belonging to the same type of policy instrument as those already in place is developed. As such, the instrument does not lead to a change in the implementation style. It is specifically targeted to the new policy goal and implemented on top of pre-existing ones. This situation is considered as path-formative for the individual instrument, but path-dependent for the implementation style.
- »» Score 0: No pre-existing instrument of this type was present in the country concerned, but it is newly developed. This situation is considered as path-formative both in terms of individual instrument as well as in terms of the implementation style.

» Score - : This instrument was not in use in the country nor is it introduced. In this situation, one cannot distinguish any form of path dependency.

Figure 2.1 presents a schematic overview of the assessment method.

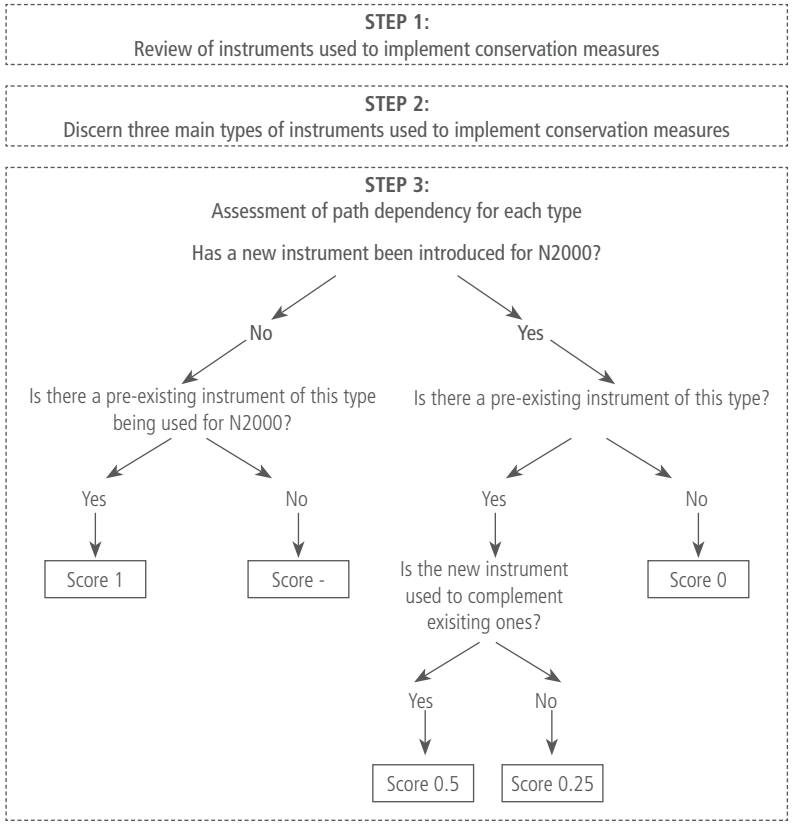

Figure 2.1. Assessment of path dependency in the use of policy instruments to manage Natura 2000 sites.

The scoring has been determined based on the countries' policy decision about which specific instrument to use. We acknowledge that the actual implementation practice might be different from the formal decision, or that in some countries implementation lags behind (EEB, 2011), yet we take the formal decision as our benchmark.

Based on the method described earlier, scores were calculated for the three types of instruments used to analyse how often the possible responses occur (Table 2.1). In Table 2.2, the scores are presented per country, thus indicating how path-dependent a country is in its use of pre-existing instruments. The total score for path dependency for each country was calculated by adding the individual scores of the types of instruments and dividing them by the number of assigned scores (number of times a score 0 or higher was given). Box 2.1 provides an example to explain the assignment of the scores as well as the calculation of the path dependency score for France.

Box 2.1: Example of the calculation of path dependency scores for France

Type 1: Management regulations. In France, no regulations for conservation measures existed nor were introduced because of Natura 2000. The score assigned is '-'.

Type 2: Subsidies. France already had pre-existing agri-environmental schemes for management in place which is now used to implement the required conservation measures for Natura 2000. In addition, new contracts for forest and other non-agricultural areas have been developed specifically targeting Natura 2000 sites (Eurosite, 2009; Journal official de la République Française, 2008; Snethlage et al., 2012). As new instruments have been introduced but pre-existing ones also remain in use the score assigned is 0.5.

Type 3: Management planning. Prior to Natura 2000 France already had a system of management plans for the various protected areas (Alphandéry & Fortier, 2001; Code de l'Environment, Decret nr. 2008-457). However in order to arrange the management of Natura 2000 sites France decided to develop a new system of management plans for all Natura 2000 sites called DOCOB. As a new planning system was introduced which was, however, similar to the pre-existing plans for protected areas in terms of the implementation style, the score assigned is 0.25.

The country path dependency score is calculated using the following formula
SUM (score type 1 + score type 2+ score type 3)/ COUNTIF (T1,T2,T3 ≥ 0).
Country score for France =(-+ 0.25+0.5) / 2 = 0.38.

2.5 Results

Table 2.1 presents the number of the reviewed Member States that show one of the three responses ('following the path', 'broadening the path or 'shaping a new path') for each type of policy instrument. The cells indicate the number of Member States that show a particular

response. The last row indicates the sum of the three possible responses for all three types (15 countries * 3 types of policy instruments = 45 potential responses[12]).

The analysis shows that all three responses do occur in practice (see Table 2.1):

- **Following the path:** In 10 out of the 45 potential responses (22%), existing policy instruments are used without much adaptation. This response occurs for all three types.
- **Broadening the path.** In 9 out of the 45 potential responses (20%), additional instruments are developed which are used parallel to pre-existing ones. This response occurs for two types of policy instruments: management plans and subsidies.
- **Shaping a new path**. In 5 out of the 45 potential responses (11 %), new instruments are introduced consistent with the implementation style (0.25). This response occurs in the type 'management planning'. Furthermore, in 10 out of the 45 potential responses, policy instruments are developed in countries outside the existing implementation style (score 0) (22%).

In 24 % of the potential responses no path dependency could be determined.

The results in Table 2.1 show that management plans and subsidies are used in all countries. Regulations are used to a very limited extent. At the end of this section we will further elaborate on possible explanations for the differences in responses.

	Used to implement Natura 2000 requirements				Not used
	Following the path	Broadening the path	Shaping a new path		No path
	Score 1	Score 0.5	Score 0.25	Score 0	Score -
1. Management regulations	2	0	0	2	11
2. Subsidies	4	5	0	6	0
3. Management planning	4	4	5	2	0
Total number of responses	10	9	5	10	11
Percentage (%)	22.2	20.0	11.1	22.2	24.4

Table 2.1. Overview of occurrence of the three path dependency responses.

Table 2.2 shows the scores of individual countries for overall path dependency in their use of pre-existing (types of) instruments. It shows two important trends.

[12] We refer to potential responses as it is also possible that an instrument was not in use in the country and it is also not introduced to implement Natura 2000 (score -). In this situation one cannot distinguish any form of path dependency.

Firstly, the analysis reveals that only 3 of the 15 countries show a predominance of path-dependent behaviour. The UK, Estonia and Slovenia have high average scores (> 0.65) indicating an overall tendency not to change their pre-existing instruments. The other 12 countries largely pick and choose from pre-existing instruments, combined with developing new ones, most of them similar to the types of instruments already in place. In fact, all countries with the exception of the UK develop either new (score 0.25, 0) or additional instruments (score 0.5). *Secondly*, the introduction of individual instruments belonging to new types (score 0) has occurred mostly in countries in Central and Eastern Europe.

The results presented in Table 2.1 and Table 2.2 allow a consideration of the extent to which countries are showing path-dependent behaviour in their choice of instruments. In fact, this depends on whether one considers the matter at the level of implementation *style* or at the level of *individual* instruments. The development of individual instruments belonging to new types of instruments is moderate to low (score 0 = 22 %). Hence, administrators show path dependent tendencies by choosing instruments which are already part of the pre-existing implementation style. Only some Central and Eastern Europe countries are (partly) deviating from the existing implementation style by introducing totally new economic instruments which they did not apply before.

Apparently, the requirement to adequately manage the Natura 2000 sites has not led to a change in the overall implementation style. This finding is in line with existing theories on instrument choice and path dependency underlining that in specific policy fields particular implementation styles persist and that change is often limited by decisions taken in the past (Baldwin & Black, 2008; Gossum et al., 2010; Howlett, 2009). However, if we look in more detail at the individual instruments, a different behaviour can be observed. Member States do develop new individual instruments for Natura 2000. Where pre-existing instruments were present, the two types of path formation occur frequently (20% broadening and 11 % shaping new paths) and together (31%) even dominate path-dependent behaviour (22% following the path). Apparently, in the reviewed countries, there were overriding reasons to change the individual instruments, despite associated costs.

We, therefore, conclude that the introduction of the Birds and Habitats Directives has, within the boundaries of existing implementation styles, initiated the development of new policy instruments by Member States. 'Path dependency' is *not* the overall trend.

Countries	*1. Management regulations*	*2. Subsidies*	*3. Management planning*	*4. Total score for path dependency*		*5. Region*	*6. Year of accession*	*7. GDP (EU average=100, Eurostat 2012)*	*8. Institutional structure (liberal-pluralist, statist or neo-corporatist) based on Lenschow et al (2005).*
UK	-	1	1	1.00		NWE	1973	109	Liberal-pluralist
Slovenia	-	0.5	1	0.75		CEE	2004	84	*Statist**
Estonia	1	0	1	0.67		CEE	2004	67	*Statist**
Czech republic	1	0	0.5	0.50		CEE	2004	80	*Statist**
Denmark	-	1	0.25	0.63		NWE	1973	125	Neo-corporatist
Finland	-	0.5	0.5	0.50		NWE	1995	114	Neo-corporatist
Netherlands	-	1	0.25	0.63		NWE	Founder	131	Neo-corporatist
Sweden	-	1	0.25	0.63		NWE	1995	127	Neo-corporatist
Latvia	0	0	1	0.33		CEE	2004	58	*Statist**
France	-	0.5	0.25	0.38		SWE	Founder	108	Statist
Greece	-	0.5	0	0.25		SWE	1981	79	Statist
Ireland	-	0.5	0	0.25		NWE	1973	129	Liberal-pluralist
Lithuania	-	0	0.5	0.25		CEE	2004	66	*Statist**
Hungary	0	0	0.5	0.17		CEE	2004	66	Statist
Poland	-	0	0.25	0.13		CEE	2004	64	Statist

Table 2.2. Overview of the path dependency scores for each country for a given type of policy instrument.

Notes: No.1 -3 : Score 1, no new instrument(s) have been developed; the pre-existing instrument has been used. Score 0.5, in addition to pre-existing instrument(s), a new one has been developed, both are used. Score 0.25, the pre-existing policy instrument is not used because a new one belonging to the same type, has been developed. Score 0, no pre-existing instrument of this type was available but a new one has been developed. Score -, No pre-existing instrument was present nor has a new one been developed. No. 5, CEE, Central and Eastern Europe; SWE, South Western Europe; NEW, North-Western Europe. No. 8; Statist *, some CEE countries were not included in the study of Lenschow et al (2005)- they are considered to be statist (situation: 1 December 2012).

2.6 Discussion

Firstly, we consider which possible explanations can be given for the observed path-shaping behaviour of individual Member States.

We assumed that policy instrument choice would be influenced by socio-economic development and governance modes. Given the patterns in Table 2.2, the choice for a particular policy instrument mix at the country level does not suggest a discernible relationship with the level of socio-economic development, the predominant governance mode of the reviewed countries or the length of EU membership. We expected that path-dependent behaviour would dominate in situations in which *historical turns (e.g. economic or political), strong domestic pressure* and/or *a shift to new modes of governance* are absent (see section 2). Vice versa, we may expect the occurrence of path formation at the level of policy instruments in the presence of one (or more) of these factors.

The radical political changes in Central and Eastern Europe in 1989 and the following transition of the former communist countries in Central and Eastern Europe to a market economy were historic events. The transition led to a major paradigm shift in policy, amongst other things with regard to reinstitution of landowner's rights. For many of those countries, the implementation of EU policy coincided with a reshaping of their national policies and institutions after the communist period (Brusis, 2002; Knill & Tosun, 2009; Sarapuu, 2011). This change in the overall policy context enabled the development of new types of policy instruments (e.g. economic instruments targeting private landowners) outside the existing policy style in Central and Eastern Europe. For Member States lacking a proper nature conservation policy, the joining of the EU may also have been a historic event and explain the occurrence of path formation. Examples are countries such as Greece and Ireland in which nature conservation policy was not well developed prior to the introduction of Natura 2000 (Apostolopoulou & Pantis, 2009).

Besides the occurrence of historical events, path formation in situations of apparent institutional stability might also be explained as a result of coalitions exerting considerable domestic pressure (Mahoney & Thelen, 2009; Streeck & Thelen, 2005). We argue that the two Directives increased the governmental influence in privately owned areas in several Member States. Private owners and businesses raised objections to this increased governmental control over their affairs. Attempts by actors to alter the delineation of sites designated or contest the interpretation of the protection regime of the Directive were unsuccessful due to the low level of discretion in interpretation of the two Directives. But the government did rely on the co-operation of these actors for arranging the management of the sites. Under the domestic pressure exerted by these actors, new policy instruments were developed in order to increase the room for interpretation at the site level or to allow financial compensation. This perspective on the influence of crucial actors on institutional change reflects some of the previous criticism of path dependency literature by underlining the need to pay more attention to agency (Sarigil, 2009).

Domestic pressure as the main catalyst for the development of a new instrument definitely holds, for instance, for France and the Netherlands where a coalition of actors emerged that lobbied for a new planning instrument to address the management challenge of Natura 2000 (Alphandéry & Fortier, 2001; Beunen, Van Assche, & Duineveld, 2013; Nederlandse overheid, 2003).

The path formation for contractual arrangements might also be explained by domestic pressure. Since the introduction of Natura 2000, landowners and managers in different European countries have asked for financial compensation for limitations to their business associated with the Natura 2000 designation (European Commision, 1998; Eurosite, 2009). In several EU countries, this has led to the development of subsidies that are only available for Natura 2000 areas (e.g. Hungary, Poland and France). In addition, environmental NGOs have lobbied for more funding for the management of Natura 2000 (Lee, 2003; WWF, 1999). Hence, domestic pressure to change instruments within the existing implementation style is a likely explanation in countries were the implementation of Natura 2000 created much resistance and where actors were able to exert considerable pressure.

A last explanation for path shaping is that a change in instruments for managing Natura 2000 sites might have been influenced by a shift towards *new modes of governance* in environmental protection, thus changing the relationship between the state and society. During the initial phase of Natura 2000 site designation in the late 1990s, a trend towards new modes of governance in nature conservation was still largely absent. The overall governance approach of the majority of national administrations was to limit the involvement of private and local actors in nature conservation policy (EEB, 2011; Rauschmayer, Van den Hove, & Koetz, 2009). Yet, since the designation, the call for new modes of governance has become apparent. The plea for the involvement of local actors representing different interests in site management became ever more vocal (CEPF, 2009; Court of Accounts of France, 2008; ECNC, 2010; European Commision, 1998) and several of the new instruments indeed aim at increasing the participation of local actors. A proactive choice for new instruments based on new governance insights within administrations does, therefore, in our view also explain path formation, for instance in countries such as France, the Netherlands and Denmark.

To sum up, we surmise that in many of the Western European countries, path formation resulted from a combination of domestic pressure and the shift to new modes of governance. However, in many of the Central and Eastern European countries, the historical turn from communism to a market economy and the subsequent joining of the EU seems the most likely cause for path formation. Overall, the changes in policy instrumentation are the results of gradual processes of change as well as of more abrupt ones associated with historical events. Additional cases studies on the instrument choice of individual governments will be required in order to find out exactly how these change processes work out in practice.

2.7 Conclusions

This study was undertaken to establish if countries, whilst implementing EU policy but in the absence of an EU obligation for particular policy instruments, show path-dependent behaviour in their choice of policy instruments. Overall, the tendency is the opposite of path-dependent behaviour, at least at the level of individual policy instruments. Most countries develop new instruments for site management, either within their national implementation style, or even outside their previously preferred style.

Yet, at the level of the implementation *style*, one could argue that path dependency *does* exist: most of the countries that actually develop new instruments do so in line with their pre-existing style of policy instrumentation, for instance by adding a new form of management planning to an old one. The Central and Eastern European countries in which the shift from a communist to a market economy also led to the development of market-based instruments outside their national implementation style are an exception to this.
Based on the outcomes of this study, we, therefore need to rephrase our initial hypothesis as follows: *In the absence of an EU obligation for a particular policy instrument, Member States* ***do not*** *necessarily prefer to follow the available instrumental paths,* ***but they prefer to follow the existing implementation style.*** Particularly in countries in which the nature conservation policy domain is well established, the implementation of EU policy triggers a process of instrument design within the existing implementation style. Over time, this process can result in gradual transformation of institutions through layering (Mahoney & Thelen, 2009; Streeck & Thelen, 2005). The occurrence of the process of layering of policy instruments in this particular situation, characterized by the high level of enforcement of the two EU Directives in combination with the potentially strong pressure by crucial actors such as site owners and users, is in line with the conditions required for layering suggested by Mahoney and Thelen (2009). In our case, it led to an expansion of the number of individual policy instruments present in the policy instrument mix, particularly by instruments that increase the influence of affected non-state actors. Similar behaviour by EU Member States can be expected during the implementation of other EU Directives and might be taken into account during the revision of existing directives or the developing of new ones. This behaviour might, therefore, be taken into account as a factor during the revision of existing, or the development of new directives.

Hortobagy

Hungary
Code: HUHN10002/ HUHN20002
Surface: 121.110 ha/ 105.170 ha
5 habitats, 90 species

3. Cause, catalyst or conjunction? The influence of the Habitats Directive on policy instrument choice in Member States

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Abstract

In the process of implementing EU policy, Member States sometimes introduce new policy instruments in cases where this is not obligatory. To better understand this phenomenon, this chapter reviews three cases in which new instruments emerged and develops a methodology to trace back the influence of EU Directives on instrument choice. The method is illustrated by a narrative of the emergence of new management planning instruments during the implementation of the EU- Habitats Directive in three EU Member States; Finland, Hungary and the Netherlands. Three key features of a policy instrument are defined, namely, its authoritative force, action content and governance design. These are used to measure the contribution of the Habitats Directive compared to other potential explanatory causes for the emergence of the new policy instrument. In all three reviewed countries a nested causal relationship between the Habitats Directive and the introduction of the new policy instrument is identified. Based on the relative contribution of the Habitats Directive to the emergence of the new instrument a distinction is made whether the Directive acted as a cause, catalyst or if conjunction occurred.

3.1 Introduction

Most countries struggle to implement European Union (EU) Directives (Mastenbroek, 2005) as they need to be put into operation in a setting in which existing policies, instruments, discourses and actor coalitions are already present (Goetz & Dyson, 2003). Overall governments are reluctant to change their policy instruments, although changes in policy instrumentation occur (Howlett, 2009; Salamon, 2002). However, unless there is a requirement by the EU, the introduction of new policy instruments might be caused by various factors which may be domestic, European or even global. So if new policy instruments emerge in the process of EU policy implementation in cases where there is no legal EU-requirement, how can we determine the relative contribution of the EU policy to their emergence? This chapter reviews the emergence of new policy instruments in a well developed policy field, the field of nature conservation, and proposes a method for assessing the contribution of EU policy to instrument choice.

Nature conservation policy in the EU Member States has a history dating back long before the creation of the European Union. Protected areas for nature had already been designated at the beginning of the 20th century (Mose & Weixlbaumer, 2007). The requirement of the Habitats Directive (1992) to designate protected areas, called Natura 2000 sites, was already part of the nature conservation policy of many of its Member States. Furthermore the development of management plans is a widely applied approach for the management of protected areas (Hockings, 2003). It is therefore intriguing that at least 10 Member States have decided to develop new management planning instruments for Natura 2000 sites, although no formal obligation to do so exists (Bouwma et al., 2016); particularly because the drafting of these management plans requires considerable efforts from the government as well as stakeholders. This raises the question: why did the implementation of this particular EU Directive lead to the emergence of new policy instruments in several Member States, in the absence of a legal obligation, and whether this can be attributed to the Habitats Directive?

The aim of this paper is twofold. Firstly, an analytic aim of the research is to determine whether there is a relationship between the introduction of the new policy instrument and the Habitats Directive and, if so, whether this is a causal relationship. As the Habitats Directive does not prescribe the use of a particular instrument no simple direct cause-and-effect relationship exists. This brings us to the second and more theoretical aim of the chapter; in order to assess the nature of the relationship a method was devised to relate the new instrument to different developments occurring in the policy field.

Based on our analysis we will draw different conclusions about the type of causal relationships existing between the emergence of the instrument and the Habitats Directive. Depending on the relative influence of the Habitats Directive, we distinguish three different types of causal relationships; **cause, catalyst and conjunction**. If the new instrument is

the immediate result of changes in the national policy domain due to the Habitats Directive, the latter is considered the main cause. If the new instrument is shaped by ongoing processes at the domestic level which were strengthened by the Directive, the latter is acting as a catalyst. In case the instrument is the result of two or more interrelated causes, one of which was the Directive we refer to conjunction in this third situation. We conclude the chapter with more generic conclusions regarding the circumstance under which Member States, in the absence of a EU obligation, nevertheless feel compelled to develop new instruments whilst implementing EU policy.

The chapter follows an approach called historical narrative - a method regularly applied to shed light on causal relationships in policy research (Mahoney, 1999). It presents a description of the policy context in which new instruments were introduced in three Member States (Finland, Hungary and the Netherlands). Section 2 presents the method developed to determine causality from causality-theory and policy instrument theory. Section 3 describes the criteria for country selection and the research approach. Section 4 provides a short description of the Habitats Directive and presents the narrative and conclusions in the three selected counties. In section 5 we reflect on the implications of our findings for the existing theories on the influence of EU on policy instruments in its Member States.

3.2 Determining cause and outcome in policy instrument change

Causal relationships

Scholars from a wide range of different disciplines have written about the complexities involved in determining causal relationships. In its simplest interpretation, causality relates to a situation in which event A causes B and event B does not occur without event A. A distinction is made between a 'necessary' condition which is a condition that must be present for the event to occur and a 'sufficient' condition or conditions that will produce the event. In a probabilistic interpretation, a factor is seen as a cause if its presence increases the likelihood of an outcome (Gerring 2005). In policy research however, there is often a sequence of events and processes, leading to a complex situation in which many causal relations exist and interdependencies occur, so we have to deal with 'complex causality'. The challenge is to identify which causes are necessary and sufficient conditions in situations of complex causality (Steinberg, 2007).

In instrument choice literature different causes for the emergence of new policy instruments have been suggested; from learning processes of involved actors (Hall, 1993), struggles between involved actors (Sabatier, 1998), changes in governance modes and policy regime logics (Hall, 1993; Howlett, 2009) and the emergence of governance networks (Bressers & O'Toole, 1998). In respect to the EU policy creating the conditions for instrument change,

three types of EU-influences have been identified in literature, namely, institutional compliance, change in domestic opportunity structures and impact on beliefs and expectations (Knill, 2001; Knill & Lehmkuhl, 2002; Treib, 2014). Institutional compliance is used to indicate the process of adjusting the EU Member States legal and administrative procedures to EU requirements, for instance the transposition of Directives or the obligation to introduce a particular policy instrument. The EU can also more indirectly influence the distribution of power and resources between domestic actors by supporting particular organisations, promoting particular instruments or products. The impact of the EU on beliefs and expectations might occur as some policies promote a set of European values, such as a healthy environment, or frame problems in a particular manner (Knill & Lehmkuhl, 2002).

In the case under consideration, there is no simple direct cause-and-outcome relationship, as the Habitats Directive does not prescribe the use of a particular management instrument (see section 5). We therefore need to assess whether the changes the Habitats Directive brought to the national policy arrangements were sufficient to lead to the introduction of the new policy instrument, or whether other causes also contributed to the creation of the required conditions. Steinberg (2007) describes various types of causal relationships occurring in situations in which indiscriminate pluralism occurs. The case we are reviewing is considered as a nested causation. In such a situation, one or more events (A1-Ax) are necessary for event B to occur, which in turn is necessary for event C to occur. We distinguish two different types of nested causations; single nested causation and compound nested causation. In the first instance, there is one constituent cause which acts as a necessary and sufficient condition for another necessary cause which leads to the outcome. In the second instance, there are several unrelated necessary constituent causes which together act as a set of sufficient conditions for another necessary cause or set of causes to produce the outcome (see Figure 3.1). Nested causation therefore differs fundamentally from situations in which a dependent variable is predicted and accounted for by the preceding independent variable.

A particular difficulty in determining cause-outcome relations in policy research is that often only a few cases for research exist and statistical methods are therefore either not applicable or have a limited application (Mahoney, 2000; Steinberg, 2007). In his review of different methods for macro causal analysis, Mahoney (1999) argues that '*narrative can be a useful tool for assessing causality in situations where temporal sequencing, particular events, and path dependence must be taken into account'*. Because temporal sequencing, particular events and path dependency (Bouwma et al., 2016) are likely to have played a major role in the cases under consideration, we present a narrative account of the developments which took place prior to the emergence of the new instrument. In order to increase the explanatory power of our narrative, we combine two existing approaches applied in policy research namely the *outcome based causal assessment approach* (Steinberg, 2007) and the *policy arrangement approach* (Arts & Leroy, 2006).

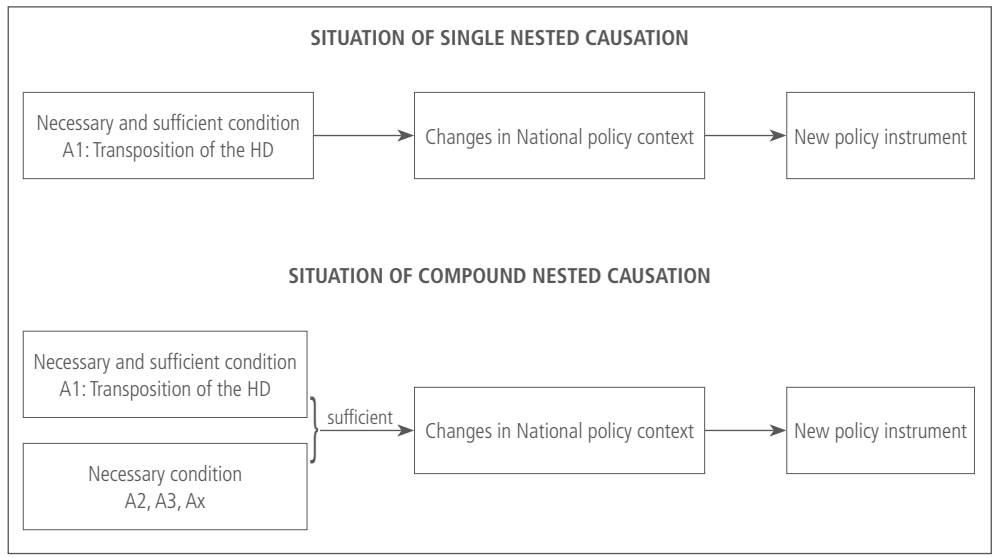

Figure 3.1. Different types of causal relationships between the introduction of the Habitats Directive and the new policy instrument.

Outcome based causal assessment

In an outcome-based causal assessment, one constructs a metric with respect to the outcome and analyses how far one or another antecedent is responsible for the outcome (Steinberg, 2007). A metric is a system or standard of measurement. In the case of policy instruments, we have to develop a metric that allows us to determine how the new instrument differs from those already in place. We therefore have to identify the key features of the instrument. After describing the key features, we can establish to which extent they reflect the changes in the national policy context and, consequently, which events were the causes of these changes in the policy context.

The existing literature on instruments enables us to identify the key features of a policy instrument. A policy instrument is developed by the government in order to influence the behaviour of a specific actor (Bemelmans-Videc & Rist, 1998; Salamon, 2002). It requires the actor to undertake or to refrain from a certain action. Each instrument therefore has a certain action content. In case of compliance, the actor might receive benefits, in case of non-compliance governmental sanctions may follow. Each policy instrument therefore has a certain authoritative force. Important key features of policy instruments are therefore the action content and authoritative force (Vedung, 1998).

The definition of policy instruments which is put forward by Vedung (1998) is formulated from a government dominated perspective which was prevalent in much of the early literature on policy instruments. This perspective was increasingly challenged under the influence

of the governance debate (Kjaer, 2004; Rhodes, 1997). A range of 'new' policy instruments emerged that were designed and implemented in close co-operation between the government and stakeholders (Jordan et al., 2003; Salamon, 2002). So besides authoritative force and action content, another essential third key feature of the instrument is it's governance design. The governance design describes which parties are involved in the development, approval, implementation and enforcement of a particular policy instrument. The three key features used in our analysis do not embody all aspects of instruments as distinguished in available typologies (for an overview see Salamon, 2002). But for the analytic scope of this paper they enable us to distinguish change between relatively comparable instruments in contrast to other aspects proposed, whose primary purpose is to categorise very different tools.

Based on the three key features, i.e. action content, authoritative force and governance design, we can characterise the new instruments and asses how they differ from their predecessors. The next step to assess causality is to link the key-features of the instrument to the changes, both organisational as well as the content ('substance'), in the policy domain before and after the introduction of the Habitats Directive. The policy arrangement approach was selected in order to describe the changes as the approach takes into account both the organisational as well as substance side of the policy domain.

The policy arrangement approach

A policy arrangement refers to the temporary stabilisation of the organisation and substance of a policy domain, at a specific level of policy making (Arts & Leroy, 2006). Change of a policy arrangement can occur due to policy initiatives (such as the Habitats Directive), socio-political trends, shock events, changes in adjacent arrangement (e.g. forestry or agriculture) and policy entrepreneurs (Arnouts, 2010). The policy arrangement approach analytically distinguishes four dimensions, i.e. rules, discourse, actors and resources/power. The rules dimensions refers to the formal rules embedded in legislation and official procedures. It also includes informal rules, norms or shared understanding, which are part of everyday practice. In this chapter we will focus on the formal rules. The discourse dimension reviews the ideas, concept and narratives which are prevalent in a specific policy domain. The discourse dimension relates both to general ideas about the relation between the state, market and society as well as the concrete problem at stake. The actor dimensions reviews which actors are involved in the specific policy field. What are their roles and responsibilities and how do they interact? The power/resources dimension relates to resources available to the various actors and how this influences their position of power in respect to each other. In this chapter this dimension particularly reviews the financial resources. Although four dimensions are distinguished, in reality they are closely interrelated and interdependent (Liefferink, 2006).

Method for causal assessment of policy instrument emergence

The method to assess the relative contribution of the Habitats Directive in relation to the emergence of new policy instruments consists of the following consecutive steps:

Step 1: Determine the change in key features. By comparing the action content, authoritative force and governance design of the new instrument with the ones in place, we can determine the extent to which the instruments have changed.

Step 2: Asses how these modified key features are related to the changes in the national policy arrangement. Which changes in the four dimensions of the national policy arrangement occurred and have shaped the new instrument?

Step 3: Assess the causes of the changes in the national policy arrangement. How much is the transposition of the Habitats Directive responsible for the change in the four dimensions of the policy arrangement or can we discern other causes?

In order to facilitate drawing conclusions from our narrative, we will schematically map the relationships between the key features of the new policy instrument, the relevant change in the four dimensions of the national policy arrangement and the Habitats Directive (Figure 3.2-3.5). Based on the key features of the instrument introduced, we will draw different conclusions about the type of relationship existing between the emergence of the instrument and the transposition of the Habitats Directive. If the key features of the new instrument were decisively impacted by the changes in the national policy domain due to the Habitats Directive, the Habitats Directive is considered as the main **cause**. In this case, no other events could have led to the introduction of an instrument with such a character (counterfactual reasoning). If the key features of the new instrument were shaped by ongoing processes at the domestic level but which were strengthened by the Directive, we consider that the Directive is acting as a **catalyst**. The national domestic process and the EU process are independent and unrelated necessary conditions. Counterfactual reasoning leads to the conclusion that an instrument with such a character might have been introduced, even in the absence of the Habitats Directive.

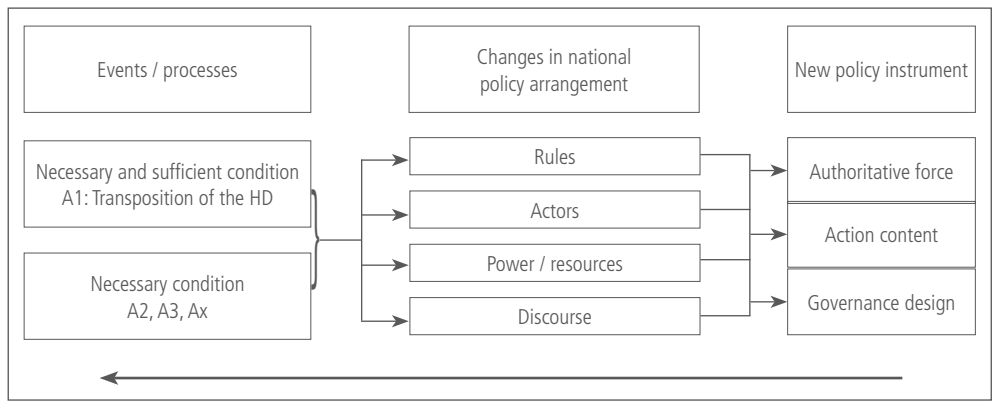

Figure 3.2. Outcome based assessment of the possible causal relationships between the new instrument, the changes in the national policy arrangement and introduction of Habitats Directive (arrow from right to left).

A situation can also occur in which there are two or more causes which are necessary conditions but which are not independent from each other but are interrelated. We refer to a situation in which the Habitats Directive together with an interrelated other cause is a necessary condition, as **conjunction**.

3.3 Country selection and research approach

In comparative case studies of the impact of EU policies among EU States, one of the most difficult choices is the selection of cases (Haverland, 2005). As we were interested in the circumstances in which change in management planning instruments occurred, the first of the selection criteria was whether the Member States[13] introduced **new instruments** for the management planning of Natura 2000 sites (Bouwma et al., 2016). The second criterion was **time of accession**. Due to the expansion of the EU, some Member States were involved in the drafting and approval of the Habitats Directive. This provided them with the possibility of uploading their own policy goals and instrumentation to EU policy (Bulmer & Padgett, 2005). Other countries joining after the Habitats Directive came into force were faced with implementing the directive as it stood. Between 1992 and 2004 the EU expanded slowly and only three countries joined, i.e. Finland, Austria and Sweden. In 2004 the accession of 10 Member States led to a major extension, the majority of these were from Central and Eastern Europe (CEE) (8 out of 10). The CEE states were facing particular implementation issues due to the transformation from a communist state and the strict deadlines set for transposition of EU legislation in order to accede (Hille & Knill, 2006). Another criterion for selecting among the candidates was based on their **geopolitical situation** in Europe. The Netherlands was chosen as one of the founding members and promotor of the Habitats Directive in 1992 (Bennett & Ligthart, 2001). Finland, as one of the Member States joining between 1992-2004, in which the Habitats Directive led to considerable implementation difficulties (National Audit Office of Finland, 2007). Finally, from the CEE accession states Hungary was selected as the Member State representing this group, since it generally performs well in implementing EU policy (Hille & Knill, 2006).

The narrative describing the history of management planning in the respective countries was reconstructed based on available literature and semi-structured interviews. In each of the countries, interviews were held with staff of the Ministry responsible for implementation of the Habitats Directive, (state) organisation responsible for management of conservation areas, and a researcher or representatives of Non-Governmental Organisations (NGO) (10 interviews in total). Several of the respondents had been involved in the particular field for a long time and were therefore able to provide a detailed account of the events. The interview

[13] The following countries introduced new management planning instruments. Members prior to 1992: Netherlands, France, Denmark, Ireland, Greece.
Member after 1992: Finland, Sweden, Czech republic, Lithuania, Hungary, Poland.

focussed on changes they had perceived in the management of protected areas and the policy domain in general following the introduction of the Habitats Directive. After a short introduction of this, the following section presents the change in the management planning instrument in each of the selected countries, followed by a description of the changes in the four dimensions of the national policy arrangement due to the Habitats Directive and other events.

