CHALMERS

Interpretation and Implementation of Natura 2000 in Environmental Impact Assessments

A case study of Blå Torget, a small square by the River Säveån

Master's thesis in Industrial Ecology

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Department of Energy and Environment
Division of Environmental Systems Analysis
CHALMERS UNIVERSITY OF TECHNOLOGY
Gothenburg, Sweden 2016
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In collaboration with Lerums kommun and Miljöbron.

Examiner: Sverker Molander

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Illustration of Blå Torget from the case study. © Mia Callenberg 2016

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Abstract

Environmental Impact Assessment (EIA) is a procedural tool aiming at predicting the environmental impact of a project or a plan, and preparing for mitigation measures. Many actors need to collaborate in this process. In the Swedish context some of them are central administrative authorities, courts, county administrative boards, municipalities, proponents, consultants, NGOs and the general public. Natura 2000 is a network of sites within the European Union, with the purpose to protect valuable biodiversity. Different species and habitats can be subject to this protection policy, which is regulated under the Habitats Directive and the Birds Directive. This thesis aims to gain insight and create a deeper understanding about how the Natura 2000 regulations are interpreted and implemented in EIAs in Sweden, with a focus on the municipality as the commissioner of the EIA. The roles and responsibilities of the different actors in EIA are discussed in relation to the Natura 2000 network. This is done through a study of literature and earlier court cases, interviews with different actors involved in the EIA process and a case study of a small square called *Blå Torget* in the municipality of Lerum. The study shows that the Natura 2000 network is seen as a strong form of protection, but that there are challenges to the implementation of the protection in practise and that the interpretation of 'significant impact' is essential in the reviews. There are different ways to receive guidance and support, and the importance of praxis and precedents is highlighted for cases concerning Natura 2000 sites in Sweden.

Keywords:
environmental impact assessment (EIA), Natura 2000, Habitats Directive, sustainable development, environmental law, urban planning, nature conservation, biodiversity, implementation, interpretation

Sammanfattning

Miljökonsekvensbeskrivning (MKB) är en metod och ett verktyg för att förutsäga miljöpåverkan från ett projekt eller en plan, och för att möjliggöra skyddsåtgärder. Många aktörer måste samarbeta i den här processen. I Sverige är några av aktörerna centrala förvaltningsmyndigheter, domstolar, länsstyrelser, kommuner, verksamhetsutövare, konsulter, intresseorganisationer och privatpersoner. Natura 2000 är ett nätverk av skyddade områden inom Europeiska Unionen med syftet att skydda värdefull biologisk mångfald. Detta verktyg har som syfte att ge skydd åt olika arter och deras livsmiljöer, och regleras under Art- och habitatdirektivet samt Fågeldirektivet. Detta examensarbete syftar till att öka förståelsen om hur bestämmelserna för Natura 2000 tolkas och tillämpas i MKB-processen i Sverige, med fokus på kommunen som beställaren av MKB. Roller och ansvar hos de olika aktörerna diskuteras i förhållande till Natura 2000 nätverket. Detta görs genom en studie av litteratur och tidigare fall, kvalitativa intervjuer med olika aktörer som är involverade in MKB processen samt en fallstudie av att litet torg kallat *Blå Torget* i Lerums kommun. Studien visar att Natura 2000 nätverket anses vara ett starkt skydd, men att det finns svårigheter kring hur bestämmelserna tillämpas i praktiken och att tolkningen av 'betydande påverkan' blir avgörande i prövningarna. Det finns olika sätt att få vägledning och stöd, och vikten av praxis och vägledande domar framhävs för fall som rör Natura 2000 områden i Sverige.

Nyckelord:
Miljökonsekvensbeskrivning (MKB), Natura 2000, Art- och habitatdirektivet, hållbar utveckling, miljörätt, stadsplanering, naturvård, biologisk mångfald, tillämpning, tolkning

Preface

This master's thesis of 30 credits has been carried out in the summer and autumn 2015. During this time I have been based at the municipal office of Lerum and on site in Floda most of the time, but also to a large extent on the road between the courts, consultancy offices, authorities and NGO quarters that I have been fortunate to visit. I am very grateful for the response I got when I was looking for interviewees and I am pleasantly surprised and grateful that so many colleagues took the time to help me answer my questions, despite the workload and shortage of time in several workplaces.

I think that it has been extremely interesting to look at this subject from so many perspectives, especially as the inexperienced student I still am. It is indeed hard to find an answer to the questions about how the Natura 2000 regulations are interpreted and implemented in EIA, and the result of this study becomes more of a discussion around the factors that can have an influence. The ambition is not to give a complete picture of this problem, but to highlight certain issues of importance. Most importantly, I have learnt extremely much during these months and I hope that this thesis can contribute with some new views to the discussion about EIA and Natura 2000.

Acknowledgements

First and foremost, I would like to thank my supervisor and examiner Sverker Molander at Chalmers University of Technology for helping me to define, carry out and complete this work. You never made the decisions for me, but always pushed me in the right direction. And to Karl-Gunnar Olsson, head of the program of Architecture and Engineering, thank you very much for these interesting years and for letting students find their own approach to this field.

I want to send many thanks to Lars Palmeby and Johanna Zachrisson at Lerums kommun for their help and advice during this whole time, and for letting me have a desk and be a part of the team. I also want to thank Lisa Andersson and the organisation Miljöbron for bringing me and the municipality of Lerum together in a work that I think has been fruitful for both parts.

Huge thanks to all the interviewees for giving me of your time, explaining, describing and reflecting on these questions together with me. Even if you cannot be mentioned by name here, you should know that this work would not have been the same without you! As I promised many of you, this report is sent out for you to read, and I hope that you will find some interest in it.

Last but not least, I want to thank Maike for being my faithful companion throughout all our years at Chalmers, and because the dream of white beaches and warm evenings in Zanzibar kept me going this autumn.

Abbreviations

CAB	County Administrative Board
CP	Comprehensive Plan
DDP	Detailed Development Plan
EC	European Communities
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EU	European Union
NGO	Non-Governmental Organisation
PBA	Planning and Building Act
SACs	Special Areas of Conservation
SEA	Strategic Environmental Assessment
SPAs	Special Protection Areas

Translations

central administrative authority	central förvaltningsmyndighet
comprehensive plan	översiktsplan
consultation meeting	samrådsmöte
county administrative board	länsstyrelse
declaration of admissibility	tillåtlighetsförklaring
detailed development plan	detaljplan
EIA constitution	MKB-förordningen
Environmental Code	miljöbalken
Environmental Impact Assessment	miljökonsekvensbedömning (process)
Environmental Impact Statement	miljökonsekvensbeskrivning (document)
Environmental Quality Standards	miljökvalitetsnormer
environmentally hazardous activities	miljöfarlig verksamhet
examination of admissibility	prövning av tillåtlighet
Land and Environment Court	Mark- och miljödomstol
Land and Environment Court of Appeal	Mark- och miljööverdomstolen
leave to appeal	prövningstillstånd
municipality	kommun
permit obligation	tillståndsplikt
Planning and Building Act	plan- och bygglagen
proponent	verksamhetsutövare
right of public access	allemansrätten
right to litigate	talerätt
Species Protection Ordinance	artskyddsförordningen
Strategic Environmental Assessment	strategisk miljöbedömning
Supreme Court	Högsta domstolen
Swedish Agency for Marine and Water Management	Havs- och vattenmyndigheten
Swedish Environmental Protection Agency	Naturvårdsverket
Swedish National Board of Housing, Building and Planning	Boverket
Swedish Society for Nature Conservation	Svenska naturskyddsföreningen
Swedish Transport Administration	Trafikverket

Contents

1 Introduction

The fact that humans have a large impact on the environment is today considered to be beyond all doubts (UN 2015). The interest for environmental issues has increased over the last decades, and impacts on the environment caused by industrial and societal activity are concerning many groups of actors. New tools for the assessments are developing, and legislation regulating environmental impact is now found all over the world. This could pave the way for a systematic approach where the way towards sustainable development can be analysed and discussed. If potentially harmful effects could be avoided or mitigated already at a planning stage, there is much to gain.

Impacts from projects and plans can, or in many cases even must, be assessed through an Environmental Impact Assessment (EIA), a procedural tool aiming at predicting and mitigating the negative environmental impact (Glasson *et al.* 2005). In the first step, the screening, potential impacts are identified and a consideration is done whether these impacts are likely to be significant (Oxford Brookes University 2002). The next step, the scoping, sets the delimitations for the assessment. During the process, an Environmental Impact Statement (EIS) is produced. This is a document used as a decision basis in the authorisation procedure, and should also contain alternative solutions and locations so that the negative impacts of the project or plan can be minimised. If these potential threats and possibilities are known in advance, the work can be enhanced towards prevention rather than cure (Glasson *et al.* 2005). The concept of EIA is spread throughout the world, and most countries include a procedure for EIAs in their environmental legislation (Hedlund & Kjellander 2007). In several cases, the environmental politics imply that many actors in society can take responsibility and provide solutions to the environmental problems that the world is facing. Moreover, EIA is meant to be a democratic process where different stakeholders can voice their opinions.

Natura 2000 is a network of protected sites within the European Union, with the aim to protect valuable biodiversity (European Commission 2000). Specific species as well as habitats can be subject to the protection, and the network is based on the Habitats Directive (92/43/EEC) and the Birds Directive (2009/147/EC) of the European Commission. Member states of the European Union have nominated sites that have been affirmed by the European Commission and included in the network. The Natura 2000 protection differentiates from the nature reserves in Sweden in many ways. For example, for nature reserves the restrictions generally apply only within the borders of a limited area. For a Natura 2000 site it is the impact on the subjects of protection listed for the site that matters, wherever these operations take place. Also, the nomination or abolishment of ordinary nature reserves is done by the county administrative boards (CAB) or the municipalities, but by the Government and the European Commission for Natura 2000 sites (Swedish EPA 2015a).

Protected by EU law, Natura 2000 is a strong protection in theory. However, there are many actors involved in the EIA process and their different roles can have a large influence on the result of the EIA, and thus on how the protection of Natura 2000 is handled in practice (Hedlund & Kjellander 2007). The EIA process shows a large variation between countries, as do the responsibilities of the actors involved. In Sweden, the structure of the EIA is incorporated in the Environmental Code (1998:808), and it is the responsibility of the proponent to perform the EIA and produce an EIS document. This work is often carried out with help from consultants. In this sense, EIA is a process driven by the proponents, where authorities and other actors can contribute with knowledge, experience and review at an early stage (Hedlund & Johansson 2008).

Among the authorities, the CAB has a special responsibility to guide the proponents. Many other actors can also be involved in the practical work with an EIA, and their roles, responsibilities and importance for the quality of the EIA are often subject to discussion. Municipalities, CABs, Land and Environment Courts, central administrative authorities, NGOs and the general public are some of these actors. It can indeed be a challenge to ensure consideration and awareness of nature and biodiversity in a process with many actors involved, all having their own responsibilities, goals and methods. The context of EIA with its general challenges, in combination with a strong protection of habitats and species regulated through a EU directive, turns EIAs concerning Natura 2000 sites into a jungle of desires, conflicting interests and in the end very much a question of how the regulations and guidelines are interpreted and implemented.

This Master's thesis investigates how Natura 2000 is interpreted and implemented in EIAs in Sweden, with a focus on spatial planning. It is done through interviews with representatives of actors from different groups, where the starting point is the legislation regarding EIA and Natura 2000, as well as praxis and experience from earlier EIAs of plans and projects affecting Natura 2000 sites. To illustrate the procedure and its challenges, the thesis also includes a case study of a smaller project in Floda in the South West of Sweden. The project, called *Blå Torget* (the Blue Square), is a small 'square' framing a part of the River Säveån, with wooden decks and bridges on the riverbank towards the water. The river floats through the centre of the town called Floda, and about 400 meters downstream there is a Natura 2000 site protected for its species of fish and the valuable habitats of grassland and deciduous forest (Västra Götaland County Administrative Board 2005). The commissioner of the EIA is in this case the municipality of Lerum, and the case is here used to exemplify the processes and first steps towards an EIA for a project or plan that may have a significant impact on a Natura 2000 site.

1.1 Earlier Studies

The roles, responsibilities and collaboration of the actors in Swedish EIAs have been discussed in a number of earlier studies. Some examples with various foci are de Jong *et al.* (2004) on biodiversity in EIA, Hedlund and Johansson (2008) about the roles of the different actors in more general terms, Wärnbäck (2007) on cumulative effects in impact assessments, and Björckebaum and Mossberg (2009) on the cultural environment in infrastructure projects. Emmelin (2015) writes about environmental assessments for spatial planning, where the roles of the Swedish municipalities are discussed. Earlier studies on the interpretation and implementation of Natura 2000 include Kati *et al.* (2015), in a study based on surveys with scientists in the EU, Peterson *et al.* (2010) about screening decisions concerning the likely impacts of plans and projects on Natura 2000 sites, and Opdam *et al.* (2009) on uncertainties when judging the significance of human impacts on Natura 2000 sites.

1.2 Problem Description

Several actors must collaborate in EIAs concerning Natura 2000 sites in Sweden, and their interpretation of the legislations and regulations can be of importance for how the assessment is done. This can also influence how the results of the EIA are implemented, and how the EIS document is used for the Natura 2000 sites. By trying to understand how different actors interpret the protection of Natura 2000 in the EIA process, what knowledge they possess, what tools or guidance they use, and how they perceive the cooperation with other actors, the understanding of this field may be increased.

For the case study of *Blå Torget*, in the town called Floda in the municipality of Lerum, the Natura 2000 site Säveån is a recurring issue in the urban planning since the municipality now works actively to improve the urban environment and develop the neighbourhood around the town centre of Floda. The closeness to the water is a great quality, and since operations in Floda can affect the Natura 2000 site downstream several EIAs may be needed for various projects in the near future. As the new square *Blå Torget* might have such an impact, there are discussions about an upcoming EIA to identify potential impacts and mitigation measures.

1.3 Aim

The aim of this study is to gain insight and understanding about how different actors in the Swedish EIA process interpret and implement the legislation around the Natura 2000 network of protected sites, how the collaboration between these actors works and what they think of their own roles and responsibilities, as well as the roles and responsibilities of other actors. The thesis also aims to understand what the first steps in the EIA process can look like with a municipality as the commissioner of the EIA for a plan that can cause significant impact on a Natura 2000 site.

The thesis aims to answer the following research questions:

1. *How do the different actors in the EIA process for the Natura 2000 sites interpret the laws and regulations regarding EIA and Natura 2000?*

2. *How do the interpretations of the laws and regulations influence the implementation of the Natura 2000 network in the EIA process?*

3. *What can the EIA process look like for a municipal urban planning project that might have a significant impact on a Natura 2000 site?*

1.4 Delimitations

This study is limited to the current conditions in Sweden, and thus to EIAs according to the Swedish legislation. The protected areas looked into are the ones classified as Natura 2000 sites in the EU, and the Swedish implementation of the regulations regarding such sites. Other possible procedures elsewhere in the world are not included, nor are other types of protected areas looked into. The prevailing conditions since the adoption of the Swedish Environmental Code in 1999 work as a starting point, and the legislative framework that was in use before that is not discussed.

The report is investigating EIAs for projects or plans with a potential impact on Natura 2000 sites, and includes both EIAs performed solely for the Natura 2000 permission, and EIAs where Natura 2000 is one of several matters that need permission. Moreover, the main focus of this thesis is on EIAs for Detailed Development Plans (DDPs) where the municipality is the commissioner of the EIA, although the more general case for Natura 2000 EIAs also is discussed. The concept of strategic environmental assessments (SEA), used for programmes, plans and policies, is not in the scope of this study but does have a strong connection to EIA. The DDPs developed by the municipalities are considered to fall under the category of EIAs (Hedlund & Johansson 2008). This specific case is further discussed in chapter 3.2.3 about EIAs for DDPs.

For the case study, the scope of investigations is the planned *Blå Torget* in the municipality of Lerum and its potential impact on the Natura 2000 site called Säveån, with the area code SE0530085.

In this thesis report, the notion EIA denominates the process, and EIS is the document that is created during the process. In Sweden in general, the abbreviation *MKB* is commonly used to denote both the process and the document.

1.5 Outline of the Report

After this introduction follows chapter 2 about the methodology used in the thesis. Chapter 3 gives a background and provides theory around the concept of EIA and the Natura 2000 networks, as well as some other notions connected to the subject. Chapter 4 gives a description of the actors involved in the process, together with their formal responsibilities. Chapter 5 is a summary of the case study, explaining the background, the process and shortly the findings. Chapter 6 presents the results of the interviews, together with findings in the literature and other important Natura 2000 cases as well as observations from the case study. This is followed by a discussion in chapter 7 and a section of conclusions in chapter 8. Chapter 9 gives recommendations for the actors, and chapter 10 consists of recommendations for further research. Closing remarks are found in chapter 11.

2 Methodology

The methodology used in this thesis consists of several parts: at first a study of literature, articles, legislation and judicial decisions concerning the EIA process in relation to the Natura 2000 network. This is further specified in section 2.1. Secondly, interviews with different actors involved in the EIA process in Sweden have been held. The respondents and the structure of interviews are described below in section 2.2. Thirdly, the thesis include a case study of *Blå Torget* in Floda, following the process of the work prior to a potential EIA for a project or plan that might cause significant impact on a Natura 2000 site. This is explained in section 2.3.

2.1 Study of Literature, Legislation and Judicial Decision

The very foundation of this report is the Swedish legislation and the EU Habitats Directive. These can be seen as the subjects to interpretation and implementation throughout the EIA process. The laws and directives primarily looked at and discussed here are:

- *The Swedish Environmental Code (1998:808)*
- *The Swedish Planning and Building Act (2010:900)*
- *The Habitats Directive of the European Union (92/43/EEC)*

Guidance documents have been used both for informative purposes and as a basis for discussion during the interviews. The most important documents are:

- *Natura 2000 i Sverige: Handbok med allmänna råd* (*Natura 2000 in Sweden: Guide with general advice*) (Swedish EPA 2003)
- *Miljöbedömningar för planer enligt plan- och bygglagen – en vägledning* (*Environmental assessments of plans according to the Planning and Building Act - a guide*) (Swedish National Board of Housing, Building and Planning 2006)
- *Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC,* by the European Commission (2000)
- *The Swedish EIA Constitution (1998:905),* and in particular its appendix 4 about assessment criteria for the environmental impact of plans or programs.
- *The maintenance plan for the Natura 2000 site 'SE0530085 Säveån'* (Västra Götaland County Administrative Board 2005)

Literature on the notion of EIA has been used, which to a large extent has been Hedlund and Kjellander (2007) and Glasson *et al.* (2005). Other literature, papers and articles used are found under References. Earlier judicial decisions are used to exemplify how the law is interpreted and implemented. The cases have been brought up by interviewees, found in the literature or are related to the case study.

2.2 Interviews

The results of this report are to a large extent based on interviews with different actors in the EIA process. Interviewees have been chosen to represent the groups that have been considered relevant for Natura 2000 sites and/or spatial planning EIAs. The semi-structured interviews have been done through physical meetings, over the telephone or on Skype, and have been between 20 and 70 minutes. In appropriate cases, answers have been given in writing. An interview guide can be found in appendix AI.

It is noteworthy that not all questions have been relevant to ask all interviewees, and that the questions in the interview guide have been modified and to some extent added over time, as answers from earlier interviews gave interesting input for new questions. The results from the interviews are used anonymously, in order to guarantee that the interviewers feel comfortable to express their genuine opinions and to give frank answers. In total, 30 people have been interviewed. The respondents were given the opportunity to read through the report before it was sent to print, to ensure that the interview answers had been correctly understood by the author. All of the 30 respondents answered to these follow-up emails that were sent out, and they all gave their consent to the publication of this report.

There is always a question about how many qualitative interviews that are needed to reach a useful result, and when some kind of saturation can be achieved. Saturation for this kind of interviews can be seen as the point where no new themes appear (Baker & Edwards 2012), and the presumption is that as more and more interviews are done, the amount of new information from every additional interview will decrease. How far this aspiration for saturation can be drawn depends on practical issues such as the time available, the level of the publication and the institutional requirements. In qualitative studies, it is often desirable to include as many diverse opinions as possible from the interviewees. Therefore, in the selection of respondents, it has been an aim to choose people with so different profile as possible within reasonable geographical limits.

2.2.1 Respondents

The ambition with the interviews has been to meet at least a couple of persons within each group of actors, to get an idea of their approach and their thoughts on Natura 2000 and EIA. Many of the respondents have had several roles in the EIA procedure, and have therefore been able to share their experiences from different perspectives. In the section below follows a brief description of the persons that have been interviewed in the study. A more detailed list of respondents is found in appendix AII. Figure 2.1 on the following page shows the respondents, where their current roles that they have are illustrated in black, and the grey figures represent the previous roles that they have in the work with EIA. As an example, six of the respondents today work as officials at a municipality, and in addition to that one more respondent has been working at the municipality earlier.