3.4 Country case description

3.4.1 Introduction

The Habitats Directive is a legal act of the European Union which needs to be transposed by all Member States into their national legislation. The aim of the Habitats Directive is 'to contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora'. The Directive stipulates that Member States should legally protect species listed and designate special areas of conservation for species and habitats which are listed in the various Annexes of the Directives.[14] These sites, in combination with sites designated under the Birds Directive (1979), are called Natura 2000 sites and collectively form the Natura 2000 network. Member States need to ensure that necessary conservation measures are taken in the sites and should avoid activities that lead to the deterioration of natural habitats and the habitats of designated species. In order to ensure that conservation measures are taken, considerable freedom is given to Member States to select their own policy instrumentation (Article 6). The Habitats Directive does not specify which policy instruments should be used nor that public consultation is required. Although the instrument choice to manage the Natura 2000 sites is up to the Member States they should ensure that the conservation status of the species and habitats in the sites does not deteriorate by undertaking the necessary conservation measures and avoidance of damaging activities.

The following sections describe the cases. Table 3.1 and Table 3.2 provide a comparative overview of the cases summarising the changes in policy instruments and the impact of the Habitats Directive on the respective policy arrangements.

	Finland	**Hungary**	**Netherlands**
Authoritative force	Similar	Decreased	Increased
Governance design	Targeting private owners	Targeting private owners	Targeting all stakeholders
Action content	Slightly broadened	Similar	Broadened

Table 3.1. Comparison of changes in management planning instrument.

[14] Habitat types and species for which sites need to be designated are listed in Annex I and II.

	Finland **Catalyst**	**Hungary** **Concurrence**	**Netherlands** **Cause**
Adaptation pressure	Low	Moderate	High
Rules	No major legislative change: similar regime. 2% increase in protected area	Moderate legislative change: dual system, 62% increase in protected area	Major legislative change: stricter regime, 80 % increase in protected area
Actors	Increased awareness amongst private owners due to N2000 notification	Increase in private ownership of protected areas	Involvement of new actors from various economic sectors
Discourse	Need for intervention management; new role of private owners in conservation	Acknowledgement for financial compensation of private owners	Increased attention for impact of conservation on economic sectors
Resources	LIFE funding	LIFE funding	LIFE funding

Table 3.2. Comparison of changes in national policy arrangement due to the Habitats Directive.

3.4.2 Finland

Change in management planning instrument

The history of management planning of state owned land began in 1978, with the development of facultative plans for National Parks (Heinonen, 2007; Pertulla, 2006) By the beginning of the nineties, this facultative planning system for National Parks was well developed. For other state owned conservation areas, no systematic management planning process was in place (Eidsvik & Bibelriether, 1994). In 1996, a new nature conservation act was adopted which transposed the requirement of the Habitats Directives into Finnish law. This law included an obligatory requirement to draft management plans for National Parks, thus providing a statutory basis for a well-established practice. For other areas (e.g. strict nature reserve and other nature reserves) the law provides the option to develop management plans ('facultative system').

The discussion about changes required to Finnish management planning instruments for Natura 2000 sites was an internal governmental affair. In 2000, a working group was established to review the management requirements for Natura 2000 sites (Ministry of the Environment, 2002). The working group concluded that the conservation values of smaller reserves in particular might be at risk given the high land use intensity in and around these sites and the absence of management plans. The working group proposed two actions which were implemented. This entailed, firstly, a review of all existing management plans and, if required, updating them to incorporate the Natura 2000 requirements. Secondly, it included a threats assessment for Natura 2000 sites without a management plan and, in case of threat, developing simple operational management plans for the sites[15]. The Regional Environmental

[15] Since 2014 this plan can also be a Natura 2000 Site Condition Assessment

Centres became responsible for developing most of the plans for privately owned land and Metsähallitus for state owned land (Ministry of the Environment, 2002). As prior to 2000, there had been neither a legal requirement nor an established practice to develop management plans for privately owned conservation areas, this proposal led to the development of a facultative management planning instrument for privately owned conservation areas. For state owned areas, it accelerated the process of developing facultative management plans, especially for small reserves.

The management planning system introduced since 2000, shows changes in two key features compared to the pre-existing instrument. Most importantly, the governance design of the instrument changed as new groups of actors became involved, namely, private owners and businesses. The plans are developed in consultation between owners, users and the government. Its action content altered slightly, as previously the instrument had focussed on reducing human influences on the site, while the new instrument also considers 'conservation measures' to be taken. Its authoritative force showed little change as just like the pre-existing plan no legal provisions exist to enforce the plan that go beyond the legal restrictions laid down in the Nature Conservation Act.

Changes in national policy arrangement

Overall, no major changes occurred to the rules for management of conservation areas between the two periods.[16] The revision of the Nature Conservation Act in 1996 only led to minor changes as the previous Act (1923/71) already provided the possibility for restricting various damaging activities in conservation areas. The adaptation pressure to comply with the two Directives was therefore low. A requirement for consultation of affected parties by national conservation programs was included. The Finnish approach to extension of the conservation area network was purchase driven. Private landowners could exchange their land, sell it or receive appropriate compensation in case they wanted to retain ownership. Since 1978 national conservation programs have been in operation (Heinonen, 2007). Due to the successful execution of these programs, the area established in private ownership increased significantly after 1995 (Heinonen, 2007; Paloniemi et al., 2012). The requirement to designate Natura 2000 sites increased the area already intended for designation under national programs by only 2%. Nevertheless, the official announcement to designate Natura 2000 sites created a strong response instigating changes in the discourse and actor dimensions. Prior to the announcement private owners in general were unaware that their land had been earmarked for national designation, as before 2007 no statutory obligation for consultation existed (National Audit Office of Finland, 2007). Private landowners fiercely opposed the designation of their land. It resulted in the largest legal complaint procedure in Finnish history. But

[16] The formal rules for management of conservation areas vary, depending on the Act establishing the area. Although at least 5 Acts stipulate the rules, only the Nature Conservation Act was revised in the reviewed period, this section limit itself to discussing this revision.

despite the opposition no revision to the rules applicable to conservation areas were made. During the reviewed period, the dominant nature conservation discourse based on non or minimum intervention was enhanced by insights in relation to the need for human intervention to ensure conservation. The Finnish natural environment which is dominated by forests, lakes and mires led to a nature conservation philosophy that relied on reducing damaging human activities and non or minimum intervention principles for management: 'In most of our sites the management that is required is to keep the areas untouched[17]'. In the middle of the nineties, however, the awareness of the need to restore nature became an issue in Finnish conservation (Kuuluvainen et al., 2002). This led to the implementation of various large scale restoration programs focussing on mires and forests at the end of the nineties, and a discourse in the forestry sector developed about how foresters could voluntarily contribute to nature conservation. Until that time, the non or minimum intervention principles underlying nature conservation had been in stark contrast with the utilisation principles underlying Finnish forestry, hindering co-operation between the two sectors (Primmer et al., 2013).

Comparing the two periods, a gradual shift in the actor dimension can be noted. Private landowners, especially foresters become more involved in biodiversity protection in and outside of conservation areas. The Nature Conservation Act of 1996 stipulated the need to inform affected parties. Gradually a broader range of stakeholders has become involved in the management of state owned areas, as a consequence of the guidelines for the involvement of stakeholders in planning process of state owned land (Loikkanen, Simojoki, & Wallenius, 1999). In the same year, the Act of Land Use & Building (1999) and the Environment Impact Assessment Procedure (1999) set out new procedures for the involvement of stakeholders in planning processes in Finland.

With regard to the resources dimension, there was a gradual increase of national resources allocated to both state and private landowners over the entire period (Heinonen, 2007). Prior to 1996 some funding was allocated to the national programme to extend the protected area system, after 1996 several funding programs were introduced that increased funding to fulfil both national as well as EU obligations. Membership of the EU complemented national resources, as Finland has been successful in using the European Commission (EC) LIFE programme in particular for restoration projects.

[17] Interview Finnish official, 2013

Relationship between changes in the policy arrangement and the management instrument

Our narrative shows that the new management planning system that was introduced resulted from changes in the national policy arrangement due to the transposition of the Directive as well as several ongoing domestic processes. The extension of the protected area network and the associated increase in actors was a consequence of a process set in motion long before the implementation of the Habitats Directive. The discourse on active management embedded in the Habitats Directive intermingled with discourses which were developing simultaneously at the national level. Given the increase in privately owned nature reserves due to the national program, it is likely that the Finnish government might have introduced a management planning system for private areas in the longer run in order to manage its many smaller privately owned reserves. We therefore conclude that the Habitats Directive acted as a catalyst for the ongoing processes in Finland.

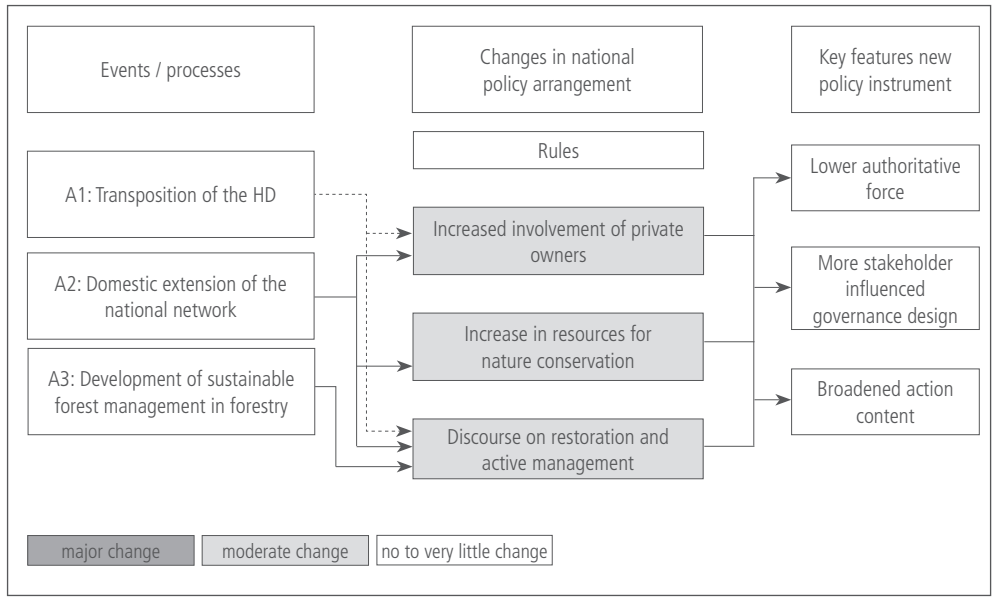

Figure 3.3. Causal relationships between the Habitats Directive, the national policy arrangement and key features of the new policy instrument, in Finland.

3.4.3 Hungary

Change in management planning instrument

Since the Act on Nature Conservation (1 January 1997), the preparation of a management plan has been compulsory for all nationally protected areas and their prescriptions are binding (Art. 36). In the following years, management plans have been developed for all National

Parks, and to a lesser extent, for other conservation areas (Johnson, Duncan, & Oldenkamp, 1998). In 2001, a decree was published detailing the required content of the management plans, prescribing an elaborate process of consultation and official approval (30/2001.XII.28). The discussion on a new management planning instrument for Natura 2000 was mostly an internal government discussion and, to a lesser extent, representatives from research and NGO. Several reasons for introducing the new system of Natura 2000 maintenance plans can be discerned. First, many Natura 2000 sites did not fall under the existing planning system (Ministry of Environment & Water, undated). Second, the maintenance plans provide clarity on the type of conservation measures that can be subsidised, specifically for private owners (Ministry of Agriculture, 2009). Thirdly, the negative experiences with the existing management planning process, in particular the process of drafting and official approval of these plans, was time-consuming due to extensive consultation procedure (pers med).

The new instrument was introduced in the 2008 amendment of the Government Decree (Art. 4.3 of Decree 275/2004 X8). The amendment provides the option to develop facultative non-binding management plans for Natura 2000 sites, the 'Natura 2000 maintenance plans'.

The management planning system introduced in 2008, shows changes in two key features compared to the pre-existing instrument for nationally protected areas. Most importantly, the authoritative force of the instrument differs, since the focus is on voluntary conservation measures and the plan in not legally binding. Furthermore, the governance design of the instrument differs as the only requirement is a consultation with involved actors and there is no procedure for approval. Its action content did not alter much, although it is focussed on Natura 2000 species and habitats and not on nationally protected features (Ministry of Agriculture, 2009).

Changes in the national policy arrangement

The end of the Communist era followed by the establishment of the Hungarian Republic (1989) and the joining of the EU (2004) brought many consecutive changes in all four dimensions of the national policy arrangement. There were contrary trends in the rules regarding conservation areas. After an initial period of reduced government control, due to the restitution of land to private owners, strict rules for conservation areas were introduced in 1995. Act XCIII on 'the restoration of the level of protection of protected natural areas' was passed which avoided unrestricted privatisation of land within conservation areas. If land was reinstituted, the private owner had to abide with the restrictions set forth by government. Furthermore, an active policy of expropriation was introduced on land which had already been reinstated. In 1996, the Nature Conservation Act, which replaced several acts and regulations from the communist era, stipulated which activities were prohibited or required approval in conservation areas. The transposition of the Habitats & Birds Directives into Hungarian law in 2004 led to a dual system. The established rules for national conser-

vation areas were upheld, but less strict rules were introduced for Natura 2000 areas which were not protected as national conservation areas. Adaptation pressure was moderate as it only applied to areas not previously protected under national legislation.

The major change in the actor dimension is the emerging of coalitions between the government and environmental NGO's and to a lesser extent between government and private landowners. The end of the communism led to the emergence of several conservation NGO's that actively contribute to both policy development as well as implementation (Börzel & Buzogány, 2010; Cent, Mertens, & Niedzialkowski, 2013). At the same time two contradicting processes occurred. The active expropriation process of national conservation areas led to a decrease in private ownership in these areas, from 42% to 24% between 1990 and 2007 (Ministry of Environment & Water, undated). At the same time, Natura 2000 designation, led to a contrary movement, increasing the number of private owners within the Natura 2000 network.

In the discourse dimension there was a shift towards a less state-dominated mode of governance of nature conservation policy: 'In Natura 2000 areas, it is more about co-operation then about [strict] conservation. Especially the projects and payment schemes provide the opportunity to really communicate nature conservation positively to stakeholders and not just the restrictions'[18]. But in practice, private land ownership in nature conservation areas remained problematic. Due to the communist legacy, many landowners are averse to governmental interference. In respect to the type of nature conservation measures needed no major shift in views on Hungarian nature conservation occurred. In general, ideas on the importance of conserving nature through undertaking conservation measures and avoiding damaging activities were already well developed in the early years of the Hungarian republic.

The main change in the resource dimension between the period prior and after joining the EU was an increase in funding for nature conservation from EU sources. Prior to the pre-accession period, no subsidy system was available to encourage biodiversity protection by private owners. In the pre-accession period funding did increase as LIFE funding was available from the EU. After accession there was a sharp increase in funding for nature conservation from EU funds, both for governmental organizations (through LIFE-projects and structural funds) as well as private landowners (through EU agri-environmental subsidies). The new funding sources are facilitating the interaction with private landowners.

[18] Hungarian ministerial official, 2013

Relationship between changes in the policy arrangement and the management instrument

The description of the national policy arrangement shows that key features of the instrument changed due to an increase of private owner involvement combined with an increase of resources for nature conservation. Our analysis shows that both the transposition of the Directive as well as an increase of funding for nature conservation due to joining the European Union were contributing causes. Prior to EU accession, the government's policy focussed on reducing private ownership of nationally protected areas. Natura 2000 led to a contrary shift in ownership conditions and instigated the development of the maintenance plans. It is not likely that an increase in private ownership of protected areas would have taken place solely due to domestic influences. The increased budget for nature conservation in Hungary from LIFE funds, Structural Funds and the Common Agricultural Policy and the possibilities these Funds offered for state as well as private landowners were the result of overall EU Accession. Separating the influence of the Habitats Directive from those of the overall process of joining the EU is complex as the two processes are related. Therefore, in the case of Hungary although the Habitats Directive was one of the necessary conditions for the emergence of the new management planning instrument, it might be better to talk about a conjunction, namely, a process in which interrelated conditions, in this case both emerging from the process of joining the EU occurred and were both necessary conditions and together sufficient.

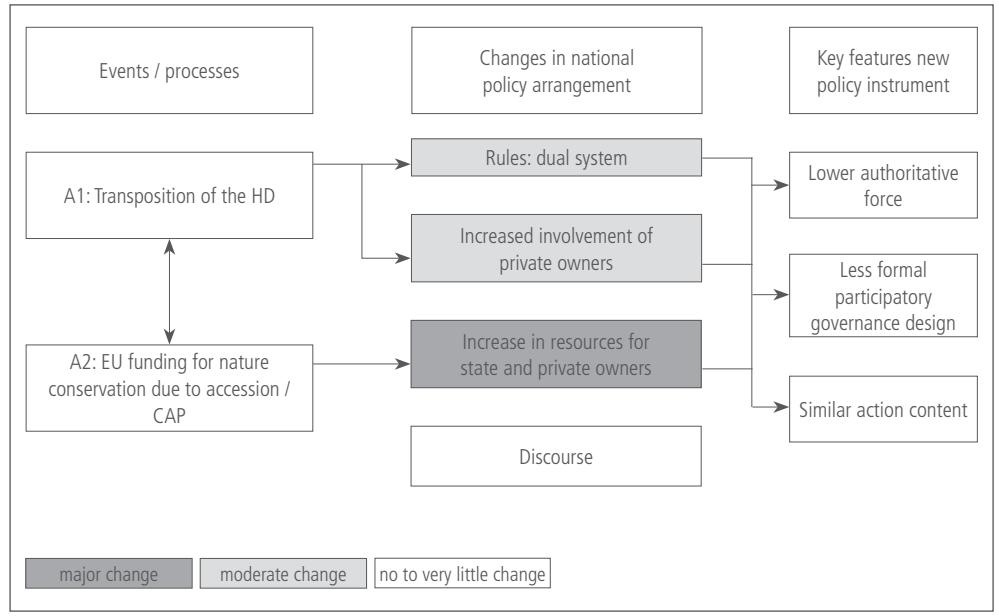

Figure 3.4. Causal relationships between the Habitats Directive, the national policy arrangement and key features of the new policy instrument, in Hungary.

3.4.4 The Netherlands

Change in management planning instrument

Until 2004 the system for management planning for privately owned conservation areas in the Netherlands was facultative (Art 14.1 Natuur beschermingswet 1967). For legally designated conservation areas, the government could prepare a management plan in consultation with the owner. The conservation measures to be taken ('action content') incorporated in the plan were based on mutual agreement. For conservation areas owned by the government and Dutch nature conservation NGOs management planning has been standard practice since the 1960's (Buis, Verkaik, & Dijs, 1999). The Nature Conservation Act was revised in 1998 in order to transpose the Habitats Directive into Dutch law. The facultative system was maintained in the revised act.

In 2004, due to an EC notification on incomplete transposition, the Nature Conservation Act was revised. At that time a statutory requirement for management plans for Natura 2000 sites was introduced, following an amendment supported by several political parties (Art 19a). Also the most influential governmental and non-governmental actors[19] from the business and nature conservation sectors supported such a plan. Since the majority of the legally protected conservation sites were part of the Natura 2000 network the pre-existing facultative system was almost completely replaced.[20]

The management planning system introduced in 2004, shows changes in all three key features compared to the pre-existing instrument. Its action content was altered: the instrument would specify both 'conservation measures' and stipulate land use activities that are not allowed or require permission. Its authoritative force also changed: the plan now can be enforced by the government. Lastly, the governance design of the instrument changed. The plan can, in contrast to the past arrangement, be developed and approved without the consent of the owner. Additionally, an elaborate consultation process with other stakeholders is required for private as well as state owned areas.

Changes in national policy arrangement

The major change in the rules dimension observed between the two periods is a shift from a consensual approach for conservation towards a regulatory approach. This was primarily due to the Habitats Directive. In 1989, a proactive non-binding strategy for nature conservation was introduced in the Netherlands called the National Ecological Network (Bogaert & Gersie, 2006). Protection of areas through law was limited. The consecutive revisions of the Nature

[19] IPO, VNG, VNO-NVW, MKB, State Forest Service, Vogelbescherming, Natuurmonumenten & Stichting Natuur en Milieu

[20] The facultative system was maintained for the 64 conservation areas (3422 hectares) (Broekmeijer, Bijlsma, & Nieuwenhuizen, 2011).

Protection Act in 1998 and 2004 in order to transpose the Habitats Directive, driven by the EC notification, led to a much more regulatory approach for areas managed for nature in the Netherlands. The adaptation pressure was high as the EU requirements were not in line with the existing laws. The new rules were enforced because several plans and projects were contested in court. This led to an increase in the application of legal processes to Dutch nature conservation practice (Beunen, Van Assche, & Duineveld, 2013).

In the discourse dimension the dominant ecological discourse was supplemented by more people oriented discourses. The dominant Dutch nature conservation approach had been based on ecological insights to reconnect the fragmented natural areas of the Netherlands and increase the area managed for nature on a consensual basis. Although this approach was initially successful, it met with increasing resistance in the middle of the 1990s, mainly from the agricultural sector (Bogaert & Gersie, 2006). From 2000 onwards, the Dutch nature conservation policy was increasingly criticised as being too technocratic, too restrictive, too detached from the average citizen (Buijs, Mattijssen, & Arts, 2014) and support for critical discourses, which were already present grew (Beunen, Van Assche, & Duineveld, 2013). In particular, they reflected the need to acknowledge the interests and views of local stakeholders as well as the need to limit the negative economic effects of nature policy. 'Both directives have given rise to concerns in different sectors ...'. A few of them express their concerns with statement as The Netherlands locked down? ('Nederland op slot'?)[21].

The change in the rules dimension also led to a change in the constellation of actors. In the beginning of the 1990's, nature conservation was dominated by the national government, the State Forest Service and several non-governmental nature conservation organisations and to a lesser extent by farmers (Bogaert & Gersie, 2006). From 2000 onwards, other actors from economic sectors such as transport, building and recreation became involved in nature conservation policy, mostly opposing the restrictions laid down by the New Conservation Act.

In respect to the resources dimension, no clear differences between the periods can be distinguished except for a steady increase in the resources allocated for nature conservation between 1990-2004. The increase was not related to the need to undertake conservation measures for Natura 2000 sites but due to an extension of the National Ecological Network (CBS, PBL, & Wageningen UR, 2012).

Relationship between changes in the policy arrangement and the management instrument

In the Netherlands evidence strongly indicates that the major changes that have taken place in the Dutch national policy arrangement are due to the requirements of the Habitats Directive. The shift towards a more regulatory approach in relation to nature conservation originated from the rules laid down in the Habitats Directive and their enforcement by the

[21] Statements made during parliamentary debate in 2004 (https://www.overheid.nl/)

EC. It is highly unlikely that the shift towards a more compulsory regime would have occurred because of autonomous domestic developments given the consensual approach of Dutch nature conservation prior to 1992. During the period 1992-2004, there seem to have been no other domestic events in the nature policy sector that led to a more regulatory approach. Moreover, the change in the rules dimension instigated the changes in the actor as well as discourse dimension. The requirement to legally designate the areas and assess the impacts of plans and projects changed the number and types of actors involved. It also built more support for alternative discourses. The change in the key features of the management planning instrument itself formalised the changes that had taken place in the national policy arrangement.

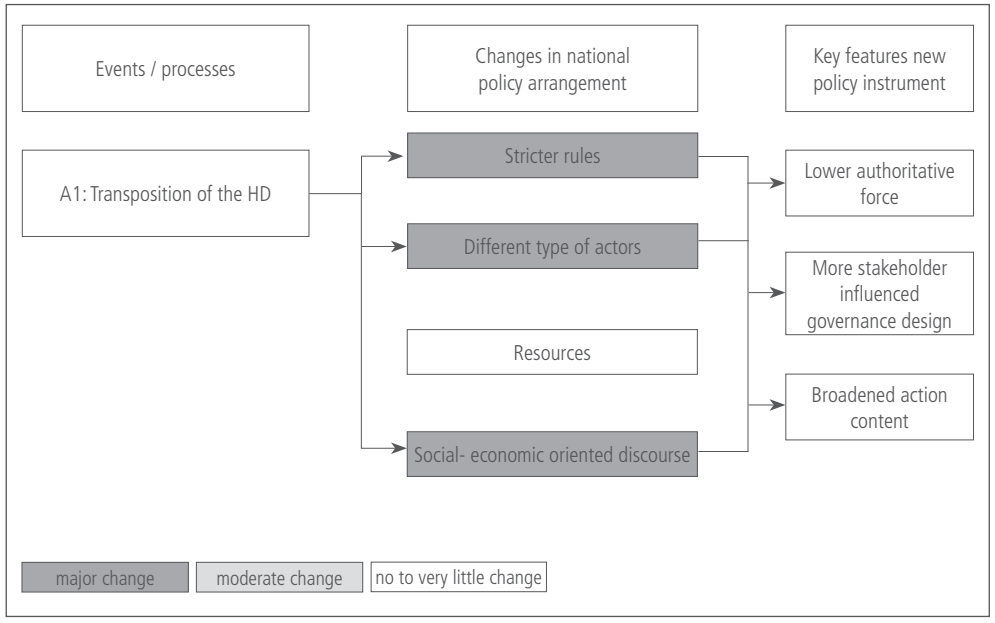

Figure 3.5 Causal relationships between the Habitats Directive, the national policy arrangement and key features of the new policy instrument, in the Netherlands.

3.5 Discussion

Our narrative shows that the domestic impact of the Habitats Directive on the national policy arrangement in the three countries varied. In the Netherlands major changes occurred due to the Directive, in Finland and Hungary only moderate changes occurred (see Figures 3.3-3.5 and Table 3.1 and 3.2).

Our findings indicate that we can distinguish three different situations in which policy instruments might develop under the influence of a EU Directive in the absence of an explicit

requirement to do so. The first of these are situations, such as in the Netherlands, in which adaptation pressure is high because the EU requirements are not in line with existing administrative traditions and the existing sectoral policy (Knill, 2001). Once the policy is implemented this will inevitably lead to major changes in several dimensions of the national policy arrangement (see Table 3.2). This in turn will create high adaptation pressure to modify the existing instruments. New instruments that are introduced will clearly reflect EU influence. In these situations the EU Directive is most likely a necessary and sufficient condition for policy instrument development **(cause)**.

In other situations, such as Finland and Hungary, the EU requirements create low to moderate adaptation pressure resulting in moderate change to the national policy arrangements. The EU Directive is most likely a necessary but not a sufficient condition for policy instruments development. Other necessary conditions are required such as socio-political trends or developments within adjacent policy fields (Arnouts, 2010). In Finland the already present socio-political trends of increased participation and changing discourse about management, among other things due to developments in the adjacent policy field of forestry together with the Habitats Directive, created the necessary and sufficient conditions for a new policy instrument (see Table 3.2). In Hungary the additional resources due to EU accession, together with the Habitats Directive created the sufficient conditions to enable the introduction of a new policy instrument. In situations of low to moderate adaptation pressure emerging instruments will reflect the requirement of the EU Directive as well as the other necessary conditions. If these other necessary conditions are already set in motion prior to the introduction of the EU Directive the Directive acts as a **catalyst**, if they are interrelated or occur at the same time the situation is better described as **conjunction.**

Our findings underline the importance of considering the interaction of EU policy with various aspects of the domestic situation as suggested by several other Europeanization studies (Bailey, 2002; Knill, 2001; Lenschow, Liefferink, & Veenman, 2005). They also show the need for review of other explanations for change of the domestic situation such as socio-political trends or developments in adjacent policy fields (Arnouts, 2010). Apparently the EU does not only influence policy instrument choice by Member States through direct institutional compliance by requiring that a specific instrument is introduced. Indirect influence on the national policy arrangement is also likely to initiate or affect instrument change. Our analysis suggest that **the governance design** of existing instruments may need to be adapted if the EU influences the actors or discourse dimensions; for instance if the responsibility for action shifts to new actors who in exchange for their co-operation expect more influence on the development of the instrument. The **authoritative force** of an instrument might require adaption if the EU influences the rules or resources dimension. Stricter rules require a greater authoritative force, less strict rules allow for a more voluntary approach. If resources increase, a more incentive based voluntary approach can be feasible; if resources decrease a more regulatory approach might be required. The **action content** of instruments might also need adaptation due to the EU influences on the discourse or rules dimension (see Table 3.1).

In instrument choice literature, explanations of why governments change their instruments are manifold; learning, changing discourses, struggles between involved actors, national policy styles and policy networks (Bressers & O'Toole, 1998; Dolowitz & Marsh, 2000; Hall, 1993; Howlett, 2009; Sabatier, 1998). This chapter reveals that all of these played a role in the decision to introduce a new instrument, for instance learning (Hungary), struggles between actors (Netherlands, Finland), changing discourses (Netherlands, Finland), national policy styles (Hungary) and changing policy networks (Hungary, Netherlands, Finland).

3.6 Conclusions

This chapter began with the question of how to discern the impact of an EU Directive on policy instrument choice. We were surprised by the behaviour of Member States, which introduced new instruments in order to address the management of Natura 2000 sites without a legal requirement to do so. Despite the intricacies of causal analysis, this chapter shows that EU Directives even in the absence of a requirement for a particular policy instrument can instigate policy instrument development. In all three of the cases reviewed a nested causal relationship could be determined between the emergence of the new instrument and the Habitats Directive. But the character of the newly emerged instruments shows that the relative significance of the influence of the Habitats Directive varies. We ascribe this variation to the intermingling of the Directive, national domestic developments and the EU Accession process which have led to a change in the rules, discourse, actors and resources of the national policy arrangement.

Overall, this chapter shows why it has proven to be difficult to draw generic conclusions about the influence of EU policy on policy instrument choice of individual Member States. In the case of non-binding requirements, the influence of a specific EU Directive is diffused by the ongoing domestic processes. For EU and national policy makers, this makes it a very complex task to carry out ex ante assessments of the impact of a new Directive on the national policy instrumentation. This is particularly so because not only legal and administrative effects but also effects on actor constellations, discourse and resources need to be assessed. Nevertheless, the chapter provides insights into the type of situations in which new policy instruments might emerge under the influence of EU policy in cases in which no explicit legal obligations exist. In the first instance instrument development can be expected in situations in which the Directive causes high adaptation pressure and instigates major change in the national policy arrangement of the Member State **(cause)**. The resulting instruments primarily reflect EU policy requirements. Although new instruments are not required it will be very likely that they will be developed. Therefore an ex ante evaluation should review the benefits and costs of developing new instruments. New instruments may, however, also emerge in situations in which the Directive itself exerts medium to low adaptation pressure. Whilst this

results in moderate changes in the particular policy field, the Directive strengthens ongoing developments in the policy field **(catalyst)** or coincides with developments in related policy fields **(conjunction)**. However, given the many uncertainties involved in such situations, considering instrument development in an ex ante evaluation is not very likely to be helpful.

Acknowledgments

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Lemmenjoen Kansallispuistio

Finland
Code: FI1300201
Surface: 285.990
19 habitats, 38 species

4. Natura 2000 management plans in France and the Netherlands; carrots, sticks, sermons and different problems

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Abstract

Many EU Member States are using management plans to ensure the sustainable conservation and management of Natura 2000 sites. The decision about whether to use management plans lies with the Member States. Although management planning systems differ, in most countries the management plan is developed at local level in close consultation with relevant stakeholders. This chapter explores to what extent national decisions on the management planning system have influenced the content of the local plans. The comparison of French and Dutch Natura 2000 management plans shows that the plans mostly propose conservation measures that can be implemented by individual owners or users of the site and for which funding is available. The individual measures in the French plans reflect the national decision that the management plans should work primarily as a funding tool. The individual measures in the Dutch plans however do not reflect the national decision that management plans should act as a legislative tool to regulate land use activities in and around the site. In the Netherlands, the focus has shifted towards a tool for the coordination of funding. The analysis shows that in both countries the selection of particular measures in the management plans is connected to other policies and funding mechanisms that deal with the problems perceived by involved actors, such as the Common Agricultural Policy and the Dutch National Programme for Nitrogen Deposition.

If you fail to plan, you are planning to fail
(Benjamin Franklin 1706-1790)

4.1 Introduction

The EU Birds Directive (1979) and Habitats Directive (1992)[22], require Member States of the European Union to designate protected areas that jointly form the Natura 2000 network. The site selection of the Natura 2000 sites is based on scientific criteria and overseen by the European Commission. After site designation, Member States have to ensure that adequate conservation measures are taken and damaging activities do not occur (Sundseth & Roth, 2013). The Directives grant Member States considerable freedom in how to arrange the management of Natura 2000 sites. The Birds Directive only states that special conservation measures regarding the habitat of species listed are needed (Art 4.1) and that 'Member States shall take appropriate steps' to protect species and avoid deterioration in the designated sites (Art. 4.4). The Habitats Directive provides Member States with different options to arrange management as they can develop site specific management plans, integrate the measures into other development plans, or introduce appropriate statutory, administrative or contractual measures. The majority of the Member States prefer using management plans as the policy instrument to organise the management of Natura 2000 sites (Bouwma et al., 2016). In addition, the EC actively promotes management planning as a mechanism to ensure the adequate management of the site (Bouwma et al., 2016; European Commission, 2013). In 2012, 9271 management plans had been prepared for Natura 2000 sites designated under the Habitats Directive in 24 Member States, with an additional 4229 plans under preparation (European Environment Agency, 2015). These management plans are developed at local level within the confines of the different national or regional management planning systems. The Member States' management planning systems vary in their legal status, required content, participation process, and finances available for their implementation. The majority of the Natura 2000 management plans are developed in a participatory manner although legal obligations for participation are often not in place. This reflects the overall ongoing trend of increased public participation in environmental management (Reed, 2008), but has also resulted from the severe criticism of many stakeholders on the limited participation during the phase of designation (Alphandéry & Fortier, 2001; Ferranti et al., 2014; Laffan & O'Mahony, 2008; Unnerstall, 2008).

The formulation of management plans integrates national hierarchical forms of goal setting and regulation with local forms of planning and decision-making (Beunen & de Vries, 2011; Díez, Etxano, & Garmendia, 2015; Geitzenauer, Hogl, & Weiss, 2016; Kati et al., 2015). National governments designate sites, formulate conservation goals, and determine the status of the management plans, while regional or local governments, often in co-operation

[22] Both Directives have been subsequently adapted due to scientific progress as well as accession process.

with site managers, users and other stakeholders decide on how those conservation goals relate to other land use activities and how they should be translated into specific measures. Furthermore, if goals are not achieved, the national government or the European Commission can undertake legal action (Sundseth & Roth, 2013). Local aspects of planning relate to the consultation and/or participation of stakeholders during the plan development. They have local knowledge about the site that is required to develop the plan as well as views on the problems that need to be addressed, the goals that can be achieved and their involvement is important for the acceptability of measures for local owners and users (Blondet et al., 2017; Brescancin et al., 2017; Diez, Etxano, & Garmendia, 2015).

Studies in relation to management plans for Natura 2000 sites have mainly focussed on the planning process (Alphandéry & Fortier, 2010; Beunen & de Vries, 2011; Kovacs et al., 2017; Young et al., 2013), with a few exceptions that focus on financing issues (Geitzenauer et al., 2017), the plans themselves or resulting management measures (Duhalde, Levrel, & Guyader, 2017; Winter et al., 2014). This study complements the process oriented studies by reviewing the management plans, paying particular attention to the kind of measures included in the plans, the problems addressed by these measures, and the way in which implementation of these measures will be guaranteed. We are particularly interested in the extent to which national authorities can influence the type of measures that are included in the management plans. National, or regional[23] authorities set the boundary conditions for Natura 2000 management plans. Following these conditions the exact content of the plan is negotiated between the involved actors at the local level. As a result the policy instrument for site management is a nested instrument consisting of the management planning system, the management plans for specific areas, and the individual measures proposed in the plans.