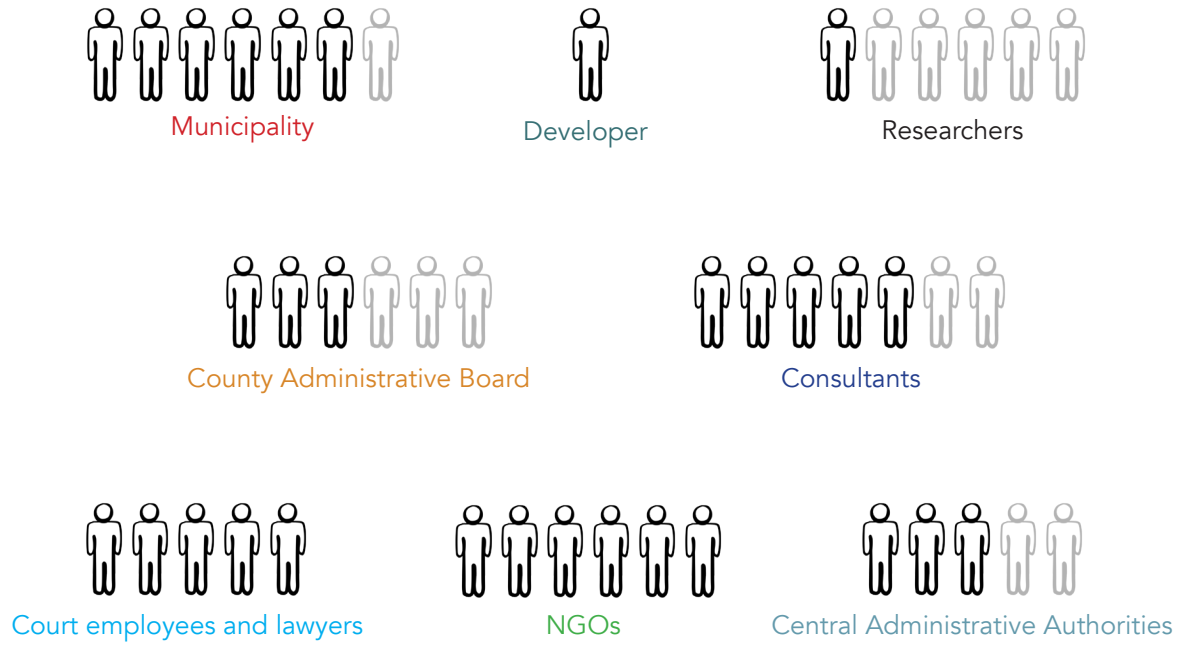

Figure 2.1 The respondents in the study and their roles in the EIA process. Figures in black represent the current roles of the 30 respondents, and the figures illustrated in grey show earlier roles that the same respondents previously have had in EIA

- Three of the respondents now work at central administrative authorities. One of them is an investigator of the marine environment. A second works with permission reviews and water activities, occasionally for Natura 2000 sites. The third works with guidance and permission reviews for Natura 2000 sites and other protected areas.

- Three respondents are employed by the courts; two at a Land and Environment Court and one at the Land and Environment Court of Appeal. One works as a district judge, one is a technical judge in nature conservation, and one is technical judge in planning and construction cases.

- Two respondents are environmental lawyers; one currently working with guidance and consulting in a private firm, and one is recently employed by an environmental NGO.

- Three of the respondents work at one of the CABs; one at the department of nature conservation dealing with Natura 2000 reviews inter alia, one as an administrative official at the planning department and one at the department of law.

- Six of the interviewees are officials at three different municipalities. Two of them are urban planners working with the handling of DDPs, two of them are municipal ecologists, and two of them are project managers for urban and construction projects.

- One of the respondents represents a construction company working with the development of housing projects, often in collaboration with the municipality.

- Four of the respondents work as EIA consultants, and have come in contact with Natura 2000 sites in their work. Some of them are specialised in protected areas. One of them works at a smaller firm with focus on infrastructure and urban planning, and the three others work at some of the largest environmental consulting-firms in Sweden. *At one of these larger firms, the interview turned into a group discussion, where in total three additional EIA consultants joined the conversation and shared their experience.*

- Six of the interviewees are representatives from Swedish NGOs that have an interest in environmental issues for various reasons. Of these six, two respondents represent an NGO concerning water and biodiversity and another one is active in an organisation with similar focus. Two other respondents represent yet another NGO, one at a local and one at a national level. The last of these six is a representative from an NGO engaged in the natural environment inter alia, at a national level.

- One respondent is an architect and urban planner working with guidance in planning issues, helping e.g. municipalities with the interpretation of the legislation.

- One of the respondents is a university professor involved in research and education concerning EIA and spatial planning.

It should be noted that the perspectives of the researchers and academics to a larger extent could be found in literature and articles, in comparison with the other groups of actors. This has complemented the interviews done with actors from this group. Additionally, several of the other respondents have been working with research previously or in parallel with other positions. In excess of the interviews, many interesting discussions have been held during the case of *Blå Torget*, with urban planners, ecologists, the CAB, NGOs and the general public.

2.3 Case Study

The point of departure for this thesis work was that the municipality of Lerum wanted a thesis student to look at the environmental consequences of *Blå Torget* from different perspectives, where the impact on the Natura 2000 site downstream was one possible field to investigate. It was also desirable to identify if there were specific parts of *Blå Torget* that had extra large impact, and to see if the construction and design could be done differently to avoid negative environmental impact. It was not clear if a formal EIA was needed, but it could be required for the realisation of the project in the future. The thesis work could then be used as a document to build on for an EIA later on.

The work with the case study constituted of background descriptions of the conditions for *Blå Torget*, production of presentation material for dialogues with different actors and architectural design work to redevelop the proposal according to the findings. In practice, this meant a specific pre-study of relevant documents for the River Säveån and the local area, contact with the CAB and different stakeholders, on site visits and biological surveys. All in all, this was a start of the screening for the EIA, and an initiation of the assessments that could be used as decision basis in case an EIA will be needed. In addition to this work for the municipality, the case study has been used to exemplify processes, methods and challenges in a municipality's EIA procedure when there could be disturbance on a Natura 2000 site. Chapter 5 contains a more detailed description of the work with *Blå Torget*.

3 Background and Theory

This section introduces theory and definitions as a background for the thesis, and shortly presents the concepts of EIA, Natura 2000 and some other notions of relevance for the understanding of these topics.

3.1 Swedish Legislation

The regulations for building, planning and construction, and the assessments of these operations in terms of EIA, are mainly found in two Swedish laws: the Swedish Environmental Code and the Swedish Planning and Building Act.

3.1.1 The Swedish Environmental Code

Taken into effect January 1st 1999, the Swedish Environmental Code (1998:808) is a merger of 16 former environmental laws set up to 'promote a sustainable development which will assure a healthy and sound environment for present and future generations' (Environmental Code 1998:808). Especially important for this study are chapter 6, describing EIAs and other types of planning and decision-basis, and chapter 7 about protection of areas. The EC's EIA Directive (EC85/337) is transposed to the Environmental Code and incorporated in chapter 6, and the Birds Directive and the Habitat Directive are incorporated in 7 chapter 27-29 §§, under the heading 'Specifically protected areas' (Särskilda skyddade områden). Protected areas defined in 7 chapter are automatically classified as national interests and are covered by chapter 4 in the same legislation. Chapter 2 contains the general rules of consideration, including the burden of proof, consideration of plausibility and the precautionary principle.

3.1.2 The Swedish Planning and Building Act

The Planning and Building Act (2010:900) contains regulations on the planning of land and water and on constructions. The regulations aim to 'promote a society with equal and good social conditions with regard to individual freedom, and a good and sustainable living environment for today's citizens and for future generations' (Planning and Building Act 2010:900). In its 4 chapter 34 § the Planning and Building Act has a connection to 6 chapter of the Environmental Code (1998:808) and the demand for EIA, and there is also a reference to the 7 chapter 28-29 §§ of the Environmental Code about protected areas, in 14 chapter 22 § of the Planning and Building Act about 'The assessment of the impact of a damage' (Bedömningen av en skadas betydelse).

3.2 Environmental Impact Assessment

Environmental Impact Assessment (EIA) is an analytical process that systematically examines potential environmental impacts of a project or a plan. It helps to decide if the effects are acceptable, to implement appropriate monitoring, mitigation, and management measures, and to propose alternatives. The document produced during the EIA, called Environmental Impact Statement (EIS), is used as a decision-basis for the reviewing authority when it is decided if permission can be given or not. An EIA is meant to be a democratic process including the environmental assessments, dialog procedures and documentation (Glasson *et al.* 2005). EIAs are applied when there are expectations or uncertainties of significant environmental impact. Even though the focus often is on the environment, social and cultural values should also be included, and positive as well as adverse impacts should be addressed. The EIA should contain a presentation of alternative locations, and alternative design solutions should be investigated. The EIA hopefully leads to increased knowledge and understanding of the environmental impacts of the project or the plan, and decisions made along the way can influence the scope and the form of the EIS (Andersson, 2007). EIA implies a process that can be formalised to a certain procedure by legislative rules, but can in principle be divided into the steps shown in figure 3.1 below.

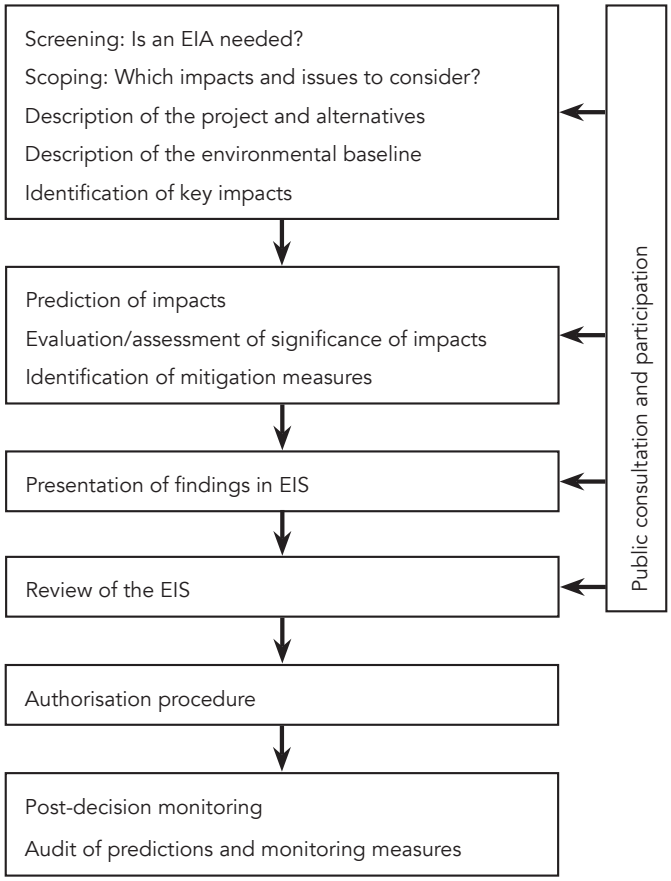

Figure 3.1 Important steps in the EIA process, adapted from Glasson et al. (2005)

3.2.1 A Brief History of EIA

The concept of EIA was introduced in the US around 1970, and in the following decades this type of assessment spread to many countries throughout the world (Hedlund & Kjellander 2007). The first legal act in Europe came in 1985, as the European Communities[1] EIA Directive (EC85/337) about EIAs for certain public and private projects. The directive has been changed several times since then, and the latest amended version came in 2009. As a 'directive', it is a minimum requirement on what the legislation at least must fulfil in the EU member states. Therefore, the directive has been transposed and incorporated in different ways into the legislations in different counties. The Governments in the EU member states can thus chose to go further in the regulations than what the directive requires, and the different national implementations are a reason for the varying scope and proportion for EIAs worldwide.

3.2.2 EIA in Sweden

The first step in Sweden towards EIA legislation was made as an addition to the Road Traffic Act (Väglag) in 1987, describing EIA arrangements for that specific case (Hedlund & Kjellander 2007). When the Swedish EIA regulations were formed in 1991, the country was still not a member of the EC and hence the EIA Directive (EC85/337) was not guiding for the Swedish EIAs. One feature of this history is that the screening step to a large extent was missing, where it can be decided if an EIA is needed or not. This is still something that characterizes Swedish EIAs, and therefore the number of EIAs in Sweden is relatively high compared to other European countries. The EC's EIA directive was finally implemented in Sweden in 1994, as a consequence of the first agreements towards an EC membership. Since 1999 the EIA regulations are integrated in the Swedish Environmental Code (1998:808).

3.2.3 EIA for Detailed Development Plans

A Detailed Development Plan (DDP) is a legally binding document where the municipalities can regulate the use of land and water areas (Swedish National Board of Housing, Building and Planning 2014). For a number of technical reasons, both the regulations covering EIA and Strategic Environmental Assessment (SEA) may be applicable to a DDP (Emmelin 2015). The assessment done for DDPs is sometimes considered to fall under EIA for projects and not under SEA (Hedlund & Johansson 2008). However, there can be different opinions in this matter, and in practise it is not always clarified what kind of EIA that is carried out for a DDP. The concept of SEA is further described in chapter 3.5.1.

The EIA process for a DDP diverges in many ways from a project EIA (Swedish EPA 2009), and is special in the sense that it is the municipality, and not the developers of the built projects, that carries the full responsibility for the EIA. There have been regulations about EIA for DDPs since 1994, and in most cases they comprise the regulations in the Environmental Code (1998:808) concerning EIA for projects. Mostly, it is for 'industrial activities' (industriändamål) or 'coherent built development' (sammanhållen bebyggelse) that the DDPs possibly cause significant impact on the environment (Swedish National Board of Housing, Building and Planning 2006). All DDPs must go through a screening, and an EIA is required if the DDP is considered to have significant environmental impact. However, the legislation does not specify

[1] The European Communities is an older naming of what since 1993 is called the European Union

the content or the limitations of the EIA. Regarding Natura 2000 sites, it is the impact on the protected species or habitats that decides the need of an EIA. If a DDP needs additional permissions according to the Environmental Code 6 chapter 11-18§§ it is not likely that several kinds of EIA are needed, but in practise only one EIA is performed and should comply with the relevant regulations for all aspects (Hedlund & Johansson 2008). Both in the case of DDPs according to the Planning and Building Act and for EIAs according to the Environmental Code, consultation with affected stakeholders is a mandatory part of the process. The Swedish National Board of Housing, Building and Planning (2006) provides a guiding document for environmental assessment of DDPs and other plans, and appendix 4 of the Swedish EIA Constitution (1998:905) presents criteria for when an EIA is required for plans or programs, corresponding to appendix II in the European Commission's SEA Directive (2001/42/EG).

3.3 Natura 2000

Natura 2000 is a network of protected sites, and a key instrument to protect biodiversity within the European Union. It was founded in 1992, when the Governments of the European Communities adopted the new legislation for protection of threatened habitats and species across the European Union (European Commission 2000). The ecological network is set up to ensure the survival of the most valuable species and habitats in the territory of the union (European Environment Agency 2015). Natura 2000 consists of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), designated under the Habitats Directive (92/43/EEC) and the Birds Directive (2009/147/EC) respectively. Both marine and terrestrial sites can be included in the network. There are about 4,000 Natura 2000 sites in Sweden, and the majority also are protected as nature reserves or national parks. The Swedish EPA (2015b) provides an online map tool where all the Swedish sites are marked out.

3.3.1 Habitats Directive and Birds Directive

The Habitats Directive (92/43/EEC), adopted in 1992, forms together with the Birds Directive the cornerstone of the nature conservation policy in Europe (European Commission 2000). When the Habitats Directive is fully implemented it will embody and consequently replace the Birds Directive, and its protection already covers the protected sites of the Birds Directive (2009/147/EC). Foremost, the directives regulate demands on the member states to establish specific protected areas for listed species included in the Natura 2000 network. The Habitats Directive consists of two parts with common purpose; the Natura 2000 network of protected sites, and a more general protection of listed species (Swedish EPA 2012). The ultimate objective of the directive is to achieve 'favourable conservation status' for a set of over 200 habitats and 1,000 species, to ensure that their long-term future will be secured. The network is the EU's contribution to materialise several international conventions on biodiversity. The member states are obliged to ensure that a favourable conservation status is maintained, or if appropriate restored, for the Natura 2000 species and habitats within their borders, and they must take necessary measures to achieve this. The Habitats Directive and the Birds Directive is fully implemented in the Swedish legislation since July 1 2001 (Swedish EPA 2015a) as a permission obligation according to 7 chapter 28 a § of the Environmental Code (1998:808) for plans and projects with potential impact on the sites protected by Natura 2000.

3.3.2 Definitions of 'Favourable Conservation Status'

Conservation status for natural habitats is defined in Article 1(e) of Habitats Directive (92/43/EEC) as 'the sum of influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species' within the territory protected by Natura 2000 (European Commission 2000).

The conservation status of natural habitats will be taken as 'favourable' when:

i. its natural range and areas it covers within that range are stable or increasing, and
ii. the species structure and functions which are necessary for its long term maintenance exist and are likely to continue to exist for the foreseeable future, and
iii. the conservation status of its typical species is favourable as defined in Article 1(i). The emphasis here has moved to the contemporary state of the habitat together with a supporting environment capable of maintaining it in the long-term.

Conservation status of a species means 'the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations' within the protected sites specified in the Habitats Directive (European Commission 2000).

The conservation status of species will be taken as 'favourable' when:

i. population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
ii. the natural range of the species is neither being reduced for the foreseeable future, and
iii. there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis. Similar remarks apply here as to habitats.

3.3.3 Interpretation of 'Significant Impact' on Natura 2000 Sites

The interpretation of what a 'significant impact' means is crucial for how the EU directives and the Environmental Code are used. As claimed by the European Commission (2000), the notion of 'significant impact' cannot be treated arbitrarily. In the Habitats Directive, the term is used in an objective context, in the sense that it is not qualified with discretionary formulae. It is also stated that there must be a consistent approach to ensure the coherency of the Natura 2000 network. Even if it is necessary to be objective in the interpretation of the scope of the notion 'significant', such objectivity cannot be split up from the special environmental conditions or features of a protected site concerned by a project or activity. To be able to more precisely identify conservation sensitivities, the conservation objectives and baseline information of a site can be of great importance.

Gävleborg County Administrative Board (2007) explains a significant impact as a negative impact that through disturbance obstructs the conservation of protected species in the area, and by that the preservation of the species in a viable population. The disturbance should be put in relation to the population and its development in the area, rather than the effects on single individuals. It should be noted that the threshold for 'significant impact' is low and must not be confused with the regulations in 6 chapter about 'significant environmental impact' for ordinary EIAs (Johansson *et al.,* 2015).

Specified in article 4(1) in the Habitats Directive (92/43/EEC) the EU member states are required to propose and document natural types and species native to the territory that the Natura 2000 site hosts (European Commission 2000). This document forms the basis to establish 'the site's conservation objectives', for example through the Swedish 'maintenance plans' described in the next section. Under these conditions, it can be seen that what may be significant in relation to one site may not be significant for another site. Thus, this important term 'significant' needs to be interpreted objectively, while at the same time taking particular account of the site's conservation objectives.

3.3.4 Maintenance Plans

Each Natura 2000 site should have a maintenance plan (bevarandeplan) giving a description of the area, its natural values and a motivation for its protection (Swedish EPA 2003). The plan is supposed to describe the aim of the conservation, specify conservation arrangements and by that ease the planning permission process, according to the Environmental Code (1998:808). Through a Government remit, the Swedish EPA is liable to compile guidelines for the maintenance plans, which are developed and affirmed by the CAB. The conditions needed for the species and nature types in the specific area to reach a favourable ecological status should be described, as well as potential and real threats to achieving this. A time plan for necessary measures should be included. Within the work to develop these maintenance plans, communication with concerned landowners is of great importance, and the CABs are obliged to inform landowners about Natura 2000 and necessary protection measures.

3.4 EIA for the Special Case of Natura 2000

For projects and plans that may have a significant impact on a Natura 2000 site, the regulations and formal conditions differ from the normal procedure of an EIA (Swedish EPA 2003). The methodology is thus different, and there are other requirements on judgement and documentation. More specifically, the EIA must contain the information needed for a review according to the Environmental Code (1998:808) 7 chapter 28 b and 29 §. The consideration of the impact on the protected species and habitats of Natura 2000 is done in an 'appropriate assessment', which is explained in the next section. This review is not done in relation to the Environmental Code and its general consideration rules of EIA, but according to the Habitats Directive (92/43/EEC), and thus focuses on the sustainability in the network of Natura 2000 sites in Europe that the site belongs to. The Swedish Parliament has decided that projects that could have a significant impact on Natura 2000 areas must go through a consideration of impediments (hindersprövning), and that an EIA shall be the decision-basis for such a review (Swedish EPA 2003). The review could basically relate to any activity with a significant impact on a Natura 2000 site, and does not have to comprise permit consent according to any other legislation. Permission is not required for activities connected with the necessary management or maintenance of a site, according to 7 chapter 28 a § of the Environmental Code (1998:808).

The special review of projects and plans that can affect a Natura 2000 site implies that the assessment must be done without compensatory measures and must take into account the cumulative effects that all planned projects can have within a reasonable future (Hedlund & Kjellander 2007). If the EIA is performed for the Natura 2000 review alone, only the information necessary for that very review is needed, i. e. only the significant environmental impacts that are relevant for the site's function in the Natura 2000 network have to be reported. Because it is a

basic condition for a Natura 2000 review that alternatives are missing, it is not relevant to illustrate alternative locations. A Natura 2000 EIA is therefore seen as very different from the general case of EIA. In practice however, the concerned activity is likely to need permission also according to other chapters in the Environmental Code. In such cases, the Natura 2000 review can be integrated in the ordinary EIA.

3.4.1 Suggested Step-by-Step Approach for Natura 2000 EIAs

A step-by-step approach has been suggested by Oxford Brookes University (2002) on behalf of the European Commission, to function as a starting point for the Natura 2000 EIA procedure. In this guideline, each stage determines whether a further stage in the process is required. The term 'assessment' is here used as in environmental impact assessment (EIA).

The step-by-step approach consists of the following parts:

1. **Screening**: the process that identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant

2. **Appropriate assessment:** the consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts

3. **Assessment of alternative solutions:** the process that examines alternative ways of achieving the objectives of the project or plan that avoids adverse impacts on the integrity of the Natura 2000 site

4. **Assessment where no alternative solutions exist and where adverse impacts remain**: an assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest, it is deemed that the project or plan should proceed

3.4.2 Appropriate Assessment

When a project or plan is likely to have a significant impact on a protected Natura 2000 site, the EU Directive states that there must be an 'appropriate assessment of the implications for the site in view of conservation objectives' (European Commission 2000). This 'appropriate assessment' raises questions concerning the form and content, is a step preceding and providing a basis for other steps and by that leading to an approval or refusal of a plan or project. As implemented in the Environmental Code (1998:808) consent can be granted only if:

i. the project or plan cannot affect the habitat(s) in the area, and if
ii. the project or plan does not imply that the protected species is subject to disturbance that can significantly obstruct the conservation

Both of these conditions must be fulfilled. If the conditions not are fulfilled, consent may still be granted if:

i. there are no alternative solutions, and
ii. there are imperative reasons of overriding public interest and if,
iii. compensatory measures can be taken so that the purpose of protection still can be reached

All those three conditions must be fulfilled for authorization to be granted. Whether these three criteria are fulfilled or not is reviewed by the Government in a so-called 'examination of admissibility' (tillåtlighetsprövning). Thus, it is up to the Government to decide if a project or plan can be realised despite its significant impact on a Natura 2000 site, and in the cases where permission is given it comes with demands on compensatory measures.

Except for this by the Government permitted exception, the permission requirements in the Environmental Code (1998:808) imply that it is against the law to pursue any operation that may cause damage on the species or habitats Natura 2000 sites. This concerns activities regulated in the Environmental Code as well as in other legal documents. An EIA shall be a part of any application that could lead to significant impact or obstruction, and the conditions to give permission are specified in the environmental code, 7 chapter, 28 b § and 29 §. The permission obligation (tillståndsplikt) is actualised when there is a risk that an operation or activity can have a significant impact on a Natura 2000 site, and it only regards negative impacts. Direct as well as indirect impacts are subject to the authorisation requirements. Worth to note though, is that there is a difference between projects or plans that risk to cause significant impact, and thus require an application for permission, and projects or plans that risk to damage and obstruct the conservation of the species or habitats protected by Natura 2000, where permission must not be granted.

3.4.3 Precautionary Principle

Implicit in the Habitats Directive is the application of the 'precautionary principle', which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty. Moreover, the Environmental Code (1998:808) mentions the precautionary principle in the general rules of consideration in its chapter 2 for EIAs in general. It is stated by the European Commission (2000) that the use of the precautionary principle presupposes:

i. identification of potentially negative effects resulting from a phenomenon, product or procedure;
ii. a scientific evaluation of the risks which, because of the insufficiency of the data, their inconclusive or imprecise nature, makes it impossible to determine with sufficient certainty the risk in question

3.5 Other Related Notions

This chapter gives a brief description of some other concepts and notions that can be relevant in relation to EIA and Natura 2000. This includes Strategic Environmental Assessment, Environmental Risk Assessment, Environmental Quality Standards, the Species Protections Ordinance, national interests and nature reserves.

3.5.1 Strategic Environmental Assessment

Strategic Environmental Assessments as a concept was introduced in the 1980s, and is a form of high-level EIA done for programs and plans. SEA was born from the desire of an assessment similar to the EIA, but better suited for the more overall planning (Hedlund & Kjellander 2007). The importance to environmentally assess not only concrete projects but also initial strategic plans spurred the debate. SEA is legally enforced in the EC by the SEA Directive (2001/42/EC), aiming to ensure that the environmental impacts of plans and programs are assessed before the adoption of them (European Commission 2015a). It introduces a systematic assessment of the land use in connection to plans and programs. Municipal comprehensive plans, regional and local development plans, waste plans and transport plans are typically subject to an SEA. An SEA is in most cases performed during an earlier stage than an EIA, and the findings and results of the SEA can therefore permeate the later EIA work.

3.5.2 Environmental Risk Assessment

Potential effects on the environment, specific species or their habitats, that a project or plan can give rise to, can be assessed through an Environmental Risk Assessment (ERA). This methodology can be important to understand during the discussions about EIAs and significant impact on Natura 2000. Environmental risk can be defined as the chance of harmful effects to human health or to ecological systems resulting from exposure to an environmental stressor (US EPA 2015). A stressor is a biological, physical or chemical entity that can cause an adverse effect on ecosystems, specific species of animals or plants, or the environment where these are found. ERA can be used to identify and characterize the nature, probability and magnitude of risk to ecological receptors. These ecological receptors are the endpoints of the assessment, in this study represented by the species or habitats that the Natura 2000 network aims to protect. To define the risk it is crucial to find the different cause-effect chains, in order to understand potential pathways that any disturbance might take.

As described by the US EPA (2015), ERA is carried out in three phases:

1. **Problem Formulation** where information is gathered about the potential risk, and the needs for protection of the defined endpoint.

2. **Analysis** that determines what the endpoints are exposed to and to what extent, as well as at what level of exposure harmful effects can occur.

3. **Risk Characterization** where the exposure profiles and the exposure effects from the previous step are combined. The results are then interpreted so that potential harmful effects on the endpoints can be identified.

3.5.3 Environmental Quality Standards

The environmental quality standards were introduced in 1999, and are specified in 5 chapter of the Environmental Code (1998:808). It is a legally binding policy instrument with the purpose to remedy the environmental impact coming from diffuse emission sources (Swedish EPA 2014b). At present, Sweden has standards for noise, air quality and water quality, that can be used nationwide or for smaller geographical areas, e.g. the counties or the municipalities. The environmental quality standards are to a large extent based on directives from the EC, such as the Water Framework Directive (2000/60/EC) (Swedish Agency for Marine and Water Management 2015b). The Government decides on standard levels can define maximum allowable concentrations of various substances in air, soil or water. The standards deriving from EC directives can be delegated to other authorities, which means that for example the Swedish Agency for Marine and Water Management is responsible for guidance on environmental quality standards related to water quality and the marine environment, whereas the Swedish EPA has the responsibility for the supervisory guidance on environmental quality standards related to air quality and noise. Action programs describe what the municipalities and other authorities must do in order to reach the standards.

3.5.4 Species Protection Ordinance

As mentioned earlier about the Habitats Directive (92/43/EEC), the directive consists of two parts for the protection of biodiversity (Swedish EPA 2012). The first part, the creation of the Natura 2000 network, is implemented in 7 chapter of the Environmental Code and is obligating member states to nominate protected areas necessary to conserve threatened species and habitats. These habitats and species are specified in appendix 1 and 2 of the Habitats Directive, and do not have any protection outside the Natura 2000 network. The second part of the Habitats Directive is a general protection of the species, specified in its appendix 4. In Sweden, this part is implemented under the 'Species Protection Ordinance' (2007:845) (Artskyddsförordningen), which implies that the species are protected wherever they exist, no matter if that is inside or outside the Natura 2000 network. Many species are protected through both parts, which means that project or plans can be subject to several reviews simultaneously. This can be done through a common assessment, but the motivation for permission or dispensation should be separated.

3.5.5 National Interests

All Natura 2000 sites in Sweden nominated by the Government have since 2001 also the status of 'national interests' according to 4 chapter of the Environmental Code (1998:808). This will influence if plans affecting Natura 2000 sites in a significant way can be adopted or not (Swedish EPA 2003). The notion of 'national interest', as used in Sweden, regards areas, sites or specific objects that are considered to be of importance from a national point of view. The protection can apply to natural or cultural environments, and the degree of protection is defined in the Environmental code (1998:808) where regulations concerning the national interest are found in 3 and 4 chapters. The Government can, through the CABs, intervene with any development that implies damage on the natural interest, even if the action takes place outside the borders of the concerned area. The national interests should be discussed and presented in the municipal comprehensive plans, to clarify how these relate to other interests, but also how tradeoffs between incompatible national interests are to be made (Swedish National Board of Housing, Building and Planning 2015b).

3.5.6 Nature Reserves

Nature reserves are one of the most common measures to protect valuable nature in Sweden, and the legislation about these reserves is found in 7 chapter 4-8 §§ of the Environmental Code (1998:808). This form of protection was introduced in 1964, in conjunction with the Nature Conservation Act (1964:822). A land or water area can be declared a nature reserve by the CAB or the municipality, with the purpose to conserve biodiversity and important natural environments, or meet the need for areas of outdoor life and recreation (Swedish EPA 2015). As a protection measure, the classification determines the restrictions that apply within the defined area, and the regulations for a nature reserve are described in a 'management plan' (skötselplan). There are some main differences between nature reserves and the Natura 2000 sites, for example for the responsibilities to point out or abolish the protection lies with the CAB or the municipality for the nature reserve, whereas this decision is taken by the Government and finally by the European Commission for the Natura 2000 sites. As mentioned earlier, another significant disparity is that the criteria for Natura 2000 protection is based on the impact no matter if the source of the impact is inside or outside the defined area, but for nature reserves it is the physical border that is the basis for what activities that are allowed.

4 Roles and Responsibilities of the Actors

The wide range of participants in EIA means that there are many different positions and interests, and the aims and goals of the EIA can vary between the actors. For example, it can be to predict impacts, to ensure that the legislation is used correctly, to review the product, to advise decision-makers, to protect flora and fauna or more generally to promote sustainable development (Andersson 2007). However, there are some formal responsibilities regarding Natura 2000 EIAs and the reviews of such, and these are shortly described in this chapter. The judicial instance hierarchy for Natura 2000 reviews in Sweden is presented in figure 4.1 below. In addition to what is shown in this figure, there is also a possibility to retry some of the Governmental decisions in a judicial review (rättsprövning).

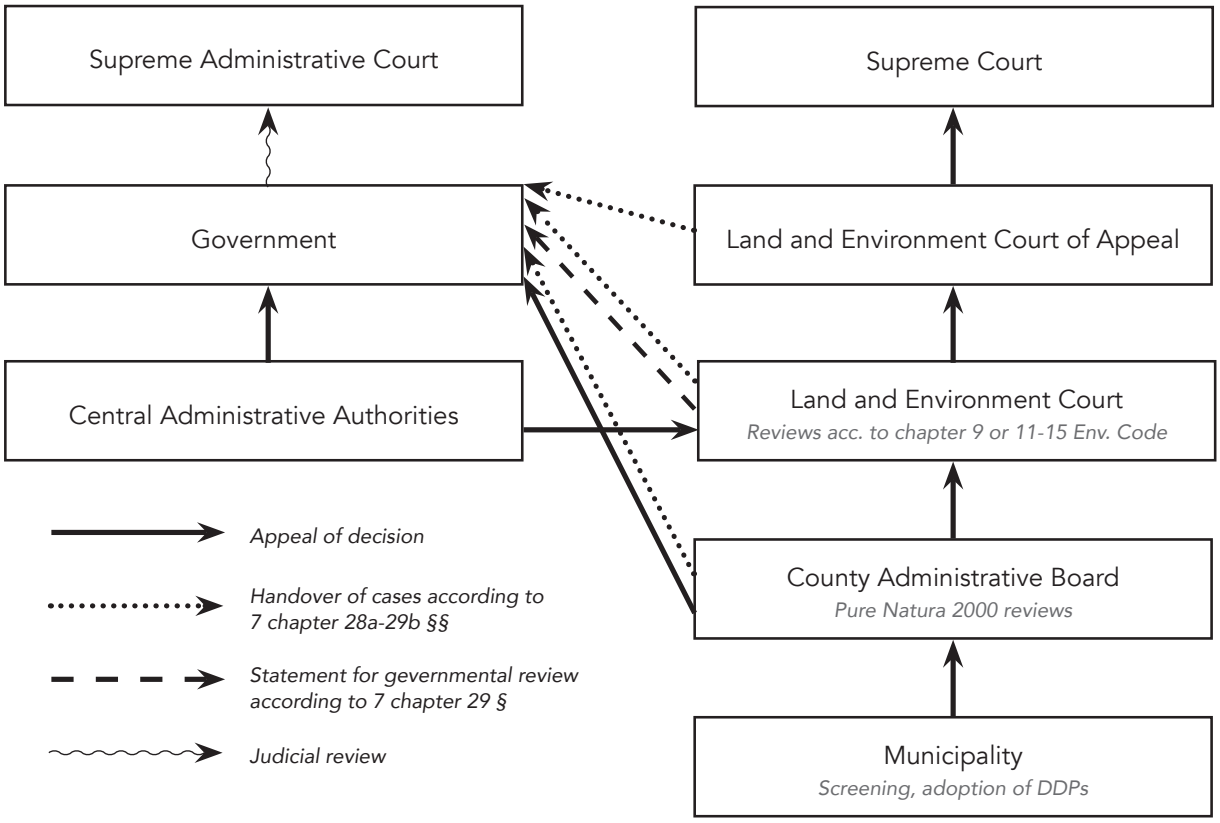

Figure 4.1 Judicial instance hierarchy for Natura 2000 reviews in Sweden, adapted from Ebbesson (2008)

4.1 Proponent

The Swedish environmental legislation implies that the proponent has the main responsibility for investigations and the decision basis in connection with the permission review, and by that also the responsibility for the EIA. The proponent can be e.g. authorities, organisations, companies, associations or private individuals. This responsible proponent is in charge of the EIA at least until an application is sent to the deciding authority. The proponent must also carry the cost of the EIA, and can suffer sanctions if incorrect information is given. When it comes to DDPs according to the Planning and Building Act (2010:900), the obligation lies with the planning authority: the municipality. The specific role that the municipality has in this process is described further down.

4.2 Consultants

For proponents obliged to carry out EIAs, it is common to hire a consultant, and the consultancy firms in Sweden doing EIAs can vary in size from one person to many hundred. The consultants are often specialists in a certain field, and have no formal standing in the review or EIA procedure. Moreover, sub-consultants can be taken in if the case requires investigations beyond the competence of the contracted consultants. The relation between the proponent and the consultant is regulated according to civil law, and the procurement can be done in various ways (Hedlund & Kjellander 2007). However, procurement by public authorities and other organizations financed by public funds is regulated through the Public Procurement Act (2007: 1091) (Lagen om offentlig upphandling).

4.3 Municipality

Town and country planning in Sweden is mainly a responsibility at a municipal level, and it is the municipalities that develop and decide on legally binding DDPs (Swedish National Board of Housing, Building and Planning 2014). Regarding EIAs for these DDPs, it is not the developer but the municipality that is the commissioner of the EIA and the relevant investigations. A municipality can have many different roles in the EIA work, and involved officials can be e.g. urban planners, biologists, project managers and technical specialists under departments for planning, nature conservation, environmental protection or procurement. Many municipalities have a municipal ecologist working with nature conservation and other ecological issues. At the municipality, it is often the planning department that has the responsibility for the EIA screening of the DDP, even though it is possible for them to consult other departments. If the plan can cause significant impact on a Natura 2000 site, an EIA must be carried out. Exactly how the screening process shall be done is not specified, but appendix 4 to the EIA Constitution (1998:905) lists criteria to take into account. It is thus the municipality that does the screening, pays for the EIA and adopts the DDP, as a part of the planning monopoly established in the older Planning and Building Act (1987:10), even if the CABs must be given the opportunity to give comments. In that sense the judicial review process starts already at a municipal level.

4.4 County Administrative Boards

There are 21 CABs in Sweden, which are central actors in EIA as the extended arm of the state (Ebbesson 2008). Among many other tasks, one function is to provide guidance during the EIA process. Their judgement and acting can have a large influence on the scope and level of detail in the EIA. In the cases where legislators or the Government have not specified, it is the CAB that decides if a project can be assumed to have significant environmental impact or not, whereas for DDPs this is decided by the municipality. The CAB is also beholden to compile the planning material and provide this to developers that must establish an EIA (Swedish EPA 2009). The CAB develops and affirms the 'maintenance plans' for Natura 2000 sites, and is also ultimately responsible of ensuring that the ambition with the protection is met. According to 7 chapter 29 b § in the Environmental Code (1998:808), permit matters according to 28 a § in the same chapter (i.e. permits for project or plans that can affect a Natura 2000 site) are reviewed by the CAB in the county where the concerned Natura 2000 site is located. In cases where the project or plan is subject to a permit obligation according to 9 or 11-15 chapters, the permission for Natura 2000 shall be reviewed by the same authority that reviews the other permit matter, e. g. in many cases by a Land and Environment Court. Before this authority gives its decision, the CAB shall be given the opportunity to express their opinion. Cases concerning environmentally hazardous activities are reviewed by the environmental assessment delegation (miljöprövningsdelegationen)

at the CAB. Similar to the municipalities, there are many different departments at the CAB, of which the planning department, the department for nature conservation, the department for environmental protection, the water management department and the legal department are some. DDPs enter the CAB through the planning department, which can consult other department in issues outside their field of knowledge. The CABs also work with the regional development perspective, and it is written in 6 chapter 20 § of the Environmental Code (1998:808) that the CAB shall compile investigations, programs and other bases for planning of importance for the region, that can be found at the central administrative authorities. If requested by municipalities and other authorities, the CAB has to provide such planning basis for the implementation of the Environmental Code (1998:808).

4.5 The Land and Environment Courts

There are five Land and Environment Courts (Mark- och miljödomstolar) in Sweden, that are part of the district courts in Nacka, Vänersborg, Växjö, Umeå and Östersund (Swedish Courts 2015). These are special courts dealing with environmental and water issues, parcelling, planning and building matters, and cases that previously were handled by the environment courts. The majority of the objectives previously handled by the property courts and the majority of the targets under the Planning and Building Act, which previously dealt by the administrative courts and the Government, also fall under the Land and Environment Courts. The Land and Environment Court is the first instance to examine permit cases about e.g. water operations according to the Environmental Code (1998:808), meaning that the permission procedure for Natura 2000 will be taken in the Land and Environment Court directly if the project or plan also needs a permission according to 9 or 11-15 chapter in the Environmental Code (1998:808), which is described in 7 chapter 29 b §. If there is an appeal against the decision of the CAB regarding the Natura 2000 permission, the case can be taken to one of the Land and Environment Courts, which then is the next higher instance. Most often, the court contains four members; one legally trained judge, one technical judge and two specially appointed members.

4.6 The Land and Environment Court of Appeal

The Land and Environment Court of Appeal (Mark- och miljööverdomstolen) is part of the Svea Court of Appeal (Svea Hovrätt), and has the function to examine appeals from the five Land and Environment Courts. It is thus the higher court in environmental law cases, property law cases and planning and construction law cases (Land and Environment Court of Appeal 2015). The court consists of four members, of which three shall be legally trained judges, and there is often also a technical judge. The decisions taken here serve as precedents for the lower instances. For a case to be taken up in the Land and Environment Court of Appeal, it needs a specific leave to appeal. A leave of appeal can be given if it:

1. can be a reason to change the decision of the Land and Environment Court;
2. is needed for the Land and Environment Court of Appeal to decide if the Land and Environment Court has made a correct decision;
3. is important that the Land and Environment Court of Appeal examines the case to give the Land and Environment Courts guidance in future examination of similar cases;
4. there are extraordinary reasons to review the appeal.

4.7 The Supreme Court

The Supreme Court (Högsta domstolen) is one of two highest instances in the Swedish judiciary, and has as its main task to create precedents (The Supreme Court 2015). It is the Supreme Court that adjudicates appeals from the Land and Environment Court of Appeal, and a leave of appeal is needed for cases to be brought up in the Supreme Court. The general principle is that the Supreme Court only gives a leave of appeal if the judgement or decision can be of importance as a precedent, to work as guidance for lower instances. It can also be granted in cases where a serious procedural error may have had an impact on the decision by the Land and Environment Court of Appeal.

4.8 The Government

In particular cases, the Government may reserve the right to examine the admissibility of operations in or outside a Natura 2000 site that may lead to more than insignificant damage to the natural value of the area. This procedure is specified in 7 chapter 29 a § of the Environmental Code (1998:808), and means that if a proponent believe that a project or plan only should be given permission despite its significant impact on Natura 2000, the case shall be handed over to the Government for a decision together with a statement motivating such an exception. The Government can thereafter do an examination of admissibility (tillåtlighetsprövning), and grant permission for a project. The criteria for such permission are described in chapter 3.4.2, and the judicial review is done in the Supreme Administrative Court (Högsta förvaltningsdomstolen).