National authorities can to some extent influence the individual measures through decisions they make regarding the management planning system. They can, for instance, decide whether the measures included in the management plans are legally binding or whether there is national funding available for plan development or specific measures. The mechanism (or mechanisms) by which the government chooses to influence the behaviour of actors sets the boundary conditions for the formulation of measures included in the management plan and is referred to as authoritative force (Salamon, 2002). Usually three main mechanisms of authoritative force are distinguished for policy instruments: motivation through financial incentives ('carrots'), motivation by using laws and regulations ('sticks') and motivation through information provision ('sermons') (Vedung, 1998).

At the local level the exact measures which are incorporated in the management plan are negotiated (Beunen & de Vries, 2011; Cent, Grodzinska-Jurczak, & Pietrzyk-Kaszynska, 2014; Duhalde et al., 2017). Here the authoritative force of the management system will influence

[23] In federally organised Member States the decision on management plans is taken at the regional level

which measures are included in the plan, but also how it is ensured that those measure will actually be taken and complied with. Authoritative force thus plays a role both at the level of the management system as a whole, i.e. regarding the range of instruments that are available for inclusion in management plans, and for the individual measures determined at local level. In order to clearly distinguish between the authoritative force of the management system as a whole and that of the individual measures as included in the plans, we use the term authoritative mechanism to indicate the authoritative force behind the individual measures.

This brings us to the research question that guides this study (see also Fig. 4.1); *To what extent does the authoritative force of the national planning system influence the types of measures included in the management plans that are developed locally*?

Understanding how national decisions on Natura 2000 instruments influence the selection and implementation of measures at site level is important. Many of the species and habitats for which the Natura 2000 network was created are still in an unfavourable conservation status (European Environment Agency, 2015). Measures to improve this situation are therefore required in many Natura 2000 sites. Insight in the selection and implementation of measures proposed in the first round of management plans enables an assessment of the effectiveness of different types of policy instruments. Currently, the management of the sites is an issue of considerable debate (Birdlife Europe, EEB, Friends of the Earth, & WWF, 2018; Kati et al., 2015; Young et al., 2005). Some nature conservationist call for more stringent action from the side of the government to ensure good management, whilst private land owners look sceptical towards interference of the government with management. Although much of the actual management decisions will be decided on a local level it is important to better understand how national authorities can facilitate the selection of effective and legitimate measures through the design of policy instruments available for inclusion in management plans. In the end national governments have to decide how they want to use their authoritative force for achieving the goal of improving the conservation status of Natura 2000 habitats and species.

To answer the research question, the individual measures incorporated in thirty management plans from two Member States with a different authoritative force were reviewed. For the analysis of the plans an analytical framework was developed based on instrument choice literature (see section 2.2). In section 2.3 the selection of countries and sites is explained, section 2.4 describes the results. In section 2.5 the results are discussed and in section 2.6 conclusions are drawn. The chapter does not assess the effectiveness of measures, i.e. whether measures are adequate to ensure the conservation of the species and habitats in the site.

4.2 Analytical framework

4.2.1 Policy instrument theory and Natura 2000 management plans

For our analysis of the management plans we considered them as a policy instrument with a nested character. Policy instruments are defined as the tools at the disposal of the government to implement its policy objectives (Bemelmans-Videc & Rist, 1998; Howlett, 1991). In policy instrument literature, much attention has been given to the authoritative force of instruments ('carrot', 'sticks', 'sermons') and how this influences the behaviour of involved actors. The behaviour required by policy instruments is usually referred to as action content, for example actions that should or should not be undertaken by a certain actor (Vedung, 1998). Instruments with a high authoritative force (sticks) force actors to comply to set rules, even in cases where they rather would not. Instruments with a lower authoritative force, such as financial (carrots) or communicative instruments (sermons), leave more freedom to actors. A carrot stimulates actors to act in a certain way by (financially) rewarding or discouraging certain behaviour. A communicative instrument (sermon) tries to influence behaviour by disseminating information to actors with the intention to entice them to change their behaviour.

Reviewing the authoritative force of a particular instrument is not always clear-cut. In practice, many policy instruments have a mixed character and do not always neatly fit the theoretical distinctions made (Salamon, 2002). The nested character of Natura 2000 management planning system amplifies this problem. The management plans are developed in a multilevel setting, where national authorities set boundary conditions and local actors decide on specific measures. Local actors have significant freedom to ensure that conservation goals are met, to discuss problems, and to decide which measures are needed to solve these problems, and who will be responsible for undertaking action. Yet the actual choices should meet the conditions set by the legal framework of the EU Birds and Habitats Directives and a particular management planning system that is decided on at a national level. The discussions about measures thus take place in a setting in which the actors involved may or may not agree on the causes of the problems or the solutions at stake. Furthermore the measures need to be related to existing land use activities, ownership situations and use rights. As a result the management plan encompasses a broad suite of measures that may specifically be proposed in the framework of the new planning instrument, have their origin in other, pre-existing policies or address specific local issues.

4.2.2 Operationalization of theoretical concept for analysis

To assess to what extent the authoritative force of the management planning system may influence the content of the management plans, four different aspects of these plans will be reviewed: the type of measures proposed, the problems these measures address, the number or parties involved in executing the measures, and how these parties are motivated to take the proposed measures. Each of these aspects is elaborated below (see also right side of Figure 4.1). Based on this analysis conclusions are drawn as to how the selection of particular measures and the plans as a whole relate to the authoritative force of the management planning system.

Action content

The Habitats Directive provides the basis for the typology of the action content of the plans. Conservation measures are defined by the Directive and the Guidance Note (European Commission, 2013) which supports it as '*a series of measures required to maintain or restore the natural habitat and population of species of wild flora and fauna at a favourable conservation status*. In the Guidance Note it is stated that a conservation measure is a positive and pro-active intervention. A conservation measure therefore refers to an action that is required to ensure that the species and habitats are conserved ('*to do* ' or '*to do more*'). In addition, Art. 6.2 requires the Member states to '*take appropriate steps to avoid deterioration of natural habitats and natural habitats of species as well as disturbance of species*'. The Guidance document also refers to conflicts that may occur with current land use. For the purpose of this chapter we refer to such activities as 'restrictive measures', i.e. measures that are proposed to avoid deterioration of habitats and disturbance of species resulting from current land use. The activity should not occur or its intensity needs to be reduced ('*do not*' or *'do less'*). Our review of the plans will show that several measures in many of the plans are described in such a generic way that it is unclear whether they constitute a conservation or a restrictive measure (see Table 4.1). For the purpose of this analysis, therefore, a distinction will be made between three main types of measures; conservation measures, restrictive measures and general measures. In Table 4.1 the definitions of the measures are provided as well as some examples, in the supplementary material (Annex IV- Table B) the coding system is presented[24]. The plan also includes research (e.g. monitoring) and general communication activities. We did not include these activities in our analysis as implementing them does not have a direct effect on the conservation status of species and habitats within the site.

[24] The coding system of the Article 17 reporting for measures we deemed not suitable for our analysis. Whereas this system provides a sectoral typology, our typology is based on the character of the measure itself regardless of the sector executing the measure (see Supplementary Material A).

Type of measure	Description	Examples of measure
Conservation measure	Positive and pro-active intervention to ensure the conservation status or to improve it	Grazing or mowing of grasslands. Development of natural banks
Restrictive measure	Intervention that should not occur to ensure the conservation status or to improve it	No use of fertilizer No clearcutting
General measure	Intervention of a more generic kind that can both lead to a positive intervention or describe an intervention that should not occur	Maintain the diversity of the area Develop a programme of measures to manage the area

Table 4.1. Action content of the plan.

Problems addressed

Most management plans also specify the problems that the measures will address. For the typology of the problems addressed we will use the existing coding system developed by the European Commission for the latest Article 17 reporting. As part of the reporting Member States indicate possible threats to Natura 2000 species and habitats (http://bd.eionet.europa.eu/activities/Reporting/ Article_17). This typology distinguishes threats based on the sector (f.i. agriculture or urbanisation) or on specific themes (pollution, non-native species, natural system modifications). Seventeen main categories of threats are identified (see Table 4.2)[25].

Code	*Description*
A	Agriculture
B	Forestry
C	Mining, quarrying & energy production
D	Transportation & service infrastructure
E	Urbanisation, residential & commercial development
F	Use of living resources (other than agriculture & forestry)
G	Disturbances due to human activities
H	Pollution
I	Non-native species
J	Modification of natural conditions
K	Natural processes (excluding catastrophes)
L	Geological events, natural catastrophes
M	Climate change
U	Unknown threat or pressure
X	No pressures or threats
XE	Threats and pressures from outside the EU territory
XO	Threats and pressures from outside the Member State

Table 4.2. Classification of threats/problems that might require measures to be taken.

[25] This typology is not mutually exclusive as overlap between codes is possible for instance pollution caused by agriculture. We addressed this by closely reviewing the text - if a sector was mentioned as threat the corresponding code was used, if no sector was indicated the specific theme code was used.

Furthermore if the plan includes measures addressing a certain threat, this is taken as an indication that the actors involved consider this threat an actual problem requiring action[26].

Involved party to execute measures

Management plans normally indicate which actors are required to execute the conservation measures or which actors should not undertake specific damaging activities. Management plans can include measures that can be taken by a single party and measures that require co-operation of more parties. To assess whether the measure requires single party action or multiple party action a simple coding system was developed using two values only (1, 2). If the execution of the measure depends on the action of one party the score assigned was 1, if the action depends on the co-operation of more than one parties to execute the action the score assigned was 2. As the general measures were too vague or ambiguous to assess the number of parties required, these measures were not reviewed and excluded from this part of the analysis.

Authoritative mechanism

To determine the authoritative mechanism behind each measure the typology prevalent in policy instrument theory is used. If funding is available for either undertaking a measure or as compensation for the restriction is stipulated, the authoritative mechanism used is financial (carrot). If the measure can be enforced through existing law or due to the legal status of the plan the authoritative mechanism is regulatory (stick). If neither funding nor a legal requirement is in place the authoritative mechanism used is communicative (sermon). Due to their generic and often ambiguous character, it turned out to be impossible to assess the authoritative mechanism behind the category of general measures (see Table 4.1).

In sum, the following four aspects of the plan will be reviewed; (see Figure 4.1)

- Action content of the plan (conservation measures, restrictive measures, general measures)
- The problems the measures address (17 problem categories)
- The parties needed to implement the measure (single or multi party action)
- The authoritative mechanism used to ensure that the measures are taken (stick, carrot, sermon)

To compare the plans within as well as between countries, for each plan metrics were developed for the four aspects described above (action content, problems reviewed, number of parties for execution, authoritative mechanism). In Annex IV the metrics used are described in more detail. A statistical T-test or Mann Whitney U-test was carried out to assess the significance of differences between the country's plans with regard to the four aspects ($p > 0.05$).

[26] Note that this implies the possibility that certain threats, e.g. climate change, are not regarded as problems *by the actors involved*.

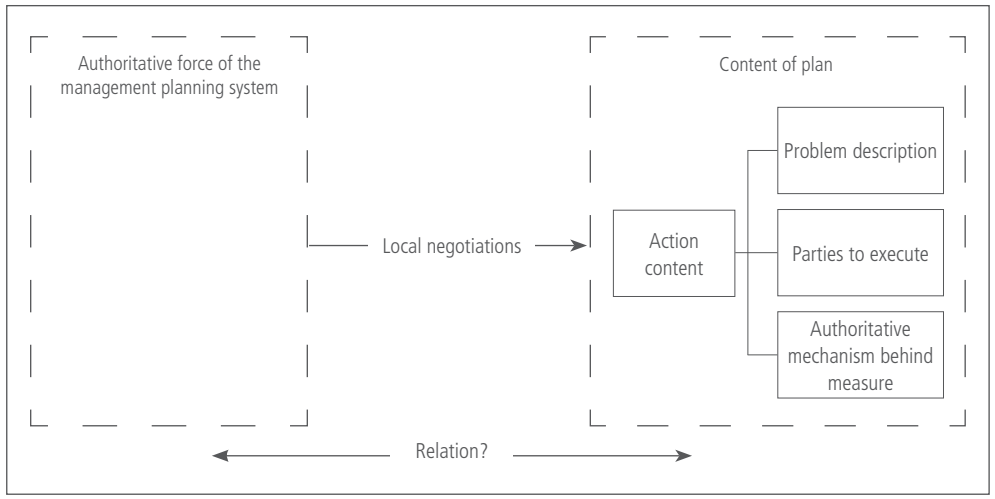

Figure 4.1. Multilevel process of development of management plans. The chapter reviews the relationship between the grey boxes in the figure by analysing the content of the local plan. The local negotiation process is not analysed.

4.3 Country and site selection

The management planning systems of Member States differ considerably, based on national choices regarding, among other things, enforceability, funding available for measures, required content and participation procedures. Furthermore they also feature different levels of authoritative force (European Commission, 2013; Unnerstall, 2008). Whilst in some of the Member States management plans were primarily introduced to be legally binding and enforceable, in other Member States the management plans are voluntary and the plan primarily acts as a communication tool or a funding mechanism. Given the large variation between Member States and sites the selection of the management plans to be reviewed was complex and consisted of two distinct steps. In a first step the Member States for which the review would take place were selected, in the next step the sites for review within the Member States were selected. The following criteria were used to select the Member States for this research:

1. Existence of a decision at Member State level to develop management plans for Natura 2000 sites (Bouwma et al., 2016);
2. Variation between the selected Member States with regard to the authoritative force of the planning systems;
3. Existence of a more or less comparable socio-economic and ecological background in the selected Member States;
4. Availability of a large number of plans within the selected Member States;
5. Easy accessibility of management plans, preferably through the internet.

Based on these criteria France and the Netherlands were chosen for the research. Whereas in France the management planning system primarily plays a role as a funding mechanism, in the Netherlands the plans have a more stringent legal status as a review of current land use is required and damaging activities can be forbidden, require a permit, or conditions can be set. Also conservation measures stipulated in the plan that need to be taken by the government (whether national, regional or local) are binding (see Box 4.1).

Box 4.1 Short description of the management planning system in France and the Netherlands

Management planning in France

The management plans in France are called DOCOB ('Document des Objectives, DOCOB'). In France the process started in 2000 (Alphandéry & Fortier, 2010) and for many of the sites the management plans have now been concluded. A guideline is available on both the content and how to organise the process of the development of these management plans (Souheil et al., 2011). DOCOBs are prepared under the responsibility of the Prefect of each Department, assisted by a facilitator and with full stakeholder participation. In each site a Comité de Pilotage is established by a decree of the Prefect in which stakeholders are present. This committee is involved in drafting the plan and approves it. Once the DOCOB is approved, land owners or users can accept the provisions of the management plan by entering into different types of contracts, signed by the Prefect (the State) for a minimum of five years. The contracts include specification of the work to be carried out to conserve or restore habitats and species, the nature of funding from the State and the conditions of the payments. State funding can be in the form of investment subsidies or annual payments per hectare. Given the focus of the French planning system on funding the authoritative force of the system can be characterised as primarily financial.

Management planning in the Netherlands

In the Netherlands the decision to draft management plans is incorporated in law (Natuurbeschermingswet, 1998). Each management plan must indicate which current use is allowed, whether conditions apply and/or whether a permit is required. The responsibility for drafting the management plans is divided amongst fifteen different parties being the Ministry of Agriculture, Nature and Food Quality, the Ministry of Defence, the Ministry of Infrastructure and Water Management or one of the 12 regional governments. Like in France there is a guideline on the content and drafting process of the management plan (Ministerie van Landbouw Natuurbeheer en Visserij, 2005). The organisation responsible for the drafting process provides the person(s) that will draft the plan (either their own staff or commissioned). In most sites, a 'Steering Group' has been established in which the main stakeholders in the area are represented as well as a 'Klankbord Group' that encompasses a larger group of involved stakeholders. The process in the majority of the sites in the Netherlands started in 2008/2009. The majority of the plans were approved in 2015 and 2016.

The next step involved the selection of sites within these two Member States. Overall there is a high variation between sites in terms of land cover, ownership, and the occurrence of Natura 2000 species and habitats. As management measures are likely to relate to the conservation features (e.g. habitat types and species) of the sites, sites were selected that contained similar habitat types occurring in both countries. In order to compare the two countries the review restricted itself to the measures taken for habitats present in both countries. Species were excluded as there are many species covered by the Directives and selecting a comparable sample

would be difficult. Using the EEA database on Natura 2000 sites27, 30 sites were selected that contain 33 habitat types belonging to eight major ecosystem groups (Table 4.3).

Site code	Site name	Date Management Plan	Surface	Nr habitat types in selection
FR2500108	Bois et coteaux à l'ouest de Mortagne-au-Perche	2013	36	2
FR2400534	Brenne	2012	58311	12
FR2200395	Collines du Laonnois Oriental	2009	1378	16
FR5200640	Corniche de Pail, Forêt de Multonne, Vallée du Sarthon	2007	950	9
FR5200624	Des Marais de l'Erdre	2003	2565	10
FR3100480	Estuaire de la canche, dunes picardes, plaquees sur l'ancienne falaise, foret d'hardelot et falaise d'Equihen	2012	1658	18
FR3100478	Falaises du cran aux oeufs et du Cap Gris-nez, dune du châtelet, marais de Tardinghen, dunes de Wissant	2005	1079	10
FR3100479	Falaises et dunes de Wimereux, Estuaire de la Slack, Garennes et Communaux d'Ambleteuse-Audresselles	2006	406	8
FR3100491	Landes, mares et bois acides du Plateau de Sorrus / Saint-Josse, prairies alluviales de Valencendre et La Calotterie"	2006	60	12
FR5200626	Marais du Mès, baie et dunes de Pont-Mahé, étang du Pont-de-Fer	2007	2673	7
FR2200357	Moyenne valée de la Somme	2006	1816	14
FR3100495	Prairies, marais tourbeux, forêts et bois de la cuvette audomaroise et de ses versants	2013	563	10
FR2100334	Reservoir de la Marne dit du Der-Chatecoq	2012	6135	6
FR2402001	Sologne	2007	345000	16
FR2200359	Tourbières et marais de l'Avre	2003	333	7
NL3000044	Alde Feanen	2015	2142	5
NL9801044	Botshol	2016	215	6
NL2003014	Drouwenerzand	2015	223	3
NL3009006	Duinen Schiermonnikoog	2015	1024	6
NL2000008	Elperstroomgebied	2016	522	4
NL2003016	Geleenbeekdal	2009	226	5
NL9801075	Grensmaas	2009	301	4
NL1000022	Kempenland-west	2015	1957	8
NL2000008	Meinweg	2009	1809	9
NL3000036	Nieuwkoopse plassen	2014	2078	6
NL3009016	Oosterschelde	2015	36577	4
NL1000016	Solleveld & Kapittelduinen	2013	724	6
NL2003044	Stelkampsveld	2015	135	9
NL2003045	Swalmdal	2009	122	3
NL9801017	Vecht en Beneden Regge	2015	4122	16

Table 4.3. Sites selected for the analysis.

[27] The European database on Natura 2000 sites consists of a compilation of the data submitted by Member States to the European Commission. It is managed by the EEA and available for downloading at https://www.eea.europa.eu/data-and-maps/data/natura-8

The site selection started with Dutch sites as the number of sites in France is higher. In a first step sites were selected that contain at least 5 habitat types that also occur in France. Then a French site with similar habitat types was selected for which a management plan was available. In case more options were available the site with the highest number of overlapping habitat types was selected. For all sites and for each of the 33 habitat types occurring in both countries, the corresponding measures were fed into a MS access database. Finally a check was undertaken to establish whether the selection covered most frequently occurring habitat types in both countries (e.g. habitat types that are present in more than 10 sites in the country).

4.4 Results

The review of the management plans shows that the content of the plans shows a fair amount of variation, both between sites in the same country as well as between France and Netherlands (see Annex IV - Table A and B). The following overall picture at country level emerges. In both countries the majority of the proposed measures are conservation measures (51% France, 65% Netherlands; see Figure 4.2).
Only a limited number of restrictive measures is proposed (21% France, 12% Netherlands). The measures in the Netherlands are taken primarily to address pollution (both of air and water) and natural system modification (mostly related to changes in hydrology). In France the majority of measures relate to natural biotic and abiotic processes (e.g. to avoid succession) and measures to stimulate less intensive forest and agricultural management. Although similar problems are mentioned in the management plans in both countries, the main difference appears to be that in France the measures address mainly problems related to the biotic condition of the area itself (e.g. abandonment leading to succession as well as intensity of the management) whilst in the Netherlands measures are more often related to abiotic conditions of the site which tend to be influenced by land use activities in the surrounding area (pollution and natural system modifications) (see Figure 4.3).

The majority of measures proposed in the plans in both countries are measures that can be carried out by a single party (Figure 4.4). The majority of these measures in France and the Netherlands relate to mowing and grazing of grasslands and heathlands, removal of top soil and the removal of trees and bushes. Multi party measures mentioned are related to hydrological measures as well as measures for recreational activities.

The main authoritative mechanism used in both countries is financial (85% France; 84% Netherlands). Regulatory or communicative mechanisms are rarely used to ensure that measures are taken (Figure 4.5). If regulatory force is used in France and the Netherlands, it is mainly to reduce recreation pressure in the areas based on pre-existing regulations. Additionally in the Netherlands, a few measures related to water quantity and quality can be regarded as regulatory due to the legal status of the plan.

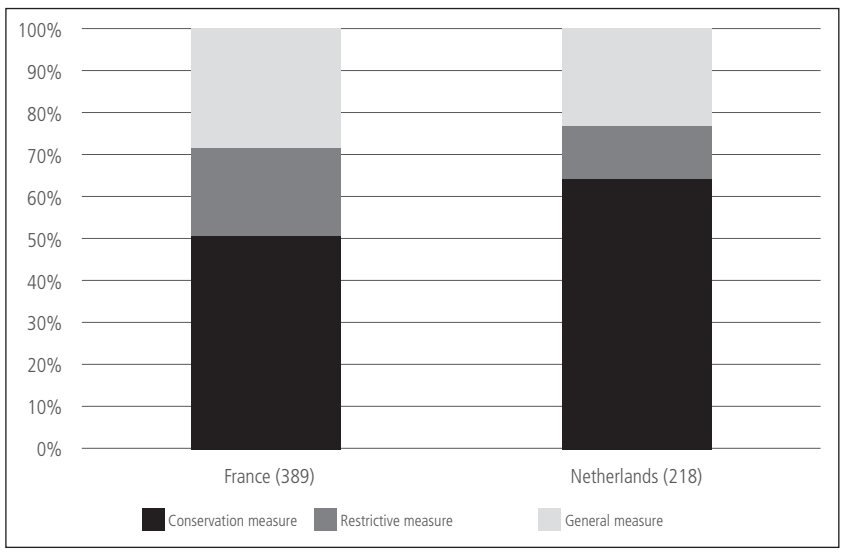

Figure 4.2. Type of measures mentioned in the plan for selected 33 habitat types. A total of 607 unique measures are included,a total of 1345 measures are proposed.

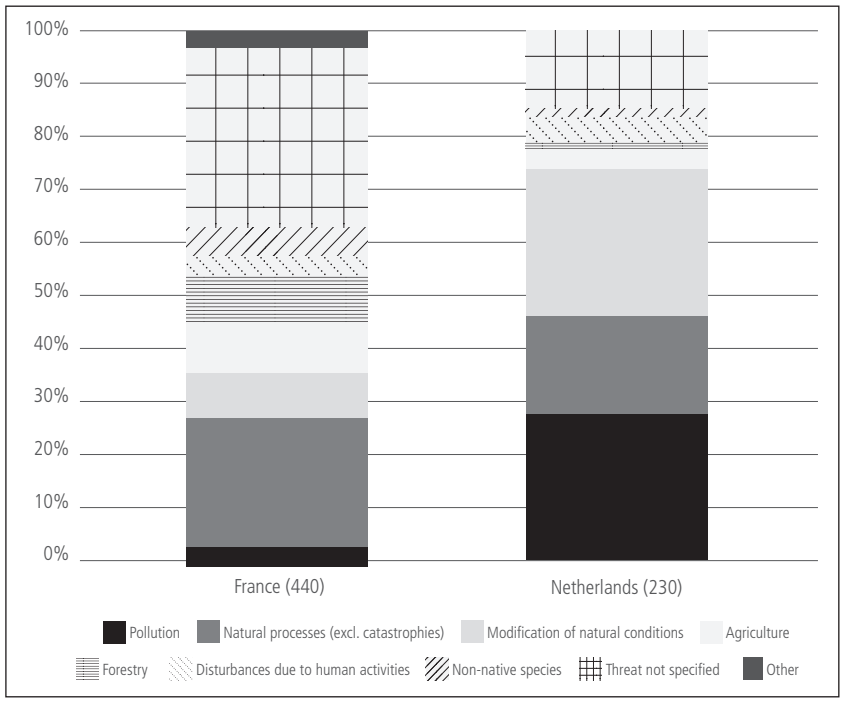

Figure 4.3. Type of problems addressed by the conservation, restrictive and general measures mentioned in the plan for the 33 selected habitat types. The total number of measures is higher than the total number of problems as some measures address more than one problem. For some measures no threats were specified in the plans.

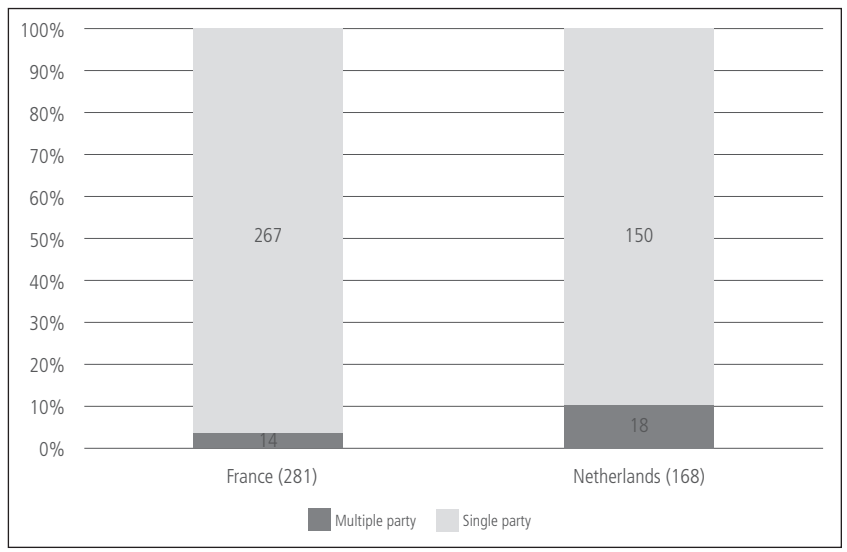

Figure 4.4. Number of parties required to execute the conservation and restrictive measures for the 33 selected habitat types.

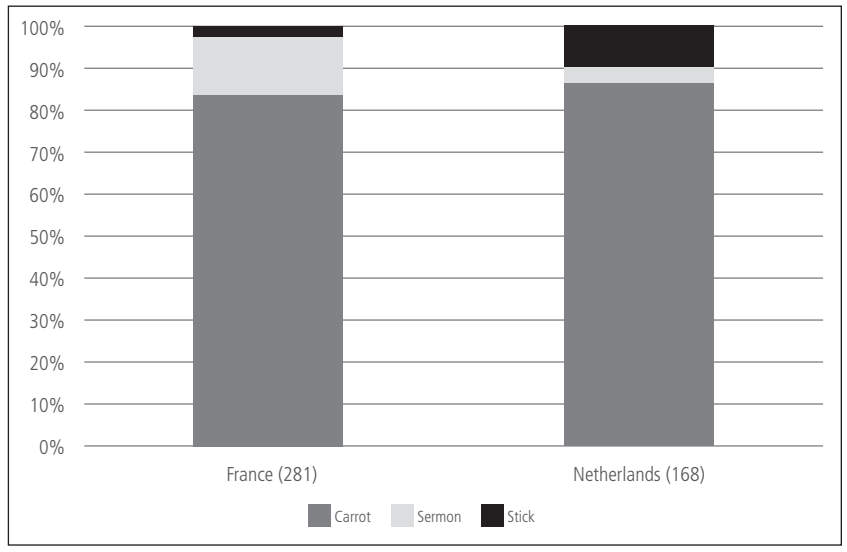

Figure 4.5. Authoritative mechanism used to implement restrictive measures as well as conservation measures for 33 selected habitat types.

Table 4.4 presents the outcome of the statistical tests performed to verify whether there are significant differences between the 15 French and 15 Dutch plans regarding action content, problems addressed, parties or authoritative mechanism used. A T-test was performed for data with normal distribution, a Mann-Whitney U test for data with a non-normal distribution.
The table shows that there are a number of differences. First, French management plans propose more restrictive measures than those in the Netherlands (p=0.04). No difference is noticed in the percentage of general measures or conservation measures between the countries. Second, in terms of the problems addressed, French plans include significantly more measures related to agriculture and forestry whilst in the Netherlands measures are proposed mainly to address pollution and modification of natural conditions. There is no significant difference found in the number of parties that execute the measure between the plans in the countries, both Dutch and French plans mostly feature measures that require one party for the measure to be executed. Finally, no difference is found between the measures based on a stick in Dutch management plans compared to the French plans. Overall the authoritative mechanism behind most measures is the carrot. In this respect no significant difference can be found between the plans in the two countries.

Content of plan	Aspects	p-value
Type of measure	Conservation measure	0.11
	Restrictive measures*	0.04
	General	0.32
Problems addressed	Agriculture*	0.05
	Modification of natural conditions*	0.00
	Natural processes (excluding catastrophes)	0.08
	Pollution*	0.00
	Unspecified*	0.00
Parties needed for execution	Single party	0.29
	Multiple party	0.29
Authoritative force	Carrot	0.46
	Mann-Whitney U Test (Critical Value = 64, $p < 0.05$)	
Authoritative force	Sermon	73
	Stick	73
Problems addressed		
	Disturbances due to human activities	85
	Forestry*	42.5
	Non-native species	70
	Mining	105
	Transportation & service infrastructure	83
	Urbanisation, residential & commercial development	105
	Use of living resources (other than agriculture & forestry)	105

*Table 4.4. Outcome of T-test and Mann-Whitney test for differences between 15 French en 15 Dutch management plans. Aspects with p-values for the T-test below 0.05 or with values below the critical value of the Mann-Whitney U test are indicated with an *.*

4.5 Discussion

In this paper, we have explored the question to which extent the authoritative force of the national planning system influences the measures proposed in the locally developed management plans. Our study shows that the majority of the measures included in the French plans are based on financial incentives (carrots) and thus reflect the national authoritative force of the system. In the Dutch case the relationship between the national management system and the measures taken locally is less obvious. The Dutch management system was aimed at assessing the impact of various land use activities on protected habitats and providing clarity about the need to put forward restrictions on these activities. The plans were supposed to determine, by way of permits, which activities could or could not be allowed. However, almost no restrictive measures are actually included in the management plans. Compared to French plans, the Dutch plans show no significant difference in the number of restrictive measures included. Instead, the Dutch plans mainly include conservation measures that are funded by the government. This raises the question why in the Dutch situation the content of the managements plans has shifted towards a system based on financial incentives and consequently a lower authoritative force than might be expected on the basis of the character of the national planning system.

To some extent the differences between the types of measures included in the French and Dutch plans can be explained by the particularities of the problems that are addressed. In France measures mainly relate to halting natural succession and to stimulate less intensive agricultural and forest management of the sites themselves. In the Netherlands the main problems for the sustainable conservation of Natura 2000 are pollution and natural system modification. These problems differ considerably in complexity and possible measures. In France many problems can be tackled through measures requiring single party agreement and for which compensation or subsidy mechanisms are either in place or can easily be designed. Furthermore, and particularly for the measures to halt natural succession due to agricultural land abandonment, the interests of nature conservation are to a large extent in line with those of agricultural owners. In the Netherlands the solutions are more difficult due to the nature of the predominant problems of environmental pollution and water management.

One of the most prominent environmental pollution problems in the Netherlands is the high level of nitrogen deposition. Although high levels of nitrogen deposition occur in some parts of France too, the problem is much more prominent in the Netherlands. Nitrogen deposition has many sources ranging from local to global. Addressing it tends to require multiparty cooperation (Van Grinsven, Tiktak, & Rougoor, 2016; Vitousek et al., 1997). Water management also constitutes a complex governance problem that is strongly connected with intensive agriculture land use in the Netherlands (Bressers & Kuks, 2004; Gaalen et al., 2016a; Hoppe et al., 2016). Ensuring a favourable conservation status by addressing these problems would require stringent and far reaching restrictive measures not only impacting stakeholders in the

direct vicinity, but also in a wider area around the sites (Ministerie van Economische Zaken & Ministerie van Infrastructuur en Milieu, 2017; Wamelink et al., 2013). When the extent of the problem of nitrogen deposition was acknowledged, the process of the development of management plans halted in many sites (Regiebureau Natura 2000, 2011). Eventually, a national approach to tackle this problem was elaborated, the Dutch National Programme for Nitrogen Deposition (Programmatische Aanpak Stikstof, PAS) (de Heer, Roozen, & Maas, 2017; Ministerie van Economische Zaken & Ministerie van Infrastructuur en Milieu, 2017). This programme introduced a dual approach consisting of (1) an overall reduction of emissions and (2) a reduction of the negative effects of nitrogen through conservation measures that remove nitrogen from the habitat, like sod-cutting, mowing, or grazing. Due the expected positive effect of these measures on the conservation status of the Natura 2000 sites responsible authorities are currently able to allow activities that lead to nitrogen deposition. The policy came with a substantial budget to fund necessary measures and this might explain the shift to more financial, incentive-based measures in the Dutch management plans. Many of the proposed measures aim to reduce (in the short term) the effect of N-deposition and are funded through the PAS. Although that programme aims to reduce the total emission in the Netherlands, it is rather uncertain if it will indeed lead to the reduction levels needed to ensure the long term favourable conservation status of habitat types sensitive for N-deposition (PBL, 2014). Similar problems are also faced in relation to water quality in the Netherlands. Recent studies show that current policies will fail to meet the Water Framework Directive (WFD) objectives by 2027 (Gaalen et al., 2016b; Van Grinsven et al., 2016). Nutrient levels, mainly from agricultural activities, are also too high and delimit ecological improvement; but no policy has been put in place to address this problem.

Another explanation might be that responsible authorities are reluctant to include restrictive measures in the management plans, because those would likely generate opposition from land owners, farmers or other users and the interest groups that represent them. The issue of land owners rights played a dominant role in both countries during the decision making process on the new management planning system (Alphandéry & Fortier, 2001; Nederlandse overheid, 2002). The French system that resulted from this discussion was based on the premises of compensation, whilst the Dutch system was not. Consequently, the French system provided the mechanism to negotiate at local level on compensation or subsidisation, whilst the Dutch system did not. The latter might be a reasons why very few restrictive measures were actually included in the Dutch plans. The Dutch planning system specifically aimed at management plans that would rely on legal rules as authoritative force. These plans should therefore distinguish between activities that, with a permit, could be allowed and those activities that should be restricted or even halted to prevent deterioration of the sites. Although in very few sites habitats and species are in an excellent conservation status and specific problems related to other land use activities are identified in almost all of the studied plans, the stick was rarely used to ensure effective action or to impose restrictions.

Furthermore the study indicates that the formulation of management plans is influenced by other policies that influence activities in and around Natura 2000 sites and by shifts in the political landscape about the need to address certain issues and the way in which to do so. In the Netherlands this drove a shift from a system with a high authoritative force (sticks) to measures primarily based on funding (carrots). Along similar lines, many existing measures already funded by the national subsidy system for nature were incorporated in management plans. The latter was also the case in France - many measures included in the plans stem from the Common Agricultural Policy (CAP). But in France the CAP and the Natura 2000 management system shared a focus on financial instruments (carrots) from the beginning.

Natura 2000 management plans can be a useful tool for establishing necessary conservation measures and for organising funding for such measures. Yet many of the measures included in the French and Dutch plans are voluntary and thus highly dependent on the willingness of land owners to participate. There seems to be little political will to restrict damaging activities, and especially not if no financial compensation can be provided. In addition, our study shows that the financial opportunities are often strongly dependent on funding from adjacent policies such as the Common Agricultural Policy, or specific national funding programs that might not always focus on Natura 2000 objectives (Sarvašová et al., 2017). There is a risk that management measures are proposed for which money is available, rather than those that are most effective. It is also possible that necessary measures are not proposed at all due to lack of funding. These insights show that it is important to consider the extent to which national funding schemes are suitable for ensuring the selection of effective measures at site level.

The value of management plans to avoid further deterioration of the Natura 2000 sites also in sum looks rather limited. Even in the Dutch system where the explicit intent was to formulate restrictive measures only a limited number of such measures were actually proposed. Management plans are likely to be insufficient to safeguard the conservation of species and habitats threatened by damaging activities in the site. More generally speaking, the value of the management plans as a tool for addressing complex environmental issues seems limited. This is illustrated by the fact that the plans are hardly used to restrict activities with a possible negative effect on conservation objectives. The review of the different management plans shows that complex problems are very difficult to solve through a collaborative planning process at local level. Rather this requires a different approach that combines considerable resources, a higher authoritative force, and a high level of political commitment. Earlier criticism of collaborative planning of natural resources has already alluded to this problem by concluding that if success was achieved this could be attributed to the fact that the management agreed between the parties focused on obvious solutions to easy problems, the long-term effectiveness of which was not guaranteed (Kenney, 2000; Duncan Liefferink, 1999). The potential of stakeholder involvement for solving environmental problems depends on power relations amongst involved stakeholders and on the possibilities and limits decided at

a national level, taking into account that various stakeholders, both at a local level and in national politics, might not favour sustainable solutions (Blondet et al., 2017; Goodwin, 1998; Jentoft, 2017; Sarvašová et al., 2017; Van Assche, Beunen, & Duineveld, 2016).

This chapter only reviews the Natura 2000 management planning systems of two of the twenty-eight EU Member States. This raises a question about the extent to which the results found may be expected to be representative for other Member States. First, the problems addressed in the management plans in France and the Netherlands are representative for the overall threats for Natura 2000 species and habitats in the entire EU (European Environmental Agency, 2015). High ranking pressures and threats reported for habitats are agriculture, modification of natural conditions, natural processes and pollution. These are therefore also the most urgent problems that management plans can be expected to address in other Member States. Second, almost all Member States are developing management plans, although not all of them have developed new management planning systems (Bouwma et al., 2016). In the majority of Member States the designation of Natura 2000 sites has increased the protected area in private ownership. Consequently new management plans increasingly need to deal with private owners and their property rights. In sites with private ownership restrictive measures cannot be introduced without a discussion about subsidization and financial compensation. This is also reflected by the discussion at EU level on Natura 2000 that also centres on how land owners could be compensated (European Commision, 1998; Ferranti et al., 2014).

4.6 Conclusions

This paper explores to what extent the authoritative force of the national planning system influences the types of measures included in the management plans that are developed for Natura 2000 sites. Our review of 30 management plans developed in two Member States reveals that both Dutch and French plans mainly propose conservation measures that can be executed by a single party and for which funding from the government is available. Only a limited number of restrictive measures is proposed. Restrictions are only included if they are accompanied by financial compensation. The study shows that largely irrespective of the original ambitions of the national authorities the main emphasis is on financial instruments. The authoritative force of the instruments for governing and managing Natura 2000 sites therefore seems rather low. This shifting emphasis, from sticks to carrots as the main tool for coordinating the management of Natura 2000 sites, could be described as 'the carrotisation' of nature conservation policy. The Natura 2000 management plans appear to have become a tool to elaborate the necessary pro-active measures in discussion with stakeholders, and to organize the financial opportunities for funding these measures. However, the extent to which the management plans can fulfil this role depends on their interaction with other policies and the availability of financial resources. Apart from that, it remains to be seen to what

extent a largely carrot-based management of sites will provide sufficient protection to prevent further deterioration of habitats and species. This study suggests that moving back from carrots to sticks will require a significant tightening of the national boundary conditions for management plans.

On the basis of this study, it may be wondered to what extent management plans can help solving complex problems such as nitrogen deposition, that require the co-operation and agreement of many parties and more fundamental changes in current land use activities. The results indicate that this might be difficult, especially if no funding is available, because decision-makers seem reluctant to put in place restrictions to prevent further deterioration of protected habitats. Further research could therefore investigate how policies and measures are actually negotiated (process), the role that adjacent policies play in this, and the eventual effectiveness of those policies. Such research should take into account the extent to which national policies shape the possibilities and limits for stakeholder involvement and local decision-making. From a Natura 2000 perspective it would be most relevant to focus on complex problems related to natural systems modification, pollution and its relationship with agricultural practices, as these are major threats for Natura 2000 species and habitats EU-wide.

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Zeeschelde

Belgium (Flanders)
Code: BE2300006
Surface: 8.957 ha
16 habitats, 13 species

5. Societal engagement in Natura 2000 sites. A comparative analysis of the policies in three areas in England, Denmark and Germany.

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Abstract

Several governments in Europe have explicit ambitions to increase societal engagement in the management of Natura 2000 areas. However, implementing this ambition in practice remains a challenge. This chapter reviews experiences in three Natura 2000 sites in countries in which local level policies exist to improve societal engagement. By defining the elements of the different policies employed in terms of storylines, instruments, organizational structure and style of interaction, and evaluating to what extent these address societal and governmental arguments for societal involvement, wider lessons are drawn on how governments might tackle this complex issue. The area cases show that a hierarchical governance mode is combined with governance modes that are based more on co-operation, market mechanisms or responsiveness to societal energy in order to achieve societal engagement that goes further than acceptance of nature designations.

5.1 Introduction

Natura 2000 is a network of protected nature areas in the European Union that was established under the 1992 Habitats Directive (Council Directive 92/43/EEC). The designation of this network by EU Member States has been criticized for being an overly government-driven and top-down approach, with a lack of stimulus for stakeholder involvement (Crofts, 2014; Dimitrakopoulos et al., 2010; Hiedanpaa, 2002). In response, authorities have begun to invite landowners, entrepreneurs and communities to take a more active role in the planning, use and management of Natura 2000 sites (Boller et al., 2013; Ferranti et al., 2014; Young et al., 2013). Socio-political trends, such as increased citizen empowerment and the changing role of the public sector, have contributed to this development. Over the past decade, the influence of neo-liberal politics in many Western European countries has shifted the emphasis on citizen participation further towards the notion of active citizenship and coproduction of public goods and services (e.g. Bovaird, 2007; Brandsen & Pestoff, 2006; Pestoff, 2006).

We have seen this, for instance, in the term 'big society' in the UK and in the 'participation society' in the Netherlands (Cabinet office, 2010; Ministry of the Interior and Kingdom Relations, 2013). The expectation behind these concepts is that reducing the size and scope of the government will enable societal responsibility, local innovation and civic action (Kisby, 2010).

Even though the EU and Member States have made efforts to establish more societal engagement and a societal discourse in the process of implementing Natura 2000, the literature suggests that so far they have tended to take a regulatory and government-driven approach, in terms of both discourse and practice (see e.g. Apostolopoulou, Drakou, & Pediaditi, 2012; Bouwma et al., 2010; Cent et al., 2014; Enengel, Penker, & Muhar, 2014; Turnhout et al., 2015; Young et al., 2013). This chapter investigates, from a social science perspective, how policies to improve societal engagement are dealt with and reconciled with the regulatory character of Natura 2000, especially in practice.

Little research on Natura 2000 has taken a social science perspective; most studies have taken a natural science perspective (Popescu et al., 2014). The studies available on social science topics deal with a wide range of issues, but few studies focus on governance and the role of public participation (Blicharska et al., 2016). Blicharska et al. (2016) conclude from a systematic review of 664 studies that despite the widely recognized importance of stakeholder participation, few studies have evaluated in detail the policies for societal engagement. Four studies directly evaluated participation processes (Apostolopoulou et al., 2012; Cent et al., 2014; Enengel et al., 2014; Young et al., 2013). The general picture is a low prevalence of participatory practices in Natura 2000 and these were usually steered in a top-down manner with an asymmetric power distribution. The government decides who may participate and how, and it is usually about achieving legal requirements or other governmental needs

(Blicharska et al., 2016). Blicharska et al.(2016) conclude that, in general, there is a need for more social science research on how the functioning of Natura 2000 can be improved, including societal engagement.

The literature overview in Section 5.2 illustrates that government interpretations of societal engagement in Natura 2000 reflect an overall regulatory character. We compare government and societal perspectives on societal engagement in Natura 2000 areas to determine whether or not government policies are responsive to societal motives to become involved. To explore how such societal engagement can be organized, we analyse the literature from a governance perspective to see how shifts in governance modes allow development of several modes of societal engagement, such as sharing responsibilities with societal actors, flexibility in goal setting and outsourcing (e.g. Meuleman, 2008; Reddel & Woolcock, 2004; Van der Steen et al., 2015). Section 5.3 sets out this analytical framework.

The core of the chapter is a qualitative research of three government policies for societal engagement in three Natura 2000 areas. We address the following questions: What types of policies for societal engagement do the authorities develop? How do these relate to the regulatory framework of Natura 2000? and How do the policies balance government perspectives for societal engagement with the arguments of social actors to get involved in these areas? The areas are Exmoor National Park (England, UK), Lille Vildmose (Denmark) and Nature Park Aukrug (in Schleswig-Holstein, Germany). Each have Natura 2000 sites within their boundaries and take different approaches to societal engagement. The methods and case selection are explained in Section 5.4 and Section 5.5 presents the results of the analysis. Section 5.6 contains a comparative analysis of the policies and practices. Section 5.7 contains the discussion and conclusions.

5.2 Societal engagement from two perspectives

In this section we compare arguments for societal engagement in Natura 2000 from governmental and societal perspectives. We show that the EU and Member States have invested in a more participatory approach to Natura 2000, but that government arguments for and interpretation of societal engagement in Natura 2000 reflect a regulatory and government-driven approach.

Arguments for stakeholder participation and co-management can be categorized as normative, substantive and instrumental (e.g. Rauschmayer, Van den Hove, & Koetz, 2009; Young et al., 2013). Normative arguments relate to strengthening democratic processes, such as conflict resolution or avoidance, and strengthening the legitimacy of policies. Legitimacy is defined as having the support of those affected by the outcomes of binding collective decision making (Keulartz & Leistra, 2008). In all Member States the designation of the Natura 2000 sites led to conflicts with private landowners and other concerned actors (e.g. Beunen, 2006; Dimitrakopoulos et al., 2010; Geitzenauer et al., 2016; Grodzinska-Jurczak & Cent,

2011; Hiedanpaa, 2002; Rauschmayer, Van den Hove & Koetz, 2009). In general, conflicts over the designation processes of Natura 2000 sites in many Member States are related to democratic values, such as a perceived lack of information and consultation, and not being able to influence decisions (Bouwma et al., 2010; Hiedanpaa, 2002). To remediate the negative effects of the designation processes of the Natura 2000 sites, both the EU and Member States take efforts to increase societal engagement in the implementation phase through workshops, guidelines and interaction. This discourse is more participatory, but is still largely directed at education and information on Natura 2000 (Turnhout et al., 2015) and seeks to gain the acceptance of nature designations by societal actors (Ferranti et al., 2014). This may be explained by the fact that the designations are legally binding and cannot easily be changed. However, societal support for policies in general is no longer merely expressed by passive acceptance, but increasingly through citizen action and initiative (e.g. Hajer, 2011; Van der Steen et al., 2015). Societal actors may want to take a proactive role in shaping their own living environment, express their support for nature areas actively and take responsibility, which is known as environmental citizenship (e.g. Buijs et al, 2012; Dobson & Bell, 2006). From a societal perspective, this means that policies for Natura 2000 should encompass the potential for societal actors to come forward with their own ideas and initiatives for the management of these areas.

Instrumental arguments for societal participation take a rational choice perspective, which assumes that actors make choices on the basis of rational deliberations on how best to achieve a certain end (Bevir & Rhodes, 2001). From this perspective, societal engagement for Natura 2000 can be understood as an effort to find the most efficient way to realize the Natura 2000 obligations. Instrumental arguments are among the core arguments used by governments to increase societal engagement in Natura 2000 areas. An important government argument for societal engagement is ensuring adequate management of the Natura 2000 areas through the active involvement of landowners and farmers. Besides, EU regulations oblige Member States to take adequate measures to protect the species and habitats the sites were designated for, and to do this they need the co-operation of private landowners. After all, most of the Natura 2000 sites in Europe are privately owned (Gallais, 2015). Agricultural management is particularly important as 63 habitat types depend on or can benefit from agricultural activities (Halada, Evans, Romão, & Petersen, 2011). From the perspective of social actors, instrumental arguments are about reaching their own goals in the most effective way. Landowners and farmers who want recognition of their ownership and land use rights in the designated areas, may argue that becoming involved provides opportunities to demand sufficient compensation for possible income losses that they fear will result from Natura 2000 designations. Societal actors may also have other interests that they want to pursue. Often, financial instruments to compensate landowners and efforts to balance interests are needed to ensure societal involvement. This poses a challenge to governments that are trying to reduce public spending.

Substantive arguments for societal engagement are based on the local knowledge and values of the actors involved (Young et al., 2013), which may add quality to the Natura 2000 areas. Member States are bound to the EU objectives to protect particular species and habitats in a specific site and their first responsibility is to ensure the conservation status of the species and habitats in the Natura 2000 sites (Council Directive 92/43/EEC). Despite more participatory efforts, the EU and national governments continue to pursue a largely biodiversity oriented scientific discourse that appeals mainly to professionals, but is less compelling to others (Turnhout et al., 2015). Societal actors may be motivated more by other interests, such as socio-economic, recreational, cultural and historical, and even emotional values (Bakker & Overbeek, 2005). Combining these values is a crucial challenge for governments who want to increase societal engagement, especially as the Natura 2000 framework for assessing human activities, plans and projects is strictly regulatory. The governmental and societal perspectives for societal engagement in Natura 2000 are illustrated in Table 5.1.

Societal engagement	Governmental perspective	Societal perspective
Normative (legitimacy)	Ensure acceptance of nature designations	Ensure active involvement of societal actors with initiatives
Instrumental (reaching goals)	Society contributes to finance and undertakes nature conservation management	Financial or other reward for societal contributions to the areas
Substantive (values)	Biodiversity goals central	Extend goals to include all societal values

Table 5.1. Perspectives on societal engagement in Natura 2000 areas.

5.3 Analytical framework

We use a governance perspective to explore how governments organize societal engagement in the cases. We define governance as a process in which societal actors and governments work together to tackle policy problems and address challenges (Kooiman, 2003). Where active citizenship is involved, it involves a mix of activities in which both public service agents and societal actors share the responsibility for policy and the provision of public goods (Bovaird,2007). Societal engagement in this chapter therefore refers to participating of societal actors in decision making, but also in taking care of nature and natural values. In this section, we use the concept of governance modes to operationalize policies for societal engagement. New governance modes have emerged that have the potential to allow societal initiative, balance interests and include societal values; in short, modes that might meet today's demands for societal engagement. Societal engagement has a different character according to the mode of governance. As existing policies are often still in place, a process of layering of governance modes occurs (Meuleman, 2008; Van der Steen et al., 2015). Governance modes appear, develop, accumulate and change over time.

Hierarchical governance operates in the context of the nation state and representative democracies. Legitimated by public elections, governments use authority to intervene in society and reach goals by imposing regulations (Meuleman, 2008). Public authorities are the core executors of public policy and they persuade society to accept these policies. In this mode of governance, societal engagement seeks to ensure passive public support through information provision and consultation procedures, and may lead to informed and consulted societal actors (see Table 5.2).

Network governance is a response to the realization that policy is increasingly the result of interaction between a multitude of actors. Public and private or societal parties try to reach shared goals by cooperating and negotiating in mutual dependence in coalitions (Klijn & Koppenjan, 2006; Rhodes, 1997). We can operationalize societal engagement in this mode as co-operation and interaction where interests can be balanced. Ideally, societal engagement results in interactive and co-created solutions.

Market governance also has a participatory component. In this mode of governance, business competition is the driving force for more efficiency in the public sector. A typical strategy is out-sourcing, in which contract partners undertake government tasks (Meuleman, 2008). We operationalize societal engagement in this mode as invitation and contracting. Both network and market governance are suitable for enabling societal actors to negotiate their own financial or other interests.

Self-governance, in which authorities give social actors the maximum space to reach their own goals, is a governance mode that emphasizes societal initiative. In this form of governance, the government is responsive to societal initiative and explores ways to connect its own goals with the societal energy outside the government (Hajer, 2011; Van der Steen et al., 2015). Societal engagement can be characterized by initiative and (self-)creation. Network and self-governance modes are useful for moving beyond the governmental and 'scientific' arguments. The emergence of these governance modes is not a matter of transition from one mode to another. It does not mean the end of public governance, but merely results in mixed perspectives (Van der Steen et al., 2015).

The setting in which policies for Natura 2000 are developed reflects trends of increasing complexity of actors, scales and decision-making modes in various policy domains (Niedziałkowski et al., 2016). Policies for societal engagement are interwoven in the local and regional context of the areas, in which histories, earlier conflicts and a web of other policy frameworks at the national, regional and European levels play a role. In the cases, we examine the contextual factors which influence the development of these policies. To analyse how policies for societal engagement are operationalized and to unravel the modes of societal engagement in more detail, we make use of some clearly defined elements of policy: storylines, instruments, organization and interaction style (adapted from Liefferink & Jordan, 2004).

Storylines refer to the shared concepts which mobilize or galvanize people into action (Bate, 2004; Hajer & Laws, 2006; Rein & Schön, 1996). Van der Stoep (2014) shows that storylines are an important way for governments to communicate with citizens when they want them to connect with a government agenda (and vice versa). In each government strategy or area policy, storylines are substantive and context related. They can provide an indication of a mode of societal engagement based on the concepts they contain, for example by referring to public goods (hierarchical government), shared goals (network governance), market values (market governance) or self-reliance (self-governance).

Instruments can be defined as tools to implement a policy. Although in reality instruments are often multifaceted, making them more or less compatible with other governance modes, instruments are often closely connected to a specific governance mode (Salamon, 2002; Wurzel, Zito, & Jordan, 2003). As the Habitats Directive itself sets a rather unifying regulatory framework for the Natura 2000 sites, the review in the area cases focused in particular on the use of financial and information instruments (based on Salamon,2002). Some of the financial instruments are compatible and used in several modes, such as subsidies, but in each mode they have a different character. In hierarchical governance modes, financial instruments are predominantly one-sided, such as taxes. In network governance, targeted subsidies and public-private partnerships are developed in close consultation with recipient groups. In market governance, financial instruments have the character of contracts, and in self-governance modes, government may provide start-up funding for societal initiatives. Likewise, communicative instruments differ in each governance mode. Whereas public meetings and brochures are among the main instruments used in a hierarchical mode, instruments such as negotiation and roundtable meetings are more suited to market governance, dialogues are more associated with network governance, and individual coaching and self-assessment tools are more appropriate for self-governance.

With regard to the organizational structure for the cases, we refer to the type of local policy organization in the areas. We indicate the mechanism by which the policy is developed and implemented with public and/or private actors: whether it is carried out mainly by public actors, contracted societal actors or partnerships, or mainly by inviting citizens and communities to take responsibility.

Finally, the policies can be characterized by style of interaction, defined as the formal and informal attitudes with which societal actors and authorities cooperate. In general, hierarchical governance is associated with formal interaction. Market governance is also characterized by formal interaction, but it is enforced by contracts. In network governance, emphasis is given to informal and frequent contacts between actors, enforced by mutual agreements. In self-governance, informal contacts also dominate and enforcement is based on choice. In the latter two modes, however, there is less enforcement. Wurzel et al. (2013) show how different governance forms and related instruments often coexist, but can also give rise to new

instruments with a more hybrid character. In practice, therefore, different elements can be employed in different ways in each mode.

Governance style & policy elements	Hierarchical governance	Market governance	Network governance	Self-governance
Societal engagement	Informed & consulted	Invited & contracted	Interactive & co-created	Initiated & created
Story line	Government taking legitimate care of nature	Private parties taking engaged care of nature	Public and private parties taking joint care of nature	Locals taking creative care of nature
Financial instruments	Public funding, taxes & benefits	Public-private contracting	Public-private funds & targeted subsidies	Public seed funding & donors
Communicative instruments	Meetings & brochures	Round tables & campaigns	Platforms & dialogue	Individual coaching & self- assessment
Local policy organisation	Public based	Contractor based	Partnership based	Citizen based
Policy interaction style	Formal structure & enforcement by law	Formal negotiations & enforcement by contracts	Informal contacts & enforcement by covenants	Informal action & enforcement by choice/ incidents

Table 5.2. Governance styles and policy: operationalizing societal engagement.

5.4 Case selection

This research was carried out using a case study design. Natura 2000 was chosen as an overarching case for a policy field in which governments face challenges regarding active societal engagement within a regulatory setting. As there are over 27,000 Natura 2000 sites in Europe, selecting areas for an analysis of societal involvement was challenging. Selecting the best practices was not an option. We aimed for areas in which societal engagement was an issue both locally and nationally. The areas were selected by carrying out a quick scan of Natura 2000 areas where societal engagement was an explicit issue in 2013. The selection was based on an internet scan for documentation on Natura 2000 sites and analysing these documents to identify where societal engagement was explicitly mentioned, coupled with an expert assessment with the Eurosite and Europarc Federation network[28]. Three areas with national or regional policies on societal engagement were selected: Exmoor National Park (England, UK), Lille Vildmose (Denmark) and Naturpark Aukrug (in Schleswig-Holstein, Germany). Core features of the areas, such as scale of the site, type of landscape and protected habitats, type of land ownership, GDP and population density are compared

[28] Eurosite and the Europarc Federation are European network organizations of protected area managers.

in Table 5.3.
The research into the cases consisted of a document analysis and interviews with 5 to 12 respondents (face-to-face, telephone and group interviews). The questionnaire focused on the type of societal engagement and the perceptions of actors on the involvement in the case. The policies of the three areas were classified according to the elements in our analytical framework to enable a comparison of the three areas and to study the extent to which the policies provide for societal engagement that meets the motivations of individuals and groups in society to be involved. Table 5.3 shows the similarities and differences between the areas. In all areas, land ownership is mixed, although the type of private owners differs between the cases. In Lille Vildmose the main private owner is a nature conservation organization, while in Exmoor there are many farms within the boundary of the park. The areas contain similar types of protected habitats, such as bogs and heathland. The biggest differences relate to the size of the area studied as well as the general economic situation of the surrounding areas. Lille Vildmose is the smallest area in terms of size, but the largest in terms of the area protected under Natura 2000. In both Aukrug and Exmoor, the authorities are active in areas outside the Natura 2000 sites; their policies cover Natura 2000 sites and their surroundings. The GDP is the highest in the NUTS region in which Lille Vildmose is located, and lowest in Exmoor.

Societal involvement Natura 2000	Naturpark Aukrug, Schleswig-Holstein; Germany	Exmoor National Park, England	Lille Vildmose, Denmark
Short description	Local organization is in charge of management plans for Natura 2000, involving landowners.	The park created a multi stakeholder management plan and co-finances local initiatives.	Collaborative process in order to achieve support for nature protection.
Scale of the site	The area in which the organisation is active is approx. 380 km2. The total area of the Natura 2000 sites is 10 km2.	The National Park covers 693 km2. It includes two Natura 2000 sites that cover approximately 126 km2.	At 76 km2 Denmark's largest protected land area. Almost all of the park is designated as Natura 2000.
Type of landscape	Mixed agricultural forest landscape.	Moorland, woodland, valleys, farmland.	Moorland and woodland.
Type of land ownership	Private ownership (landowners and NGOs).	Mixed ownership (three- quarters of the area is privately owned, among which many farmers).	Mixed ownership (primary owner is a private fund for nature conservation).
Habitats protected under EU legislation	Bogs, grasslands, heathland streams, lakes, forests.	Bogs & fens, forest, heathland, vegetated cliffs.	Bogs, forests, grasslands, inland dunes.
GDP of Nuts area (l2) in which site is located (100 = EU average) in 2014 *	104	90	112
Population density of nuts area (l2) in which Site is located *1	178.7	213.2	98.2

*Table 5.3 Comparison of core features of the areas (adapted Kamphorst et al, 2015; * http://ec.europa.eu/eurostat/cache/RSI, 2016).*

5.5 Results of the area cases

Societal engagement in Exmoor National Park, England

Exmoor National Park in England covers 693 km^2 of moor-land, woodland, valleys and farmland. Exmoor was designated a National Park in 1954. Two Natura 2000 sites are located within its boundaries: Exmoor Heaths Special Area of Conservation (SAC) and Exmoor and Quantock Oakwoods SAC. The National Park is located within the boundaries of two counties: Somerset (71%) and Devon (29%). About three-quarters of the land is privately owned and many of these owners are farmers. About half of Exmoor's population live in small towns and villages and the remainder live in isolated farms and hamlets (Lichfield and Partners, 2009). Exmoor is a sparsely inhabited rural area, which largely explains the main socio-economic issues in the area. Tourism, agriculture, hunting and forestry together make up almost one-third of employment within the National Park. They are drivers of the economy and an important source of jobs (Lichfield & Partners, 2009).

The Exmoor National Park Authority was established in 1997. Its remit is not just nature conservation, but includes a wider range of priority actions relating to engaging people, visitors, access and supporting local initiatives that help to meet local needs and entrepreneurship. In England, the government's 'big society' initiative and the tendency to cut back on public spending on nature conservation influence the policies for the area. The National Parks Authority faces the challenge of finding societal finance and involving communities and landowners more than before for their work in the area.
The designation and management of the Natura 2000 sites in England is implemented through the existing national protected area system of Sites of Special Scientific Interest (SSSIs), a responsibility of Natural England, an executive non-departmental public body funded by the Department for Environment, Food & Rural Affairs. Since Natura 2000 imposed no additional requirements on individual landowners in Exmoor, no extra consultation was considered necessary. Respondents reported resistance from landowners and farmers concerning restrictions on the use of their land. Others, however, are pleased to receive agri-environment scheme funding that compensates them to some degree for their reduced farming income.

Some interviewees said that the National Park Authority experienced problems in gaining public support for their policies because people felt that policies were being imposed on them. The Authority seeks societal support for its policies by activating societal actors. An important argument for societal engagement used by the Authority is to widen responsibility for the park. In 2012 the Authority published its Exmoor National Park Partnership Plan, a management plan for the park. Creating the plan was an interactive process. Partly driven by reductions in public expenditure, there was a need to combine public and private efforts and resources and societal engagement is therefore a main theme of the Partnership Plan. The plan identifies three priorities for partnership action: 'a thriving landscape', 'connecting

people and places' and 'towards a sustainable future' (Exmoor National Park, 2012a, 2012b). The storyline is that the partners share the responsibility for keeping Exmoor National Park special and that together they meet the needs and wellbeing of local communities. Respondents indicate that Natura 2000 is not explicitly mentioned in communication to the wider public. A Habitat Regulations Assessment was carried out to determine the likely consequences of the partnership plan on the Natura 2000 sites and the plan was amended accordingly (Exmoor National Park, 2012a).

The main instrument for increasing societal engagement is seed funding and public-private financing of projects in the park. The National Park Partnership Fund, which is a grant funding programme provided by the National Park Authority, co-funds projects that contribute to the goals of the National Park. Nature conservation partners, such as RSPB, who carry out nature conservation work, also have to bid for funds and attract different sources of finance for nature conservation. On the other hand, the fund provides public finance for a range of societal projects. Projects are selected that add to community values and economic development in the region, such as local tourism activities and transport for the elderly and disabled in the region (National Parks Authority, 2014). Another project providing economic benefit is collective management of woodland, which provides wood as an alternative energy source.

The local organization can be characterized as partnership- and contract-based: the authority develops and carries out policy in partnership with local councils, other public sector organizations, businesses and societal actors. The style of interaction is formalized in strategic partnership groups, which include a wide array of actors, formed around different themes. They develop project proposals and submit bids for funding to the partnership fund. Staff at the National Park Authority are employed to guide the strategic partnership groups. The idea is that the National Park Authority helps communities to deliver their own goals, instead of imposing policies on the population or by executing the work by itself.

Natural England coordinates efforts and management measures to achieve the conservation objectives in both Natura 2000 sites, such as engaging landowners to bring woodlands into positive management and establishing more agri-environment schemes. The societal engagement organized and facilitated by the partnership fund exceeds these processes as it covers a larger area than the Natura 2000 sites.

Societal engagement in Aukrug, Schlesswig Holstein, Germany

Naturpark Aukrug is located in the middle of Schleswig-Holstein, about 30 km north of Hamburg, in two counties (Kreise), Rendsburg-Eckernförde and Steinburg. It was established in 1998 and is approximately 380 km^2 in size. The Naturpark contains nine Natura 2000 sites, which consist of forest with remnants of heathlands or streams and their banks (Auen).

Management plans have been prepared for all the Natura 2000 sites in Schleswig-Holstein. Most of the management plans were prepared by the Landesamtes für Landwirtschaft Umwelt und ländliche Räume (LLUR). However, Schleswig-Holstein is experimenting with setting up Lokale Aktionsgruppe (Ambstblatt fur Schleswig Holsteijn, 2007), local organizations responsible for preparing management plans for Natura 2000 sites and ensuring adequate management. At the moment there are eight different Lokale Aktionsgruppen. The character of these groups is very diverse, from local NGOs to water boards responsible for management of specific areas. One of the Lokale Aktionsgruppen is established in Naturpark Aukrug (Boller et al., 2013).

There are two important organizations active in the Naturpark. The first, the NGO Naturschutzring Aukrug (NSR), was founded in 2001 to establish successful nature projects together with the local people and has been given the responsibility for drafting the Natura 2000 management plans in the area. To further formalize the co-operation between the municipalities in the Naturpark, the Naturpark Aukrug E.V. association was established in 2011; currently 27 municipalities are members. The municipalities cooperate on improving tourism, nature conservation and protection of the cultural landscape in the Naturpark. Tourism operators have also established an association to promote the region and their businesses.
The regional strategy in Schleswig-Holstein of delegating Natura 2000 management planning to Lokale Aktionsgruppe aims to gain acceptance for nature conservation designations and to deal with earlier conflicts (Boller et al., 2013). Also, the regional governments (Kreise) stress that the presence of a local contact person is essential for avoiding or defusing conflicts as these people are trusted. Avoidance of conflicts and ensuring adequate management of the whole Naturpark are important arguments for the government to seek societal involvement. This is reflected in the main storyline of Naturschutzring Aukrug and Naturpark Aukrug, that local residents are responsible for nature conservation and that the best results are achieved if co-operation is sought between the different parties. Wherever possible, nature conservation activities should be voluntary, including measures by landowners and land acquisition. The various people interviewed gave their own variation of this theme, depending on their own motivation. A core concept in the storyline is mutual interest and that what is needed is adequate management through shared ownership. The main arguments given for societal engagement in the area seem to be normative as well as instrumental.

NSR Aukrug has different means to increase societal engagement in Naturpark and the management of the area: educational public meetings (walks, talks) to inform the general public about the area and bilateral meetings with landowners to discuss options for nature conservation on their land. In addition, everyone can become a member of NSR Aukrug or become involved in their activities. This approach was also reflected in the management planning process for the different Natura 2000 plans developed by NSR Aukrug. For some of the management plans only bilateral talks with owners were organized to discuss management options - no large meetings were held. For other management plans, larger meetings were held

(approximately 30 people) with follow-up discussions with owners. Overall, the preferred approach was to include measures in the plans that were achievable and for which support was ensured.

In Naturpark Aukrug a variety of different financial instruments are used to achieve conservation. First, NSR Aukrug itself is co-funded by the national government, the regional government and the private foundation Kurt und Erica Schrobach Stiftung. Second, tailor-made agri-environmental schemes are available for the region in addition to the existing regional schemes of Schleswig Holsteijn. The schemes operating in Naturpark Aukrug are more flexible than the regional schemes and offer landowners more opportunities for incorporating them into their businesses. Third, funds from regional and private organizations are used to acquire land. The pasture land in the stream valleys owned by the foundations are leased by local farmers and the new associations VERNA and ERNA. These instruments link the motivations of societal and government actors: they find shared goals by enabling landowners to undertake conservation management activities compatible with their businesses, thereby compensating landowners for their contributions. The policy organization can be characterized as partnership- and contract-based. The interaction style is both anticipatory and consensus seeking. Many of the actors involved are connected to NSR Aukrug, know each other well and meet frequently, both formally and informally, and in the interviews they stressed that they have constructive working relationships. In Aukrug, therefore, the policy leads not only to participation by landowners in land use, but also supports social cohesion and conflict diffusion.

Societal engagement in Lille Vildmose, Denmark

Lille Vildmose in East Himmerland is Denmark's largest protected land area (76 km2) and has been a Natura 2000 site since 1998. Lille Vildmose has North-West Europe's largest raised bog, unique natural and grazed forests, and cultural and historical values relating to the peat extraction that used to be an important source of employment. The area is located close to the city of Aalborg. The primary and biggest landowner is Aage V. Jensen Nature Foundation, a private foundation whose main interest is nature conservation.

Since 2007, the Danish government has published guidelines for Natura 2000 plans (By og landskabsstyrelsen, 2007; Lund & Holbeck 2009; Ministry of Environment, 2011). At that time, the government stressed that Denmark had never before faced plans for nature conservation on such a scale. The main regulations on nature conservation are laid down by the central government. For the Natura 2000 management plans for 2016-2021 it was decided to stress the importance of dialogue between public and private stakeholders and collaborate on implementation. Respondents in our study stated that in Lille Vildmose there has been stakeholder engagement and collaboration from the beginning. The area has its own organization and process, with its own communication and dialogue.

The organizational structure is a public-private partnership consisting of Aage V. Jensen Nature Foundation, the Municipality of Aalborg and Nature Agency Denmark. Together, they carry out the daily management and habitat restoration works as well as an extensive restoration project in the raised bog (LIFE+, 2011-2016). Societal actors are represented in an Advisory Board, a Followers Group for local people, NGOs and farmers, and a Board of Supervisors. Private actors are also important and the big peat company Pindstrup Mosebrug is a member of the day-to-day management group. Many people (including locals) have been recruited as ambassadors for the area. The storyline in Lille Vildmose is built around the image of the area as full of historical interest and a paradise for nature lovers. The partners are working actively on branding the Lille Vildmose as a 'pearl of natural beauty' and nature as a source of wellbeing that also contributes to the economy. But the partners emphasize that the nature protection policy is here to stay. Everyone must accept that and act accordingly. It is a 'no way back' strategy. In the past, the EU had criticized the lack of protection, which prompted a more comprehensive approach and led to the application for a LIFE+project in 2010. The LIFE+ project is a public-private nature conservation initiative that aims to overcome societal resistance and balance competing interests, such as those of farmers (Nature Agency, 2010; Snethlage et al., 2012). There has been resistance from some small farmers and landowners, who represent a small portion of the land in the area and seven agrarian landowners are taking legal action. Their main concern is that their rights and farming activities are restricted, and as a consequence they have lost income and their property has lost value, while the compensation scheme is insufficient. This was one of the reasons for the partners to make communication a core instrument and it became an in-depth information campaign for the duration of the project. The approach includes efforts to create better economic conditions. An essential component of the work of the project partners are the habitat restoration works. They also use these to increase the level of support by creating jobs through contracts with local businesses. A problem here is that the larger projects have to be put out to tender. Local NGOs are also engaged in nature management tasks. The policy organization can be characterized as partnership- and contract-based.