As described above, the CABs suggest sites to the Natura 2000 network at the request of the Government (Swedish EPA 2003). The Government then makes a decision about the nomination of Special Areas of Conservation (SACs) according to the Habitats Directive that is reviewed by the Swedish EPA and affirmed by European Commission following strictly scientific criteria. In this elaborate process, the state must compile a list of wildlife areas that contains habitats and species listed under the Habitats Directive, a list that subsequently is submitted to the European Commission for evaluation and selection. The procedure is different for Special Protections Areas (SPAs) under the Birds Directive, where the SPAs are designated directly by the Member States (European Commission 2000). The selection of sites to Natura 2000 does not mean that all areas containing species or habitats listed in the directives have to be included in the network, but the total area covered by the network shall be sufficient to ensure their long-term conservation. The Government may, after consultation with the European Commission, revoke a declaration of a Natura 2000 protection.

4.9 Central Administrative Authorities

Unlike the courts, the central administrative authorities are under principal subordination to the Government, with the role of these authorities being to implement their decisions (de Jong et al. 2004). However, this limitation does not mean that neither the Parliament nor the Government may determine how an authority is to decide on a matter regarding exercise of authority towards individuals or municipalities, or that is related to the implementation of the law (Government Offices 2015). These central administrative authorities work independently within the frameworks given by the Government, and in the beginning of every year specific Government remits can be allocated to the different authorities. These authorities can provide guidance to primarily the CABs, but also municipalities and other actors through their guidance documents and manuals.

4.9.1 The Swedish Environmental Protection Agency

The Environmental Protection Agency (EPA) (Naturvårdsverket) works on remits comprising compilation of knowledge and documentation to develop the environmental efforts of themselves and others (Swedish EPA 2014a). The EPA shall also help to develop and implement environmental policies and ensure that the Environmental Code is complied with. Another task is the one of coordinating, monitoring and evaluating efforts among agencies and other parties, to meet the environmental objectives of Sweden. As one of many stakeholders in issues concerning the environment, the joint action with other groups and organisations is important to unite the efforts and coordinate the environmental work. The agency's development of inventory methodologies for species according to the Habitats Directive and the Natura 2000 network can come to use in the EIA process, and a handbook with general advice on Natura 2000 was published in 2003 (Swedish EPA 2003).

4.9.2 The Swedish Agency for Marine and Water Management

Instituted in 2011, the Swedish Agency for Marine and Water Management (SwAM) (Havs- och vattenmyndigheten) is a relatively young central administrative agency. Working on the behalf of the Government, its main focus is the conservation, restoration and support aiming at a sustainable use of lakes, oceans and other watercourses (Swedish Agency for Marine and Water Management 2015a). When this new agency was introduced, it took over tasks and commitments that used to fall under the Swedish EPA and the earlier Swedish Board of Fisheries (Fiskeriverket). Within its area of responsibility, SwAM shall 'be proactive, supportive and coordinate the implementation of environmental policies and promote sustainable management of fisheries resources'. The agency supports the five water authorities through guidance, consulting and prescriptions, and reports this work to the EU.

4.9.3 The Swedish National Board of Housing, Building and Planning

The Government permit of the Swedish National Board of Housing, Building and Planning includes several fields, e.g. to analyse the housing market, issue building regulations, and supervise the town and country planning principally done by the municipalities (Swedish National Board of Housing, Building and Planning 2015a). In addition to that, the Government can also give more detailed commissions to the authority. The assessment of the national environmental quality goal 'Good Built Environment' and the comprehensive goal of 'Spatial Planning and Resource Conservation of Land and Water' lies under the responsibilities of the National Board of Housing, Building and Planning. Through the supervision of the built environment, spatial planning and resource conservation, policies for environment and energy are often implemented through the planning system. A guidance document for environmental assessments of plans according to the Planning and Building Act was published by the Swedish National Board of Housing, Building and Planning in 2006.

4.10 Non-Governmental Organisations

In Sweden, there are many environmental Non-Governmental Organisations (NGOs) working actively with issues concerning the environment in general, and the Natura 2000 network in some more specific cases. Larger organisations can operate at an international, national, regional or local level. The relation between the local committees and the national section can be arranged in many different ways, but is often an umbrella organisation where the officials at the national level

can provide their local equivalents with guidance, support and, in specifically interesting cases, also get involved in the juridical process. The NGOs can consist of both voluntary workers and paid employees. Examples of NGOs working with environmental issues in some way are the Swedish Society for Nature Conservation (Naturskyddsföreningen), the Swedish Anglers (Sportfiskarna) and the Swedish Tourist Association (Svenska Turistföreningen).

To be able to appeal judicial decisions by authorities and courts, a so-called 'right to litigate' is needed. This gives a possibility to speak in court in a juridical matter. Defined in 16 chapter 13 § of the Environmental Code (1998:808), this right applies to an organisation or juridical person that:

1. has as the main objective to protect nature or environmental interests,
2. is a non-profit driven organisation
3. has been operating in Sweden for at least three years;
4. has at least 100 members or otherwise indicates that the operations have public support.

4.11 The Public

A consultation where different stakeholders are invited to participate is an obligatory part of both the EIA process according to the Environmental Code (1998:808), and in the development of a DDP according to the Swedish Planning and Building Act (2010:900). The public has the right to get information about the plan or project in cases where they can be affected, and the right to have an opportunity to express their opinion. A municipality's decision to adopt a DDP may be appealed by a person affected by the plan and that, no later than during the exhibition period, has left written comments that have not been met. The right to appeal the decision taken by the municipality is described in 13 chapter 8 § of the Planning and Building Act (2010:900), referring to 22 § of Administrative Procedure Act (1986:223) (Förvaltningslagen). As established in the Aarhus Convention, both individuals and associations of the public have certain rights regarding environmental issues. Stated in the convention, everyone has the right to access of environmental information held by public authorities, the right to participation in the environmental decision-making and the right to review decisions taken in environmental cases (European Commission 2015b).

5 Case Study of Blå Torget

The small square *Blå Torget* has been used as an example of what the first steps prior to the EIA could look like for a DDP with a potential significant impact on a site protected by Natura 2000. During the time of the thesis work, the design process and the beginning of an EIA screening for Blå Torget has been followed from within the municipal organisation. Some of the main findings about this process, together with a discussion about the impact on the Natura 2000 site and an adapted design proposal, are presented in this chapter. The observations from the case study have also contributed to the results in chapter 6 about interpretation and implementation of Natura 2000 in EIA, to exemplify the topics discussed in the interviews.

5.1 Background and Context

The town Floda is located 30 km North East of Gothenburg in the municipality of Lerum. It originates from a former manor, and the society that developed along the historically important main railway line during the 19th century. Villages were first formed around the early church of Floda, and later the community continued to develop around the newer church. New dwelling areas have been constructed surrounding the train station since the second half of the 20th century. Today Floda is geographically spread out, as a consequence of its historical development. The River Säveån floats through Floda, and a large part of it is here protected by the Natura 2000 network. The river has a rapidly flowing watercourse that is open all year around. It contains important wintering places for several species of duck and other birds, and is surrounded by broadleaved deciduous woodland. It could serve as a reproduction area for fish, thanks to the large stream with both slow and fast flowing parts. The purpose of the Natura 2000 site Säveån is to protect the fish species salmon and bullhead, together with the valuable habitats of grassland and deciduous forest surrounding the river (Västra Götaland County Administrative Board 2005). The dell of the River Säveån is also a nature reserve as well as a national interest for nature conservation. Figure 5.1 shows Floda and the Natura 2000 site Säveån, and figure 5.2 shows the location for the planned *Blå Torget*.

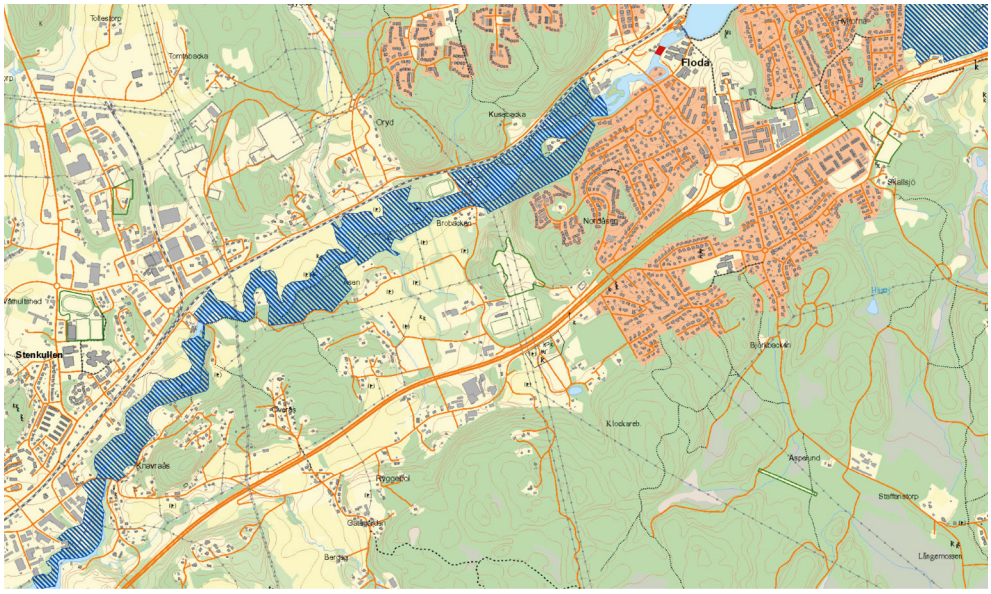

Figure 5.1 The location of Blå Torget in Floda, shown as a red dot in the upper right corner. The hatched dark Blue area is the Säveån Natura 2000 site following the River Säveån southwest of Blå Torget

Figure 5.2 The location for Blå Torget by the River Säveån in the town centre of Floda

As a part of a program for urban transformation of Floda, an architectural competition was held in 2012. A design proposal was chosen by the municipality in 2013, and the winning architects were the two offices Hosper and Mandaworks. They gave rise to what they called *Blå Torget*, a small 'square' that would frame a part of the River Säveån with terraces and bridges by the riverside. The ambition with the project is to create a central meeting point in the community, and connect the two sides of the River Säveån. The design concept is visualised in figure 5.3 below, and figure 5.4 shows a plan drawing of the proposal.

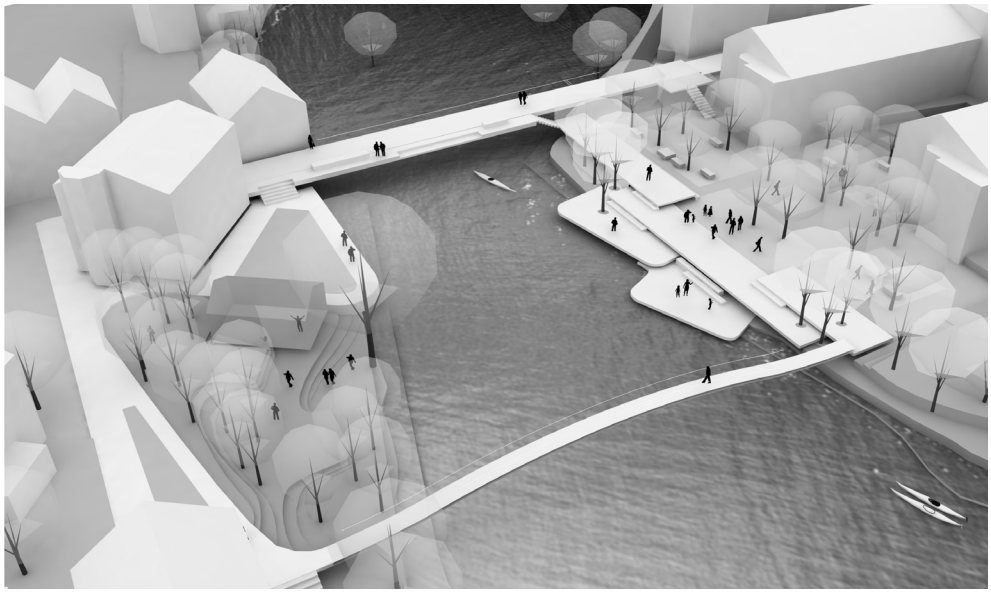

Figure 5.3 The design proposal for Blå Torget, developed by the architecture offices Hosper and Mandaworks that was chosen as a winner in the architectural competition by the municipality

Figure 5.4 Original plan for Blå Torget, created by the architecture offices Hosper and Mandaworks

5.2 Process

Since the suggested *Blå Torget* is situated 400 meters upstream from the Natura site of Säveån, the construction must be preceded by careful considerations and investigations on how the project could affect the protected species and habitats. When the thesis work with the case study started, the point of departure was the design proposal by Hosper and Mandaworks, and the will of the municipality to investigate the environmental impacts of the project and how the project could be adapted to decrease negative impact. Among the questions that could be investigated within the scope of the Master's thesis, it was desirable to look deeper into the effects on the downstream Natura 2000 site. Parts of the project that had an especially large impact were also to be identified. It was not made clear if a formal EIA or a Natura 2000 EIA was required, but during a meeting in spring 2015 between the municipality of Lerum and the CAB it was stated that there was a need for an overall assessment of the projects in Floda town centre. There was also a necessity for an investigation on how these projects together could affect the national interest in the immediate area and the Natura 2000 site further downstream.

The work with *Blå Torget* started off with a baseline description. Consultation with various officials at the municipality, with knowledge in e.g. nature conservation, technology management and procurement, added to the overall understanding of the project. Some potential risks with Blå Torget were identified at an early stage, and a first meeting was held with one of the local NGOs. At this stage it was presupposed that no change in the DDP was needed to perform the project, but a planning expert was later consulted on this matter. An early meeting with the CAB gave answers to many procedural questions, such as a clarification of what permissions that were required according to the Environmental Code (1998:808) and identification of the investigations that had to be carried out. A consultation meeting was also held with the property owners concerned, and further input to the design proposal was given. To involve the general public, and to inform about the plans, a smaller exhibition took place in the town centre in Floda where written standpoints were collected. Figure 5.5 shows a timeline for the work with the case study.

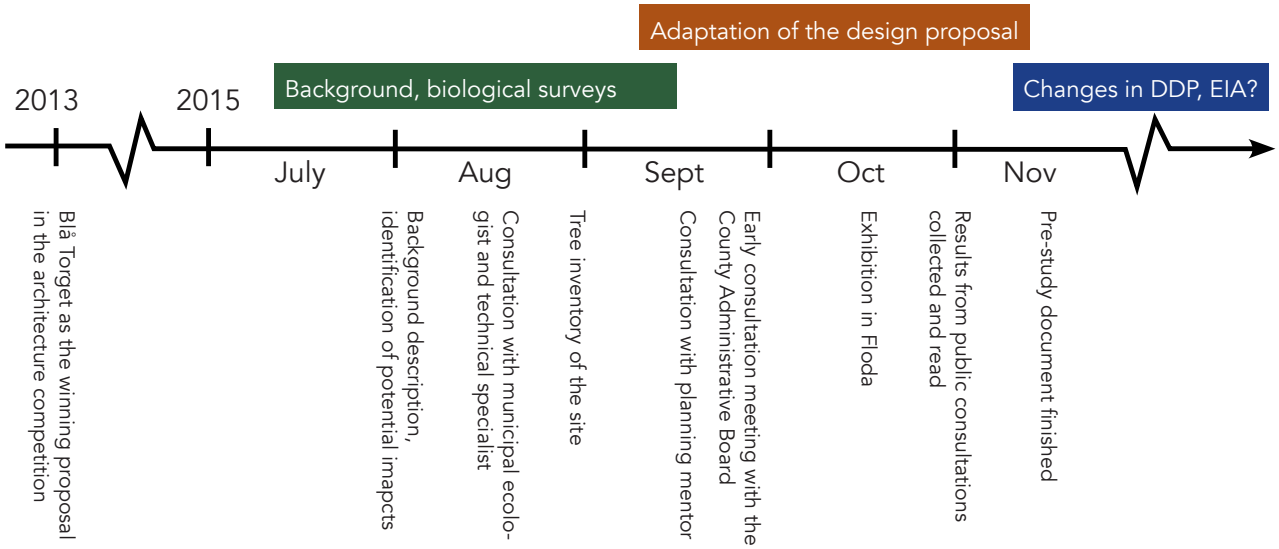

Figure 5.5 Timeline for the case study work

5.3 Findings and Continuation

This chapter summarises finding from the case study, presents the adopted design proposal as a result of these findings and explains the next steps needed in the work with *Blå Torget*. The original design proposal is discussed in relation to the local conditions and the Natura 2000 site of Säveån. Today, both sides of the river are covered with vegetation and large trees. Figure 5.6 and 5.7 show the east and the west side of the River Säveån at the location for *Blå Torget*.

Figure 5.6 East side of the River Säveån

Figure 5.7 West side of the River Säveån

5.3.1 Impact on the River Säveån and its Natura 2000 Site

It was clear already at an early state that, concerning the natural values of the River Säveån as a national interest and Natura 2000 site, the large trees growing on the river bank were of greatest importance. They give shade, and allow leaves and insects to fall down to feed the species of fish that are protected through Natura 2000. The kingfisher, mentioned in the maintenance plan but not listed among the protected species, could benefit from the low branches in its hunt for feed. In a longer perspective, the regrowth of new trees must be kept in mind, so that the ecosystems can continue to function over time.

Other potential threats from the project were disturbance in the water flow and clouding of the water because of the construction. The run-off from the wooden construction must not leak chemicals down into the river, which can put requirements on the choice of material. A permission for water operation will probably be needed even if no construction was meant to take place under the water surface, since the limit for the permission is decided by the highest water level of a 100 years period, alternatively at the highest flooding. Not only constructions under water, but also a much larger area around the river, was therefore included in the permission obligation for water operations, as informed by the CAB during the early consultation meeting. It will also be very important to have the environmental quality standards for water in mind when dealing with the River Säveån, since the classification "good ecological status" is not reached at present due to migration obstacles, changes in the natural water flow in the river because of hydropower plants, and the fact that parts of the ecological zone around the river are disturbed by urban development.

The DDP for this part of Floda today classifies the area next by the water as 'Nature'. Early in the process there were discussions that the operations for *Blå Torget* maybe could go under "Nature", but after the meeting with a planning expert and mentor it was no doubt that a new DDP, or at least changes in the existing DDP, would be required. Consultation with NGOs and the municipality ecologist made it possible to identify further investigation that will be needed to provide a complete application to the CAB for permission for Natura 2000 and water operations according to the Environmental code (1998:808). These findings from the case study were compiled as a pre-study prior to an EIA, also containing background information and presentation of earlier cases. This material is hopefully useful for the municipality for the continuation of *Blå Torget* and the work to change the DDP.

5.3.2 New Design Proposal

The first architectural proposal did not expressively take the sensitive and valuable River Säveån into account, nor that it was a national interest with a Natura 2000 site downstream. The municipality had some misgivings that the original proposal could not be carried out, as it meant that almost all the trees had to be cut down and operations under the water level were needed. As consultation was done and new knowledge gained about the project's potential impact on the River Säveån, the work to adapt *Blå Torget* went on. A basic condition was that the trees should be kept, and that no construction works should be done in the water. Still the idea about getting closer to the water and the vision to create a meeting point around the River Säveån is a large part of the concept for *Blå Torget*, which desirably should be kept. Additionally, discussions with NGOs, the public and the CAB had an influence on the framework for this task. All this resulted in a new design proposal that can be seen in figure 5.8 and 5.9 below.

Figure 5.8 Adapted design proposal for Blå Torget

Figure 5.9 Adapted plan for Blå Torget

The structural elements for the wooden decks of *Blå Torget* will consist of concrete plinths and iron beams, covered with larch wood. A principal section of the wooden decks towards the water can be seen in figure 5.10.

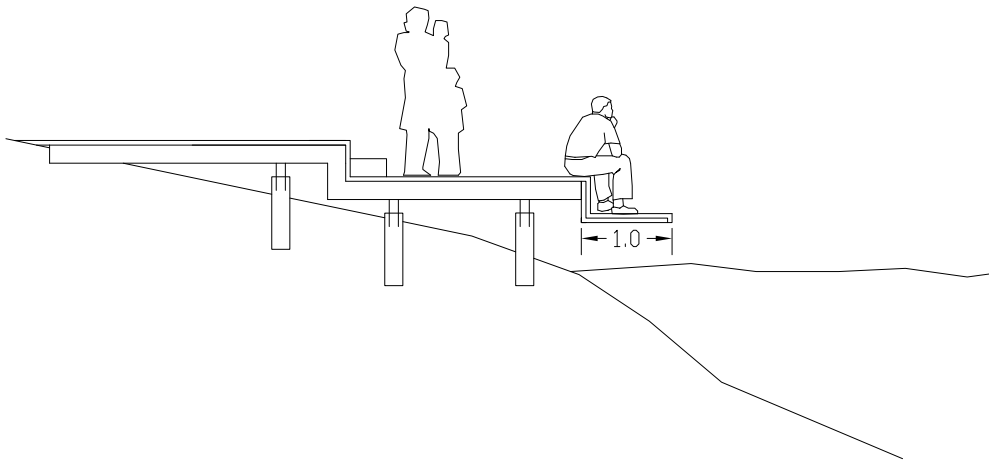

Figure 5.10 Principal section of the wooden decks towards the Säveån River

5.3.3 Changes in the DDP, Further Investigations and Possibly an EIA

To be able to determine what impact this new design proposal can have on e.g. the Natura 2000 site, more specific and technical specification is needed, and it was suggested by the municipal ecologist that a constructor and an arborist should be consulted simultaneously. A geotechnical investigation, and more research on how to reach the environmental quality standards for the River Säveån, will be needed. Furthermore, a proper EIA screening will be carried out by the municipality in consultation with the CAB, once more details are known about the construction of *Blå Torget*. The work with the changes in the DDP, or possibly the development of a new DDP, will begin during the winter 2015/2016. Further investigations on the geotechnical conditions, the exact construction, the conditions for the trees on the riverbank can be ordered once the DDP work has started, for financial reasons. The money to pay for such investigations can be allocated to the project within the process of the DDP, and be affirmed by the Municipal Council. In case an EIA is concerned to be obligate, a consultant will be hired according to the framework contracts that the municipality has with some chosen consultancy firms.

6 Interpretation and Implementation of Natura 2000 in EIA

This chapter presents the results of the study, where the answers from the interviews are put in relation with earlier findings in the literature and with the observations from the case study. The main focus is on how different actors in the Swedish EIA process can interpret and implement the regulations around Natura 2000, and what their roles and responsibilities are in relation to that. This part is largely based on the answers from the interviews; hence the large share of quotations in the text. The footnotes after each quotation indicate the respondent behind it, so that [RX] means that respondent X was the one saying this.

6.1 The Strength of the Natura 2000 Protection

Natura 2000 is described as the centrepiece of the EU's nature and biodiversity policy that will provide a strong protection for Europe's finest wildlife areas (European Commission 2000). This makes the network a powerful tool for protection in theory. This section presents the results of the interviews concerning the strength of the Natura 2000 protection.

Emmelin and Lerman (2004) argue Natura 2000 appears to be a move forward seen from the nature conservation point of view, since it gives a functionally ecological rather than a territorial perspective. It is given a high status when decisions are lifted to an EU level. This is to a large extent confirmed in the interviews of this study. The general view among the respondents is that Natura 2000 has a high status, and good possibilities to protect biodiversity. *Natura 2000 is the strongest protection for nature we have* [R27], says one respondent. *The requirements for Natura 2000 are high: no significant disturbance must be proved beyond all reasonable doubts!* [R24] another respondent affirms. If this really is done in practise seems to vary considerably from case to case. Contradictory to what most respondents say, there are those claiming that *even the authorities seem to have little understanding about neither the difference between Natura 2000 and ordinary nature reserves, nor about the specific 'appropriate assessment' that has to be done for Natura 2000 sites. The county administrative boards do not emphasise this enough either* [R11]. *Natura 2000 is taken seriously, but is notoriously difficult. Some actors exaggerate the risks, some understate them* [R22], is another answer. However, the overall picture is that Natura 2000 becomes stronger and stronger as a means to protect biodiversity. *The environmental code has been in use since 1998, but the implementation is very much different today. The requirements on the EIAs become stricter and stricter in general, also for Natura 2000. The demands from the county administrative boards are getting tougher for every year, even for every month* [R10].

Even if Natura 2000 mostly is perceived as a strong protection all along the line, there are cases where it is more often put aside. *Expansion of existing operations have seldom been subject to Natura 2000 reviews historically, but there has been a change the last few years* [R14], says an employee at a central administrative authority. Natura 2000 can also more often be forgotten in urban areas, where the regulations still not are followed. The fact that there are many Natura 2000 sites in Sweden can imply that even if the judicial protection is strong, the approach among many proponents is that it is nothing special. As one respondent says, *there is a feeling among some actors in Sweden that the Natura 2000 sites cannot be worth this high protection, because they are a dime a dozen* [R21a]. Kati *et al.* (2015) emphasise some weaknesses of the network as being the negative attitude and the lack of knowledge of local stakeholders, and the lack of will from national governments to make the implementation more effective.

6.1.1 Natura 2000: A Network

Natura 2000 is a network of sites all over Europe, and the importance to treat it as the actual network that it is meant to be is repeatedly highlighted. One respondent with experience from both research and consultancy tells that *a common approach to Natura 2000 is that many proponents, including authorities and municipalities, become cautious and afraid of legal conflicts, and therefore avoid these areas. That gives wrong perspective on the whole thing, because by doing that they miss that Natura 2000 is a* network. *Going in slalom between the Natura 2000 sites without even investigating the effects of going through a site means that important alternatives are missed* [R3]. It can thus be unfortunate that the relation between the sites is not taken into account, and it seems to be a lack of understanding about the indirect effects that this approach may cause. *It was meant to be a network thinking, to raise the sight from specific spots. Here we have something to continue to work with, to see the continuity of the network* [R24], says for example one respondent, and many others share similar experience. Another aspect is that *it is easy to only focus on specific species, and not look at the site as a whole* [R26]. The public, as well as many other actors, generally sees the separate species, and do not understand the complete picture of the network. *Natura 2000 reviews usually boil down to specific species* [R23], another respondent confirms. Some possible reasons discussed are how the Habitants Directive is transposed and translated in the Swedish legislation, which is further discussed in section 6.2.2, and the fact that it is easier for the reviewing authorities to look at and understand the impact on specific species than on ecosystems as a whole.

6.1.2 Knowledge About Natura 2000

A prerequisite of being able to handle Natura 2000 in a correct way is to know what it means and understand the regulations. Since the protection is science-based rather than according to administrative boundaries and requires understanding of the impact of a project or plan, it is not evident that all concerned actors have enough knowledge. Some respondents are troubled by the low insight among many actors. One respondent says on this matter that *grading the knowledge of Natura 2000 among the actors on a scale from 0 to 5, the courts get 4, the municipalities 1, the public 1 or 2 and the consultants 0. The proponents also get 0, but it is not their responsibility to know* [R16]. Overall though, there is a picture that lawyers and EIA consultants have a lot of knowledge about Natura 2000, and that the reviewing authorities and the courts know the regulations well. A respondent working at one of the Land and Environment Courts points out that *it is a lot about finding the right technical judge for the case and to get support from the specially appointed members. There is competence to find!* [R26]. The role of the consultants is discussed further in chapter 6.6.

The municipalities or proponents that today know about Natura 2000 EIAs with the appropriate assessment are as a rule only those who have learnt the lesson through their own experience when they have come across it, according to several of the answers. *The knowledge of Natura 2000 varies among the proponents from very high to nothing at all* [R14], is a common answer. Proponents from the industry generally have lower knowledge than municipalities or authorities, and larger actors are more knowing than small. Still, many presume that if they just stay outside the Natura 2000 site then everything is fine. The fact that those who know are those who have learnt the lesson is confirmed time and again in several interviews. Not all planners or project managers, that have important roles to play when a DDP is believed to have an impact on Natura 2000, have education in the field and have thus gained their knowledge during the career. Lack of knowledge can surely be a reason for poor assessments. However, it can be questioned if it is the knowledge or the approach that is the real problem. *One can wonder if the proponent have bad track of Natura 2000, or if they are doing a dirty trick to get around it. Sometimes I think that they know more than they want to show*

[R18], says for example one respondent working as a lawyer. *The municipalities know about Natura 2000 but do not always take it seriously* [R27], says another respondent. For DDPs it is the municipality that does the screening, and they can choose to interpret the protected network in different ways. *The municipalities should stay up to date not to be left behind in the discussion, and are expected to know the legislation* [R6], one respondent notes.

There are calls from many groups that Natura 2000 can be used as an argument against a project or plan, when there are other reasons for not wanting to see it realised. *Private individuals seem to have understood that Natura 2000 is an argument that weighs heavy, and therefore it can be thrown in every now and then. Not seldom because they want something stopped for other personal reasons*[R23], says one employee at a Land and Environment Court. *DDPs can be appealed by anyone who does not like it, who can refer to public interests such as Natura 2000, for the sake of their own individual reasons. It becomes a messy argumentation, where the answers are supposed to be found in the EIS* [R28], says a CAB official. It is apparently hard for private individuals to understand the criteria to be given permission when it is about impact and disturbance, and has no clear boundaries, even if they know that it is a strong protection. Even if it happens that private individuals appeal, it is not very often. *These are people with some kind of judicial support. It is a pity that both the planning process and Natura 2000 is so fussy* [R27], as one respondent recognises.

Natura 2000 is obviously a hard concept to grasp for people in general, the concept is a not well known among the public and the issues not lifted in the public debate. *It is sad that the media open their eyes so late. A lot of time and money could have been saved if important cases were noticed earlier. But the EU feels far away, and it is hard for the media and the public to grasp the width of Natura 2000 protection* [R15], says one respondent from an NGO. The lack of knowledge may imply that the Natura 2000 review is taken up seriously first in court. *Before that, no one has understood the type of protection afforded by Natura 2000* [R11].

6.1.3 No Compromises

Natura 2000 is seen as a strong form of protection, but is sometimes questioned for this strictness when it is balanced against other societal interests [R21]. This statement from one respondent corresponds well to a returning comment during the interviews. Another respondent shares the same view regarding that Natura 2000 can be seen to put the appointed species above humans: *I once had a presentation called 'Salmo salar vs. Homo sapiens' to emphasise this fact. It feels like the legislation is even stricter in Sweden than in the EU* [R20]. Another respondent note that *Natura 2000 hit the public interests hard, and there should be a societal impact assessment before the nomination of a Natura 2000 site. We must be able to find ways forward despite Natura 2000* [R21c]. Emmelin and Lerman (2004) write that many of the protected sites are located close to urban areas, and may limit development and imply restrictions. If the protection is not locally founded, it can be hard for municipalities and other proponents to understand and accept the form of protection. Clear motivations for the protection are important, and a lack of rootedness may create undue resistance to the necessary nature protection over all.

One important feature of Natura 2000 pointed out many times is that when a site once is included in the network it is given a very strong protection, which rarely is taken back again. Swedish legislation traditionally do compromises or trade offs between different interests, whereas the EU directive gives different conditions. *The Habitats Directive is based on natural science, and is not negotiable in the sense that compromises with other interests are not done* [R24]. In reality there are of course many conflicting interests and considerations, and there are stakeholders wondering about

how human interests can be put aside for the sake of nature. *But that is the whole purpose of Natura 2000, and the Habitats Directive does not bother about how happy humans could be at the expense of a protected species* [R6], as one respondent simply puts it. The strength of a Natura 2000 site once it has been adopted calls for a thorough motivation and a systematic nomination process. This is discussed by e.g. Emmelin and Lerman (2004), who write that the nomination of a Natura site automatically down prioritises other interests. This is a correct consequence of the EU directive, but can be lamentable since no impact assessment has been done of alternatives or other public interests. One respondent working at a central administrative authority comments the nomination process when the network was introduced: *It all went quite fast in the beginning when Sweden had to present the Natura 2000, and it was based on other protection forms to a large extent. This has gradually been completed. Today when new sites are pointed out it is possible to have a more systematic approach*[R24].

The conflicts between development and nature conservation are also discussed by Popescu *et al.* (2014), who claim that Natura 2000 is a complex social-ecological network that must be harmonised and integrated with local social desires to achieve the conservation targets. Conflicts between the conservation objectives and opportunities for economic development, especially in rural areas, are seen as common. Therefore, they argue that new research on Natura 2000 should address these conflicts between nature conservation and development, a field that previously has lacked behind when most of the research has focused on the network from a scientific rather than socio-economic point of view. Academic research on the relation between social desires, economic development and the conservation of biodiversity is thus urgently needed, according to these actors, and current research lacks a holistic vision that could integrate ecology and society.

6.1.4 Natura 2000 Compared to Ordinary Nature Reserves

Apart from Natura 2000 there are also nature reserves in Sweden protecting biodiversity and nature, which is described in chapter 3.5.6. A comparison between Natura 2000 and the ordinary nature reserves pops up as a natural question to discuss during many interviews. The importance of the EU directive is highlighted, and that Natura 2000 is an important form of protection. *The Swedish regulations can be bypassed without any legal or financial implications, whereas if you try to bypass en EU-directive or regulation, the European Court can punish the country which can lead to heavy fines* [R15], one respondent explains. *Natura 2000 definitely gives a stronger protection than ordinary reserves, 100 points for Natura 2000 compared to 80 points for nature reserves* [R16], says another, and a respondent working as an official at the a CAB says that *the CAB looks after these [the Natura 2000] sites much more than the ordinary nature reserves* [R27]. The surveillance that the European Commission has of the member states, and the possibility to bring them to justice if their implementation of the Habitats Directive is incorrect, makes the Natura 2000 network a powerful tool. *In the Habitats Directive lies a strong protection, and also in the community of the EU* [R24]. Some also note that many nature reserves and Natura 2000 sites coincide, in theory giving them a double protection from a legal point of view. The fussiness possibly makes Nature 2000 weaker, but it is a strength that the EU decisions *can be thrown in the heads* [R13] of those who do not care, in contrast with the nature reserves where decisions can be changed by the municipality or the CAB.

Berggren (2004) discusses the judicial differences between Natura 2000 and the nature reserves, and claims that, from a juridical point of view, there is a much larger possibility to protect Natura 2000 sites than nature reserves. The European Commission has a strong control over these sites, and the Government that has the overall responsibility of the nomination of protected Natura 2000 sites within the national borders. Hence, the Government gets a better overview of the

entire country and there is a potential for a better holistic picture, compared to regular nature reserves where the CABs are in charge. Kati *et al.* (2015) similarly argue that some main strengths of Natura 2000 are the adequacy of the network design when it comes to area and representativeness in Europe, and the effectiveness of the EU legal frame.

Whereas a strength of Natura 2000 that many respondents mention is that it is more scientifically grounded than the nature reserves, it can be problematic that *people tend to want clear boundaries and the boundaries for Natura 2000 is quite irrelevant* [R22]. Biological knowledge is required to fully understand Natura 2000, and the nature reserves have the advantage of having cleared protection restrictions. *For nature reserves it is clear what can and cannot be allowed. Natura 2000 is more vague, and was perceived that way also when it first came* [R21]. For streaming water, the 4 chapter 6 § of the Environmental Code (1998:808) (stating national rivers where hydro power cannot be implemented) is by some considered to give a stronger protection than Natura 2000, and to be a more efficient tool. *The fussy regulations around Natura 2000 gives the consultants the opportunity to use this and 'proof' that no significant impact on Natura 2000 will occur* [R13], says one representative from an NGO, who also claim that *those who know how to use the EU has a powerful tool though, but for water the nature reserves are better for protection at the moment* [R13]. The awareness of the EU directives is to a large extent seen as low, and they are only known through the Swedish legislation. A historical reason can be that Swedish nature conservation had little interest in Natura 2000 when it first came, thinking that Sweden already was at the forefront in environmental work. *When the nomination of the Natura 2000 sites was done by the county administrative boards, it was without any deeper motivation or reflection. The power of this new tool was not fully understood, neither was the fact that impact outside the site also should be taken into consideration, unlike ordinary nature reserves that only protects the marked area. Many still do not understand the importance and the meaning of the Natura 2000 protection* [R11].

6.1.5 The River Säveån as Natura 2000

Among the citizens in Floda, the location for the case study of *Blå Torget*, the River Säveån is often referred to as the 'nature reserve' by both school children and adults. On the contrary, the term of Natura 2000 has not been worded at all during the time that the author grew up in the municipality. Moreover, it seems that it is not common knowledge that a EU decision is needed to revoke a Natura 2000 protection. An anonymous letter to the editor in the local press in Lerum claims that the Swedish Transportation Administration at an information meeting about new railways in the municipality incorrectly stated that the CAB could revoke the Natura 2000 site of Säveån if needed (Lerums Tidning 2015). For the case of *Blå Torget*, it is also interesting to note that the program for the architectural competition, that lead to the suggestion to form a little 'square' by the river, did not at all mention the Natura 2000 site 400 meters downstream. On the other hand, both the nature reserve and the national interest was recognised in the program.

6.2 The Environmental Legislation in Sweden

This chapter discusses the Swedish environmental legislation as the context for EIAs. It is put in relation with EU law and the Habitats Directive, and potential conflicts or interactions between Natura 2000 and other regulations are touched upon.

6.2.1 Too Complex Legislation?

During the interviews there are indications that the environmental legislation can be seen as complicated and heavy to grasp. Natura 2000 is even called *a cuckoo in the environmental legislation's nest* [R17]. One question appears naturally: Is the legislation around EIA for Natura 2000 made too complex, or is it up to the actors in the EIA process to obtain the legal knowledge needed to reviews of Natura 2000 sites?

First of all, no one seems to have a clear answer about how the legislation could be changed. This results in comments such as *It is hard to do it any other way, the law has to be general* [R10] and *It is a jungle and it is hard, but how could that be made differently?* [R8]. Anyhow, it is undoubtedly seen as complicated in many cases: *The EIA procedure is a juridical jungle, not the least when Natura 2000 is involved. Even for experts, there are many ambiguities* [R2]. Though, the legislation is not seen as complex by all. *The regulations for Natura 2000 are quite clear. A qualified scientific assessment is needed, and the difficulty lies here rather than in the law* [R28], says a lawyer at the CAB. This can be interpreted as a problem of competence among consultants, authorities and procurers. Complex legislation or not, it seems to be crucial to have some kind of judicial knowledge to understand these issues. That, and some time and effort to try to understand. *It is important to understand the legislation, but you do not have to be a lawyer to do that* [R15], says an NGO representative, being accordant with another respondent commenting that *Judicial knowledge is crucial, whether you are a lawyer or not, because there are so many laws and rules to relate to* [R18]. *The judicial knowledge is first and last, and it is all about knowing the law. The legislation is what it is, and it is hard to see it done differently. But the implementation can be improved* [R13], says another NGO member. Several other respondents agree that it is not the legislation that is the problem, but rather the implementation and praxis. Still not settled after many years with Natura 2000, the trend is positive as far as most actors can see. *The legislation is on the right track, and the correct implementation is increasing* [R10], says for example a consultant. It is also noted that the terminology used in practise does not ease the application of the law. Notions such as *effect*, *damage*, *disturbance* and *significant impact* are used, sometimes without any clear distinction or explanation.

What makes the legislation complex is that the matters to be assessed are complex [R24] says a central administrative authority official. A respondent from one of the courts adds to this reasoning: *All legislation is extremely complex. Natura 2000 issues are complex, and it is also about the rule of law. We rather need more tools, which even may increase complexity* [R23]. There is also a difference between complexity and openness to interpretation. *Because Natura 2000 EIAs differ from ordinary EIAs it largely becomes a question about law. Deep going scientific requirements and a jungle of laws makes it complex, but not hard to interpret* [R16], says a lawyer. And even if the legislation by some is seen as abundantly complex, it is a big step to go in and change it. *The legislation may be complex or open to interpretation, but it would be stupid to unravel and change it before it has even settled. There is always an implementation phase. Every time the legislation is changed everything has to start all over again* [R15], one respondent calls attention to.

6.2.2 Cultural Clash between Swedish and EU legislation

The Swedish legislation and the EU legislation are to some extent born from different legal traditions, and several respondents mention that this can be problematic. The term 'cultural clash' is used many times. This means that the Swedish legislation traditionally has seen to tradeoffs between different interests, whereas EU law in general is more absolute. This goes for Natura 2000 as well, where no such compromises are done. *The European Commission does strict assessment with clear levels. We have not had the same methodology in Sweden, where we work more with conditions and an evaluation of the reasonability*[R28], says a CAB official. *The Natura 2000 regulation are overall in contradiction to how many people's awareness on how things have been done previously in the Swedish legislation*[R26], says a technical judge. It though takes time to change the legal tradition, and many judges still do as they always have done, despite new directives coming from the EU. *If the EU collaboration continues and time is given to find praxis and implementation I think it can become better. There is a change-of-generation in the courts, where EU law is about to be a more obvious part* [R18], says one respondent on this matter.

As the regulations around Natura 2000 derive from an EU directive, they have been transposed, and implemented, into the Swedish legislation. This can be perceived as more or less well functioning. *The implementation of the EU directive in the Swedish legislation has not been entirely successful. EU law becomes praxis to a large extent; something that the Swedish proponents and decision makers are not used to* [R17] says a respondent working with Natura 2000 reviews at the CAB. It is brought up by the same respondent that the courts in their decisions sometimes refer to the English text of the Habitats Directive, because it sometimes has a clearer formulation. One example is the 'integrity of the site', defined as 'the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified' (European Commission 2000), which is not mentioned in the Swedish law. What is written in 7 chapter 28 b § of the Environmental Code is (as translated by the author) that:

'Permission can only be granted if the activity or operation alone or together with other ongoing or planned activities or operations does not:

1. can damage the habitat(s) that the site is meant to protect,
2. implies that the species that is meant to protect is subject to a disturbance that significantly can obscure the conservation of the species at the site.'

Darpö (2007) also argue that this translation of the 'integrity of the site' is unfortunate. He also writes that there is undeniably a fact that the regulations around Natura 2000 are complicated already at an EU level, and that has not been made easier through the Swedish implementation. *Potentially the Swedish legislation is even more complex than in the EU* [R16], says one respondent with much judicial experience, and gets backing from other comments. Another respondent, a district court judge, says that *the implementation of the EU directives for Natura 2000 in Swedish legislation is not problematic per se, which it is for e.g. the Species Protection Ordinance. The problem lies between EU legislation and Swedish legislation. The courts follow the Swedish legislation and the problem therefore lies higher up in the chain* [R23]. Thus, a potential problem with the implementation of the EU directive is not primarily a problem for the courts, since they are supposed to follow Swedish legislation. It is still left an open question about what could happen if Sweden was brought to justice in EU court.