In order to bridge differences, the partners are conducting informal kitchen table meetings between partners and farmers (landowners). Face-to-face talks are used to keep the communication going and larger, formal meetings follow these more informal meetings. The interaction style can be characterized as a mixture of formal and informal interactions. Although time-consuming, this work is viewed as necessary for creating a joint framing of problems and solutions. Another important aspect of the strategy is providing information and education on the value of the wildlife and natural habitats to tourists and visitors at the Lille Vildmose Visitor Centre. The centre is supported by about 25 local sponsors. The aim is to give everybody the information they require and the partners strive for a shared storyline based on the positive values of Lille Vildmose. Increasingly, local agricultural products are being given a Lille Vildmose brand, such as the Vildmose potatoes, although these come from the neighbouring Store Vildmose. The Pindstrup company has also picked up on this strategy

of product and area branding. Pindstrup has just a small area inside and on the edge of the Natura 2000 area, but wants to stay there and work for sustainable peat extraction. In all the major restoration works, people are offered opportunities to become involved in the work. However, the partners realize that engagement must be matched by facilities and a plan that enable the partners to manage the expectations involved.

The biggest challenge in Lille Vildmose is the protesting farmers. The expectation put forward by the respondents from the partnership organization is that the farmers will gradually move towards the positive storyline as their opportunities to claim compensation become exhausted.

5.6 Comparative analysis

In this section we address the following questions: What types of policies for societal engagement are the authorities developing? How do these relate to the regulatory framework of Natura 2000 and the specific context of the areas? And how do the policies balance government perspectives for societal engagement with the arguments of social actors to get involved in these areas?

We studied three different policies for societal engagement that have developed in different policy contexts and backgrounds within each of the countries and regions involved. In all cases, the regulatory framework for Natura 2000 applies. The provisions of the directives have been transposed into national laws by the Member States. Responsible authorities are obliged to assess activities in the areas that may conflict with the conservation status of the species and habitats that the sites have been designated for (Habitat Assessment; Council Directive 92/43/EEC). The objective of protecting the relevant habitats and species in the areas is central and require a process to establish restoration and management measures for those species. In all areas cases in this study, the designations, or the fact that the designations require changes in the use of privately owned land, has led to resistance from these landowners. In all cases, overcoming this resistance is part of the reason why the government authorities have sought to develop a more societal approach, which has to be reconciled with the regulatory framework for Natura 2000.

In Exmoor, the context is a mixed land ownership, with the presence of towns and villages in the park and socioeconomic challenges in the area. The jurisdiction of the National Park Authority covers a large area, in which the two Natura 2000 sites play a modest role in terms of scale. This allows the National Parks Authority to address societal engagement on a wider scale than Natura 2000 site management and to address economic development, community work and nature conservation at the same time. The process of arranging management and other needed measures for both Natura 2000 areas continues alongside the bottom up

strategy.
In Schleswig-Holstein, the response to conflicts over Natura 2000 designations has been to establish pilot projects in which local organizations are responsible for creating management plans, as in Aukrug. The area has a mixed ownership and management depends to a great extent on local landowners, but the area of the Natura 2000 sites is limited. Involving landowners in nature management is at the centre of the strategy. In Lille Vildmose, most of the area is owned by one private nature fund and almost all of the park has a Natura 2000 designation. Nature protection is at the centre of the strategy, but the resistance of the few farmers located at the edges of the park is a core motive to start a more interactive dialogue. These backgrounds lead to the development of different modes of societal engagement.

In Lille Vilmose the strategy mostly resembles hierarchical governance with elements of market governance and network governance, with a focus on public support for the nature designations through compensation and dialogue. The arguments for nature conservation and the corresponding societal engagement are mostly 'government driven' and normative, that is, to strive for acceptance of the nature designations. The presence of a private funding organization collaborating with the government shows that network governance also plays an important role. Contracting local businesses is being used as an additional way to find shared goals and move towards coproduction, which indicates market-oriented elements in the policy. Aukrug's strategy is one in which societal actors contribute to nature management of the area and the Natura 2000 goals and can be classified as being dominated by network governance with elements of market governance. The arguments of the authority that dominates the policy are mostly instrumental and to a lesser extent normative: a wish to activate landowners for management and to ensure their support, in line with the ecological emphasis of the Natura 2000 framework. Personal contact through the presence of a manager of NSR is central in achieving societal involvement. A core instrument is the use of adapted agri-management schemes which are easier to incorporate into farm management. The government-driven motivation to use landowners for management is mixed with instruments that are attractive and ensure local pride and responsibility.

Exmoor's policy for societal engagement is mostly based on network governance with elements of self-governance and market governance. Societal contributions are sought to supplement the ecological work of professionals, and ecological work is no longer only financed with government money. The responsiveness of the National Park Authority to societal initiatives is a core element of the strategy and seed money from the partnership fund allows societal actors to bring in their own ideas. The storyline of the authority is to share the responsibility for the park with societal actors and activate them as delivery partners, which indicates a market approach. This is a way to combine the government's instrumental wish to attract societal finance to the area with the motivation of societal actors to take their own initiatives and achieve wider benefits for the area (Table 5.4).

The societal engagement in our cases is less government driven than expected from the literature review (Section 5.2). The authorities do indeed strive for acceptance of nature conservation designations and they aim to attract finance from society to achieve ecological goals. However, the cases also indicate the extent to which the policies meet the motives of societal actors to get involved. The policies address several societal motives for engagement, such as the inclusion of wider societal values, compensating landowners for income losses and inviting societal initiatives. In our cases, both storylines and instruments are used to balance the perspectives of governments and society in relation to societal engagement and what this engagement implies. For example, normative arguments of governments (achieving acceptance of nature designations) are combined with society's instrumental arguments (we want to be rewarded for our contributions) by adapting subsidies to local circumstances. Instrumental arguments of governments (societal engagement should contribute to policy outcomes) are combined with society's instrumental or normative arguments (we want to be active and rewarded for our own initiative) by outsourcing or by setting the obligation to finance each proposal with combined public and private finance. In addition, the normative and substantive motives of society (we want to be active with our own values and initiatives) are combined with normative arguments of governments (acceptance of nature designations) by establishing financial instruments, such as seed money, and an inviting storyline. Table 5.5 presents the arguments for societal engagement used in the areas.

Societal involvement Natura 2000	Exmoor National Park, England	Naturpark Aukrug, Schleswig-Holstein	Lille Vildmose, Denmark
Storylines	Meeting the needs of activated communities, economic developed and a thriving landscape as a shared responsibility.	Shared ownership; local people are responsible for nature management; mutual interest.	Area is wonderful nature pearl, which stakeholders should accept; nature restoration can bring economic benefits.
Main instruments	Seed money and public private finance of projects for the park	Tailor made agri- environment schemes	Information and collaboration
Organizational structure	Single purpose authority works in partnership with societal partners; partnership based planning, contract based planning	Membership organization in charge of management plan; shared management; partnership- and contract- based organization.	Public- private partnership in charge of nature restoration; partnership- and contract based organization.
Style of interaction	Formalized; strategic partnership groups; societal partners are delivery partners.	Informal co-operation, trust building.	Public meetings and kitchen table talks; business relations.

Table 5.4. Comparison of main elements of the policies for societal engagement between the areas.

Arguments	Governments' arguments	Society's arguments
Exmoor	Mostly instrumental and substantive: society contributes finance to support the purposes of the park including biodiversity	Mostly substantive: societal actors participate with their own goals; and normative: allowing active engagement of societal partners and citizens
Aukrug	Mostly instrumental and normative: societal contributions to nature conservation to ensure public support	Mostly instrumental: societal actors receive rewards for management contributions
Lille Vildmose	Mostly normative: finding acceptance for nature goals	Mostly instrumental: societal actors receive compensation for income losses (farmers)

Table 5.5. The presence of arguments for societal engagement in the areas.

5.7 Discussion and conclusion

The key question in this chapter was what kind of policies authorities develop for societal engagement in Natura 2000 areas and to what extent these policies respond to societal motives for being involved. We also explored how the aim of improving societal engagement is reconciled with the regulatory character of Natura 2000. We examined this in a qualitative study of government policies to improve societal engagement in Natura 2000 sites and their surroundings in three cases: Exmoor National Park (England, UK),Lille Vildmose (Denmark), and Nature Park Aukrug (Schleswig-Holstein, Germany).

The authorities in the three case areas have the explicit wish to increase societal involvement, but nature conservation and the Natura 2000 objectives are far from an entirely societal affair. In all three cases, governments largely retained their roles of coordination and setting goals, either explicitly or implicitly. Despite similar ambitions, the strategies adopted reflect different emphasis in approach, as seen through the analytic lens of dominant governance modes. Our cases show that modes for societal engagement are presently mixed. As was suggested in our perspective on the emergence of governance modes, new styles emerge, while the regulatory framework of Natura 2000 still plays a role. The designations and the possible restrictions on land use have led to conflicts with landowners. The need to resolve these conflicts is a motive for governments to seek more societal engagement in the implementation of Natura 2000, which is consistent with other research (Boller et al., 2013; Ferranti et al., 2014; Geitzenauer et al., 2016; Young et al., 2013).

The conflicts still play a role in the three areas, although their intensity differs, as do the strategies for involving societal actors. Authorities combine the aim of gaining societal acceptance of nature designations with the implementation of distinct strategies that are also responsive to motives for individuals and groups in society to get involved in the management of the areas. This ranges from funding public support for nature designations through compensa-

tion and dialogue (Lille Vildmose), to involving landowners by underlining shared responsibility and the presence of a local broker and flexible agri-environmental schemes (Aukrug), to inviting societal projects that stimulate the economy and include societal values in addition to nature conservation (Exmoor). This finding confirms what Turnhout et al. (2015) saw as a shift from a technocratic discourse in the design stage to a more participative approach in the implementation stage. Our findings also confirm that societal engagement is often about engaging relevant landowners and users, but also that the focus is gradually shifting towards a broader engagement (Beunen & de Vries, 2011). As concluded by Turnhout et al. (2015), this engagement often serves economic purposes, but it is also about the ability to integrate economic, environmental, and social concerns, and to realize multiple wins. In our cases, we found a growing awareness of a need for broadening the societal engagement.

Government strategies for societal involvement require a reconsideration of the strategies in terms of storylines, instruments and styles of interaction. To promote societal inclusiveness in nature conservation requires the limitation or downplaying of the technical story about nature conservation rules and regulations and developing a storyline that presents a wider scope of the Natura 2000 area and its surroundings, including economic interests, leisure, place identity and other societal goals. However, this also depends on the size of the Natura 2000 area. The development of such an wider storyline is easier where the Natura 2000 sites are part of a much larger area that has a local identity. In terms of financial instruments, different approaches can be sought. One approach could include efforts to provide flexibility in funding mechanisms, in particular agri-environmental schemes. In our cases, the provision of flexibility in the duration of contracts and type of measures in agri-environmental schemes works as a mechanism for getting local landowners involved, which has also been pointed out by Borrass (2014). Another, more far-reaching, approach is to set up funding mechanisms that enable a broad range of projects to be funded or to contract local businesses. Inviting communities and landowners to deliver their own initiatives, instead of authorities imposing policy on actors, helps to shift the responsibility more towards society. The presence of informal contacts between professionals and societal actors is essential for building trust and for triggering societal engagement in decision making and management of Natura 2000 sites. Beunen and de Vries (2011) also underlined the importance of trust in the process of management (planning) of Natura 2000 sites. We found that both formal and informal interactions are needed, a finding that has also been reported by Borrass (2014). In areas where conflict occurred or the implementation of measures is proving difficult, local brokers or informal dialogue, such as kitchen table talks, can play an important role.

A lesson from our cases is that a dedicated approach to increase societal engagement works, is to overcome tensions resulting from the regulatory character of the Natura 2000 framework, - particularly if an authority develops tools and instruments to help generate societal projects and bottom-up initiatives.

Including societal perspectives on societal engagement in this study allowed us to analyse whether policies for societal engagement exceed the common interpretation of societal engagement in Natura 2000, which is acceptance of the designations. Explicitly analysing the processes in Natura 2000 sites through the analytic lens of governance modes employed, the associated storylines, instruments used, organizational structure and styles of interaction shed light on strategies that meet demands for engagement among individuals and groups in society and can be employed by government authorities to increase societal engagement in Natura 2000 areas. It is, however, of paramount importance to look closely at the ways the strategies interact with local, regional and national conditions, as matters of ownership, socioeconomics, and natural and cultural characteristics of the areas in question are important for how the strategy works.

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Lille Vildmose

Denmark
Code: DK00FX007/DK00FX125
Surface: 7.393 /7.824 ha
28 habitats and 24 species

6. The eye of the beholder: Stakeholders' perceptions of EU Natura 2000 policy performance in France, Flanders, England and the Netherlands

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Abstract

Stakeholder-inclusive management in protected nature areas is increasing, in particular in European Natura 2000 sites. This chapter presents the results of a four-country survey among stakeholders in Natura 2000 sites who are involved in management committees and/or actual management. It addresses the question of how these stakeholders perceive the performance of the Natura 2000 policy. First it sets out stakeholder's perceptions of the policy performance at the local level and, secondly, it explains differences among those stakeholder's perceptions based on three explanatory factors: (i) group interests, (ii) political territories and (iii) pre-existing designated status of the area. The survey distinguishes among process, output, outcome and impact aspects of policy performance. Stakeholders notice an increase in the number of measures taken in the sites and consider that the various policy instruments do have an effect. More difference in opinion is found between respondents in relation to the process of policy implementation and expected impact. Differences in perceptions are best explained by group interests as there is a moderate influence on the perception of the process and impact of Natura 2000 policy performance. Political territory mostly influences process whilst small to no influence was found for pre-existing designated status of the area.

6.1 Introduction

A shift is taking place in the management of protected nature areas; from top-down, expert-driven approaches towards participatory management planning and co-management (Keulartz & Leistra, 2008; Lane, 2001). As a consequence the input of various stakeholders to nature management has increased considerably. In the European Union, the designation of Natura 2000 sites under the Birds Directive (1979) and Habitats Directive (1992) has particularly strengthened this development (Alphandéry & Fortier, 2001; Paloniemi et al., 2015; Turnhout et al., 2015). The shift towards multi-stakeholder management of Natura 2000 sites means that, besides authorities, many more people are involved in the delivery of their objectives. This necessitates the involvement of a broad range of actors in policy evaluations, and not solely experts or policy makers. A number of arguments exist that advocate multi-stakeholder policy evaluations. Firstly, it will result in a more balanced view of policy performance, since the latter will be assessed from the perspective of many interested parties, and not a few (Grant & Curtis, 2004; Leach, 2002). Secondly, it will mobilize additional knowledge and support for the policy evaluation concerned (Arts & Goverde, 2006). Finally, it will also show whether various stakeholders have different views on policy performance and, if so, the underlying factors that lead to these different views might be better understood.

This chapter therefore reviews how stakeholders involved in management committees and/or actual management practices perceive the policy performance of Natura 2000. Stakeholder assessments of policy are becoming more common (Koontz & Thomas, 2006), also in European nature policies (European Commission, 2016a).

In evaluating the performance of the EU Natura 2000 network from the perspective of various stakeholders three main challenges can be discerned. Firstly, the number and types of stakeholders involved in the Natura 2000 network is huge. Over 27.000 Natura sites have been designated in the EU, ranging from less than 1 hectare to about 1.5 million hectares (European Commission, 2016b). Due to the sheer size of the network and the diversity of its land use stakeholders exhibit great variety, ranging from foresters, farmers, fishermen, those involved in recreation and businessmen to governmental officials within various departments. Secondly, as no (multi-stakeholder) evaluation of the management of Natura 2000 sites is required by the European Union[29], hardly any national (multi-stakeholder) policy evaluation of the Natura 2000 performance has so far been undertaken. The existing data bases for such an evaluation are therefore rather poor. It is only recently that, as part of the 'Fitness Check' Evaluation (European Commission, 2016a), a first EU wide multi stakeholder evaluation was carried out for the Nature Directives. It consulted 159 stakeholders in 27 Member States and numerous EU level organisations as well as the public. Thirdly, the evaluations that have been carried out have mainly focussed on the ecological aspects of the Directives, only limit-

[29] Member States need to report on the Conservation status of species and habitats for the biogeographical regions in their territory (Art 17), not for specific N2000 sites.

ed attention has been paid to socio-economic aspects (Popescu et al., 2014). Moreover, the majority of the available studies that do review socio-economic aspects of the Natura 2000 network mainly focus on topics related to conservation conflicts, implementation challenges, management and on public perceptions of the Natura 2000 sites (Grodzinska-Jurczak & Cent, 2011; Pietrzyk-Kaszyńska et al., 2012). Only a few studies have explicitly evaluated the participatory aspect of the policy (Blicharska et al., 2016). An even smaller number of these are comparative quantitative surveys of stakeholder's views about implementation performance, which relate the outcome of performance to both local as well as national implementation aspects. For a multi-stakeholder evaluation, it is pivotal to address the various dimensions of policy performance and to better understand the underlying causes that lead to differences in viewpoints.

This chapter therefore presents the results of a stakeholder survey that reviews various aspects of the Natura 2000 network in four countries in the EU (France, England, Flanders and the Netherlands). As the current status of policy implementation of the Natura 2000 network does not yet allow for an *ex-post* evaluation, this study better qualifies as an *ex-durante* evaluation. The aim of this chapter is twofold: the descriptive aim is to evaluate the performance of the Natura 2000 network as perceived by a broad range of stakeholders; and the analytic aim is to review explanatory factors that might play a role in opinion formation about Natura 2000 performance among different stakeholders.

6.2 Evaluation methodology, theoretical approach and hypotheses

Policy evaluation: a quantitative survey of stakeholder perceptions of policy performance

Within the field of policy evaluation, three main evaluation types can be discerned, juridical, administrative and political (Arts & Goverde, 2006). Each has its own focus and typical set of actors involved in its execution (Crabbé & Leroy, 2012; Howlett, Ramesh, & Perl, 1995). Juridical evaluations focus on accountability and legal security of policies. It reviews the decision contents, process and procedures against the legally valid and fair application of rules and regulations. Generally, the administration itself or an independent legislative branch of the government undertakes such evaluations. Administrative evaluations focus on the question of effectiveness and efficiency of policies. Central are questions with respect to whether the policy reaches it goals, whether goal-achievement can be attributed to the policy itself and whether it is realised in the most cost-effective way. Usually such evaluations are undertaken by a government or by a hired expert. Political evaluations focus on issues such as participation, legitimacy and responsivity of the government. Political evaluations are often undertaken in close co-operation with involved stakeholders, either by assessing their view about the policy or by jointly developing criteria with stakeholders for such evaluations.

Given the main aim of this study - to assess how involved stakeholders perceive the performance of the Natura 2000 policy - our study qualifies as a hybrid between an administrative and a political one. It reviews aspects of goal attainment and of participation and equality, and takes the opinions of a broad range of stakeholders into account. Figure 6.1 shows the differences between the three evaluation types and positions our research in relation to them (see star in Figure 6.1).

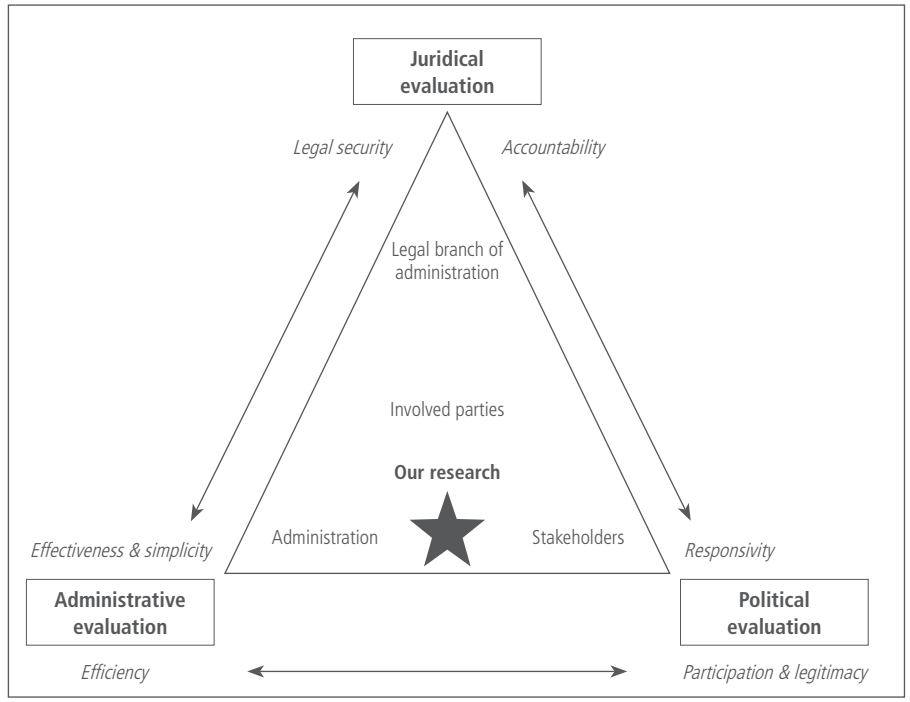

Figure 6.1. Types of evaluations and our research (adapted from (Arts & Goverde, 2006).

The different evaluation types all have their own methods and techniques (Crabbé & Leroy, 2012; Fischer, Miller, & Sidney, 2006; Howlett et al., 1995). Different methods exist to undertake a research into the perceptions of key stakeholders in relation to particular policies. Some methods are more qualitative in nature (e.g. in-depth interviews, document analysis, ethnographers and participant-observers), others more quantitative (e.g. data analysis, models and surveys) (Fischer and Miller, 2006). This study utilised a survey, a method regularly used to assess the opinions of stakeholders with regards to policy implementation (Leach, 2002; Mitchell, 2007).

Another important aspect of evaluations, regardless of type, is whether it is undertaken prior (*ex-ante*), during (*ex-durante*) or after (*ex-post*) the policy has been put into place (Crabbé & Leroy, 2012). Although the distinction of policy evaluations on the basis of different policy phases is very helpful from a theoretical perspective, in practice most policies do neither

abruptly end nor start as completely new. They are regularly revised over time and the distinction might therefore not be so clear-cut. It is therefore difficult to undertake an ex-post evaluation of the Natura 2000 network now, because the full implementation and impact of the network has not yet been realized (European Commission, 2016a).

This *ex-durante* evaluation focuses on the perceived performance of the Natura 2000 policy by stakeholders. For *ex-durante* evaluations undertaken from a policy cycle perspective different aspects can be reviewed which, in this chapter, are together considered the **policy performance:** process, output, outcome and impact (Crabbé & Leroy, 2012; Koontz & Thomas, 2006; Rauschmayer et al., 2009). *Process* evaluations focus on *how* the output is produced rather than on the output itself. As many process evaluation criteria are available, such as legitimacy of and equity in the process, each evaluation will need to select its own criteria that are relevant to the specific process under review (Blackstock, Kelly, & Horsey, 2007). Policy *output* evaluations consist of measuring what is produced by the government in terms of prohibitions, procedures, grants, subsidies, taxes, plans, services and goods (Vedung, 2008). Measuring policy output is relatively easy and it is therefore common practice in evaluations. Policy *outcome* relates to the influence the policy has on the behaviour of target groups for instance by adjusting management practices in accordance with policy requirements. *Policy impact* refers to the ecological, social or economic effects of a policy. The effect of policies for protected sites might be difficult to measure, as a site will also be influenced by other factors. The observed change can only be partly attributed to the policy itself, the influences of other factors, such as agricultural practices, land prices, climate change, but also the socio-economic setting of a region or the political-institutional setting (Hirschnitz -Garbers & Stoll-Kleeman, 2011) should, if possible, be filtered out. Measuring policy impact - in terms of socio-economic as well as ecological impact - is difficult, due to the inherent complexity of a socio-ecological system (Nuno, Bunnefeld, & Milner-Gulland, 2014). In this study the impact itself is therefore not assessed, but the impact as perceived by stakeholders.

In conclusion, this study uses a survey to undertake an ex-durante evaluation of the performance of the Natura 2000 policy in terms of process, output, outcome and impact of the Natura 2000 policy as perceived by stakeholders.

Factors influencing stakeholders' perceptions

In public policy studies, two central contrapositions are frequently used to situate theories, one between agency and structure and the other between top-down and bottom up approaches (Fischer et al., 2006). We also use these contrapositions to heuristically find explanatory factors by which to understand the variation in stakeholder's perceptions of the Natura 2000 policy performance. Below, after a short description of these contrapositions, the existing Natura 2000 literature on policy implementation and evaluation is positioned in this framework. In a next step, we will formulate the hypotheses of this study.

The motivations of agents are generally explained in policy implementation literature using the concept of 'interest', both for group interest and self-interest (Howlett et al., 1995; Krott, 2005; Truman, 1971). Group interest starts from the underlying premise that groups of individuals in a society share similar concerns, views and characteristics. In the policy process, it is argued, these groups will organize themselves into interest groups and work together to influence policy making during its various stages. A characteristic of organised interest groups is that they, on the one hand, articulate the interest of the group they represent in order to influence policy makers and, on the other hand, they mobilise, inform and discipline the members of their own group (Jordan, Halpin & Mahoney, 2004; Krott, 2005). As a consequence, the attitude of an individual towards a particular policy is determined by the group's shared view. Interest groups are often identified on the basis of their main economic activity (Howlett et al., 1995). Questions remain open as to how exactly to define these interest groups, and on how homogenous they are. Nevertheless the idea has gained considerable ground in both political theory and every day policy practice. For example, in Europeanization literature, delay of implementation has often been ascribed to the opposition by certain national interest groups (Steunenberg, 2006; Treib, 2003).

At the same time, literature reviewing policy perceptions and preferences stresses the fact that a multitude of individual-level factors shape these and might explain variation. Age, beliefs and political orientation are some of the factors that have been used to explain people's policy perceptions (Sabatier, 1998; Stoll-Kleemann & Welp, 2006). A recurrent explanation at individual level is related to self-interest. In social welfare studies, for example, people's preferences of particular policies have been linked to self-interest; it is assumed that the more a particular policy positively influences one's own personal situation, the more the policy will be supported (Zhu & Lipsmeyer, 2015). Furthermore, the opposition of local residents to new developments in their neighbourhood has been linked to self-interest through the concept of NIMBY (Not In My Back Yard) (Freudenburg & Pastor, 1992). Self-interest as an explanation of policy perceptions and preferences is also a central theme in rational choice theory (Fischer et al., 2006). Following this line of reasoning, the way an individual evaluates a particular policy is thus dependent on how it has affected his or her own personal situation or the expectation of how it will affect this.

Structural explanations for explaining policy perceptions and preferences are often found in opposition to agency-related explanations. National policy traditions and administrative routines have, in particular, been identified as considerable obstacles to any EU policy that aims to alter these (see e.g. Immergut, 1998; March & Olsen, 1998; Pierson, 2000; Steinmo, Thelen, & Longstreth, 1992). In Europeanization literature, the existence of national policy styles and administrative traditions have been used to explain differences in EU policy perceptions among Member States (Knill, 2001). Such policy styles and traditions are specific for a defined political territory. EU policies that try to substantially change such national styles and traditions will likely suffer from a lack of appreciation.

However, in Europeanization literature, less attention has been paid to the *regional* or even *local* administrative traditions into which EU-policies are diffused and how this affects (perceived) performance (Treib, 2014).

The other central contraposition is the one between top-down and bottom-up approaches towards the analysis of policy implementation. Successful policy implementation from a top-down perspective depends on well-defined policies and on well-co-ordinated implementation programs. Implementation problems from this perspective are therefore the result of faulty policy design (e.g. policy objectives are based on wrong assumptions or do not match instruments) or faulty co-ordination, in which case the centrally defined objectives are incorrectly interpreted at lower administrative levels (Fischer et al., 2006; Van Gossum et al., 2008). In contrast, bottom-up approaches emphasize the importance of local administrators, policy makers and policy processes at local level (Lipsky, 1980). In the case of protected areas - the implementation of the policies will depend on the management plans developed, contracts negotiated for and enforcement of these agreements in the particular area.
The paper addresses amongst others the gap in relation to the impact of EU policy from a bottom-up perspective considering both agency as well as structural explanations.

Evidence from Natura 2000 literature

In relation to Natura 2000 implementation, explanations of successful and failing implementation trajectories focus particularly on group interests and national policy styles and traditions, and they address both top-down and bottom-up dynamics. For example, delay in Natura 2000 implementation is attributed to conflicts among *national* interest groups in part of the literature (Keulartz & Leistra, 2008; Laffan & O'Mahony, 2008). Several studies show that during the phase of area designation, national associations that represent the interests of private owners and businesses questioned the Nature 2000 policy and its implementation approach and actively advised their constituencies on how to object to it (Alphandéry & Fortier, 2001; Laffan & O'Mahony, 2008; National Audit Office of Finland, 2007). The Natura 2000 policy implementation was thus characterised by a high degree of multi-level interaction among EU and national actors, representing different organised interests. A case in point is the 2015 public consultation on the Fitness Check of the Birds and Habitats Directives. Various national interest groups called on their members to participate in the EU wide public consultation and some of them even suggested prefabricated answers (Fries-Tersch, Sundseth, & Ballesteros, 2015).

At the same time, Natura 2000 implementation and particularly its lack thereof was also explained on the basis of conflicting interests among *local* stakeholders (Hiedanpaa, 2002; Kati et al., 2015; Sumares & Fidelis, 2009). Some Natura 2000 implementation research reviewed the support for Natura 2000 amongst the general public at local level (Dimitrakopoulos et al., 2010; Grodzinska-Jurczak & Cent, 2011; Pietrzyk-Kaszyńska et al., 2012). However, as

our assumptions related to the influence of collective factors, individual level factors were not included in the survey.

In addition, several national studies show how different policy styles and administrative traditions have influenced implementation trajectories in various countries (Apostolopoulou et al., 2012; Rauschmayer, Van den Hove & Koetz., 2009; Unnerstall, 2008). Furthermore, although the Habitats Directive is implemented in 28 Member States, limited comparative research is available that provides explanations for variation in implementation performance in different Member States (Bouwma et al., 2016; Ferranti, Beunen, & Speranza, 2010). A few descriptive studies indicate the existence of different implementation strategies (European Commission, 2013) and show that views on effectiveness differ among Member States (Milieu, IEEP, & ICF, 2016).

Although political structures are conventionally associated with national administrations, a Natura 2000 site can also be viewed as a political structure *in itself*. Due to an area designation, new rules for land use might be established, alternative management plans might be needed and new management organisations might be formed. As a result, a new local political territory is created that differs from its surroundings and past. Wendler and Jessel (2004) showed that in sites already protected, actors were generally less concerned about the effects of the Natura 2000 policy as not much local change was expected.

Hypotheses

Based on the two contrapositions in public policy theory (agency/structure, top-down/bottom-up) and based on the empirical literature on Natura 2000 reviewed in the previous section, we develop three hypotheses in relation to factors that might explain how stakeholders perceive the performance of the Natura 2000 policy: one on economic interests (shaping stakeholders' perceptions), one on national political territories (role of administrative styles and traditions) and one on local political territories (history of the designated site).

Given the extensive communication among interest groups at all levels of Natura 2000 implementation (EU, national, regional and local), we assume that the perceptions of local stakeholders involved in management planning processes have been strongly shaped by those other levels. The respondents of this study can be said to belong to particular interest groups, that can be related to economic sectors, such as agriculture, forestry and tourism. Our first hypothesis is therefore: '*Respondents belonging to economic interest groups whose assets are believed to be negatively influenced by Natura 2000 policy are more likely to express negative perceptions of its performance (process, output, outcome, impact).*'

Starting from a structural perspective, we asses change at two levels of 'political territory' - one from a top-down perspective and one from bottom-up. From a top-down view a major issue

was to what extent EU's Natura 2000 policy requires substantial policy change at national level (e.g. in terms of legal protection, funding, communication plans, etc.). We assume that the introduction of new policy instruments will create tensions with existing policy styles and administrative traditions. Our second hypothesis is therefore that *'Respondents from Member States in which Natura 2000 is likely to lead to substantial (national) policy change are more likely to express negative perceptions of its performance (process, output, outcome, impact).'* From a bottom-up perspective, a major issue was whether a Natura 2000 site would introduce new management styles and administrative traditions at local level. If so, we assume that this will lead to conflicts and negative perceptions. We assume that, when a site has a prior designation under existing nature law, this leads to less change. Our third hypothesis is therefore that '*Respondents from sites not yet protected by nature conservation law prior to Natura 2000 designation are more likely to express negative perceptions of its performance (process, output, outcome, impact).'*

6.3 Selection of Member States, sites and stakeholders

A self-administered on-line survey was chosen as the means to collect the data. The choice for this method was due to the number of sites to be reviewed, the number of actors involved as well as the inclusion of four countries. Important steps in conducting the survey were the selection of the Member States or region, the sites and the respondents and the development of the survey questions. These are described in the next sections followed by the methods used for the statistical analysis.

Member State selection

The choice of Member States in European comparative research is always intricate (Haverland, 2005). In this research, territories with a comparable socio-economic and ecological setting were selected. The underlying reasoning was that differences in opinions of respondents could then be more easily attributed to national policy change and not to existing differences in socio-economic or ecological context. Furthermore, as the stage of implementation of the policy needed to be advanced as far as the phase of management is concerned, Member States in the Atlantic region were chosen. At the start of the research all responsible government administrations in the Atlantic region (with the exception of Portugal and Spain[30]) were approached with a request for them to participate in the research - only four of them (England, Flanders, France and the Netherlands) were willing and able to participate. As co-operation of the respective administrations was crucial in order to obtain information about the respondents in the Natura 2000 sites, this was a necessary requirement for the research.
Table 6.1 provides information about Natura 2000 for the four political territories.

[30] Only a small part of these countries is allocated in the Atlantic region

Political territory	Terrestrial surface Natura 2000	Nr of sites[c]	Policy instrument change (based on (Bouwma et al., 2016)
England	8.5%	338	Low
Flanders	12.3 %[a]	62	Medium
France	12.6 %[b]	697 (Atlantic region only)	High
Netherlands	13.3 %[b]	162	Medium

Sources: a. Natuurindicatoren, 2016. Oppervlakte Natura 2000. Instituut voor Natuur- en Bosonderzoek, Brussel. www.natuurindicatoren.be (versie van 12-04-2016). b. (European Commission, 2016b).
c: England: https://www.gov.uk/government/publications/improvement-programme-for-englands-natura-2000-sites-ipens, Alterra GIS data base Natura 2000 sites, http://www.natuurenbos.be; Ministère de l'Ecologie et du développement durable).

Table 6.1 Characteristics of Natura 2000 in selected areas.

Site selection

As our objective was to undertake a multi stakeholder survey to assess the impact of interest group, the influence of policy change as well as the effect of prior designation status of the site, sites needed to be selected that varied in these aspects. A stratified random sampling procedure was therefore used where sites were selected based on 1) size of the area 2) political territory and 3) status of designation prior to 1993. Only sites with a surface between 1000-10000 hectares were included in the selection. In smaller sites not all economic interests might be at stake - while in larger sites it might be difficult for actors to assess the performance in relation to the entire area. The information for status of designation before 1993 was based on a GIS analysis[31]. Three of the four countries fall entirely within the Atlantic biogeographical region; France is the exception and is covered by more than one region, and we therefore only included the French sites in the Atlantic biogeographical region.

Stakeholders selection

Due to theoretical as well as pragmatic reasons the survey only reviewed the opinion of those stakeholders who are involved in the management (planning). We needed to obtain names and addresses of the survey population in four political territories for several Natura 2000 sites. We expected that it would be easier to identify the people involved in the planning process or management; but even obtaining this information was complex. In the Netherlands and France no central records exist - contact persons therefore needed to be approached at the local level. In England and Flanders[32] central records were available. The original intention was to undertake the survey in 108 sites. In the end due to the difficulties in acquiring data the survey was held in 89 Natura 2000 sites. Overall, the types of actors approached for the survey in the 89 sites were similar, although the total number as well as the relative frequencies varied; (see Annex V, Table A, supplementary material).