6.2.3 The EIA Procedure in Sweden

Many of the problems for Natura 2000 EIAs do not specifically apply to Natura 2000, but are more general for the EIA as such. This section is about the EIA procedure as it works in Sweden, as the context of Swedish Natura 2000 reviews.

There are different views on if the Swedish EIA system, with the proponent as the one responsible for carrying out the EIA, is a problem per se or if it is just not used in an optimal way. There is a large variety among the comments on this. *The EIA system is adequate, but is about filling the EIA with something that makes sense* [R28], says for example one respondent about this. There are also those with an opposite view of it: *The entire EIA process is as leaky as a sieve, and it is not impossible that things run right through that should not do that* [R2]. This respondent argues that an EIA authority are believed to be a good idea, since a large share of the problem today is that the proponent is the commissioner of the EIA, and just wants to finalize as fast and as cheaply as possible. The consultant is the tool of the proponent, and there have been discussions for a long time about alternative solutions. *It is still considered to be best as it is now, with control mechanisms reviewing the consultant's work* [R3], says a consultant and researcher. *There is no good alternative to the existing system. It is better to use the structure that we have today and support the county administrative boards, rather than to create a completely new EIA authority* [R16], says an environmental lawyer, and continues: *One way to improve is to reduce the number of cases that need an EIA. By doing that the work can be concentrated to the cases where it is really needed, such as cases with Natura 2000. There is an old misunderstanding about the screening; there is a fear that no EIA means no respect for the environment* [R16].

The problem with the lack of screening, and that too many EIAs for cases where it is not needed, seems to be something that most actors agree on. This means the effort is not worth the benefits of it, and that the reviewing authorities get very many EIAs and do not have time to focus on those that are actually needed. *For many smaller DDPs, no full EIA is required but just an environmental assessment in general. This can be enough in many cases, even for Natura 2000, if the screening is well performed* [R2], says an NGO member. In addition to the problem with too many EIAs, there can also be a problem with too extensive EIAs. *A Natura 2000 EIA can be relatively short and concise. It is a question of delimitations. EIA has a tendency to expand, and become unwieldy* [R17].

The very nature of the EIAs are also regulated in an EU directive, and Westerlund (2006) claims that as Swedish legislation is inferior the EC legislation, it has to respect its directives. This can complicate the regulations concerning EIA, because the Environmental Code does not fulfil the EC legislation and gives a problematic set of regulations, he argues. Neither does the Environmental Code have any equivalent to the EC directive's 'responsible authority', and is implemented so that it is the proponent that performs the EIA. This deviates from the basic idea of EIA, and can be additionally problematic. Seen from this point of view, the lack of an 'EIA authority' with an overall responsibility nationwide put even higher demands on the CABs to ensure a high quality of appropriate assessments for Natura 2000, and to have a holistic picture on the network in Sweden. Kati *et al.* (2015) write that conservation scientists in Europe are moderately satisfied with how Natura 2000 is implemented, and that the main constraint is said to be the poor application of results of EIA. Apparently, the design of the EIA process seems to be a factor of influence for poor assessments of the Natura 2000 network.

6.2.4 Natura 2000 in Relation with Other Legislations

There are situations when the connection between Natura 2000 and other legislations can be confusing, or when it can be seen as a complement. Some examples that were brought up in the interviews were the Water Framework Directive (2000/60/EC), the environmental quality standards and the Planning and Building Act (2010:900). Environmental quality standards for water often come into the picture for cases with marine Natura 2000 sites, and it is said in the interviews that these standards then should be at least as high as the requirements for Natura 2000 and somehow overlap and have a connection. Representatives from an NGO dealing with marine ecosystems show a statement from a consultation occasion for a project where an exception has been made for the environmental quality standards. Here it says that 'The Natura 2000 sites shall reach a favourable conservation status by the end of 2015, which generally can be seen as a tougher requirement than the ones on good ecological status according to the environmental quality norms. This implies that classifications where the environmental quality standard is set to good ecological potential or lower, or with a time limit to 2021 or 2027, are incorrect. Despite this, many Natura 2000 sites are subjects to exceptions, meaning that Sweden probably will commit an infringement of the Habitats Directive (92/43/EEC) after the end of 2015. For this reason actions need to be taken to reduce the severity of this infringement as soon as possible' (Swedish Anglers 2015). Thus, even if the environmental quality standards by many are seen as a step in the right direction, it is hard to transform Natura 2000 and the environmental quality standards into requirements on the actors. *We lack a bridge between environmental requirements and practical requirements on the actors* [R23], says one respondent.

The environmental quality standards for water are based on the Water Framework Directive (2000/60/EC). This directive is similar to the Natura 2000 network in the sense that it is based on scientific logic, rather than administrative or juridical (Emmelin & Lerman 2004). Though, the Water Framework Directive in itself has been proved hard to get into Swedish legislation and there are problems with the efficiency of the remedies, many respondents claim. A respondent at a central administrative authority explains: *It is hard to connect the permission obligations for water operations with those for Natura 2000. These shall be interlinked according to the EU, but no one knows how! The directives are very general, but the law is implemented for specific projects. The five water districts have a hard time to be consistent. The Water Directive is not successfully implemented in the Swedish legislation* [R13]. Another respondent agrees: *The environmental quality standards are interpreted differently in the Swedish legislation than in the EU, it is a translation problem* [R23]. One respondent remarks that the water legislation started to lag behind already in 1998 when the Environmental Code (1998:808) was enacted: *When the Environmental Code was put together, the water legislation got a shortcut around the legislation when for example hydropower was classified as water operations and not environmentally hazardous operation. All in all, the water legislation in Sweden lacks teeth* [R8]. This can then be a problem for Natura 2000 sites as watercourses.

The connection between the Planning and Building Act (2010:900) and the Environmental Code (1998:808) is often a subject for discussion. The municipal planning monopoly according to the Planning and Building Act is one example that is often brought up. A consequence of the fact that an EIA for a DDP only is needed if it might have significant environmental impact (which includes significant impact on Natura 2000), and that the municipality because of the planning monopoly is the one to decide whether or not there will be significant impact, it is the municipality itself that will develop the decision-basis, make the decision about EIA or not and in the end pay for a possible EIA. Together with a presumed low knowledge of the appropriate assessment preceding a Natura 2000 EIA, this can be a risk factor where subjective assessments

and lack of understanding for Natura 2000 can occur. The Planning and Building Act has a connection to 3 and 4 chapter of the Environmental Code (1998:808), but not more than that. There is for example no precautionary principle in Planning and Building Act. *These two legislations are indirectly connected in chapter 3 and 4, but the principles of the Environmental Code should not be used in issues taken up in the Planning and Building Act* [R22], one respondent says. The same respondent point out that when the environmental legislation is used for urban planning issues, it is sometimes criticised for lacking a holistic approach, and therefore risking sub optimisations. *Densification in the cities is important for a sustainable society, but obstacles in the Environmental Code imply that we instead build sparsely on the countryside. The system according to the Planning and Building Act is lacking compensatory measures!* [R22] There are surely other cases when the connection to the Natura 2000 regulations can be complicated. One consultant says for example: *We had a case where a road plan was needed to do the EIA, but a Natura 2000 review was needed to do the road plan, and it became a Catch-22 situation* [R21b].

6.3 Natura 2000 Reviews

The reviewing authorities decide if projects or plans can get a permission or not, regarding their impact on Natura 2000. This can be done by the CABs or the courts. In the case for DDPs it starts already at a municipal level. This chapter focuses on how these Natura 2000 reviews are done, with the main emphasis on reviews by the CAB and the Land and Environment Courts.

6.3.1 Interpretation

The interpretation of 'significant impact' is crucial in the Natura 2000 review, since permission only can be given if there is no possibility for such impact unless the Government makes an exception. Another aspect with Natura 2000 is that the permission obligation depends on the significant impact, which means that an assessment is needed already in this first screening step. Someone pointed out that *Natura 2000 becomes a bit of an indirect interpretation, since it does not come from the Swedish legislation in the first place* [R17], and also emphasis that *interpretation and assessment is not the same thing* [R17]. The assessment is the investigation that hopefully leads to knowledge of an impact or an effect, whether this impact can be seen as 'significant' is the interpretation of that word. *Because the assessments in EIA often are qualitative, it is to a large extent a matter of interpretation. What does significant impact really mean?* [R1] one respondent asks. And even if the interpretation changes in theory, it does not necessarily mean that the implementation follows. *The interpretation is slowly moving in favour of the nature, even if the implementation often is done 'as it always has been'* [R13]. There are hints from other respondents that also feel that the change is still more on paper than implemented in practice, even if that part is expected to come too. One regulation related to Natura 2000 is the Species Protection Ordinance (Artskyddsförordningen). *It says that species shall be protected on a level of individuals, even if many interpret it as a protection at a population level since the judgement otherwise would be unnecessarily rigid* [R1], as one respondent comments. Despite scientific assessments, it is in the end often a subjective discussion about this 'significant' impact. *How careful can we be? How careless are we allowed to be?* [R22]

6.3.2 Reviews by the County Administrative Board

The Natura 2000 reviews are normally done by the CABs, and the results from the interviews show that a lot of responsibility for the protection of these sites in practice lies with these authorities. One clear trend that the vast majority of the respondents seem to agree on is that the demands from the CAB are getting higher and higher in general, something that also goes for the Natura 2000 reviews. *The judgements in general, and thus also in Natura 2000 cases, are getting stricter with higher demands from both the county administrative board and the courts* [R6]. Many also see it as positive that the CABs now have a more serious approach when Natura 2000 is involved. *Earlier, inadequate investigations and EIA was not always stopped higher up in the hierarchy and was then no problem for the municipality. Maybe the demands were as high as today, but only in theory* [R4], says for example a municipal planner.

A lot of responsibility clearly lies with the CAB, and it is often discussed in the interviews if this is reasonable and if they can live up to these high expectations. Many respondents argue that the CAB has a very important role, with good opportunities to influence the outcome of the EIA. However, some think that they do not always take that chance to use this power, as if the CAB has the knowledge but not the strength to reprimand. *The county administrative boards have a rather limited capacity to guide and review* [R11], says one for example. *This can be a result of the low level of ambitions, a lack of resources or the individual officials' interpretation. The county administrative board has the*

absolute power, but does not take on that role [R12], another reasons. *They [the county administrative boards] have a problem to put the foot down. Partly it seems to be lack of time too, when the officials are occupied with administration. But the laxity is unacceptable; it is not only resources but also about the approach. And it depends very much on the official* [R8], an NGO member adds. On the other hand, there seem to be large variations between different CABs, and even between different officials. One respondent that is into water issues says *that the county administrative board are good at reviewing, and they make use of their powerful positions at least for water operations, with consistent judgments* [R13].

6.3.2.1 Elements of Risk

The lack of strength that many respondents point out is not primarily seen as a result of lacking knowledge and competence, but something connected to resources, time and communication. There are some typical elements of risk that can influence the CAB, discussed during the interviews. *There is a pressure on the legal department, and things can go fast. Therefore the inter collegial connections can be missed, and the matter does not reach all departments that it should. Statements coming directly from the department of nature conservation are usually of higher quality than if they come from other departments, from a nature conservation point of view* [R26]. DDPs with potential impact on Natura 2000 reach the CAB through the planning department. A general view is that the statements from the CAB vary depending on how it reached the CAB, and can miss the perspective on nature. An official at the planning department at a CAB says that such cases *are circulated for consultation in other departments. It is the official's responsibility to get things right, and therefore it is important to be well prepared and informed. Especially when it concerns Natura 2000* [R27]. Even if it works well in many cases, this can still be a risk. *It is crucial that the planning department talks to the department of nature conservation, otherwise things can slip through. But Natura 2000 is clearly shown in GIS maps and so on; no one should miss it* [R16].

For a strong environmental legislation, we need both knowledge and the resources to use the knowledge! [R14] says an official at a central administrative authority, meaning that this can be a problem for them as well. When resources are missing, decisions can thus be made fast and without consideration even if the competence is there. However, there can be a higher focus on larger cases, and *if Natura 2000 is concerned that means that the entire DDP is more evaluated in detail, from other aspects as well* [R27]. *The county administrative board has resources, but it takes time to ask for all completions* [R28], one CAB official says. Sometimes the EIA is sent back and forth several times, until the CAB cannot stand the nagging and therefore the EIA is approved despite its low quality, some respondents fear. The fact that many other actors lean on the CAB is often seen as natural since it is the extended arm of the state with power to influence. But as CAB official reasons around this: *The county administrative board is supposed to be the extended arm of the state, but it also becomes the collected catch-all of the state. Many peculiar tasks end up at the county administrative board, and the employees do as much as they can under these circumstances* [R17]. Also in the EU as a whole, understaffing of the authorities managing the network is one of the major weaknesses of the implementation of Natura 2000, according to (Kati *et al.* 2015). As claimed in that study, the quality control of EIA needs to improve, and funding of monitoring schemes as well as stricter implementation of control mechanisms in EIA, are main factors that could lead to better implementation of Natura 2000.

6.3.2.2 Reviews of Detailed Development Plans

As the procedure for EIA reviews is a bit different for DDPs than for ordinary projects, the authority of the CAB is sometimes seen as limited in these cases and the municipality instead has a more important role. *For DDPs it is the municipalities that decide to adopt them, but the CAB is guiding and if the DDP is unlawful with e. g. the Environmental Code can we retry it, with the EIS as the decision basis,*

and it can be revoked [R27], says a CAB official and mean that they are not powerless even if the municipality adopts the DDP themselves. The municipal planning monopoly is though seen as strong by many respondents. For the very Natura 2000 review, it does not make big difference though. *A project EIA and a plan EIA are different, but the review itself by the county administrative board is similar in the sense that the criteria are the same: it is about the ecological favourable status etc* [R17]. A respondent with many years in municipal planning also say: *It is the impact on Natura 2000 and the national interest that is the most relevant in these cases, no matter what the DDP really says* [R20].

6.3.2.3 Consistency and Calibration

A widespread view is that the reviews by the CABs are inconsistent, in all cases with EIA as the decision basis and also for Natura 2000. This inconsistency is brought up over and over again, leading to confusion and irritation among proponents and consultants. The difference between individual officials is emphasised particularly, usually discussed in relation to missing guidelines or tools that make the reviews even more person-dependent and subjective. *Different county administrative board officials have different interpretations, which makes the experience and knowledge at random. Different county administrative boards have their own hang-ups. Some are focused on agriculture land, some on water* [R11]. The different characters of the CABs are indeed discussed, where some are seen to serve the municipalities and some are more towards the nature conservation side. However, there are also respondents saying that the CABs do a good and consistent job. There are also comments such as *It is hard to say if the county administrative board is consistent because every case is unique. It is a specific assessment every time* [R23]. *I cannot tell if the county administrative boards are consistent, but it is clear that their views can differ from the Land and Environment Courts'* [R6], says a municipal project manager. *It is often seen that the county administrative boards and the Land and Environment Courts can have different ideas* [R4], adds a municipal planner.

Apart from being consistent within the own CAB, it is a challenge to keep the different CABs calibrated between each other. For example, one respondent with experience from research and consultancy says that *the county administrative boards are not well calibrated, in Natura 2000 reviews as well as in other cases. It is a serious problem that their pursuance shows such a large variety* [R3]. *Calibration between county administrative boards is done mostly through documents, but we have little resources to meet* [R24], says a central administrative authority official. There is little doubt that this task is hard. *It is a huge process to unify 21 county administrative boards. A lot of the assessment still lies with the officials that therefore need more support* [R27], says one of the CAB officials. The nature of the reviews makes it even harder. *Natura 2000 is a matter of judgement; the county administrative boards do their best to be calibrated among each other, and also internally* [R17]. As most other things about Natura 2000 reviews, there is possibly a positive trend, but monitoring is lagging behind according to quite a few respondents. *The knowledge and the calibration is getting better and better, but the monitoring if failing. Questionable competence and a lack of resources can be a reason* [R18], says an NGO employed lawyer. The fact that the monitoring of the CAB is very weak is brought up often, and it is specifically the lack of resources that is seen as a likely reason.

6.3.3 Reviews in Court

The Land and Environment Court of Appeal is the next instance in the courts hierarchy, and where a Natura 2000 case goes if there is an appeal of the CAB's decision. The Land and Environment Court is also the first instance for Natura 2000 cases if they are reviewed together with permit matters according to 9 or 11-15 chapter of the Environmental Code (1998:808).

First of all, many respondents say that just because a case is taken to court, it does not mean that judgement is stricter than by the CAB. *It is not certain that the judgments are stricter the higher a case goes in the judicial instance hierarchy* [R1], is just one of many similar answers. It is also mentioned that the decisions in court do not have to be more 'correct' from a biologic point of view, but that they are absolutely more consistent. The courts seem to listen a great deal to the statement from the European Commission, and *that defines what they [the Swedish courts] dare to do* [R13]. Some see a problem in the inertness with *old employees at the courts judge the way they have always done, even if the legislation is changing* [R14], as one comment exemplifies. This respondent also says that *even if the Natura 2000 permission in theory shall be reviewed first, and thereafter the other permissions, this varies in practice* [R14].

6.3.3.1 Consistency och Calibration

The inconsistency was seen as a problem with the Natura 2000 reviews by the CABs. However, for the Land and Environment Courts this is seen as better functioning. *The Land and Environment Courts are consistent in their judgement, and the precedents from the Land and Environment Court of Appeal get quick response. That is how the courts are used to work* [R16]. Overall, there tend to be a higher consistency in the decisions taken in court. This consistency is believed to come naturally, *we all look at higher instances and relate to the same legislation* [R23], says a judge at the Land and Environment Court. At the courts, the judges can go through their own judgements, and those from the EU court. However, they cannot discuss the cases before they are decided due to the judicial oath and the rule of law. Each judge must be independent, and cannot deliberate together with others. The internal communication, and lack of time and resources that many respondents point out as a potential risk for the CABs, is not at all mentioned for the courts.

6.3.3.2 The Procedure in Court

The fact that the reviews in a court are a bit different and must follow a certain procedure can affect how Natura 2000 is handled. *In the courts' world, new facts cannot be brought up just like that. The facts that emerge must be shared with the part that can be negatively affected. It is easier for the CAB in that sense, because that it is an authority and not a court. Courts have to stick to certain regulations* [R26]. This is not always seen as a good thing, and for example a NGO member say that *it is problematic when the lower instances of the court see it [Natura 2000 cases] as a dispute, where one part is right as long as the other does not disagree. Therefore are NGOs and other counterparts invaluable* [R13]. From below, the courts can be perceived as *very intent on formalities rather than practical implications. For the municipalities it is about the matters of fact, that it will be as good as possible in reality. In the end it comes down to formalities versus realisation* [R4], which a municipal planner concludes. This is also discussed by a CAB official, saying that *the CAB is closer to the practice and may therefore have a different view than the courts. The municipalities are even closer, and often think that their respect towards nature is enough. It can be easy to sit high up in the system and not fully understand the implications of the decisions* [R27].

The technical judges of the courts can have different backgrounds and knowledge, and for planning cases concerning Natura 2000, the technical judge can be either an expert in biology or in planning, from what is said by the representatives interviewed in this study. *Which of the technical judges that takes on the case can differ, but usually we decide among each other to see who is the best suited. DDPs and issues concerning the PBA goes to the technical judge within planning and construction, who can decide to call another technical judge if that is considered to be of importance for the Natura 2000 review* [R26]. The opinion of the technical judge is seen as important for the decision, as they are given a lot of authority in cases with Natura 2000 since this is very much about specific knowledge and outside the scope of

the legally trained judges. *The issues of fact are judged by the technical judges, not the lawyers* [R23], a district court judge explains. The specially appointed members can also contribute with a lot of very detailed knowledge. However, the courts do not perform investigations, and should not do. The burden of proof is on the proponent of the project or plan, and with this actor alone.

6.3.3.3 Cases in the Land and Environment Court of Appeal

The fact that the Natura 2000 classification could increase the possibilities to get a right to appeal in the Land and Environment Court of Appeal seems like something the respondents with experience from such reviews agree on. *There is not much praxis for Natura 2000, and that means there is a bigger chance to get a right to appeal in the Land and Environment Courts of Appeal. This is also a chance for the lower instances to bring up the question to discussion, to learn from it* [R16], one respondent says. The need for praxis is highlighted by several others as a likely reason for the right to appeal. Sometimes clarifications are wanted, and *there have been formulations such as 'the lower instances have not made clear that the favourable conservation status not can be affected'* [R18] from the Land and Environment Court of Appeal. The respondents with experience from this court are few, and it is hard to tell much about trends of these decisions. Darpö wrote in 2007 that without being able to see large trends because of the few Natura 2000 cases in the Land and Environment Court of Appeal, there was a tendency towards stricter judgements. Overall, the respondents in this study see the Land and Environment Court of Appeal as more consistent and fair in its judgements than the lower instances.

6.3.4 Praxis and Precedents

Natura 2000 has existed since 1992, and been fully implemented in Swedish legislation since 2001. Still, it seems like praxis is very important for the level of the judgement. It is to a large extent driven by praxis. New court decisions change praxis and it starts all over again. What was okay five years ago is suddenly not okay anymore. No wonder this is hard to understand for municipalities and proponents [R27], one respondent explains. Still there is a positive picture among many. It gets better and better as praxis is increasing, meaning more consistent interpretations and more respect for natural values. Natura 2000 had some teething problems in the beginning, but things are moving in the right direction [R17]. Considering the relatively long time that we have had Natura 2000 sites in Sweden, it can be considered to have been a slow process to create praxis. It is noted that Natura 2000 has existed in Sweden since 2001 and cannot be seen as new anymore. It has taken very much time to find praxis and implementations [R26], says a technical judge. If this praxis corresponds to the strict legislation can of course always be questioned. Praxis from the courts does not give the high protection of Natura 2000 as it should. *There is a discrepancy between the legislation and the implementation (…) The precautionary principle is not applied the way it should be. It is not needed to prove that a disturbance will occur to reject an application for permission, it is enough that there is a risk* [R18].