[31] An overlay of the CCDA database with the Natura 2000 database was performed. The surface of the site designated before 1993 as a protected area corresponding with the IUCN I-IV categories was used.
[32] In Flanders in consultation with the Ministry and interest groups, interest group respondents for the sites were provided.

6.4 Survey design

For the survey the different aspects of performance in terms of process, output, outcome and impact needed to be framed in survey questions that would be understandable for a multi stakeholder audience in different political territories (see Table 6.2). A multitude of possible criteria exist to evaluate the performance of a process. According to Ferranti et al. (2014) issues of legitimacy, relations and finances were dominant in discussion about Natura 2000. In this survey, questions centred on legitimacy, relations and equality. In relation to ecological impact the Habitat Directive itself provides the criteria for outcome as it states that conservation measures need to be taken in the Natura 2000 sites. Concerning impact, the conservation measures should ensure or even improve the conservation status of the habitats and species. Although the policy goal of Natura 2000 is restricted to biodiversity issues, the debate surrounding the Natura 2000 designation has concentrated on the impact of the Natura 2000 site on the economic development of the region as well as the well-being of local populations (European Commision, 1998; Hiedanpaa, 2002). Two questions were therefore included on these issues.

The four political territories which participated in the survey are comparable in terms of socio-economic and ecological setting, nevertheless they have developed different policy instruments for implementation (=output). A question on how respondents perceive the impact of the different policy instruments used to implement the management of the Natura 2000 sites was therefore included[33]. The survey was designed by the Dutch research organisation Alterra in consultation with local contacts in 3 of the 4 political territories (in Flanders ABN and INBO, in France ATEN, in England Natural England). The request to fill in the on-line survey was sent out by email in the Netherlands and Flanders and in mixed mode (email and letter) in France and England as no email addresses were available for all respondents in these areas. The survey sent out by email was followed by a reminder.

6.5 Statistical analysis

The core of the survey results consists of the answers to the evaluation questions on the different performance aspects. First in the analysis is a description of the answers for the sample as a whole (Table 6.2).
Our further analysis, for each question separately, was aimed at ascertaining the differences between levels of two categorical factors: political territory (four areas) and interest group (six groups), and the relationship between score and the prior status of designation of the area (expressed in % of the area). The economic interest groups are based on the sector the respondents belongs too.

[33] Like in the case of process and impact we measure the perception of stakeholders in terms of output.

The respondents are clustered into six interest groups[34] : four economic interest groups of owners, users and/or representatives (abbreviated as OUR) from different sectors (OUR-agricultural, OUR-forestry, OUR-nature, and OUR- other sectors), governmental representatives (local or regional authorities) and other stakeholders.

For this analysis the Likert scale responses to the survey questions were operationalised by appointing numerical values 1 to 5, while the answers 'not applicable' and/or 'do not know' did not receive a score. The most affirmative ('positive') answer was assigned a value of 1, the most dissenting ('negative') answer a value of 5. For the two factors interest group and political territory the means of the scores for each of the 15 questions are reported, giving insight in the differences (see Annex VI). We went one step further by statistically testing if differences in question scores are significant by using various models in which the score is treated as a continuous normally[35] distributed interval variable (see Figure 6.2). Due to the symmetric and equidistant characteristics of the Likert scale, it 'behaves' like an interval-level measurement. Therefore, Likert scales are often analysed through parametric statistical tests, although researchers differ in opinion on this matter (Carifio & Perla, 2007; Murray, 2013; Norman, 2010). We nonetheless note that the analysis results from the ANOVA and regression models should be seen as explorative rather than 'hard inference'. The models used are all of the General Linear Model (GLM) type and include 1-way ANOVA (model with one categorical factor), 2-way ANOVA (two categorical factors) and regression (one numerical factor, namely the percentage of prior designation of the area). The 1-way ANOVA analyses were compared with the non-parametric counterpart, the Kruskal-Wallis test, which revealed similar results (see Table 6.3).

This observational study had a low response and the data are not balanced for interest group and political territory (see Annex VI). We also found non-proportionality in the response. For instance, the number of governmental representatives in France is disproportionally high as all mayors are involved in the planning process and several responded to our survey. The non-proportionality leads to partial confounding in the results, i.e. differences in a question score between territories may be related to differences in score between interest groups and vice versa. The solution to these problems is to run models that include several factors. For this reason we analysed the scores using different models, so that their estimated effects are mutually corrected. In addition, interactions between independent variables may occur, so we also used models that included interactions between the three factors. In this chapter we only present and discuss the results of the most simple analyses (1-way ANOVA and simple

[34] The survey itself made a further differentiation within the interest groups (leading to a total of 10 groups). A 2-sample T-test was performed on all of the survey questions to assess the differences in outcome within the interest group. Based on the outcomes of these T-tests we decided to cluster the respondents into six interest groups as some clusters contained very few respondents and for the majority of the interest groups no differences were found between owners and users.
[35] QQ plots residuals showed only small deviations from normality and in most cases the Levene's test on variance homogeneity was not significant.

linear regression), because the more complex models did neither yield significant interactions among the independent variables nor provided additional insights with regard to the individual factors. We do, however, present the R2 and P-values of 7 models in Annex VI- Table C, so the extent of confounding can be reviewed.

To reduce the chances of obtaining false-positive results (type I errors) when multiple pair wise tests are performed on a single set of data a Bonferroni corrected significance level of 0.0033 = 0.05/15 was assumed.
The ANOVA tests were followed by a Tukey Post hoc test to assess which pairs of groups show a significant difference. Per model and per question, we further reviewed how much of the variation is explained by the explanatory factor, using R2. In our results section we do not distinguish any relationship, when R2 value is below 0.02, when the value is between 0.02-0.13 we speak of a small relationship, when the value is between 0.13-0.25 we speak of a moderate relationship, and when R2 is above 0.25 we speak of a large relationship (based on Cohen (1992).

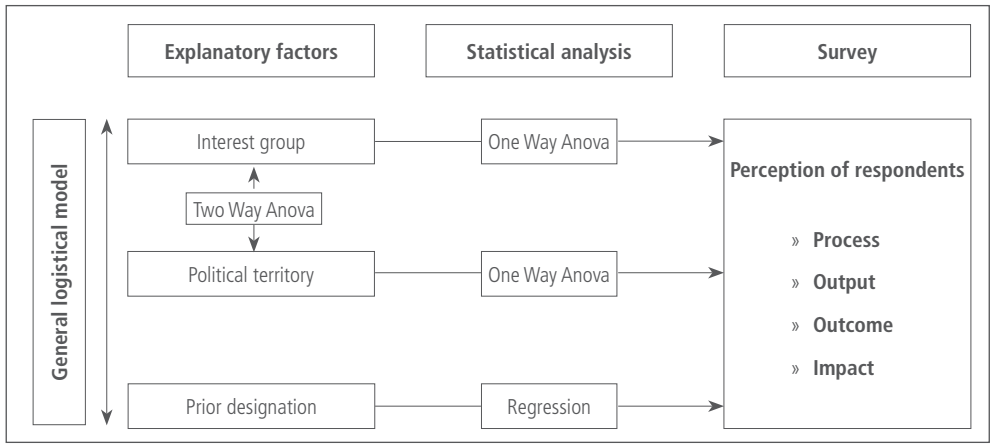

Figure 6.2 The explanatory factors and the statistical analysis undertaken.

6.6 Results

The overall response rate to the survey was 20 % (complete and partially complete responses). The response rate was higher in the Netherlands and Flanders (43 % and 34% respectively) and lower in France and England (each 13%) (see Annex V - Table B). The results of the survey are presented in Table 6.2 (answers) and Table 6.3 (statistical analysis).

Overall stakeholders are generally in agreement and rate the Natura 2000 performance in terms of *outcome* and *output* positively. In terms of *process* and *impact* the perception of stakeholders on performance is much more divided. Based on Table 6.2 we can conclude

that the opinion of the respondents on the question related to *process* vary and no clear positive or negative picture emerges. The majority of respondents agree that the local process increased co-operation and support for the measures and, in addition, they did not notice an increase in the number of conflicts. At the same time the respondents are divided as to whether interests were given equal weight in the local discussion or whether it led to better accessibility to funding. In respect to the *output* aspect of performance the survey shows a much more consistent picture. The majority of the respondents feel that the different policy instruments have a medium to very high impact on the management of the area. In respect to the *outcome* aspect of performance there is also a high agreement between the respondents as the majority of them (64%) perceive an increase in management related measures. Furthermore there is high agreement amongst the respondents for two of the three i*mpact* related questions. For the socio and economic *impact* aspect of the policy the majority of the respondents agrees with the statement that Natura 2000 will have a positive impact on the well-being of the local population (respectively 61 %) and the local economy (44%). More divergence is found in opinions of respondents in relation to the ecological impact aspect of the performance of Natura 2000 policy.

Process What is your opinion in relation to the following statements about the discussions concerning the management of the area between officials and stakeholders? (N=349)	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Do not know	N/A
LEGITIMACY							
In the local discussion all interests were given equal weight	4.3	25.2	22.9	24.1	12.3	9.5	1.7
The local process generated support for the implemented measures	6.0	36.7	21.2	14.6	8.6	11.2	1.7
RELATIONS							
The local process increased cooperation between the various stakeholders	6.9	41.5	22.3	13.5	5.4	8.9	1.4
The local process increased the number of conflicts	4.0	16.3	25.2	37.2	7.4	8.3	1.4
EQUALITY							
Local discussions led to better access to available funding for management activities	5.7	28.1	22.6	17.5	8.6	14.3	3.2
The local process increased the number of citizen initiatives	2.0	16.9	24.9	29.8	8.9	14.3	3.2
Output Can you indicate which of the following measures taken by the government have contributed to changes in the management of the area? (N=350)	Very high impact	High impact	Medium impact	Low impact	No impact	Do not know	N/A
Legal rules or regulations for certain activities in the area due to Natura 2000	11.4	27.4	22.6	18.6	5.7	12.6	1.7
Requirement to develop a management plan	9.1	26.0	23.1	18.3	7.1	12.0	4.3
Availability of subsidies or compensation payments	10.3	23.1	22.9	14.6	8.3	16.3	4.6
Funding for nature management by state nature institutes	14.3	24.3	25.1	13.1	4.6	15.7	2.9
Outcome Did the number of measures implemented for the species or habitats for which the site is designated change following the start of the discussions about the management? (N=344)	Sharp increase	Increase	No Change	Decrease	Sharp decrease	Do not know	
	23.0	40.7	20.3	1.7	1.2	13.1	
Impact Do you think that the measures implemented in the area for the species and habitats are sufficient to ensure a good conservation status of the species? (N=395)	More than sufficient	Sufficient	Neutral	Insufficient	Very insufficient	Do not know	
	8.4	35.4	15.4	25.1	6.6	9.1	
What type of impact do you feel the designation and management of the area as Natura 2000 area will have on the future of the area in the following fields? (N=347)	Very positive	Positive	Neutral	Negative	Very negative	Do not know	
Local economy	9.8	34.6	35.2	9.5	6.1	4.9	
Wellbeing of local population	16.7	44.4	26.8	3.2	4.0	4.9	

Table 6.2. Answers to the survey questions on different aspects of performance

Table 6.3 shows the results of the statistical analysis for the three explanatory factors; the first 3 columns show the level of significance for the three reviewed factors ($p < 0.05$) and the last three columns show the explanatory value for the three factors (R2).

The statistical analysis shows that none of the reviewed factors have a significant score for all four aspects of performance (process, output, outcome and impact) which was contrary to what we expected based on our hypothesis. However the factors do show significant relationships for some of performance related aspects from moderate to small. For 'interest group' a moderate relation is found for the performance aspect *process* and *impact*. The Tukey post hoc-test revealed which interest groups showed a significant difference. Overall the respondents from the agricultural sector give a significantly more negative response to the process related questions. In respect to *impact* respondents from the agricultural and forestry sector as well as 'other stakeholders' are more positive about the ecological impact. At the same time, respondents from the agricultural and forestry sector are more negative in terms of the effect of the Natura 2000 policy on the local economy. The influence of Natura 2000 on well-being of the local population is also more negatively perceived by respondents from the agricultural sector.

For the explanatory factor 'political territory' a moderate relationship is found for some of the *process* performance aspect (e.g. funding, support and co-operation). Respondents from Flanders have the lowest scores (i.e. negative responses) and England the highest (i.e. positive responses). Respondents from the Netherlands and France take a more intermediate position although respondents from France have the highest overall score in relation to the question on co-operation. Models incorporating more factors showed that limited confounding between the two factors occurs, but no statistically significant interaction between the independent variables 'political territory' and 'interest group' appeared. The relationship with the 'prior designation' is small to negligible.

In conclusion, the survey shows that in terms of *output* and *outcome* respondents are in agreement and rate the performance of Natura 2000 policy positively. For the performance aspects *process* and *impact* more differences in opinion are found among the respondents. The difference found for the performance aspects *process* and *impact* are mostly related to the explanatory factors 'interest group' as well as 'political territories'.

	P			R2		
	Interest group	Political territory	Prior designation	Interest group	Political territory	Prior designation
Process						
All interest were given equal weight	0.000	0.000	0.002	0.12	0.07	0.03
Local discussions led to better access to available funding for management activities	0.000	0.000	0.000	0.11	**0.25**	0.06
The local process generated support for the implemented measures	0.000	0.000	0.000	**0.18**	**0.22**	0.06
The local process increased co-operation between the various stakeholders	0.000	0.000	0.011	**0.17**	**0.15**	0.02
The local process increased the number of conflicts	0.001*	0.000	0.000	0.07	0.07	0.04
The local process increased the number of citizen initiatives regarding the management of the area	-	0.000	-	-	0.10	-
Output						
Legal rules or regulations for certain activities in the area due to Natura	-	-	-	-	-	-
Establishing /national regional objectives for Natura 2000	-	-	-	-	-	-
Requirement to develop a management plan	-	-	-	-	-	-
Availability of subsidies or compensation payments for owners, users or environmental organisations resulting from Natura	-	-	-	-	-	-
Funding for nature management by state nature institutes	-	0.002*	-	-	0.05	-
Outcome						
Did the number of measures implemented change?	-	-	0.019	-	-	0.02
Impact						
Do you think that the measures implemented in the area for the species and habitats are sufficient to ensure a good conservation status of the species?	0.000	-	-	0.09	-	-
What type of impact do you feel the designation and management of the area as Natura 2000 area will have on the future of the area in the following fields? The local economy	0.000	0.000	-	**0.18**	0.06	-
What type of impact do you feel the designation and management of the area as Natura 2000 area will have on the future of the area in the following fields? Quality of life of local residents	0.000	-	-	**0.17**	-	-

*Table 6.3. Statistical analysis of the three factors reviewed: interest group, political territory and prior designation (P-values and R2). Fields marked with '-' are not significant (p< 0.003). P values indicated with a * were not significant in the Kruskal-Wallis test.*

6.7 Discussion

The overall underlying hypothesis of our research was that three factors - being a member of an interest group, the political territory and the prior designation status of the area would influence all four aspects of perceived performance (process, output, outcome and impact). Our analysis shows that our assumption was incorrect as the three factors influence the four aspects of performance to a different degree. Below we discuss the three hypotheses related to explanatory factors and which aspect of performance they influenced.

Our analysis does show that respondents whose (economic) interest is expected to be negatively affected (hypothesis 1) indeed have a more negative perception of policy performance for some of the *process* and *impact* aspects. In particular the agricultural sector and to a lesser extent the forestry sector express more negative perceptions. Other actors with an economic interest that might be affected by Natura 2000, are less explicit. A possible cause might be the heterogeneity of this group in our survey compared to the other groups as it consists of stakeholders from hunting, fishery and tourism. In addition some of these sectors' economic interest might be less affected or even positively related to Natura 2000 (Brink et al., 2013). The reason that some of the performance aspects *impact* and *process* show these moderate relations might be related to the interest group shared fundamental normative precepts dealing with basic values (Sabatier, 1998).

The analysis also shows a moderate relationship with the political territory (H2) in relation to some of the *process* aspect of policy performance. As expected, respondents from England, the territory with the lowest change (Table 6.1), are indeed less negative than the other three territories that were reviewed. However, contrary to our expectations, France also scores rather positively when compared with Flanders and the Netherlands. Although policy change has been more substantial in France, this change was at the request of involved stakeholders in order that they could increase their influence on the process of management planning of the sites (Alphandéry & Fortier, 2001; Fortier, 2014). This might explain why our research shows a more positive perception in relation to performance in terms of process. Policy change that leads to increased stakeholder influence might have a positive effect on stakeholder perceptions of the performance.

In terms of the influence of a prior designation status of the area on the stakeholder's perception of the performance of the policies (H3), we only notice a very small relationship to *process* and *output*. Earlier research noted a much larger influence (Wendler & Jessel, 2004). The difference between the studies might be due to the stage of policy implementation, as our research was undertaken at a later stage in the implementation process.

Overall we found moderate to small relationships (low R2 values) which might be due to the multitude of other factors, both individual and local, that also contribute to the policy

perception of stakeholders; such as level of education, age, place identification and level of trust towards authorities (Blicharska et al., 2016; Pietrzyk-Kaszyńska et al., 2012; Stoll-Kleemann & Welp, 2006). Most interestingly, the policy performance aspect *outcome* did not seem to be affected by the explanatory factors (economic) interest and political territory. This might be an indication of positive policy performance of Natura 2000. However, it might also be that our respondents perception is influenced by their involvement in the process of management planning and as such their view might differ from that of non-participants (Larson & Lach, 2008; Leach, 2002).

We conclude our discussion with some remarks on methodological issues. Our research has shown the complexities of evaluating a policy from the perspective of different stakeholders. In cases with a high diversity in stakeholders it becomes a complex process to ensure that the selected stakeholders are a representative sample of all involved stakeholders. Furthermore, more effort might be needed to ensure a balanced and high response rate and therefore telephone survey or interviews might be more suitable instead of an on-line survey (De Leeuw, Hox, & Dillman, 2008).

So far Natura 2000 policy evaluations from a multi stakeholder perspective are scarce and evaluations mainly focus on ecological impact. However given the societal debate concerning Natura 2000 (Ferranti et al., 2014; Rauschmayer, Van den Hove, & Koetz, 2009), measuring the ecological impact of the Natura 2000 network alone is not sufficient to assess policy performance. Member States should invest in developing and measuring a broad range of criteria for Natura 2000 evaluation that take into account aspects that all parties find relevant.

6.8 Conclusions

As participatory management planning and management is becoming more common place this chapter undertook a multi stakeholder and multi country survey of the performance of the Natura 2000 policy. The survey shows that in terms of *output* and *outcome* respondents overall rate the performance of Natura 2000 policy positively. For some of the performance aspects *process* and *impact* more differences in opinion are found amongst some of the respondents. These differences are mostly related to the explanatory factors 'interest group' and 'political territories'. The relationship with interest group might be explained by the difference in (expected) effect on stakeholders' economic interests. The relation with political territory might be explained by the amount of policy change that Natura 2000 requires at national policy levels. The high agreement on outcome amongst stakeholders might be an indication of the positive performance of Natura 2000 implementation.

The result of our study underlines the importance of involving stakeholders in the evaluation of the policy for protected areas (Rauschmayer et al., 2009). Such stakeholder inclusive evaluations are nonetheless challenging. Due to the high variation in stakeholders, a robust procedure for selecting sites and respondents is important in order to provide a representative national or EU wide evaluation. In addition, considerable efforts are needed to gain access to the relevant stakeholders and to ensure a balanced response. Furthermore multi stakeholder evaluations of protected area policies should not be restricted to the ecological impact of the policy alone, but should also cover its social and economic impact.

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Exmoor Heaths

United Kingdom (England)
Code: UK0030040
Surface: 10.670 ha
6 habitats

7. Synthesis

7.1 Introduction

The previous chapters have analysed the implementation of the Natura 2000 policy, the network of protected areas set up under the Birds and Habitats Directives of the European Union (EU). The focus was on the policy instruments for the management of the sites. The implementation process is marked by its multilevel and multi-actor character, as national or regional governments need to decide on the type of policy instruments to use for the 'good' management of the Natura 2000 sites. At local level for each Natura 2000 site, the instruments need to be elaborated in order to decide which measures need to be taken.

During the process of policy instruments choice, the government considers who are managing the sites, how policy instruments might affect stakeholders and how the stakeholders will be engaged in the further elaboration at local level. The issue of engagement is particularly relevant for Natura 2000, as the majority of Natura 2000 sites are owned by private owners and organisations and are often used for recreation, hunting and fishing by other people as well. Therefore the implementation of the instruments at the local level depends on the co-operation of a wide range of societal actors. Such societal engagement includes the involvement of local actors in planning or programme development, the evaluation of the plan or programme, and the management of the site itself. At the same time, local actors have their own reasons to become involved: to ensure governmental funding for management and to ensure considerations of the economic and social goals of the area.

The Birds and Habitats Directives do not prescribe particular policy instrumentation for the management of Natura 2000 sites, nor do they specify how societal actors need to be involved. Therefore, the research objective of this thesis was to analyse, explain and evaluate the influence of discretionary EU nature policy on national and local implementation practices. Furthermore, the aim was to investigate how increased societal engagement has influenced the implementation of the management of the Natura 2000 network. To analyse this, three research questions were formulated to review the national policy instrument choice, local implementation and the influence of societal engagement. In this thesis different aspects of national and local implementation were reviewed: the instrumentation selected at national level in different Member States, the influence of the Habitats Directive on national policy, the content of management plans, local practices to increase societal engagement, and the perception of the involved local actors on Natura 2000 policy performance.

In this chapter, the findings of the research are summarised in order to answer the three research questions (section 7.2-7.4), the scientific relevance of the findings is described (section 7.5) and a reflection on the research is provided (section 7.6). as well as the lessons learned from the research that might aid the further implementation of Natura 2000 policy (section 7.7). Table 7.1 summarises the key findings of this thesis and their implications for science, policy and practice.

This thesis mostly looked backwards, as it reviewed questions on how the Habitats Directive influenced the national policy and associated instrumentation of Member States and to what extent it has affected local implementation. However, during the years in which this thesis was written, the political debate in the EU has changed considerably. For example, Euroscepticism and anti-European sentiments have gained strength, which culminated in the UK referendum vote on 23 June 2016 to leave the European Union (Brexit). Furthermore, the Nature Directives themselves were subject to a Fitness Check, a process in which the European Commission reviewed whether the Directives were proportionate to their objectives and delivering as expected. Although this process did not lead to a revision of the Nature Directives (European Commission, 2016a), general political trends such as shifting responsibilities to the regional level or increased European integration might still influence the management of the Natura 2000 sites in the future. Therefore, this chapter ends with a description of possible political developments in the EU that might affect the management of Natura 2000 sites in the longer term. This is illustrated, amongst others, with the expected impact of the Brexit on the Natura 2000 sites in the United Kingdom.

7.2 The influence of the Habitat Directive on national policy and policy instrumentation of Member States

The first research question this thesis addressed is 'How did the Habitats Directive influence the national policy and in particular the associated instrumentation of Member States for the management of Natura 2000 sites?'

The Habitats Directive had different impacts on the national policies of Member States. Depending on the Member State, it changed the national rules for protected areas, the discourse on nature conservation, the number or type of actors involved and the resources available for conservation to a greater or lesser degree. Although not required by the Habitats Directive itself, the majority of the Member States introduced new policy instruments for the management of Natura 2000 sites, resulting in voluntary path formation at instrument level. This was not in line with the expectation that Member States would show path-dependent behaviour, given that the Habitats Directive does not set any binding requirements for Natura 2000 management policy instruments.

Whether this voluntary path formation at instrument level occurred depended on the degree of overall change of the national policy, caused by the Habitats Directive as well as by other socio-political developments. The review of the process of policy instrument choice in Finland, Hungary and the Netherlands revealed three different situations underlying voluntary path formation at instrument level. In cases where the domestic impact of the Habitats Directive on rules, discourse, actors or resources was considerable (such as in the case of the Netherlands), the Habitats Directive could also be regarded as the main factor behind the emergence of the new policy instruments. In cases where the Habitats Directive had only low to moderate impact (such as in Finland and Hungary), the Habitats Directive - in combination with other domestic developments, including EU accession where applicable - explains the emergence of new policy instruments. In these situations, the Habitats Directive either sped up the creation of new policy instrumentation (catalyst), or the processes occurred at the same time (conjunction). In almost all Member States, national policy changed to such an extent - due to the Habitats Directive and/or other socio-political developments - that it led to the emergence of new policy instruments for the management of Natura 2000 sites. Only three out of the 15 reviewed Member States (i.e. United Kingdom, Estonia and Slovenia) could be considered path-dependent. In these cases, the domestic impact of the Habitats Directive was low, and neither domestic developments nor EU-accession created sufficient conditions for instrument change. In the other 12 reviewed Member States, new instruments were introduced.

The character of the new management planning instruments that were introduced depended on the intermingling of the influence of the Habitat Directive with other socio-political developments. As this process is Member State-specific, the management planning systems developed for Natura 2000 differ in the authoritative force, the governance design and the action content for each Member State. One commonality noted in the management instruments introduced is that the governance design explicitly enabled the inclusion of (new) societal actors (see 7.4). The need for engagement also underlies the introduction of several new financial instruments, particularly in Central and Eastern Europe.

The key finding for the influence of the Habitats Directive on Member States national policy is that **different mechanisms of domestic impact** exist and most mechanisms result in **voluntary path formation** at instrument level. The existence of these mechanisms underlines the need to analyse the influence of EU policy for each Members State at a sector-specific level. The occurrence of voluntary path formation at instrument level, as found in this thesis, falsifies the theory of path dependency present in Europeanization studies - at least for the development of policy instruments for the management of Natura 2000 sites. Table 7.1 summarises the key findings of this research question and their implications for science, policy and practice.

7.3 Policy instrument choice influence on local implementation

The second research question this thesis addresses is 'To what extent did policy instrument choice for Natura 2000 management influence local implementation in Member States?'

This thesis shows that policy instrument choice has two main components: firstly, whether new instruments are introduced, and secondly, what character the new instruments have.

The choice of creating new instruments versus using existing instruments affects local implementation because of the change in policy instrumentation to be implemented at local level. In Member States where existing plans and subsidies are used, change is of course limited. Change may be incremental, if existing instruments are updated to better address Natura 2000 species and habitats, or if those instruments are slowly introduced in sites previously not covered by nature conservation policy. In Member States that create new management plans, subsidies and regulations, the change in instrumentation is considerable and more abrupt, as it will initiate discussions in all sites on the management of Natura 2000 requirements (e.g. new plans that need to be developed or subsidy schemes that need to be arranged). How this change in policy instruments affects local implementation of Natura 2000 was reviewed by analysing the local perception of stakeholders on implementation in 89 sites in England, the Netherlands, Flanders and France. New instruments primarily affect the perception of the process (and to a lesser extent) the perception of outcomes or impacts of the instruments. The differences between England (existing instruments) and the Netherlands and Flanders (new instruments) indicate that in Member States where new instruments are used, this change creates a more negative perception on the legitimacy, co-operation and equality of the policy implementation process. However, the more positive perception in French sites, compared to Dutch and Flemish ones, signals that a planning instrument enabling co-decision and earmarked funding might partially mediate this effect.

This study therefore primarily revealed a **process effect** due to the introduction of new instruments at local level. At the same time this thesis shows that policy change and policy instrument choice for Natura 2000 are mutually dependent. New instruments are usually the result of considerable change in the overall policy. As a consequence, the influence of new instruments cannot analytically be separated from the overall change occurring.

In case the decision is taken to introduce a new policy instrument, the character of the instrument is determined during its adoption at national or at regional level. Subsequently this instrument is further elaborated at local level. The comparison of French and Dutch management plans shows that the measures proposed are closely interlinked with existing and new financial instruments. Authoritative systems like the Dutch management planning system result in local plans with a lower authoritative force, as the measures finally included are based on financial subsidies and compensation and not on legal enforcement - a process

we have named 'carrotisation'. We ascribe this 'carrotisation' of the management planning instruments to the need for societal engagement at local level. Particularly in cases where restrictive measures will affect private owners in or near the site, they cannot be introduced without a discussion about subsidies and financial compensation. This 'carrotisation' of the planning process is needed to enable negotiation space with stakeholders at the local level. Therefore, differences in authoritative force and action content of the national planning system appear to have less influence on the local implementation in terms of output produced than initially might be expected.

The two key findings of this research question relate to the two components of policy instrument choice. The first key finding on the influence of the introduction of new instruments is primarily that of a **process effect:** the introduction of new instruments to implement Natura 2000 is likely to lead to a negative perception of the implementation process in terms of legitimacy, co-operation and equality. For the other component, the character of the instrument, we noted the **carrotisation** of planning instruments as financial incentives appear to be the preferred way to ensure engagement of stakeholders. Therefore, policy instrument literature should pay more attention to the layering of policy instruments, particularly for policy instruments that only apply to certain areas (e.g. with a specific spatial coverage). Layered instruments interact at area level, both in terms of process and in terms of content of the instruments. This might provide options for synergy leading to new actions proposed. Alternatively, it might also result in no new action, as existing practices are reproduced in the new instruments. Table 7.1 summarises the key findings of this research question and their implications for science, policy and practice.

7.4 Societal engagement, Natura 2000 policy and associated instrumentation

The third and last research question of this thesis is 'To what extent does the need for increased societal involvement influence Natura 2000 policy implementation, the associated instrumentation and evaluation?'.

At national level, the (need for) increased societal engagement in the management of sites led to new policy instrumentation based on a governance design that enabled participation of societal actors in planning at local level. In some Member States (such as the Netherlands and France), policy actors representing different interest groups, actively influenced policy instrument choice for managing sites at national level. The review of the management plans in three Member States that introduced new policy instruments did indeed show that the governance design enabled a broad range of societal actors to be involved in the development of the management plans. But at the same time, the perception of the implementation

process in terms of legitimacy, co-operation and equality varied amongst the involved actors. So the governance design of new policy instruments can create favourable conditions for the participation of (local) actors, but it does not guarantee a positive perception of the process. Despite increased possibilities for participation, actors still perceive process and impact aspects of Natura 2000 rather differently. These perceptions are related to the interest group the actors belong to. Most differences were found between farmers (or farmers' representatives) and nature conservationists in the way they perceive the process as well as the economic, social and ecological impact of the policy. Nature conservationist are more positive on the social and economic impact of the policy than farmers are and are more negative on the ecological impact than farmers are. Government representatives and other stakeholders take an intermediate position regarding the social, economic and ecological impacts. This difference in views on impact can only be overcome if the evaluations of site management involve all actors.

In three Natura 2000 sites (Exmoor, Aukrug, and Lild Vilmose) where explicit efforts were made to increase societal engagement, particular attention was given to the building of trust and establishing of informal relationships between involved actors during Natura 2000 implementation. At the same time, to better align the Natura 2000 policy with values of involved actors, the storyline of the policy was adapted. The Natura 2000 policy was set in a broader scope to enable the inclusion of economic interest, leisure, place identity and other societal goals. This adaptation towards more value-inclusive storylines appeared to be easier in Exmoor and Aukrug, where smaller Natura 2000 sites are part of a larger conservation area for which plans and subsidies were already in place.

As more societal actors become involved in planning and execution at local level, more and different values and perceptions of policy process and impact of Natura 2000 management become relevant. Thus, evaluations should consider not only ecological, but also social and economic criteria for impact. Information on these other impacts might benefit the debate on the performance of Natura 2000 policy amongst involved actors at local and national level.

The key findings of research question three on the influence of societal engagement on policy instrumentation is that it leads to a (more) **inclusive governance design** of new instruments. This change affects implementation and might in the longer term require **integrated and inclusive evaluations** of the management plans. Policy instrumentation literature should therefore consider the implication of increased societal engagement for different types of policy instruments as a factor influencing the choice process. In addition, more attention needs to be paid to the design of types of evaluations suitable for instruments with a more inclusive governance design. Table 7.1 summarises the key findings of this research question and their implications for science, policy and practice.

7.5 Contribution to Europeanization studies and policy instrument theory

A wealth of Europeanization theories already exist to describe the influence of EU policy on Member States (see Chapter 1). However, limited attention has been given to the choice of policy instruments. The specific contribution of the thesis to this research field is its focus on policy instruments and particularly on instruments that need to be further elaborated at local level to implement EU policy.

The process of implementation after transposition is often considered to be similar to national policy implementation. '[At the same time] scholars studying application and enforcement need not start from scratch, since most studies agree that the application and enforcement of EU law is not fundamentally different from putting into practice policies that have a purely domestic origin. Often administrative or judicial enforcement actors and societal target groups do not even know that a particular rule to be applied and enforced has European origins' (Treib, 2014, page 29).

This statement neglects the fact that many Directives propose policy instruments that Member States should or can use to implement the policy (Bouwma et al., 2015; Wurzel, 2008). Even when EU legislation offers room for discretion in policy instrument choice, new policy instrumentation may still be introduced leading to considerable change in national and local implementation practices. Furthermore, the introduction of new instruments can also raise the awareness amongst involved actors that certain policy instruments do come from 'Brussels'. The increased politicisation of the EU and its policies by national policy actors might further strengthen this awareness (Hurrelmann, Gora, & Wagner, 2015). In addition, the process of layering of policy instruments creates new interactions with existing instruments at local level. These aspects create circumstances that result in implementation processes of EU policy instruments that deviate from 'normal' domestic implementation.

The thesis shows that the instrument choice in case of the absence of an obligation to use a particular instrument is not straightforward. A directive may influence the national policy in different ways (e.g. impacting the rules, actors, resources and/or discourses). Therefore 'adaptation pressure' resulting from a directive should be assessed by reviewing how well it fits with the entire domestic policy arrangement in terms of rules, discourses, actors and resources. This requires a much broader interpretation of the concept of 'adaptation pressure' than is currently present in Europeanization literature. In addition, these 'adaptation pressures' may, in combination with other socio-political trends, lead to the emergence of new policy instruments. As a result, different mechanisms can be distinguished that lead to the introduction of 'new policy instruments' in the national policy domain due to EU legislation.

The different main mechanisms are shown in Figure 7.1. In case the directive prescribes new instruments or creates a high adaptation pressure, new instruments will be introduced. In

case of low or moderate adaptation pressure, additional socio-political developments are needed for the introduction of policy instruments. In the absence of additional socio-political developments no new instruments will be introduced. If new policy instruments are introduced, this will lead to considerable change in process and output of policy instruments at the local level. At local level, the layering of instruments may result in interactions with both new and existing instruments in terms of process and output.

The research presented in this thesis also provides more insight in how different 'adaptation' pressures influence the key features of policy instruments. It suggests that the governance design of existing instruments may need to be adapted if the EU directive influences the actors or discourse dimensions - for instance, if the responsibility for action shifts to new actors who expect more influence on the development of the instrument in exchange for their co-operation. The authoritative force of an instrument might require adaptation if the EU influences the rules or the resources dimension (finances or knowledge). If EU rules are stricter than existing national rules, instruments with a greater authoritative force may be needed. If resources increase, a more incentive-based voluntary approach can be feasible. If resources decrease, a more regulatory approach may be required. The action content of instruments may also need adaptation due to EU influence on the discourse or rules dimension. New insight on the type of actions may change policy instruments, or the EU rules might stipulate that new types of actions are needed.

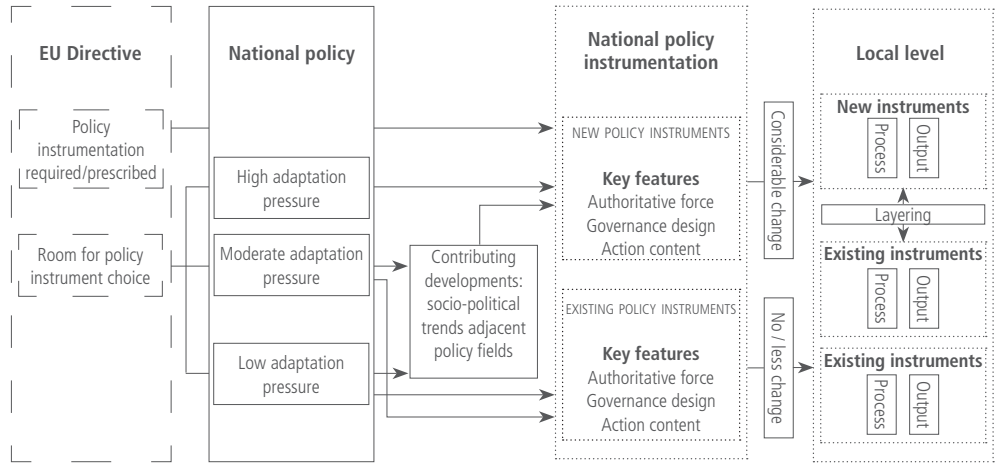

Figure 7.1 Graphic representation of the different mechanism for the impact of EU Directives on national and local implementation practices. Adaptation pressure is dependent on the influence on all four dimensions of the policy arrangement.

The contribution of this thesis to policy instrument theory is focused on linking ideas on societal engagement with policy instrumentation classification and policy instrument choice.

Change in policy instrumentation is often described by the use of **one** ordering principle, such as in policy instrument classifications. The authoritative force (or coerciveness) of policy instruments is one of them (Salamon, 2002). In contrast, the rise of instruments initiated by non-governmental actors or developed in a network setting (Bressers & O'Toole, 1998; Jordan et al., 2003; Jordan, Wurzel & Zito, 2005) leads to ordering principles related to the governance design of instruments. This thesis shows that a change in policy instruments should consider the interrelations between ordering principles. Not only will this enable a more detailed analysis of change in instrumentation, but it will also include the possibility that instruments may change with respect to a single or several key features (i.e. governance design, authoritative force or action content). The influence of increased societal engagement is not limited to voluntary instruments developed in a network setting (Jordan, Wurzel & Zito, 2005); it will also impact more hierarchical types of instruments. Therefore, policy instrumentation literature should consider the implication of increased societal engagement not only for instruments typically associated with societal engagement (such as eco-labels or voluntary agreements) but also for the more traditional policy instrument types (such as subsidies and planning instruments).

Furthermore, this thesis showed that societal actors influence instrumentation at two levels - during national policy instrument choice and during local elaboration. Much of the literature on policy instrument choice focuses on policy actors at national level that decide on the instruments to be used. They may be influenced by interest groups that have their own preferences for certain instruments, but this issue in not elaborated upon in much detail (Böcher, 2012; Lascoumes & Le Gales, 2007). Also which societal actors should be involved to address the problem is considered by policy actors as part of the process of instrument choice (Böcher, 2012). The notion that policy instrument choice at national level creates room for the 'struggle' on policy instruments to continue at the local level (and even at the level of individual measures) is clearly shown in this thesis. The nested framework developed as part of this thesis (see Chapter 4) provides a way to further describe how a change in the governance design of policy instruments, as introduced by national societal actors, might assist local actors in influencing local level output. This thesis identified four ways in which increased societal engagement might influence policy instrumentation (see Figure 7.2):

- due to the role societal actors have in solving the problem. At national level, policy actors might recognise that certain problem solutions require the co-operation and increased engagement of societal actors.
- through direct lobbying of interest groups. At national level, policy actors representing the societal actors involved might also actively exert pressure by stating their preference for particular instruments.
- through increased participation in the local process of planning. At local level, societal actors can be more engaged in the process of developing plans and programmes. Instruments may also formally arrange options for participation.

- and through their involvement in taking action locally. After plans and programmes have been improved, societal can be actively involved in the execution of the measures proposed in the plans.

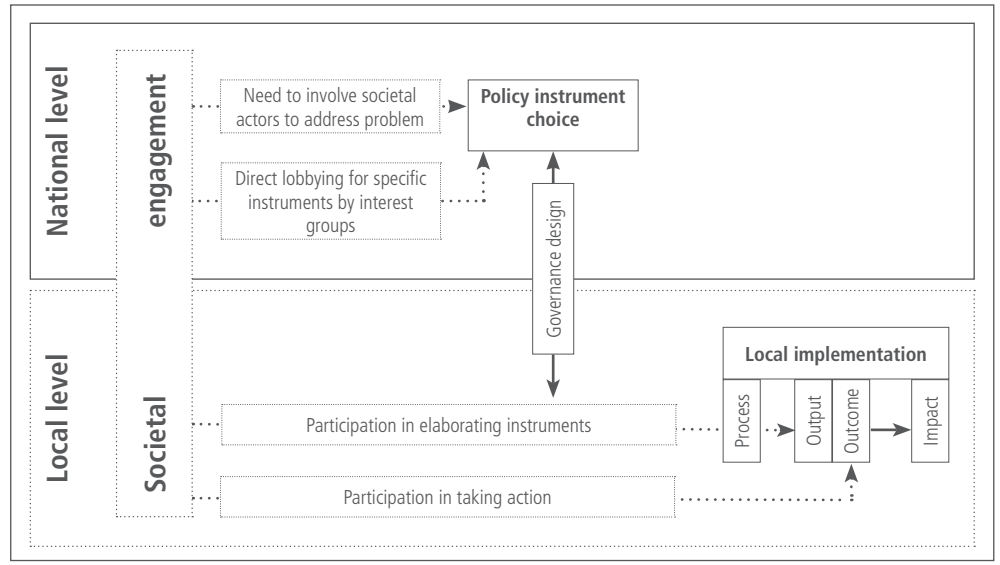

Figure 7.2 Influence of societal engagement on national and local implementation practice.

7.6 Reflection on research frameworks and methods used

Undertaking the research for this thesis has been a challenge—to review the implementation of the management of the Natura 2000 network in Member States from the national to the local level. Because the analytical frameworks used to explain the implementation at national and at local level, the chosen research design, and the case selection all may have considerable consequences for the outcome of the research, this reflection section will focus on these three main aspects of the research.

This thesis uses three separate analytical frameworks to describe the implementation process for Natura 2000 management: the policy arrangement approach, a policy instrument classification and the policy evaluation framework. The combination of the policy arrangement approach and policy instrument classification was able to provide insight into the influence of the Habitats Directive on the national policy and instrumentation (Research Question 1). The introduction of key features of policy instruments (authoritative force, governance design, and action content) helped to explain how change in a policy arrangement may lead to the emergence of new policy instruments. In addition, it showed the influence of increased societal engagement on policy instrument choice (Research Question 3). A disadvantage of

the combination of the two frameworks is that the policy arrangement approach provides analytical directions and not clear concepts to apply. This requires the researcher to clearly demarcate the interpretation of the dimensions based on the objective of the research (Arnouts, 2010). Given the focus on legislation and societal engagement, the framework was applied with a focus on changes in rules and actor dimensions. Consequently, also in the analysis of policy instrumentation, the focus was on authoritative force and governance design and thus may overlook other changes influencing policy instruments for Natura 2000 sites. For instance, limited attention was paid to the changes in the formal organisational capacity of the government to implement Natura 2000 management.

The research design that combined quantitative and qualitative approaches (mixed method) worked well for the analyses of the influence of the Habitats Directive on national policy and instrumentation. The in-depth review in three Member States was able to explain the process behind the changes in policy instrumentation found in the quantitative overview on policy instrumentation choice in 15 Member States. But the in-depth review did not include Member States that were path-dependent regarding instrumentation (i.e. a lack of contrasting cases).

The combination of the policy instrument classification and the framework for policy evaluation proved less insightful for understanding the influence of national policy instrument choice on local implementation (Research Question 2). This was mainly due to the diversity in local situations of the Natura 2000 sites. To address this diversity, both frameworks would have required further elaboration than was undertaken in this research. In particular, how governance design is filled in locally and how outcome and impact can be analysed in light of different governance designs would have required further conceptual work. In addition, during the analysis of local implementation, the mixed method approach was not executed for the relation between governance design and outcome or impact. As a result, this thesis does not provide insights as to whether, if and how increased societal engagement might lead to better outcome and impact (Koontz & Thomas, 2006). This problem might have partly been addressed by including additional research on how the governance design is elaborated locally. But to assess outcome and impact, a longitudinal research design might be required that easily would span more than 12 years, a period exceeding the time allocated for PhD theses. Only long term research can gather data over a period that covers several management planning cycles. This would also enable accounting for the time-delayed response of biodiversity towards management interventions. Nevertheless the exclusion of other factors besides management (such as climate change or long-range pollution) influencing biodiversity will remain challenging, both in short and in longer term studies. Despite its limitations, the combined framework did provide insight into the impact of national policy instrument choice on process and local output.

The comparative analysis undertaken in this thesis created considerable challenges for case selection, as the Natura 2000 network consists of over 27,000 sites and covers 28 Member

States. The cases reviewing local implementation have focused on Northwestern Europe (i.e. the Atlantic biogeographical region). This raises the question of how representative the results are for the local implementation in other regions. Due to different socio-political and economic circumstances, it is likely that the implementation process of policy instruments for the management of sites faces different obstacles in other parts of Europe.
There are considerable differences in experience with and traditions of policy instruments as well as societal engagement between the Atlantic region and other regions in the EU (Kluvánková-Oravská et al., 2009).
Overall the experiences with subsidy schemes for private owners in Central and Eastern Europe is more recent then in Western Europe. There are also differences in history of combining agriculture and the environment and related financial schemes (particularly regarding agri-environmental schemes) between Northwestern and Southeastern Europe (Brouwer & Lowe, 2000 Potter, 2004).

In Central and Eastern Europe the heritage of the communist system still creates obstacles for societal engagement, but at the same time, these regions have learned from the implementation experiences of the EU-15 and have increased their efforts to increase participation in designation (Cent et al., 2014; Suškevcs & Külvik, 2011) and management planning (Kovacs et al., 2017). For instance, participation in the Natura 2000 management planning processes in Hungary was assessed as medium (Kovacs et al., 2017). In Greece participation of societal actors in Natura 2000 management at different governmental levels exists 'mainly on paper' (Apostolopoulou et al., 2012). The negative perception of the process, despite the introduction of new policy instruments for management and increased participation in the planning process, might therefore not be restricted to the Atlantic region.

Furthermore, the case selection at Member State level has resulted in an under-representation of federal states - particularly for the issue of policy instrument choice for Natura 2000 management (see Chapter 1 and 2). Therefore, limited insight is given into whether and to what extent the central level influences policy instrument choice at province or regional level. The policy instruments selected for management in Germany do reveal similar patterns occurring in non-federal EU states (European Commission, 2013). However, whether similar mechanisms operate at the state level and how the interaction with the federal level might influence them was not analysed.

7.7 Lessons learned for Natura 2000 implementation and EU policy in the future

Based on the research presented in this thesis, several lessons can be formulated that may assist in the implementation of Natura 2000 policy in the future. These lessons may not only contribute to reaching the main aim of the Directives (i.e. to ensure protection and conservation of biodiversity) but may also further an increased acceptance of Natura 2000 policy and increased societal engagement (see introduction). As such the research provides lessons for the implementation of the Action Plan of the European Commission - particularly the establishment of the necessary conservation measures (action 4) - and may increase involvement of actors in implementation (action 5, priority D).

» **Strengthen the link between funding instruments and management planning instruments.** In almost all Member States, management plans are developed that stipulate the necessary conservation measures in sites to be taken (European Environment Agency, 2015). This thesis shows that the management planning instrument is closely interlinked with funding instruments and that financial instruments considerably influence which measures are proposed in the plans. Member States therefore should carefully consider the way the management planning system will be funded. A review is needed of the conservation and restrictive measures required and if existing funding is available for them. If not, additional targeted national funding programmes may be needed, particularly for measures to address complex problems present in many sites. Examples are problems with air pollution or water quality or quantity issues (desiccation or flooding). If the funding of plans is not considered well, management plans will either only propose measures for which funding mechanisms are in place and not propose measures that are needed to conserve the habitats and species or, alternatively, they will propose measures that will not be executed due to a lack of funding. Given their experiences with the first round of management planning, most Member States now have a better insight in measures required. This knowledge should be used while drawing up the new Programmatic Action Frameworks which outline the use of EU funding for the period 2020-2026 and (associated) national funding programmes.

» **Invest in local networks**. Increased societal engagement at Natura 2000 site level does not happen by itself. The presence of good relationships between actors responsible for the management of the areas is a prerequisite. This is not a situation that can be achieved by a 'one-off' inclusive management planning process undertaken as part of the drafting of the plan; it requires long-term co-operation to establish trusting relationships between involved actors (Blondet et al., 2017). Local organisations or platforms of local actors are best placed to ensure this due to their continued on-the-ground presence. As Member States' situations vary considerably, there is not one organisation 'model' or 'division of competences' best suited. Nonetheless, the local organisation or platform should either consist of different local actors or be able to engage them. Member States should invest in local organisations or platforms that are able to actively develop management plans and deliver on these plans. Delegating responsibilities to local actors is most useful in Natura 2000 sites that are owned and used by many societal actors or in sites where considerable distrust towards the government is present due to past conflicts. The platforms (COPIL) established in France and the 'Lokale Aktionen' in Schleswig-Holstein are examples of this approach. Although this might not solve all implementation problems - differences in interests will remain between the various actors - such local presence increases the likelihood that the management plans will be more effective, as proposed measures are more likely to be implemented and available subsidies for N2000 management more likely to be used.

» **Stakeholder-inclusive and integrated evaluation of Natura 2000 site management.** Although the Nature Directives main aim is to promote the maintenance of biodiversity, they also take into account economic, social, cultural and regional requirements. During the establishment of the Natura 2000 network, many of the involved actors expressed their concerns about the economic and social impact of the network. The management of the sites themselves depends on the involvement of many of these actors. This research shows that, despite increased participation in the phase of management planning, the views on the ecological, economical and societal impact of the Natura 2000 policy are still very diverse. This difference in views on impact can only be overcome if the evaluations of site management involve those actors. Preferably, societal actors and governmental staff should jointly develop the evaluation questions to be answered. Such evaluations are a hybrid between the administrative evaluation and political evaluation[36]. Equally important is that evaluations consider not only the ecological impact but also the social and economic impacts. The current reporting requirements of the directive and the Natura 2000 site information are not able to provide this information, as they are still very much centred on the biodiversity goals to be met. Therefore, it is necessary that Member States undertake such integrated assessments of Natura 2000 site management. The European Commission could promote such evaluations by an exchange of information between Member States on how to undertake them.

This study also provides two lessons for overall EU policy related to the two central themes of the thesis; Europeanisation and societal engagement.

» **New Directives should consider their effect on national policy instrumentation.** This thesis does provide a lesson for the process of developing new EU legislation. Whilst drafting or revising EU Directives, the issue of policy instrument choice plays an important role. In this debate both the types of policy instruments to choose as well as

[36] See Chapter 6 for an explanation of the types of evaluations.

the pro and cons of layering of policy instruments should be considered. The EU already has a procedure in place that reviews the impact of new legislation, called the impact assessment, which is overseen by the Regulatory Scrutiny Board[37]. This assessment already reviews the pros and cons of different policy measures or instruments. It does not yet consider if new or revised directives will lead to new policy instrumentation or dissolve existing policy instrumentation at national level. This information might the useful to enhance the discussion on the policy instruments proposed - particularly as the introduction of policy instruments or revision of existing ones result in a considerable administrative burden for Member States and societal actors involved. One of the underlying reasons for the 'better regulation' debate (Juncker, 2014) is the call to decrease the administrative burden of EU legislation for Member States and societal actors.

» **Increased societal engagement in EU policies.** The EU as an overall institution as well its sector-specific policies has been challenged on the grounds of legitimacy (see Chapter 1). In response, several EU policies implicitly or explicitly aim to increase societal engagement with policymaking and implementation. Also national governments have increased their efforts to ensure participation in policy development. One of the arguments for societal engagement is the inclusion of different values of actors (Rauschmayer, Van den Hove, & Koetz, 2009; Young et al., 2013). Until now this societal engagement of citizens in the EU policy has mostly focused on procedures for 'stakeholder' involvement in different phases of the policy cycle (agenda setting, implementation and evaluation) (European Commission, 2001). The challenge for the future will be to ensure not only the procedural side of 'stakeholder' involvement that is now often limited to formal procedures in which stakeholders are asked to react to proposals, but also the collaboration between administration and societal actors to incorporate their ideas and values from the start of the process of policy development and implementation. A better understanding of the values of all involved actors might increase mutual understanding and identify opportunities for common action. However, this approach may not necessarily result in commonly agreed action, if the values of societal actors and policy are clashing and no common ground can be found. In these cases, societal engagement will still be lacking. However, combining formal procedures for involvement as well as better considering the different values of societal actors might be a first step in addressing the challenge to increase engagement and improve the legitimacy of the EU. To be able to consider the values of involved actors, these should be made explicit. For the nature domain, such an exercise was already undertaken in the PBL Nature Outlook, which describes the different values of actors to protect nature in order to enable EU and Member State policies to consider their views (van Zeijts et al., 2017). It shows where different values and views on nature are compatible and can strengthen each other, offering opportunities for increased engagement. Alternatively, it also shows where choices are necessary that might lead to less engagement.

[37] (https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/impact-assessments_en)

Table 7.1. Summary of the key findings and implications for science, policy and practice.

Research question	Key finding		Theoretical implication	Policy/ practice implication
How did the Habitats Directive influence the national policy and in particular the associated instrumentation of Member States for the management of Natura 2000 sites?'	**Different mechanisms of domestic impact** The Habitats Directive influenced the national policies of Member States differently. Depending on the Member State, it changed the national rules for protected areas, the discourse on nature conservation, the number or type of actors involved and the resources available for conservation to a greater or lesser degree.		To assess adaptation pressure resulting from a directive; the fit or misfit with the entire policy; arrangement in terms of rules, discourses, actors and resources needs to be assessed.	Whilst drafting or revising EU Directives, the extent to which these are expected to lead to new policy instrumentation at national level, or to the dissolution of existing instrumentation, needs to be considered.
	Voluntary path formation. The majority of the Member States introduced new policy instruments for the management of Natura 2000 sites resulting in voluntary path formation at instrument level.		The voluntary path formation at instrument level falsifies the theory of path dependency present in Europeanization studies, at least for the development of policy instruments in the case of the Habitats Directive.	
To what extent did policy instrument choice for Natura 2000 management influence local implementation in Member States??	**Process effect** New policy instruments primarily affect local implementation by the considerable change caused, leading to a more negative perception of the policy in terms of legitimacy and equality of the management planning process amongst stakeholders.		Policy instrument literature should pay more attention to the occurrence of layering of policy instruments, particularly for those instruments that only apply to specific areas (e.g. with a specific spatial coverage). Layered instruments interact at area level, both in terms of process and in terms of content offering options for synergy but may also result in no new action, as existing practices are reproduced in the new instruments.	Invest in local networks to facilitate the discussion on the management of Natura 2000 sites and consider delegating management responsibilities to organisations operating at the local level.
	Carrotisation New management plans are often closely interlinked with existing and new financial instruments. This 'carrotisation' of the planning process is needed to enable negotiation space with stakeholders at the local level.			Make an explicit link between funding instrument and management planning instruments.
To what extent does increased societal engagement influence Natura 2000 policy implementation and associated instrumentation?	**Inclusive governance design** At national level, the increased societal engagement promoted new policy instrumentation based on a governance design that enabled participation of stakeholders in planning at local level.		Policy instrumentation literature should consider the implication of societal engagement for all policy instrument types.	
	Integrated and inclusive evaluations As more stakeholders become involved in planning and execution at local level, more and different values and perceptions on process and impact of N2000 management become relevant, and thus evaluations should consider not only ecological, but also social and economic criteria. In addition, the societal actors should be involved in the evaluation from the start.			Promote integrated and inclusive assessment of Natura 2000 site management. The challenge for future policy will be to look not only at the procedural side of 'stakeholder' involvement, but also at the many values of the actors involved in policy development, implementation and evaluation.

7.8 Looking towards the future - the effect of political changes on the management of Natura 2000

Sixty years after signing of the Treaty of Rome, the discussion on the future of the EU is still very much alive in the European Commission (European Commision, 2017), the press (Peet, 2017) and scientific literature (Giovannini, Polverari, & Seddone, 2016; Laffan, 2014). Political changes in responsibilities between governments are most likely to affect policy instrument choice as well as the level of societal engagement. Over the years, the political development of the EU has been marked by periods of further centralisation of national authority to different European bodies (e.g. Commission, Parliament, and European Central Bank) and periods of decentralisation of national responsibilities to the regional level. The degree of integration and decentralisation, moreover, may vary between policy sectors (Jordan, 2001). Given the multilevel implementation of Natura 2000, four possible developments will now be described that are likely to impact the division of responsibilities between the different governmental levels in the EU. These developments are a regionalised EU, increased integration, a (partial) dismantling of the EU (Galbraith, 2017; Jeffery, 1996; Miller, 2015) and an EU of businesses and citizens (European Environment Agency, 2016; O'Brien et al., 2014). Below, a short description of each of these developments is provided, followed by an assessment of how they might impact Natura 2000 management in terms of policy instrumentation, societal engagement and funding available for management. A summary of expected influences is provided in Table 7.2.

Development	Policy instrumentation	Societal engagement	Funding for management
EU of the regions	Increased plurality in policy instrumentation Conversion of policy instruments possible.	Increased societal engagement likely.	Decrease of funding in lesser developed regions likely.
An ever closer Union	No change to limited change, given current priority fields. Continuation of layering of instruments.	No change to limited change.	New proposed priorities may reduce budget for other themes. Management of agricultural habitats is most likely to be affected by CAP-budget cuts. At the same time, the budget for nature restoration through LIFE increases.
Dismantling the EU	Displacement of policy instruments due to reduced attention for N2000 species and habitats, and a lack of conformity with EU rules is likely. Speed of displacement will depend on past path dependency in instrumentation.	No change to limited change.	Dependent on political preferences of Member States.
EU of businesses and citizens	Removal of national or regional instrumentation for management. Management based on local covenants.	Paradigm shift -society does not need to be engaged as they actively protect the Natura 2000 sites and behave accordingly.	Increase in funding for nature. A lack of funding is likely in areas with lower social capital.

Table 7.2. Influence of major political changes in the EU for Natura 2000 management.

An EU of the Regions

One of the developments foreseen is the increased influence of European regions on the EU (Jeffery, 1996; Keating, 2001). The responsibility for nature conservation has been allocated at the regional level for a long time in several Member States or has recently shifted to this level (e.g. in the Netherlands). Further regionalisation will most likely lead to even more diverse policy instrumentation for Natura 2000 management, as each region may decide for itself on the best policy instrumentation. This development has already occurred in Germany and Austria in which every region (known as a Länder/ Bundesländer) has made different choices in policy instrumentation for the management of Natura 2000 sites (European Commission, 2013). Further regionalisation may also strengthen the discourse on the role of Natura 2000 sites in regional economic development, given the focus on economic development by governments at the regional level (Mose, 2007). This might lead to the conversion of some of the policy instruments to better consider regional economic development. Further regionalisation might also increase the extent of societal engagement of actors in the management of the sites. A central argument of supporters for regionalisation is that regions are 'closer to the people' and therefore would be in a better position to involve them into policy decisions. For the funding of management, further regionalisation might however pose serious challenges, particularly for economically less developed regions in the EU such as the Member States in Southern and Eastern Europe. In these regions, regionalisation of nature conservation policies might lead to a decrease in funding for management. Management funding might also decrease in developed regions in the EU where a low(er) political priority exists for nature protection.

An ever closer Union

The inclusion of the words 'An ever closer Union' in several treaties (Miller, 2015) has sparked fierce debates on the preferred level of integration of Member States' policies and on the preferred extent of transfer of Member States' sovereignty to the EU-level (Adler-Nissen, 2011; Bellamy, 2013; Liefferink & Jordan, 2005). The 2017 Commission 'White paper on the future of Europe' proposes different options for co-operation in core policy areas of the EU, namely the single market, monetary union, migration, foreign policy and EU budget. For the field of nature protection, the Birds and Habitats Directives already have had a considerable influence on national Member States' policies through the establishment of the Natura 2000 network (European Commission, 2016a). Furthermore, Commission initiatives to improve implementation such as the Natura 2000 Biogeographical Process and the establishment of various EU Natura 2000 working groups already created an impetus for increased co-operation. Given the priorities of the Council and the Commission, it is highly unlikely that further integration will be sought in this particular policy field. So no major Commission-led homogenisation of policy instrumentation is expected, although the current guidance and exchange of best practices on EU nature policy might decrease the plurality in policy instrumentation in the future.

The influence of further European integration on local societal engagement may be limited. The EU has for a long time underlined the need for societal actors to be involved in policy implementation, both in a generic manner (European Commission, 2001) and for Natura 2000 management specifically (Bouwma et al., 2010; European Commision, 1998)[38]. However, this has not yet led to an increase in societal engagement or a decrease in Euro-scepticism. In practice, local societal engagement mostly depends on the efforts taken by national, regional and local governments to involve societal actors in policy implementation.

The EU budget might exert most influence on Natura 2000 management. If further co-operation would lead to a refocussing of the EU budget on specific proposed priorities, namely the single market, monetary union, migration, and foreign policy, this might influence the current budget available for agriculture and nature. EU funding sources (and in particular the Common Agricultural Policy) are important for the management of agricultural habitats in Natura 2000 sites. Funding for agriculture already has declined for several years, whilst attempts to increase funding for environmentally-friendly agricultural management have met limited success (Gocht et al., 2017; Pe'er et al., 2017). The foreseen reallocation of budgets will further decrease the funding for agriculture (European Commission, 2018). For Natura 2000 habitats in sites under threat of agricultural abandonment, this might cause serious problems, particularly for sites allocated in Spain, Portugal, Sicily, Ireland and parts of Finland. In other areas, a decrease in agricultural subsidies might lead to a slowing down or even a reversal of intensification processes. At the same time, funding for restoration has increased due to an increase in the LIFE budget - though this budget still constitutes less than two percent of the money allocated to agriculture (European Commission, 2018).

Dismantling of the EU

For a long time, the (partial) dismantling of the EU was not conceivable, given the continuous expansion of the EU since its foundation. However, a growing Euroscepticism in several Member States and the decision of the United Kingdom to leave the EU led to predictions that more Member States might leave. Before the adoption of the Birds and Habitats Directives, several Member States (both 'old' and 'new') already had nature conservation policies in place (Mose, 2007). It is highly unlikely that an exit of a particular Member States will lead to the disappearance of all nature conservation policy. Protected areas had already existed for a very long time (Bastmeijer, 2016). In case of an 'exit', no change to Natura 2000 policy instrumentation is likely for those Member States that have shown path dependency (e.g. some federal states of Germany, the UK, Estonia, Slovenia). In the case of the UK, the majority of the terrestrial Natura 2000 sites were already designated under national legislation before 1992 (see Figure 1.2). Therefore, Natura 2000 sites in the UK will still be managed for conservation after the Brexit. In the longer term, the management objectives may

[38] See also EC website: http://ec.europa.eu/environment/nature/natura2000/management/best_practice_en.htm

change due to reduced attention for Natura 2000 species and habitats in preference for species and habitats of national importance. It may be that the UK will conform less to EU rules to avoid deterioration and take conservation measures in the future.

Such a refocus and removal of rules might happen and lead to a process of displacement in the longer term. For Member States that introduced new instruments for designation and management (management planning system, subsidies, and regulations), such a displacement might occur over a much shorter time span as instruments might be abolished.

The most important effect of an 'exit' will be the loss of the 'shadow of hierarchy'. The European Commission and the European Court of Justice will no longer act as guardians of nature conservation legislation. This will particularly affect the judgement of new plans and projects (Art 6.3 & 6.4 of the Habitats Directive). It might also decrease the control on damaging activities in the management of Natura 2000 sites and the promotion of conservation measures. Although the undesirably limited involvement of citizens in EU affairs has been a key rationale for an 'exit', the question is whether an 'exit' will lead to an actual increase in societal engagement in nature management. The issue of societal engagement in Natura 2000 sites has always been the remit of the national authorities. Any lack thereof cannot be ascribed to EU legislation.

Whether the amount of funding for N2000 management will change due to an 'exit', will strongly depend on the political priorities of the national governments. During economic downturns, severe budget cuts are foreseeable given the experiences of the last economic crisis. As the European Commission will no longer influence the funding for nature conservation through the Common Agricultural Policy and LIFE in Member States that have left the EU, it can be expected that funding for management of sites will increasingly be subject to the political preferences of their governments.

An EU of businesses and citizens

In line with ideas of societal responsibility, civic action, the green economy and local innovation (Kisby, 2010; O'Brien et al., 2014), EU businesses and EU citizens may increasingly protect nature themselves. Businesses become nature inclusive (Jones & Comfort, 2017). Citizens are willing to pay for environmentally sustainable products and actively manage nature themselves (Mattijssen et al., 2018). Following this trend, the green economy that is currently under discussion may become a reality.

The effect of the green economy on the management of Natura 2000 may be considerable. National and regional governments may limit their involvement in the management of privately-owned areas and leave it to civic and business initiatives to ensure the 'good' management of the area. The government could refrain from developing policy instruments for

management and even dismantle existing ones. National instruments may be replaced by covenants at local level developed between the actors managing the sites. The influence on societal engagement in Natura 2000 sites may be even greater as societal actors take the lead in management. Societal engagement as a mechanism for the implementation of the government's policy could be replaced by civic action, resulting in a major paradigm shift of the role of the government in protecting nature. The funding of Natura 2000 sites may be based on different financial mechanisms such as market based instruments in the form of certification schemes and payments for delivering of ecosystem services (PES). Owners of agricultural land and forests may receive the right pricing for their products, particularly through the branding of locally produced food in Natura 2000 sites[39]. This will enable them to produce in an environmentally-friendly way. In more natural areas managed by NGOs, private owners and the government, income could be generated through the charging of fees for various recreational activities in the area and by increased sponsorship of areas protected for nature conservation. The shift to a green economy will not happen overnight. It will require major changes in the economy and the behaviour of businesses and citizens. It can be expected that this shift will not be a smooth transition. Some societal actors in Natura 2000 sites will be able to adapt and benefit from the shift towards a green economy, but other actors might not. This could result in increasing disparities between Natura 2000 sites in terms of self-governing capacity and the ability to arrange funding. It is likely that areas where social capital is low will be amongst the losers, and in these areas the 'good 'management of the sites is not ensured and may lead to biodiversity losses.

Four developments - one future?

It is not easy to predict which of these four developments will occur in the coming years. At present, a combination of the development of 'an ever closer Union' with an 'EU of businesses and citizens' appears to be most likely. The recent political discussions on the future of the EU make a further dismantling of the EU unlikely[40]. So far, Brexit has not yet created the domino effect predicted by political analysts in June 2016. The difficulties experienced by the UK in arranging an 'exit' from the European Union might discourage other Member States from following that path. Further regionalisation may occur in the future, but so far national governments (including federal states), continue to play an important role in co-ordinating the implementation of EU legislation. Although a transition towards a green economy will be challenging, the need to live within the Earth's boundaries is pressing and will require further changes in the relations between government, businesses and citizens (Breyer, Heinonen, & Ruotsalainen, 2017; Rockstrom et al., 2009). A combination of 'an ever closer Union' with an 'EU of businesses and citizens' could lead to a European Union in which nature is safeguarded not only by the government but by citizens and businesses alike.

[39] https://www.natura2000branding.eu/

[40] Rome Declaration of the Leaders of 27 Member States and of the European Council, the European Parliament and the European Commission of 25 March 2017

Schleswig Holstein

Germany

Agricultural landscape with forests

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Annex I Overview of sites included in the thesis

Chapter	Code	Name
		BELGIE (VLAANDEREN)
5	BE2100015_BE2100323	Kalmthoutse Heide (partial test site)
5	BE2100016_BE2101437	Schietvelden
5	BE2100020	Heesbossen
5	BE2100040	Grote Nete
5	BE2101538_BE2100024	Turnhouts Vennengebied
5	BE2200028_BE2200626	De Maten
5	BE2200029_BE2218311	Zwarte beek
5	BE2200030_BE2220313	Mangelbeek en Peer
5	BE2200031_BE2219312_ BE2200525	Vijvergebied Midden Limburg
5	BE2200038	Haspengouw
5	BE2200042	Overgang Kempen-Haspengouw
5	BE2200043	Bosbeekvallei
5	BE2200727_BE2200035	Hoge Kempen
5	BE2300005#1	Zandig Vlaanderen: Oost- Oost
5	BE2300007#1	Vlaamse Ardennen Oost
5	BE2300044	Zandleemstreek
5	BE2400009	Hallerbos
5	BE2400010	Valleigebied Kampenhout
5	BE2400014_BE2223316	Demervallei
5	BE2422315_BE2400011	Dijlevallei
5	BE2500003	Westvlaams Heuvelland
5	BE2500004	Zandig Vlaanderen West
		GERMANY (SCHLESWIG HOLSTEIN
4	DE1724334	Dünen bei Kattbek
4	DE1823301	Wälder der nördlichen Itzehoer Geest
4	DE1823304	Haaler Au
4	DE1823401	Staatsforsten Barlohe
4	DE1923401	Schierenwald
4	DE1924391	Wälder im Aukrug
4	DE2023303	Rantzau-Tal (FFH-Gebiet)
4	DE2024301	Heiden und Dünen bei Störkathen (FFH-Gebiet)
4	DE2024308	Mühlenbarbeker Au und angrenzendes Quellhangmoor (FFH-Gebiet)
4	DE2024391	Mittlere Stör, Bramau und Bünzau

Chapter	Code	Name
		DENMARK
4	DK00FX125	Lille Vildmose
		FRANCE
3	FR 2200359	Tourbières et marais de l'Avre
3	FR 2500108	Bois et coteaux à l'ouest de Mortagne-au-Perche
3	FR 3100478	Falaises du cran aux oeufs et du Cap Gris-nez, dune du châtelet, marais de Tardinghen, dunes de Wissant
3	FR 3100479	Falaises et dunes de Wimereux, Estuaire de la Slack, Garennes et Communaux d'Ambleteuse-Audresselles
3	FR 3100495	Prairies, marais tourbeux, forêts et bois de la cuvette audomaroise et de ses versants
3	FR 5200640	Corniche de Pail, Forêt de Multonne, Vallée du Sarthon
5	FR1100797	Coteaux Et Boucles De La Seine
5	FR1112013	Sites de Seine-Saint-Denis
3	FR2100334	Reservoir de la Marne dit du Der-Chatecoq
5	FR2200350	Massif forestier de Lucheux
3	FR2200357	Moyenne valée de la Somme
3	FR2200395	Collines du Laonnois Oriental
5	FR2300123	Boucles De La Seine Aval
5	FR2300133	Pays de Bray -Cuestas Nord et Sud
3	FR2400534	Brenne
3	FR2402001	Sologne
5	FR2500082	Littoral Ouest du Cotentin de Saint-Germain-sur-Ay au Rozel
5	FR2500083	Massif dunaire de Héauville à Vauville
5	FR2500092	Marais du Grand Hazé
5	FR2500118	Bassin de la Druance
5	FR2502001	Hêtraie de Cerisy
3	FR3100480	Estuaire de la canche, dunes picardes, plaquees sur l'ancienne falaise, foret d'hardelot et falaise d'Equihen
5	FR3100484	Pelouses et bois neutrocalcicoles de la cuesta sud du Boulonnais
3	FR3100491	Landes, mares et bois acides du Plateau de Sorrus /Saint-Josse, prairies alluviales de Valencendre et La Calotterie"
5	FR3100494	Prairies et marais tourbeux de Guines
5	FR3110083	Marais de Balancon (test site)
3	FR5200624	Des Marais de l'Erdre
3	FR5200626	Marais du Mès, baie et dunes de Pont-Mahé, étang du Pont-de-Fer
5	FR5300002	Marais de Vilaine
5	FR5300067	Tourbiére de Lann Gazel
5	FR5402008	Haute vallée de la Seugne en amont de pons et affluents
5	FR7200738	L'Ourbise
5	FR7300891	Etangs d'Armagnac

Annex I Overview of sites included in the thesis

Chapter	Code	Name
		NETHERLANDS
3,5	NL1000016	Solleveld & Kapittelduinen
3,5	NL1000022	Kempenland-west
5	NL2000002	Bargerveen
3	NL2000008	Elperstroomgebied
3,5	NL2000008	Meinweg
5	NL2000010_NL3000401	Kampina & Oosterwijkse vennen
3,5	NL2003014	Drouwenerzand
5	NL2003015	Elperstroomgebied
3	NL2003016	Geleenbeekdal
5	NL2003026	Langstraat
5	NL2003032	Mantingerzand
5	NL2003036_NL9802060	Oostelijke Vechtplassen_
5	NL2003043	Sarsven En De Banen
3	NL2003044	Stelkampsveld
3,5	NL2003045	Swalmdal
5	NL2003047	Ulvenhoutse Bos (test site)
5	NL2003054_NL9802058	Wormer- En Jisperveld En Kalverpolder
5	NL2003058_NL3009006	Duinen Schiermonnikoog
3	NL3000036	Nieuwkoopse plassen
3	NL3000044	Alde Feanen
5	NL3000061_NL2000012	Naardermeer
5	NL3000070	Dwingelderveld
5	NL3004003	Landgoederen Oldenzaal
5	NL3009003_NL9801055	Brabantse Wal
5	NL3009004 _NL2003064_ NL2000013_NL9801013	Wieden_Weerribben
3	NL3009006	Duinen Schiermonnikoog
5	NL3009007_NL2003059	Duinen van Terschelling
5	NL3009014 _NL9801036	Leenderbos, Groote Heide & De Plateaux
3	NL3009016	Oosterschelde
5	NL9801016	Borkeld
3,5	NL9801017	Vecht en Beneden Regge
5	NL9801019	Buurserzand En Haaksbergerveen
5	NL9801025	St. Pietersberg En Jekerdal
3	NL9801044	Botshol
3	NL9801075	Grensmaas
5	NL9802048	Witte en Zwarte Brekken

Chapter	Code	Name
		UNITED KINGDOM- ENGLAND
5	UK0012586	Windsor Forest and Great Park
5	UK0012720	Epping Forest
5	UK0012724	Chilterns Beechwoods
5	UK0012799	The Lizard
5	UK0012809_UK9009101	Minsmere to Walberswick Heaths and Marshes_Minsmere-Walberswick
5	UK0012882	Waveney and Little Ouse Valley Fens
5	UK0013059	Dungeness
5	UK0013658	Cotswold Beechwoods
5	UK0013697	Blean Complex
5	UK0019859	Peak District Dales
5	UK0019864	Sidmouth to West Bay
4	UK0030040	Exmoor Heaths
5	UK0030053	Orton Pit
5	UK0030082	Aston Rowant
5	UK0030115	Cerne and Sydling Downs
4	UK0030148	Exmoor and Quantock Oakwoods
5	UK0030165	Hastings Cliffs
5	UK0030241	Polruan to Polperro
5	UK0030285	Subberthwaite, Blawith and Torver Low Commons
5	UK0030299	West Dorset Alder Woods
5	UK0030301	Wimbledon Common
5	UK0030302	Witherslack Mosses
5	UK0030328	Briddlesford Copses
5	UK0030367	Pevensey Levels
5	UK9005091	Leighton Moss
5	UK9010031	Somerset Levels and Moors.
5	UK9012132_UK0030304	Wealden Heaths Phase 2_Woolmer Forest
5	UK9020286	Sandlings
5	UK9020296	Upper Nene Valley Gravel Pits

Annex II Semi structured interview chapter 2

This questionnaire is developed for interviews with policy makers and societal actors.