It can be seen as hard to change the approach on Natura 2000 in EIA, since it is a complicated process with so many actors that have to change. Björckebaum and Mossberg (2009) discuss cultural environment in EIAs for infrastructure projects, and even if that is different from the subject in this report, they emphasise two things that are necessary for the implementation of new praxis among the actors of EIA: that *all* actors must act according to new line of action and that the implementation is done simultaneously by the different actors. A majority of the respondents point out the great importance of precedents to serve as guidelines when the different authorities make their decisions in the Natura 2000 review. *Much has happened the last few*

years, with victories for the environment and the nature side. That drives the fight for the environment forward! [R15] says for example one NGO representative. The Swedish EPA also provides important precedents on their website. *Authorities lift issues that are important to create praxis, with the fundamental criterion that it is for the environmental good. Cases of only principle character are hard to argue for* [R24], says an official at a central administrative authority. Some note though, that *it is the motivation that we are after, rather than the decision itself* [R20]. It is sometimes hard to understand why the courts judge as they do, many respondents say.

6.3.4.1 The Bunge Case

Many of the interviewees accentuate the importance of the decision taken by the Government in the long-drawn case of planned quarry operations in Bunge, on the island of Gotland. The background is that a company Nodal AB applied for permission for a new quarry in 2005, close to three sites protected by the Natura 2000 network. The application was rejected by one of the Environmental Courts in December 2008, essentially because of the risk to harm the protected Natura 2000 areas (Case no. M1826-07). The company then appealed to the Environmental Court of Appeal and a year later, in 2009, it was announced that with the provided conditions, the operations were not believed to lead to such harmful impact (Case no. M350-09). The Supreme Court did not give any right to appeal when the Swedish EPA wanted the case to be taken up again (Case no. T5118-09). The case was remanded to the Environmental Court for a review of permits and conditions, in an early decision with binding effects, here denominated 'declaration of admissibility' (tillåtlighetsförklaring). The Environmental Court argued that the potential impacts on the Natura 2000 sites were not enough investigated. It also claimed that it was not bound by the declaration of admissibility, because it was too general and did not specify any conditions for the quarry operations. Based on that, the application was rejected another time (Case no. M5418-10). The company's appeal to the Land and Environment Court resulted in a permission that came with certain conditions, where the Land and Environment Court of Appeal argued that the issue of the company's admissibility was settled by the final judgment of 2009 and that the lower courts were assumed to loyally follow the procedural instructions from the Supreme Court for remand (Case no. 10582-11).

This decision was appealed to the Supreme Court by several private persons and NGOs, as well as the Swedish EPA. In due course, the Supreme Court rejected the reasoning of the Land and Environment Court of Appeal, and the case was again remanded to the Environmental Court for a complete review (Case no. T3158-12). In June 2014, when the case was examined in the lower court for the third time, permission was given (Case no. M 3666-13) and the decision was then again appealed. In April 2015, the Land and Environment Court of Appeal decided to stay the proceedings of case, while awaiting the Government's decision on new Natura 2000 sites on Gotland. In the end of August 2015, the Government announced new and expanded Natura 2000 sites, among them the area concerned for the quarry. This meant that there was no possibility for the company to get permission, and the case had finally come to an end.

In June 2013, when the Supreme Court quashed the permit given by the Land and Environment Court of Appeal, Darpö (2013) wrote that the consequences of this criticism would go far beyond the Bunge case. The decision, he claims, is a clarification in many aspects, but the fact that the process will continue in the courts for yet years to come is unfortunate for all parts. The order with the division in one admissibility part and one permission part that was rejected by the Supreme Court, has for many years been criticised in the literature for being incompatible with EU law. This preliminary notice and its binding effect that makes the declaration of admissibility

interesting for the proponent is, according to the Supreme Court, in conflict with the authorisation process according to the Environmental Code as well as the law of the EU, and it is likely that the partition will be taken away. In the conflict between the binding declaration of admissibility and the demand for safety in the impact assessments, Darpö (2013) claims that the national interpretation of the binding effects of the declaration of admissibility must give way for the legal requirements of the EU.

Many respondents see Bunge as a huge victory for the actors fighting for nature and the protection of valuable areas. Though, the price was high in the sense that Bunge was driven in courts for a very long time. *These precedents are very useful, it gives a lot. Even if this entire process of course is a waste of resources, it gives nice praxis* [R17], one respondent comments. *It would have been better for all if the process was more predictable!* [R14] says another. Some note that it was unexpected that it could not be solved at an earlier stage, and one comment that exemplifies this is that *I am surprised that it went this far, when it was relatively obvious that disturbance on Natura 2000 was likely* [R18].

6.3.4.2 The Ekerum Case

In a case from the island Öland in 2012, the Land and Environment Court of Appeal reversed the decision taken by the concerned Land and Environment Court and affirmed the decision taken by the local CAB (Case no. 9438-11), meaning that permission could not be given according to 7 chapter 28 a § Environmental Code. This was a case with several DDPs in conjunction with a Natura 2000 site, and a species of beetle were among the objects of protection. In this case, an area outside the Natura 2000 site constituted a narrow deciduous forest corridor that functioned as a link for the concerned beetles to follow on their way to potential habitats. The courts considered that this important function hardly could be preserved with the planned construction, and specifically pointed out that action taken outside the Natura 2000 site also are subject to the regulations about Natura 2000. Permission cannot be given when any reasonable doubts exist that the activity not can have a harmful impact. The notion of disturbance was also discussed, that has to be considered connected with the consequences for the purpose to reach or maintain a favourable ecological status. Deteriorated opportunities to disperse are considered by the court to be a disturbance. With regard to the precautionary principle, the Land and Environment Court of Appeal found that there was a notable risk that the planned constructions would obstruct the conservation of the protected beetles, and therefore permission according to the Environmental Code could not be authorised. The court also made a reference to article 6.3 in the Habitats Directive.

Several respondents point out this judgement as important in the sense that the coherent protection for Natura 2000 is emphasised, not only a limited area. Since this has been a debated subject, this decision is by many seen to contribute to that fact that these indirect effects of becoming more and more noticed in later judgements.

6.3.4.3 The Konsumtomten Case in Lerum

A topical reference from the municipality of Lerum is the case of the DDP 'Lerum Torp 2:5 m fl Bostäder väster om Härardsbron', a planned housing project close to the River Säveån called 'Konsumtomten' in popular speech. The DDP was stopped in March 2015 after a decision by the Land and Environment Court, motivated by insufficient environmental investigations. The course of events had then been as follows:

The DDP was adopted by the City Council of Lerum in August, 2013. The CAB decided not to examine this adoption (Diary no. 403-32019-2013), despite in-house criticism against the suggested DDP presented in a statement on March 12 the same year where the municipality was requested to rework the suggested DDP with regard to the risk of substantial damage on the area of national interest for nature conservation (Västra Götaland County Administrative Board 2013b). Several private persons and NGOs appealed, claiming that there was not sufficient material to serve as a decision basis to meet the natural interests of the River Säveån. There were complaints about the lack of an overall assessment of how all the municipality's projects together can affect the River Säveån, which also was brought up by the CAB in their statement. The consequences of the concerned DDP were therefore said to be impossible to analyse. In December 2013 the CAB dismissed all but one of the appeals. An NGOs was given the right to appeal, thanks to the fact that they were sent the decision of adoption and information on how to appeal from the municipality. The matter of fact for this appeal was examined and rejected by the CAB, with the motivation that the DDP was not believed to bring about a significant impact in the national interest of the River Säveån.

Several appeals were then made to the Land and Environment Court, partly about how the unknown impact of the cumulative effects was not taken into account. The future plans in Floda (where the case study object *Blå Torget* is located) were mentioned as some of the impacts on the River Säveån. Because of these potential cumulative effects, a Natura 2000 review was also asked for in some of the appeals. The municipality contested a change of the decision taken by the CAB, insisting that the Land and Environment Court should reject the appeals. The Land and Environment Court reversed the City Council's decision to adopt the DDP (Case no. P255-14), and shared the appellants concern about unacceptable impact on natural values, against the background of the River Säveån as an area of national interest and the ecological status of the river. It was not believed to be possible to make a decision based on the existing decision basis. The adoption of the DDP should have been preceded by an EIA, to illustrate potential impacts and cumulative effects that the plan could have together with other ongoing or planned projects, according to the Land and Environment Court. The court also mentioned the national interests and the community interests (the Water Framework Directive) as potential conflicts to the DDP. Even if the Natura 2000 site is not explicitly commented on, it is stated that the recognised areas of national, community or *international* protection status must be respected. This international protection status refers most likely to the Natura 2000 site that is brought up by the two appellants that were given the right to appeal.

This case was discussed in the municipality as well as in the local press, and many say that it gave rise to increased carefulness from the municipality's side after that. The case of *Blå Torget* is to some extent also permeated by this caution, and some anxiety to not repeat the mistake. The case of *Konsumtomten* has also been sent to adjacent municipalities in the EIA process for other parts of the River Säveån and its Natura 2000 sites, showing that the municipalities are willing to share their experience.

6.4 Cumulative Effects

Cumulative effects can be defined as effects resulting from the incremental impact of an operation when added to other completed, ongoing or future operations (European Commission 2000). Impacts on the environment that can be seen as separately minor can thus be of significance when these are combined with the effects of other projects or plans. In the Environmental Code (1998:808) 7 chapter it is stated that *permission according to 28 a § must only be given if the activity or operation alone or together with other ongoing or planed activities or operations…* (tillstånd enligt 28 a § får lämnas endast om verksamheten eller åtgärden ensam eller tillsammans med andra pågående eller planerade verksamheter eller åtgärder…) does not give rise to significant impact on the protected areas, referring to the Natura 2000 sites. This wording differs for the content of an ordinary EIA, where the must be an *overall assessment* (samlad bedömning) to assess significant environmental impact.

Wärnbäck (2007) writes that there is a lack of professional as well as legislative incitements for including cumulative effects in EIA and other types of environmental assessments. Some obstacles mentioned are that the actors in EIA do not know that cumulative effects are required to be included, or that they do not know how to assess it, i.e. that tools and evaluation methods are needed. As a matter of fact, cumulative effects are very often excluded in the EIA practice, which can be a consequence of a vague Swedish EIA legislation regarding the demands to include and assess cumulative effects. As also mentioned by Wärnbäck, the Habitats Directive (92/43/EEC) only indirectly puts demands regarding the assessment of cumulative effects, which is done in article 6.3. The specific term of 'cumulative effects' is not used. Instead it is written that a project or a plan that, in combination with other plans or projects, can have a significant impact shall be subject to appropriate assessment.

However, regarding the interviews in this study the respondents with knowledge about the Environmental Code (1998:808) agreed that the wording in 7 chapter on protected areas is quite clear; impact from ongoing or planned activities or operations must be included and that cannot be taken as something else than cumulative effects, even if different words are used. Most respondents agree that even if it is clear by the law that the cumulative effects shall be assessed in the EIA for Natura 2000, this is complicated in practice. *It is not the interpretation that is problematic but the scientific assessment* [R17], a CAB official says about cumulative effects. *The EIA directive is not 100% well implemented in the Swedish legislation. The need to assess cumulative effects are not described clearly enough for EIA in general, but is stated for Natura 2000 so it should not be missed* [R27], says another respondent. The scientific assessment is thus hard in itself, and does not become easier when it is interpreted in the impact assessments. *The connectivity between Natura 2000 sites is also hard to assess from a scientific point of view. When this is taken into the EIA and the jurisprudence it become really difficult* [R17].

Even if the cumulative effects are recognised as complicated to assess, the implementation in EIA is increasingly taken into account. *There seem to be a positive trend for assessments of cumulative effects, and especially for Natura 2000 sites this is pointed out more and more as important in precedents and statements from authorities* [R2]. Another respondent also claims that the Land and Environment Court of Appeal has provided important precedents about cumulative effects, and from what can been seen there is a trend to bring this up more. *But the estimated number of unknown cases is high since many Natura 2000 reviews do not even go to court* [R16]. The cases where Natura 2000 is under review can also tend to increase the requirements for a deeper investigation of cumulative effects. *For Natura 2000 it [cumulative effects] definitely influences the decision, which the law also says it must* [R10].

6.4.1 Scientifically Difficult

One reason that cumulative to a large extent are missed in EIAs is that it is difficult to assess from a scientific point of view, and *generally people try to avoid what is difficult* [R22]. *The assessments of cumulative effects are poor, much because the knowledge is low. This is no wonder since it* is *hard to assess cumulative effects. This is nothing that only the municipalities can be blamed for, but the question is genuinely difficult* [R11], says one respondent, and refers to existing research in the field, such as Wärnbäck (2007). Cumulative effects become even harder when it comes to streaming waters instead of land areas. Land areas can be seen as easier to handle, and it is possible to measure the hectares that disappears. *This is harder for streaming waters, where the connection with the environmental quality standards becomes important. Useful guidance is hard to find for this field* [R14]. Cumulative effects for hydrological conditions or groundwater can also be very diffuse. During the interviews, the delimitations for what should be included in cumulative effects have been frequently discussed as well. *What has which impact in an area with a lot of industries? Fish can migrate far, from the Atlantic Ocean, as do the salmons in many rivers in Sweden. How much accumulation should be taken into account?* [R17] one respondent asks.

6.4.2 Larger Areas, Less Concern

Cumulative effects have become a popular and often discussed term, but in practice many feel that it is not very much implemented. When the Natura sites are very large, which can often be the case in the North of Sweden (Swedish EPA 2015b), the issue tend to be even more forgotten. *It is a lottery how much effort that is put on assessing cumulative effects, especially for large areas* [R24], one respondent says, and another adds to the discussion by saying that *Sometimes, a planned project might have a severe impact on the Natura 2000 site, but if the protected area is very large (some cover hundreds of thousands hectares) it is very hard, or even impossible, to prove any disturbance in the permission review* [R14]. Several respondents confirm this picture, and one respondent says that *many small sources of impact can together spawn big changes, and are not always taken into account* [R7]. Projects that are divided into smaller subprojects are risking missing the larger impact that the entire project can cause, which sometimes is pointed out by both authorities and proponents. *Our experience shows that proponents have a more holistic approach when it comes to Natura 2000, and that investigations and reviews are done at an earlier stage. The depends on the complexity of the issues but also that they know that un-investigated matters linked to Natura 2000 can cause problems and delay the project* [R19]. Another respondent confirms that this is increasingly emphasised from the CAB to the municipalities: *In a large project consisting of four DDPs, it has been pointed out by the county administrative board that there shall be* one *application and* one *EIA instead of being divided into four different EIAs. Separated EIAs risk to miss out on the cumulative effects, which is seen as particularly important for Natura 2000 where it is the total protection of the species and habitats that matters* [R6].

6.4.3 Need For a Holistic Strategy

Given the scientific difficulties to assess the cumulative effects, several respondents highlight the need for a comprehensive strategy. *The issue of cumulative effects is emphasised more and more the last ten years, but there is still a criticism against the EIA system because it, to a large extent, only handles one case at a time* [R1]. This piecemeal approach does not give a holistic picture as it would have done if there was an overall strategy or a more comprehensive layout. Here, the CABs could have a prominent role one suggests, together with spatial planning as a means to get a holistic picture. The municipal Comprehensive Plans (CPs) were also brought up by the respondents in relation to this discussion. In the work with the DDPs, it happens that the municipalities try to stay away from

the Natura 2000 sites. *It can be a hard question when a DDP is far from a Natura 2000 site, to see what the impact can be. Especially for a small DDP. If there are many small changes the cumulative effect can still be significant. In one way an assessment is done already in the Comprehensive Plan* [R29]. Several respondents point out that cumulative effects should be assessed in the Comprehensive Plan, where the guidelines are set up and areas for development decided. *The Comprehensive Plan can be seen as cumulative per se since it is supposed to give an overall picture* [R22] says one respondent. Several other respondents have also commented that the municipalities need to make use of their planning instruments to ensure the environmental quality standards are reached, and that it seems that they are not aware of the power of these tools.

The assessment at the strategic level corresponding to EIA is usually referred to as SEA (Strategic Environmental Assessment), and according to Emmelin (2015) there are indications that SEA is actively avoided in the sense that is has little or no influence on the plan or programme. This is by him termed as the *avoidance syndrome*, and it is argued that many municipalities obviously do not see the utility of strategic planning. Moreover, Emmelin let the *invisible conflict* of Natura 2000 denotes the fact that both DDPs and CPs are by all appearances adopted without any consideration for possible impact on the Natura 2000 sites. The *appropriate assessment* required in the Habitats Directive for potential risk of impact is not carried out to the extent that could be expected regarding the high number of Natura 2000 sites in Sweden. According to Emmelin, this is a question of resistance to impact assessment in the planning community. It is also a problem that planners lack methodological guidance, but only formal and procedural guidance seems to be find, which seems to be a problem in Sweden as well as abroad. Some respondents also point out deficiencies in the education of urban planners and architects as a possible reason. Additionally, many municipalities feel that the DDP processes are time consuming as it is, and that environmental assessments with a vague framework are seen as just another obstacle to the ambition to speed up the processes. Alongside the CPs, the environmental quality standards are according to some of the respondents increasingly referred to as a means to grasp the cumulative effects. However, one respondent claims that *The environmental quality standards are hard to use for assessments and judging, they are rather developed for monitoring and should look more at cumulative effects* [R1]. The same respondent remarks that the fact that the EIA has the zero alternative as the point of departure could mean that some kind of cumulative analysis automatically is done. It seems to be more common to assess a project together with existing other projects, whereas *the impact of projects planned in the future is more seldom taken into account* [R1].

6.4.4 The River Säveån, Shared by Several Municipalities

This issue of cumulative effects is also ventilated in the case of *Blå Torget*, where the municipality can feel the need for a strategic plan for not only the municipality itself but also for the River Säveån that is flowing through several municipalities. That could give all concerned municipalities a clear picture of what is needed to reach e.g. the environmental quality standards. If municipalities upstream affect the river, it could mean that those further downstream can do very little because the water quality is already low. The CAB in question has put forward the need for collaboration between the municipalities, but at the municipality the task to arrange this work understandably feels heavy and outside the scope of the municipal responsibility. The Swedish water authorities (vattenmyndigheterna), introduced to coordinate the work to conserve and improve the quality of the waters in Sweden in accordance with the Water Framework Directive (2000/60/EC), are not much discussed during the interviews. Still, coordination work such as the case of the River Säveån seems to belong to their responsibilities.

6.5 Proponents, Ambitions and Procurement Skills

The proponent as legally responsible for the EIA becomes a central actor, even if the proponent in the vast majority of the cases hires a consultant for the EIA work. Even if some respondents claim the proponents do not need any deeper knowledge about Natura 2000, this role still requires procurement skills. Moreover, the design and nature of a project or plan is after all the point for departure when the consultant begins.

If Natura 2000 is defined as a potential endpoint of the impact, it seems like most proponents understand that it has to be taken seriously. What this means in practice can differ, but there is a large group of proponents that try to avoid to get close enough to interfere with Natura 2000. *Is it not that common to do judicial reviews concerning Natura 2000, these sites often drop out at an earlier stage* [R28], as one CAB official says. *It is desirable to avoid a Natura 2000 permission procedure* [R19], says a consultant, and a project manager says that *generally speaking 29 § is a nightmare for any proponent, that does anything to avoid such a review. However, when we start a new project, the point of departure is that it should be designed so that no disturbance on Natura 2000 will occur* [R6]. Even if there seem to be a degree of foresight among many proponents when Natura 2000 appears in the discussions, not all of them always respect or understand the protection of the network. Natura 2000 means caution for many proponents, but even if no one dares to try operations within the area it is usually hard to make proponents or municipalities understand the indirect effects of operations outside, but in the vicinity of, the Natura 2000 site.

6.5.1 Risk Propensity

This eagerness of the proponent to carry out a proper Natura 2000 EIA, with all the investigations needed, depends on how risk averse they are. *Large proponents with civil responsibilities are different, but the industry only cares about their own interests* [R21b], says a consultant, and some other say that these large actors almost do more investigations than can be seen as necessary just to be on the safe side and avoid setbacks later. The same respondent also adds that *Even if proponents want their plans to be realised they must comply with the law, and the consultant must assure such compliance. If a proponent wants the consultant to cover up certain part, or even lie, one should not continue to work with that proponent* [R21b]. For a smaller player the EIA becomes a major expense, and they can therefore 'take a risk' and hope that the application goes through even with a less thorough investigation. There can be tactics from the proponents as well. *One tactic is to exaggerate the scope of the project at first, to make it look like a compromise when it is taken down in scale. They say they want to build a house of 12 floors and go then down to 6, which might have been what they wanted the whole time. But if they would have said 6, they might have been forced to go down to 3 they believe* [R10]. This reasoning should not be able to apply on Natura 2000, since that is not at all about tradeoffs between interests, but can still be tried.