Introduction to the research

General questions on N2000 implementation strategy for management of areas

1. In which way is … arranging the management of the sites?
   a. Which planning instruments are used to arrange the management of N2000? (existing plans for protected areas, regional plans for Natura 2000, other?)
   b. Which financial instruments (subsidies) are used to arrange the management of N2000?
   c. Are there any general legal regulations in regards to management measures required/ allowed or not?
2. Who are involved in the development of instruments for management (see above)?
3. Has this changed in respect to the situation before the introduction of Natura 2000?

Change to existing instruments due to Natura 2000

4. Which of these planning and financial instruments used to arrange the management of sites existed prior to the introduction of Natura 2000?
5. How did these instruments change due to the introduction of Natura 2000 - particularly in regards to those develop/used by your organisation?
6. How did the rules change?
7. How did resources change?
8. How did the actors/stakeholders involved change?
9. How did the discourse change?
10. Who were in favour of changing the existing instruments? Who were against?

Information on new instruments introduced.

11. Were entirely new instruments proposed to arrange the management of the N2000 sites? If so which?
12. By whom? What were their arguments? Who were for? Who were against ?
13. When was the decision on the instruments taken?
14. In hindsight's - do you feel the arguments proposed were valid?

Concluding questions

15. What did according to you, influence the choice for the instruments to arrange the management of Natura 2000?
16. Overall do you feel the introduction of Natura 2000 has brought changes to nature conservation and nature conservation policy in your country?

Annex III Semi structured interview chapter 3

This questionnaire is for societal actors and professionals in the three cases. When a societal actor is specifically addressed, this is added in the question.

Background questions

1. What is your professional background?
2. What is your involvement in the Natura 2000 process in this area (deciding and doing)?

Actors (and their) motives

3. Which goal to you want to achieve with your involvement in this area?
4. What were your motives to become active in this area?
   Were you (societal actor) triggered by authorities or active on your own accord?
5. How do professionals in this area respond to (bottom up) societal initiative and ideas?

Story

6. Can you describe the most important elements of the story that people share about this area? Do people share one story?
7. Is responsibility for nature quality (in technical terms) part of this story?
8. Do you feel responsible for the nature (quality) in this area and, if yes, why is that?

Resources/contribution

9. In which way (and what) do you contribute to this area? (money, activities)?
   Which resources/ means do you apply?
10. Which instruments are applied to mobilize, enable and facilitate societal actors in this process?
11. What are the respective responsibilities of professionals and societal actors?

Organization/ co-operation

12. How is the co-operation between society and professionals organized in this area?
13. Do you (societal actor) know to find your way in the institutions/ procedures of authorities?
14. Do societal actors have autonomy of decision making/ control over their initiatives in the area?

Delivery

15. What do professionals and societal actors deliver in this area?
16. Did the strategy trigger societal involvement?
17. Does societal initiative contribute to the nature quality in this area?
18. What do societal actors benefit from their involvement?

Annex IV Supplementary material Chapter 4
Table A: Typology for measures

Type of measure	Description	Code	Times mentioned
Conservation measure	Removal of top soil	A11	92
	Addition of nutrients	A12	7
	Avoid deposition of sludge	A14	2
	Profiling of deposited soil	A15	4
	Remove waste	A16	5
	No water from outside sources/water inlet	A22	2
	Avoid planting of trees along riverbanks	A23	1
	Remove nutrient rich soil	A24	4
	Water retention measures	A31	87
	Development of natural banks	A32	6
	Removal of pines/other trees	A34	10
	Increase in grazing/ mowing	B11	196
	Maintain small landscape elements	B15	11
	Removal of bushes/ tree of forest	B16	194
	Improve forest structure by creating small clearings or stimulation undergrowth or maintaining old trees	B17	32
	Harvest (manual or mechanical removal) weeds (Faucardage)	B19	7
	Management of alien invasive species	B21	50
	Use of native species	B22	6
	Management of native invasive of dominant species	B23	20
	Voluntary conversion of agricultural land to nature	C47	44
Restrictive measure	Restricting recreational access	C1	32
	Place barriers	C11	6
	Remove dog droppings	C12	2
	Remove sand hills	C13	1
	No motorised vehicles allowed	C14	2
	No fish stocking	C31	3
	No additional feeding	C32	1
	Restrictions for fishing (by foot)	C34	1
	Restrictions agricultural use	C4	-
	No burning	C41	5
	No heavy machines	C42	2
	No fertilisation /pesticide use	C43	49
	Delayed mowing	C44	4
	No grazing/mowing/- exclude small areas from agricultural use (field margins)	C45	9
	No drainage	C46	5
	No grazing (exclude areas from grazing by fencing)	C48	9
	Restrictions for infrastructure	C5	11
	Use of certain materials	C51	6
	Dredging of rivers/canals	C52	2
	Restrictions for forestry	C6	2
	No plantation (of fir/pine/popular)	C61	11
	No clearcutting	C62	2
	Alternative logging methods	C63	6
	No logging	C64	21
	No pesticide/fertilizer use	C65	7
	Leave dead wood	C66	2
	Restrictions to navigation/boating	C7	1
	Restriction collection other natural products moss/peat	C8	7
	Restriction storage waste	C9	11
General measure	Measure related to abiotic situation	A	26
	Measure related to soil quality	A1	12
	Measure related to water quality	A2	37
	Measures related to water quality and quantity	A2/ A3	2
	Measures related to nitrogen deposition	A4	1
	Measure related to improve water quantity	A3	113
	Measures related to species management	B2	14
	Measures related to habitat improvement	B	84
	Generic measure	G	56
Total			1345

Annex IV Supplementary material Chapter 4
Table B: Overview of analysis of the measures in the plans for the reviewed Natura 2000 sites

In order to compare the plans within and between the two reviewed countries for each of the four aspects (e.g. action content, type of party, motivational mechanism and problem addressed) a metric was calculated. The metric are calculated in the following way:

- Action content: The plan indicated the action content, this can be a conservation measure, restrictive measure, general measure or no action. It was calculated how many of the measures belonged to a specific category (type of measure/ all measures) (0= if no measure of this category was proposed, 100 = if all measures belonged to this category).
- Number of parties to agree on execution: For each measure someone needs to agree on the execution, this can be one actor (single party) or multiple parties. It was calculated for how many of the measures required single or multi party to agree on the execution of the measure.
- Authoritative mechanism: The conservation measures are based on a specific authoritative force. It was calculated for the measures which authoritative mechanism (carrot. Stick or sermon) was used for the measure included in the plan. It was calculated how many of the measures belonged to a specific category (type of measure/ all measures) (0= if no measure of this category was proposed, 100 = if all measures belonged to this category).
- Problem addressed: It was calculated which percentage of the measures address a particular problem (0= if no measure was proposed for the type of problem, 100 = if all measures were proposed for this type of problem).

	Conservation	Restrictive	General	Single party	Multiple party	Carrot	Sermon	Stick
FRANCE								
Bois et coteaux à l'ouest de Mortagne-au-Perche	77%	8%	15%	100%	0%	100%	0%	0%
Brenne	26%	32%	42%	91%	9%	82%	18%	0%
Collines du Laonnois Oriental	45%	27%	27%	92%	8%	92%	8%	0%
Corniche de Pail, Forêt de Multonne,Vallée du Sarthon	67%	11%	22%	86%	14%	86%	14%	0%
Des Marais de L'Erdre	47%	24%	29%	100%	0%	100%	0%	0%
Estuaire de la canche, dunes picardes plaquées sur l'ancienne falaise, foret d'Hardelot et Falaise d'Equihen	66%	14%	21%	100%	0%	100%	0%	0%
Falaises du cran aux oeufs et du Cap Gris-nez, dune du châtelet, marais de Tardinghen, dunes de Wissant	72%	12%	16%	90%	10%	86%	14%	0%
Falaises et dunes de Wimereux, Estuaire de la Slack, Garennes et Communaux d'Ambleteuse-Audresselles	69%	13%	19%	85%	15%	38%	62%	0%
La Sologne	34%	34%	32%	98%	2%	77%	23%	0%
Landes, mares et bois acides du Plateau de Sorrus / Saint-Josse, prairies alluviales de Valencendre et La Calotterie	79%	7%	14%	100%	0%	71%	29%	0%
Marais du Mès, baie et dunes de Pont-Mahé, étang du Pont-de-Fer	54%	14%	31%	88%	13%	83%	4%	13%
Moyenne valée de la Somme	67%	0%	33%	100%	0%	100%	0%	0%
Prairies, marais tourbeux, forêts et bois de la cuvette audomaroise et de ses versants	41%	24%	35%	82%	18%	91%	9%	0%
Reservoir de la Marne dit du Der-Chatecoq	40%	20%	40%	100%	0%	100%	0%	0%
Tourbières et marais de l'Avre	36%	29%	36%	100%	0%	100%	0%	0%
NETHERLANDS								
Alde Feanen	64%	0%	36%	100%	0%	100%	0%	0%
Botshol	73%	9%	18%	100%	0%	67%	33%	0%
DrouwenerzandNP	100%	0%	0%	100%	0%	100%	0%	0%
Elperstroomgebied	82%	9%	9%	80%	20%	100%	0%	0%
Geleenbeekdal	67%	20%	13%	92%	8%	54%	8%	38%
Grensmaas	22%	33%	44%	100%	0%	40%	20%	40%
Kempenland-west	56%	20%	24%	79%	21%	74%	5%	21%
Meinweg	76%	12%	12%	93%	7%	87%	0%	13%
Nieuwkoopse plassen	58%	16%	26%	86%	14%	100%	0%	0%
Oosterschelde	64%	0%	36%	100%	0%	100%	0%	0%
Schiermonnikoog	75%	0%	25%	89%	11%	100%	0%	0%
Solleveld & Kapittelduinen	50%	15%	35%	85%	15%	77%	0%	23%
Stelkamseveld	69%	8%	23%	100%	0%	100%	0%	0%
Swalmdal	17%	17%	67%	100%	0%	100%	0%	0%
Vecht en Beneden Regge	79%	12%	9%	84%	16%	97%	0%	3%

Annex V Supplementary material Chapter 6

Table A: Surveyed stakeholders and respondents per geopolitical area

	Approached										Responded	
	Flanders	%	Netherlands	%	England	%	France	%	Total actors	%	Total actors	% of actor group approached
Owner/user/rep. Agriculture	22	7.5	41	9.1	41	11.6	55	4.6	159	7	54	34
Owner/user/rep. forestry	11	3.8	4	0.9	6	1.70	20	1.7	41	2	13	32
Owner user/rep. nature	21	7.2	100	22.2	70	19.9	58	4.8	249	11	81	33
Owner user/rep. other	73	25.0	65	14.4	28	7.95	101	8.4	267	12	49	18
Governmental rep.	122	41.8	89	19.7	90	25.6	485	40.5	786	34	159	20
Other	43	14.7	118	26.2	103	29.3	205	17.1	469	20	109	23
Unknown	0	0.0	34	7.5	14	3.98	273	22.8	321	14	0	NA
Total	292	100	451	100	352	100	1197	100	2292	100	465	----

Table B: Overview of number of sites that were addressed and respondents per region or country. All sites surveyed are within the Atlantic biogeographical region.

Area	Natura 2000 sites			Stakeholders		
	Number of sites in survey	Total in the country	Natura 2000 sites surveyed (%)	Sent	Respondents	Complete and partial complete (%)
Flanders	22	62	35%	289	99	34%
Netherlands	26	162	16%	339	147	43%
France (Atlantic biogeographical region)	17	697	2%	1148	144	13%
England	26	338	8%	566	74	13%
TOTAL	91	1259	7%	2342	464	20%

Annex VI Supplementary material Chapter 6

This annex provides information on the statistical analysis undertaken in chapter 6.
The evaluation questions were using a Likert scale (6 or 7 response levels including do not know and/or not applicable). For the statistical analysis the answers (with the exception of the answers not applicable and/or do not know) received scores between 1-5. The affirmative ('positive') answer were assigned a value of 1, the dissenting ('negative') answer a value of 5. In Table A and B the Mean and N for each political territory for all 15 questions is provided. In Table C an overview of the results of the different models is shown.

Table A: Means and N for each political territory

	England		France		Netherlands		Flanders		Total	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Proces										
In the local discussion all interests were given equal weight	2.74	46	2.95	95	3.27	109	3.67	60	3.17	310
Local discussions led to better access to available funding for management activities	2.31	49	2.43	89	3.30	98	3.75	52	2.94	288
The local process generated support for the implemented measures	2.53	45	2.24	90	2.87	110	3.75	59	2.81	304
The local process increased cooperation between the various stakeholders	2.38	50	2.24	94	2.74	109	3.37	60	2.65	313
The local process increased the number of conflicts	3.30	46	3.57	97	3.37	112	2.78	60	3.31	315
The local process increased the number of citizen initiatives regarding the management of the area	2.83	41	3.07	90	3.53	101	3.71	56	3.32	288
Outcome										
Did the number of measures change following the start of the discussions about the management?	2.02	46	2.18	90	1.89	106	2.18	57	2.05	299
Output										
Legal rules or regulations for certain activities in the area due to Natura 2000	2.79	48	2.85	78	2.88	103	2.48	71	2.76	300
Requirement to develop a management plan	3.14	44	2.56	78	2.90	105	2.95	66	2.86	293
Establishing regional objectives for Natura 2000	3.63	32	2.83	71	3.15	99	2.93	68	3.07	270
Availability of subsidies or compensation payments for owners, users										
or environmental organisations resulting from Natura	2.61	41	2.84	76	3.05	96	2.67	64	2.84	277
Funding for nature management by state nature institutes	2.21	53	2.75	69	2.84	97	2.52	66	2.62	285
Impact										
Do you think that the measures implemented in the area for the species and habitats are sufficient?	2.81	57	2.78	107	2.83	121	3.00	74	2.85	359
Local economy	2.32	59	2.57	93	2.62	104	3.09	74	2.66	330
Quality of life of local residents	2.09	58	2.27	94	2.34	104	2.46	74	2.30	330

Table B: Means (M) and N for each interest group

	Our agriculture		Our forestry		Our nature		Our other		Gov		Other stake-holder		Total	
Process	M	N	M	N	M	N	M	N	M	N	M	N	M	N
In the local discussion all interests were given equal weight	4.10	39	3.17	12	2.89	63	3.29	34	2.97	92	3.10	70	3.17	310
Local discussions led to better access to available funding for management activities	3.73	33	3.67	12	2.96	69	3.03	29	2.64	78	2.72	67	2.94	288
The local process generated support for the implemented measures	3.92	38	3.27	11	2.75	65	2.71	31	2.61	90	2.46	69	2.81	304
The local process increased cooperation between the various stakeholders	3.70	37	2.75	12	2.70	67	2.42	33	2.47	95	2.39	69	2.65	313
The local process increased the number of conflicts	2.65	37	3.33	12	3.35	69	3.37	35	3.37	93	3.51	69	3.31	315
The local process increased the number of citizen initiatives regarding the management of the area	3.58	33	3.45	11	3.49	65	3.28	32	3.23	84	3.14	63	3.32	288
Outcome														
Legal rules or regulations for certain activities in the area due to Natura 2000	2.34	38	3.08	12	2.93	61	2.76	34	2.70	90	2.88	65	2.76	300
Requirement to develop a management plan	2.62	39	3.18	11	3.09	58	2.91	33	2.65	88	3.02	64	2.86	293
Establishing regional/national objectives for Natura 2000	2.61	38	3.18	11	3.30	56	3.12	33	3.03	79	3.15	53	3.07	270
Availability of subsidies or compensation payments for owners, users or environmental organisations resulting from Natura	2.65	37	2.83	12	2.67	60	3.13	30	2.74	76	3.11	62	2.84	277
Funding for nature management by state nature institutes	2.44	39	2.92	12	2.44	61	3.13	30	2.57	79	2.69	64	2.62	285
Output														
Did the number of measures change following the start of the discussions about the management?	2.00	37	2.45	11	2.10	68	2.19	31	1.90	84	2.07	68	2.05	299
Impact														
Do you think that the measures implemented in the area for the species and habitats are sufficient?	2.18	44	3.17	12	3.22	72	2.70	37	2.68	111	3.12	83	2.85	359
Local economy	3.48	42	3.25	12	2.12	66	3.00	37	2.61	99	2.47	74	2.66	330
Quality of life of local residents	3.07	42	2.42	12	1.94	66	2.75	36	2.27	100	1.99	74	2.30	330

Table C: Summary of the statistical results of analyses of the answers to 15 questions, using seven models run for the 15 questions.

In the table the first columns give the name of the model and the factor or factors included in the model (T = political Territory, I = interest group, P = prior designation). Then, for each question, 2-4 values are presented per model. The first is R-squared (R2, given in %), the proportion of the variation in the response "explained" by the factor(s). The following 3 columns indicate the p- values for the test of significance for the respective factors. A grey marking indicates that the factor was not in the model, an x indicates that the factor was included in the model but was not significant (at p= 0.003). To reduce size of the table p was indicated in ‰, so p= 0.003 is indicated as 3, p= 0.002 is indicated as 2 and so forth up to 0, where 0.000 means ' smaller than 0.0005'). For five of the 15 questions, none of the factors was significant in any of the models. These questions are omitted from the table.

		All interest were given equal weight				Local discussions led to better access to available funding for management activities				The local process generated support for the implemented measures				The local process increased cooperation between the various stakeholders				The local process increased the number of conflicts			
Model name	Factor(s)	R^2 (%)	p-values (‰)			R^2 (%)	p-values (‰)			R^2 (%)	p-values (‰)			R^2 (%)	p-values (‰)			R^2 (%)	p-values (‰)		
			T	I	P		T	I	P		T	I	P		T	I	P		T	I	P
1-way ANOVA	T	7	0			25	0			22	0			15	0			7	0		
1-way ANOVA	I	12		0		11		0		18		0		17		0		7		1	
Regression	P	3			2	6			0	6			0	2			x	4			0
2-way ANOVA	T+I	16	2	0		30	0	2		30	0	0		24	0	0		10	x	x	
GLM	T+P	8	1		x	26	0		x	25	0		1	16	0		x	10	0		1
GLM	I+P	14		0	x	16		0	0	23		0	0	18		0	x	10		2	1
GLM	T+I+P	17	x	0	x	31	0	1	x	33	0	0	0	25	0	0	x	25	x	x	1
		The local process increased the number of citizen initiatives				Funding by state nature institutes contributed to management changes				The measures implemented are sufficient				Impact of Natura 2000 on local economy				Impact of Natura 2000 on quality of life of local residents			
Model name	Factor(s)	R^2 (%)	p-values (‰)			R^2 (%)	p-values (‰)			R^2 (%)	p-values (‰)			R^2 (%)	p-values (‰)			R^2 (%)	p-values (‰)		
			T	I	P		T	I	P		T	I	P		T	I	P		T	I	P
1-way ANOVA	T	10	0			5	2			0	x			6	0			2	x		
1-way ANOVA	I	3		x		4		x		9		0		18		0		17		0	
regression	P	1			x	1			x	0			x	1			x	0			x
2-way ANOVA	T+I	11	0	x		8	1	x		11	x	0		21	x	0		18	x	0	
GLM	T+P	10	0		x	5	x		x	0	x		x	6	0		x	2	x		x
GLM	I+P	3		x	x	4		x	x	10		0	x	18		0	x	17		0	x
GLM	T+I+P	11	0	x	x	8	x	x	x	11	x	0	x	21	x	0	x	18	x	0	x

Summary

In 1992, the European Union adopted the Habitats Directive, formulating the ambition to set up an network of protected areas, the Natura 2000 network. Now, 26 years later, the Natura 2000 network consists of more than 27,000 protected sites and covers over 18% of the EU territory. As most Member States have finalised the legal designation process of the sites, the focus of the implementation of the Natura 2000 policy has shifted towards the actual management of the sites. Therefore, this thesis reviews how different Member States have arranged the management of the areas designated as Natura 2000 sites.

Member States can influence the management of the sites through different policy instruments to ensure the protection of biodiversity in the sites. EU legislation provides Member States with considerable freedom in the choice of policy instruments to arrange conservation measures and avoid deterioration of the sites. The implementation process of management instruments is marked by a multilevel and multi-actor character. National or regional governments need to decide which policy instruments they prefer to use for the 'good' management of the Natura 2000 network. At local level for each Natura 2000 site, instruments may need to be elaborated, in consultation with involved actors, to decide upon the measures to be taken. As many of the sites are managed or owned by private landowners or private organisations, the engagement of these actors is essential.

The overall research objective of this thesis is to analyse, explain and evaluate the influence of discretionary EU nature policy on national and local implementation practices and how increased societal engagement might have influenced these implementation practices. In this thesis, implementation practices comprise the entire process of policy instrument choice up to the further elaboration of the policy in terms of local management plans and available subsidies (local policy output). Societal engagement includes the involvement of local actors in planning or programme development, the evaluation of the plan or programme, and the management of the site itself.

Three research questions have been guiding the research, each corresponding with different steps in the process of implementing the management from the national to the local level.
RQ1: How did the Habitats Directive influence the national policy- and in particular the associated instrumentation - of Member States for the management of Natura 2000 sites?
RQ2: To what extent did policy instrument choice for Natura 2000 management influence local implementation in Member States?
RQ3: To what extent does the need for increased societal involvement influence Natura 2000 policy implementation, the associated instrumentation and evaluation?

Comparative public policy analysis forms the heart of this thesis. The thesis consists of a systematic investigation of how the management of Natura 2000 sites is implemented across

European Union Member States. Chapter 2 uses the concept of path dependency in a 15-country analysis of the continuity or changes in policy instruments due to the implementation of the Birds- and Habitats Directive. Chapter 3 reviews changes in policy instruments for management in Finland, Hungary and the Netherlands by developing a methodology to trace back the influence of EU Directives on instrument choice. Chapter 4 compares 15 French management plans and 15 Dutch management plans to assess the influence of national policy instrument decisions on the local content of the management plans. Chapter 5 reviews experiences in three Natura 2000 sites in Denmark, Schleswig Holstein (Germany) and England (United Kingdom) where local-level policies exist and specific efforts are taken to improve societal engagement. Chapter 6 presents the results of a survey in France, Flanders, England and the Netherlands amongst stakeholders in Natura 2000 sites who are involved in management committees and/or actual management of the site. It addresses the question of how these stakeholders perceive the performance of the Natura 2000 policy. In total, the study reviews the Natura 2000 implementation process in 15 Member States, 3 regions (i.e. below Member State level) and 132 Natura 2000 sites. The research itself was undertaken using a broad spectrum of research methods: literature review, document analysis, interviews, online surveys and statistical analysis of gathered data.

Three different theoretical frameworks were combined for the research. To investigate the influence of the Habitats Directive on national policy and instrumentation, the policy arrangement approach and the policy instrumentation classification were combined. The policy arrangement approach identifies four different dimensions of a national policy arrangement: rules, actors, discourse and resources. These four dimensions can change under the influence of the Habitats Directive, but changes also may be due to other socio-political developments. Policy instrumentation classifications group different types of policy instruments based on their key features. By comparing the key features of 'old' and 'new' instruments, change in policy instruments can be identified. The three key features used to assess change between 'new' and 'old' instruments, are action content, authoritative force, and governance design. To analyse local implementation of policy instruments, the policy instrument classification was combined with a policy evaluation framework that distinguishes four implementation aspects (process, output, outcome and impact). By combining the two frameworks the influence of national policy instrument choice on local implementation can be analysed.

The leading theory to review the influence of the Habitats Directive on policy instruments was the theory of path dependency. In public policy research, path dependency is commonly used to describe a situation where the present policy choice is shaped or constrained by institutional paths that result from choices made in the past. In the context of this study path dependency, was interpreted as follows: the choice of policy instruments to manage Natura 2000 was shaped or constrained by policy instruments already present. As no requirements for policy instruments exist in the Habitats Directive, it was expected that Member States would prefer to use pre-existing instruments to implement the policy.

This thesis concludes the following on the influence of the Habitats Directive on national policy and associated instrumentation:

» The Habitats Directive had a diverse influence on the national policy of Member States. Depending on the Member State, it changed the national rules for protected areas, the discourse on nature conservation, the number or type of actors involved in conservation and the resources available for conservation to a greater or lesser degree. Given the diverse influence the research has identified different mechanisms and levels of domestic impact of the Habitats Directive. In some Member States the domestic impact of the Habitats Directive on either the rules, discourse, actors or resources was considerable and in others the Habitats Directive had only low to moderate impact. Given the existence of these different impact mechanisms, this thesis recommends that research reviewing the impact of EU legislation on Member States should consider the influence of EU legislation from a broad perspective. This means reviewing the influence of legislation on the rules, discourse, actors and resources of a specific policy domain.

» Although not required by the Habitats Directive itself, the majority of the Member States introduced new policy instruments for the management of Natura 2000 sites, resulting in voluntary path formation at instrument level. The voluntary path formation at instrument level noted in this thesis falsifies the theory of path dependency present in studies that review the influence of the EU on Member States' policies. The occurrence of voluntary path formation has implications for the development of new EU legislation or the revision of existing legislation. The EU already has a procedure in place that reviews the impact of new legislation, called the impact assessment. However this assessment does not yet explicitly consider if new directives or a revision will lead to new policy instrumentation or dissolve existing policy instrumentation at national level. More attention should be paid during this assessment to whether the development or revision of EU Directives will lead to new policy instrumentation at national level or whether existing national instruments can be dissolved.

Considering the extent to which policy instruments influence local implementation, this thesis concludes the following:

» This thesis shows that policy instrument choice has two main components: firstly, whether new instruments are introduced or not, and secondly, what character the new instruments have.

» The choice for introducing new instruments versus using existing instruments affects local implementation because of the change in policy instrumentation to be implemented at local level. This thesis shows the introduction of new instruments for Natura 2000 generally leads to a more negative perception of the implementation process's legitimacy and equality, so

primarily a process effect was noted. At the same time this thesis shows that policy change and policy instrument choice for Natura 2000 are mutually dependent. New instruments are usually the result of considerable change in the overall policy. As a consequence, the influence of new instruments cannot analytically be separated from the overall change occurring.

» New Natura 2000 management plans are often closely interlinked with financial instruments - a process we have named 'carrotisation'- as financial incentives appear to be the preferred way to ensure engagement of stakeholders. Therefore, policy instrument literature should pay more attention to the layering of policy instruments, particularly for policy instruments that only apply to certain areas (e.g. with a specific spatial coverage). Layered instruments interact at area level, both in terms of process of implementation as well as in the actions proposed. This might provide options for synergy as new actions are proposed in addition to existing ones. Alternatively, it might also result in no new action, as existing practices are reproduced in the new instruments. Governments developing policy instruments for Natura 2000 should consider this interrelatedness to ensure that new instruments create synergies leading to new actions proposed and avoid that existing practices are reproduced in new instruments.

On the influence of increased societal engagement for policy implementation, associated instrumentation, and evaluation, this thesis concludes the following:

» At national level, the increased societal engagement led to new policy instrumentation, which enables participation of stakeholders at the local level.

» Despite improved options for local engagement, this thesis still shows differences in perception on the Natura 2000 policy - particularly in terms of societal, ecological and economic impacts. Therefore, this study recommends that - given the inclusive governance design of Natura 2000 management planning systems - new types of evaluations need to be developed that include and integrate the different points of view and values of stakeholders (e.g. considering ecological, economic, and sociological impacts).

The last chapter of this thesis also considers the impact of different political developments for the management of the Natura 2000 network. Four developments are elaborated upon, namely an 'EU of the regions', 'a closer Union', 'dismantling of the Union' and an 'EU by citizens and businesses'. These developments show differences in the expected levels of plurality in policy instruments, a further increase in societal engagement, and an increase in the funding available for Natura 2000 management. It is not easy to predict which of these four developments will occur in the coming years. A combination of 'an ever closer Union' with an 'EU of businesses and citizens' is most likely. This could lead to a European Union in which nature is safeguarded not only by EU, national and local governments but by citizens and businesses alike.

Acknowledgements

More than 8 years ago I started my PhD-thesis. As many of my fellow PhD students will agree, doing a PhD is a journey into the unknown. Especially in my case as my motivation for starting my PhD-thesis was to better understand the field of political science and analysis. I was trained as an ecologist so my theoretical background in policy analysis was rather 'poor'. Therefore I want to thank Bas Arts and Duncan Liefferink who bravely accepted me as a PhD student and who have provided me with guidance and advice during our many meetings. You helped me to develop a theoretical perspective for the empirical knowledge on Natura 2000 implementation that I have gathered over the last 15 years. Also, you have considerably improved my writing skills by insisting that my text should be understandable for the reader and sentences should not be overly long and complicated.

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About the author

Irene Marieke Bouwma was born on the 8 of April 1970 in Eindhoven (Noord-Brabant, the Netherlands). She attended VWO at Sintermeerten College in Heerlen (Zuid-Limburg, the Netherlands) after which she studied Forestry at the Wageningen Agricultural University. In 1998 she was seconded for 4 years to the European Centre for Nature Conservation. In this period she became interested in the implementation of the Natura 2000 network, both in Western Europe as well as in the accession countries. In 2002 she returned to Alterra, which was renamed Wageningen Environmental Research in 2017. Since 1998 she has worked as a project leader of interdisciplinary research teams. More specifically, she has undertaken several large projects for the European Commission, the Ministry of Agriculture, Nature Management and Food Quality as well as for the Dutch Environmental Assessment Agency on the status of the implementation of the Birds and Habitats Directive in the Netherlands and other European countries. She has been leading the Development of the Guidelines on Climate change and Natura 2000 and the project on Conflict management and Natura 2000 sites. In 2010 she started her PhD at Forest and Nature Policy Group at Wageningen University whilst being employed as a senior researcher at Wageningen Environmental Research.

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Completed Training and Supervision Plan

Name of the learning activity	Department/Institute	Year	ECTS*
A. Project related competences			
ENP-35306 Political Theory	WUR	2011	6
Summer School Foundations of Survey Design	University Utrecht	2013	1.5
Writing research proposal	LUP	2011	6
B. General research related competences			
Introduction course	WASS	2011	1
Scientific Writing	Language Centre	2010	1.8
Course Efficient Writing Strategies	Language Centre	2014	1
Working with EndNote X5	Wageningen UR Library	2012	0.2
'Management instruments for Natura 2000 areas: Use or modify the old or develop something new?'	Science for the Environment , Aarhus University, Aarhus, Denmark	2011	1
'People Engagement Approaches and Techniques - an overview of methods used across Europe'	Natura People workshop, Eurosite, meeting Brugge, Belgium	2014	1
'European Nature Outlook 2050 – Ecosystem Services based scenario'	Ecosystems at your service, Eurosite Annual Conference, Serres, Greence	2016	1
Citizens for Nature	WASS	2015	0.5
Attendance of international workshop and conferences			
'40 years Working for Nature'- Integrated Management of Protected Areas	Europarc Conference 2013, Hortibagy National Park, Hungary	2013	1
'New voices, new visions, new values'	Europarc Conference 2017, Magicas Mountaines, Portugal	2017	1
'Helping Nature to help us'	ES EU Conference, Antwerp, Belgium	2016	1
C. Career related competences/ personal development			
Commerciele Vaardigheden	Kenneth Smit Training	2012	1.2
Reviewing scientific papers for various journals		2015-2018	1
Guest lectures	WUR:LUP/ Wageningen Business School	2015-2018	0.5
Chair session of EU Green Week	European Commission	2016	0.2
Member of Working Group of Ecosystem Services		2014-2017	1
Workshop Organiser 'Natura 2000 and Spatial Planning'	Brussels, DG Regio /WUR	2017	1
Workshop organiser 'Tools and assessments for ecosystem services'	Eurosite Annual Meeting 2016: Ecosystems at your service	2017	1
Conference on preliminary finding Fitness Check	European Commission	2016	0.3
Total			**30.2**

*One credit according to ECTS is on average equivalent to 28 hours of study load

Colophon

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