Some proponents are not willing to accept that their project or plan can cause significant impact on Natura 2000, sending incomplete EIAs to the CAB. These are often sent back for completion. *If a Natura 2000 review is considered to be required it is often well investigated, but when the decision from the screening is that there is no need this is seldom motivated enough* [R28]. *It can also be hard to do a good review when proponents apply for permission too early in their project process, with the attitude that 'investigations will be done later'* [R14], says an official at a central administrative authority.

6.5.2 The Municipality as the Commissioner of the EIA

Because of the planning monopoly the municipality becomes an even more important actor in the EIA process in general, and thus also for the assessments of Natura 2000 sites. *The municipality must be able to review and judge the quality of the EIA, both for its own plans and for the ability to procure EIA consultants* [R12], says a municipal ecologist, and continues: *The approach of the official at the municipality has a large influence, as does the vision of the politicians. The latter are usually not knowing and do not generally have any opinions* [R12]. The attitude among the municipalities varies largely, as do their knowledge about Natura 2000. In areas with Natura 2000 close to urbanised places this has to be handled often, and therefore they learn. The assessments seem to become more uncertain if they are not used to Natura 2000. Municipalities with many Natura 2000 sites can find it more annoying than those with few. Even if they understand why it should be protected, it can still be seen as a barrier to development.

The approach to avoid the Natura 2000 sites as far as possible can also apply to the municipalities. Even if a municipality has Natura 2000 sites, these are most often not located where the development takes place and thus the question is more in theory than practice, even if it is clear that there are harder requirements for Natura 2000 since no disturbance is allowed. *The comprehensive plan has identified areas for development, which generally is at a comfortable distance from Natura 2000* [R30], explains a municipal ecologist. But there can be Natura 2000 sites close to urban areas, and those must be handled. How to do this is not obvious all times. *The municipalities seem to have understood the meaning of Natura 2000 very late. At first they were happy to have it, but then it was seen as an obstacle for the urban development* [R21c], says a consultant. One planner critically discusses the own municipality. *It is a large problem when the conditions are not investigated beforehand, and a developer is linked to the project and promised something that cannot come true. It is like we have a project and look IF it can be built, with no possibility say no, instead of first taking the place and see WHAT can be built* [R4]. Among some of the NGOs, there is a large amount of scepticism against the municipalities' way to work, and one representative feels like *the municipalities can have beautiful visions look good on paper, but are then put aside and nothing is changing* [R9].

Different departments of the municipality have various opinions about the point of nature protection policies, such as nature reserves or Natura 2000 [R29], says a municipal planner. When talking about 'the municipality' as the proponent, it can be important to understand that this is a proponent with different internal departments that not necessarily have the same wills and goals. *It is a huge difference depending on whom you talk to at the municipality. You cannot say that you have been in touch with the municipality, because the planning department and the department for nature conservation have very different approaches and poor internal communication* [R21a], is a representative comment. Most planners seem to have a feeling for Natura 2000 and that it is a strong protection, but it does not always affect the way they work. *Natura 2000 affects the DDP work in the way that it is seen as a more serious form of protection, but procedurally it is in the same package as ordinary nature reserves. It is not up to the planners to make these assessments, we are no biologists. But we have to make sure they are sent to the right persons* [R4], says an official at one municipality's planning department. This makes the planners central for the cooperation around the DDPs, as several respondents emphasise.

The municipal ecologist, a common position at the municipalities that are not large to have a department of nature conservation, can be an important person to keep watch over the Natura 2000 sites. Their influence is sometimes not as high as one could hope, according to several respondents. Also, many municipal ecologists are entirely green in the sense that they know nature conservation and biology, but not environmental law or EIA. *NGOs put demand that we should have a municipal ecologist, but when one finally was hired that person started to operate lower down in the*

organisation than it should. The municipal ecologist becomes very lonely in its struggle for nature conservation [R4]. Another role within the municipality is project management. *Project managers can have very different backgrounds; we do not necessarily have knowledge about EIA and Natura 2000. Experienced planners have usually gained knowledge during their time in the municipality, and the department of nature conservation also know a lot when we ask them* [R25], says a respondent currently working as a project manager. The fact that municipal officials get a better understanding of their Natura 2000 sites over time can be important, but the planning sector is very changeable. Many planners change position often, between different municipalities, and then the experience is lost again. *All these swaps mean that inexperienced planners call the CAB often, and we get an important role. But how much is our responsibility? We shall not do the work from scratch, but just be there with guidance and inputs* [R27], says an official of the planning department at the CAB.

In the municipalities, being politically controlled organisations, orders from above can influence the approach. *When there are discussions about Natura 2000 and other protected areas there is some suspicion among certain politicians, who do not want to block the areas for future development* [R30], says a municipal ecologist. *At a political level the risks are not fully understood and therefore the municipalities cannot spend the money needed for a good investigation* [R3], concludes another respondent. As the municipality is a divided proponent of the EIAs for DDPs, the internal communication becomes important. It is about time and knowledge, and to some extent also a question about culture. *The urban planners must dare to ask the environmentally knowing people at the municipality, which they are not used to do it seems* [R3], says one respondent, and another is on the same track claiming that *the planning department need to understand that they have to consult the department of nature conservation, they are like two drain pipes* [R21a]. *There is some kind of unwillingness among urban planners, or possibly a lack of insight that they do not master this field, wherefore they hesitate to ask the other departments* [R11], is another comment. The division at the municipality can though be done in many different ways. Whether the planning department and the nature conservation department are merged or if they are arranged as separate units could likely affect the internal collaboration at the municipality.

6.5.3 Practical Implementation

The transfer of the responsibility, from the municipality to the developer, can be an important step for the practical construction of the buildings and operations according to the DDP, and thus for the impacts that these may have. Good communication is crucial to ensure that the intended methods and strategies are followed, and important findings of the EIA explained to the workers on the site. The construction companies themselves do not participate in the EIA process, and do not even have to know what an EIA is. *As a construction company we have nothing to do with the EIA, that is always done by the municipality when we get into the picture. But the municipality can transform the result of the EIA into for example a simplified checklist that the developer has to follow* [R5], says an employee of a construction company.

Even if the reviewing authorities do the handling of Natura 2000 to a large extent, it is the construction of the project that actually causes environmental impact in the end. This means that the project or plan has to be followed all the way to the end to ensure that no disturbance is caused on Natura 2000. This calls for communication, monitoring and follow-up by the municipality. *Even if the consultant has done a good job, and a proposed project shows respect towards nature, this is for no good if the developer does not construct the project as if was intended* [R2], says a respondent. Things can get lost when there are many developers along the way, and it is harder to monitor if the initial idea follows the project all the way to the end. *Many different developers between the municipality and the finished project can obstruct the communication about e.g. the natural values and the*

important protection [R5], says the respondent at the construction firm. The same person also explains that *no specific competence is needed by the on-site workers, but the construction companies and developers need education about environmental impact and they also need to be able to communicate important details to the workers* [R5]. It is thus important that the results of the EIA are transferred to the procurement of developers and to the monitoring. Faith-Ell and Arts (2010) discusses the relation between EIA, sustainable (green) procurement and partnering, and say that as a lot happens after the EIA is finished, a well-functioning transfer of environmental information between the different stages of the project development process is essential to successful EIA. Safeguarding of environmental performance beyond EIA can be enabled if green procurement, partnering and EIA are integrated, thanks to better communication, adaptive environmental management and learning from experience.

6.5.4 Procurement of EIA Consultants

Good procurement is a precondition for the consultants to do a fair job, which makes it a question of procurement skills. From the consultants' point of view, many say that the tasks can be badly formulated. The depth of the investigations can be fussily expressed when proponents hire a consultant. This can though be hard for the proponent to define initially, and as the actor with more knowledge the consultant can provide advice about this. *Large actors have the eyes on them and they know what they are doing, but proponents without ambitions can hire an inexperienced or unserious consultant* [R10], a consultant says, and a CAB official argue that *the task is often badly formulated. One can hope that this is because of a lack of knowledge rather than a lack of will* [R17].

As some say, *the municipalities as proponents can be a bit stupidly stingy when they procure the consultants* [R3], and do not always know what they need. For projects or plans risking to affect Natura 2000, this can be even harder because that requires scientific knowledge to understand indirect or cumulative effects. *Some are willing to take risks, and they do not want to spend too much time or money even if a Natura 2000 site can be affected. Instead, they hired inexperienced or unambitious consultants to make it fast. They even have students working extra with EIAs* [R11], one respondent comment on the municipalities' procurement, and continues to ask if the problems are fundamental or knowledge-based: *If the municipalities do not think this is interesting, their attitude must change. If they just lack information, it is possible to educate the municipal officials* [R11].

The fact that the EIA will be used in Natura 2000 review does not seem to put any specific requirements on the consultant to have experience or knowledge about these protected sites. The general view is that *all EIA consultants are expected to have sufficient knowledge for Natura 2000 reviews. It comes in everywhere, and it is impossible to be an EIA consultant without coming across Natura 2000* [R10]. Instead the requirements on the EIA consultants are usually about documented experience, and not about specific competence. It is more common that the whole organisation or consultancy firm is evaluated rather than individual experts with special competence, which was more common earlier. *In cases where experts are needed, whether it is for the Natura 2000 assessment or something else, these services can be commissioned from a sub-consultant. In that way, the skills and necessary knowledge will be found* [R3], a consultant says. A project manager explains that in a very large urban project located next to a Natura 2000 site, the requirement during the procurement of the EIA consultant was that there was documented experience of Natura 2000 reviews that also had been reviewed by the Land and Environment Courts. *Many consultancy firms fulfilled this requirement, as they are very wide in their knowledge these days* [R6]. In a sense, it seems like the assessment of Natura 2000 is not seen to diverge much from ordinary EIAs from the proponents point of view, and the procurement procedure looks the same regardless of if a Natura 2000 site could be affected. This could

possibly be linked to the lack of knowledge among many proponents about the particularity of Natura 2000 assessments according to the Habitats Directive (92/43/EEC), in contrast to ordinary EIA reviews.

290 municipalities in Sweden means 290 ways to do the procurement [R3], as one respondent puts is. Framework agreements seem to be a common solution among municipalities and larger organisations. This can save money when consultants can go down in price because they are guaranteed more commitments, but can be questioned since it raises few incentives for innovativeness of the consultants. *They can feel safe and content that they get more jobs to do anyhow* [R3]. One of the municipal ecologists is also critical: *The framework contracts have the advantages that the procedure does not have to be repeated for every EIA, but apart from that there are no benefits. It does not assure a higher quality, and there is a widespread criticism towards the Public Procurement Act (*lagen om offentlig upphandling) *meaning that it misses to ensure the quality of the EIAs* [R12]. When a project or plan implicates lower costs than what is required for a framework contract, the EIAs are often directly procured from case to case. There can also be cases where the consultants for EIA and for nature conservation are procured in the same framework contract, even though these fields have different demands. Even if there are potential problems with the framework contracts, it could be an advantage to hire consultants that have been working with the same geographical area before. *It might be a problem to have new consultants for every commitment, and even if the lack of specific knowledge is not a widespread problem, there is a need for local knowledge and not every consultant has that* [R2], argues a local NGO member with experience from consultancy. This view is shared by some of the other respondents, whereas others claim that even if this local knowledge can be of importance it shall not be overestimated. It can be much more relevant that the consultants have good knowledge of the vegetation zone where they are to work, to understand how the ecosystems there function.

6.6 Consultants and Natura 2000

This chapter is about the consultants performing EIAs, and particularly EIAs for Natura 2000. Their influence, the quality of the EIS document and the influence of the Natura 2000 regulations on the consultants' work are some topics that will be brought up.

6.6.1 Consultants' Skills and the Quality of the EIS

One thing that seems to be widely agreed upon among all kinds of actors is that the quality of the consultants work varies from poor to very high, and it is hard to judge the consultants as a group. The quality of the EIS shows the same variety in quality, according to most answers. Regarding the knowledge and approach of the consultants, one respondent says: *There are two types of consultants: 1. The large serious firms with a lot of knowledge, 2. the small firms with very various levels of ambition* [R11]. *The quality of the consultants varies from inconceivably bad to good, generally good* [R28], says another. Yet another answer exemplifies the same thing: *Large consultancy firms are more predictable, the smaller firms can be extremes in both directions. Some are very skilled, some not at all. The ones really knowing how to treat Natura 2000 are fewer* [R14]. This last comment is typical in the sense that there are consultants with different specialities. Yet, all are believed to be able to assess such a complicated issue as e.g. indirect or cumulative effects on Natura 2000. On this subject, one official at a central administrative authority says that *the consultants' performance varies a lot, from very good to pure technical consultants with little knowledge in ecology and biology. It is always easier for the consultants if they can do the job themselves, without sub consultants, and sometimes they do not see their own limitations* [R24]. The EIA process and the EIS documents are very important for the environmental work in Sweden, writes de Jong *et al.* (2004), who also claim that it is important to increase the quality substantially not to lose credibility. Certification of consultants is therefore suggested by them as one way to guarantee a competence improvement. This is by many respondents seen as a possible step to increase the quality of the EIAs, given that the CABs as responsible for the quality control have difficulties to live up to this important role at the current state.

The variation in quality also has to do with the size of the project in many cases. *The bigger the project the better the EIS in general* [R26], says for example a technical judge. This can be because of the resources vary between small and large proponents, which gives different conditions for the consultants to work with. *Well-established proponents often show thoroughly done EISs, but it is a heavier work for small proponents* [R23]. If there is a need for further investigations outside the predetermined scope *the consultant has an important task when the work is done to signal if more investigations are needed, instead of just writing that it is 'probably not' any risk for significant impact on the Natura 2000 network* [R2]. This lies in the responsibility that the consultant has towards the commissioner, who then can decide to expand the commission. de Jong *et al.* (2004) describe a similar picture for how biodiversity is handled in EIA, with a varying quality of the EIS depending on the project sector. Some general deficiencies are the lack of references, that the decision basis is poorly described and that the quality of the analyses is low. According to Peterson *et al.* (2010), the low quality of the assessments in EIA has been documented to lead to financial investments with negative impact on the Natura 2000 network and the conservation status of its habitats and species, also in the cases where an EIA has been performed.

EISs of low quality lead to more work for the reviewing authority, and many EISs are sent back for completion. *The CAB can have higher requirements than the municipalities, and do not work under the same pressure to save time and money. Sometimes I even wonder if we ask for too much! Then we have to go back to the legislation to see what it actually says* [R27], says an employee at the CAB's planning department.

Many respondents emphasise though that the requirement *should* be high for a Natura 2000 EIA. If there is a risk for a project or plan to significantly affect a Natura 2000 site, the EIA needs to contain sufficient material for a review according to 7 chapter 28 a § of the Environmental Code (1998:808). As many point out, an EIA of more regular character may lack information to be able to be used as decision basis for such a review. Inadequate EIS documents can also be costly in terms of both money and time. *For reviews in court it is better to do a complete EIS from the beginning, otherwise it has to be complemented with new investigations. This takes time, and time is often a bigger problem than money for proponents that are afraid to get stuck in a swamp of administration* [R17], says a CAB official, and emphasises that there are proponents blaming the authorities for their slow work. *Many EISs are done at a minimum level, waiting for the CAB to ask for completions. That means that the CAB has to do the work of the consultant* [R28], says another CAB official.

6.6.2 The Cause-Effect Chain

The hardest part of the assessment is often to handle the cause-effect chain, and how the project or plan affects the favourable conservation status for the species and habitats that must be protected. The methodology of Environmental Risk Assessment is known by many consultants, but can be hard to use in practice. *This cause-effect-consequence thinking is a general problem in EIA, not only for Natura 2000. It often stops at the effect with the statement that 'We consider the effects to be small with a low impact'* [R17]. This picture is overall agreed upon among the respondents that deal with the EIS document. There can be a lack of reinforced reasoning, and the statements are in general poor. *One step is often lacking in the EIAs. They go from 'these are the conditions' to 'this is the impact' (which usually is considered to be small). The step of motivating the conclusions drawn is often missing!* [R14]. Even if the sources for the disturbance, the stressors, are identified in many cases, the impact on Natura 2000 as the endpoint is still difficult. *Biologists writing EISs do not fully know how to evaluate the impact in relation to Natura 2000 and the Species Protection Ordinance. What type of impact is problematic?* [R26]. Even if knowledge among consultants, biologists and ecologists seem to be good, still many EIAs *stop half way through* [R17].

By the same token, Opdam *et al.* (2009) argue that uncertainty in predicting the relationship between cause and effect, together with deficient knowledge in biodiversity, is a factor that obstructs the implementation of EIA results to protect Natura 2000. Because of imperfect knowledge and no proper estimate of the impact from a project or plan, it is in many cases impossible to determine the significance of such impact.

6.6.3 Potential Pressure From Proponents

Do the consultants feel pressure from their proponents to deliver a specific result from the EIA? This risk is sometimes discussed in literature, but also the fact that the proponent is dependent on the consultant to be able to carry out an EIA and make an application. Hedlund and Johansson (2008) writes about this mutual dependence between consultant and proponent, and emphasise that this dependency may constitute a problem in the EIA process and for its result, when consultants are influenced and the environmental impact is withheld or twisted. Since the consultants usually possess a higher knowledge than their commissioners, it can also be argued that the outline and depth of the EIA to a large extent is decided by the consultants, rather than the proponents. The consultants interviewed do not explicitly see a problem with pressure from proponents. Someone says that *the proponent's pressure on the consultant is not as widespread as many wants to give the impression of* [R1]. But this can vary from consultant to consultant, depending on the consultant's personality and experience. *If the consultants feel under pressure or not is very individual, but*

they are doing a disservice if they deliver an inadequate EIA because it will probably get stuck somewhere higher up in the system. That will not make the proponent pleased [R3], says one consultant. Another experienced consultant highlight the trend where the EIA consultant is becoming a more influential member of the team. *Sometimes the consultant needs to be determined, but pure master suppression techniques from proponents are not common anymore. New demands and complicated issues like Natura 2000 makes the consultant an important building block and raises the status; the consultant becomes one in the deciding group* [R10]. Solid scientific methods are also seen as harder to influence, and one consultant exemplifies this: *We work according to standardised methods. Is gives little leeway for such adaptations (...) On the contrary is it important to stay neutral and objective towards the proponent, that creates credibility in the long run* [R19]. As someone also mentions the consultant's responsibility is regulated in the contracts, which means that a correct and objective assessment must be done no matter the hopes or intentions of the proponent. There might still be specific consultancy firms that care less about correct assessments and their reputation. S*ome consultancy firms are well known for their turncoat behaviour, doing questionable assessments adapted for the proponents interests. The authorities can then be specifically aware when that consultancy firm has performed the EIA* [R1], says an employee at a central administrative authority.

The consultants' relation with the proponent can be very different, and even if there is no 'pressure' to talk about, there can still be influence. *If the proponent is open about their will to carry through to project at any price, it is easier to be strict as a consultant. If that approach is subtler, with a nice ambiance and a closer relation, it can be harder to know how we as consultants are coloured* [R21a]. This confirms a feeling that the consultants do not see themselves as under pressure, but still other actors might perceive tendencies of subjectivity. *The consultants are coloured by the proponent, no doubt about that. It is almost impossible to stay neutral, it seems* [R9], says an NGO member. Another agrees: *there is a risk that the consultant becomes engaged in the project more than what is good. When too shallow investigation is presented and results argued for in a dubious way that can be a reason* [R2]. Some are even more sceptical: *Consultants living on EIAs are very biased, more or less all of them. If they do 'a good job', they get more requests from the proponents* [R13] says a respondent who represent an NGO. The answers from the interviews indeed show the whole range, but the most common picture is still that most EIAs are done in an objective and independent way. When the consultants and the reviewing authorities have different ideas about significant impact, it is mostly believed to be about lack of time or knowledge, or simply different ways to interpret the notion 'significant impact'. *The EIA is a job and not a personal responsibility for the consultants, and how many hours they can spend determine the level of the result* [R2], one respondent points out, who think that it is the limited time, rather than perceived pressure from the proponent, that leads to inadequate EIAs. All in all, the feeling of pressure is not believed to be the biggest problem.

6.6.4 Natura 2000 Influence on EIA and Consultants

As described in chapter 3.4 about EIAs for Natura 2000, there are different requirements for such an EIA, compared to an ordinary one. This could have a large influence on how the consultants work with the EIA. *The entire process is influenced by the fact that a Natura 2000 site can be affected* [R1], says one respondent with experience from consultancy. *There is a big difference between ordinary EIAs and EIAs for Natura 2000, a Natura 2000 EIA is completely focused on the impact on the favourable conservation status for constituent habitats and species* [R19], says another consultant.

Natura 2000 can also affect the relation between the consultant and the proponent, and there are some indications that the classification can be a support for the consultants in case a proponent does not see the severity of the impacts of the plan or project. The Natura 2000 network can be something for the consultant to lean on, in case the proponent is putting pressure on a false EIS

statement that will help the project or plan to go through. *Natura 2000 can facilitate the consultant's work, because it gives stricter regulations to relate to* [R21], is a comment regarding this. The possibilities to adapt and change a project or plan according to the results of the EIA are discussed by some consultants. *Several Natura 2000 investigations have been done in relation to wind power plants and DDPs. In many of these, adjustments could be done so that the operation did not become a permit matter* [R19], says one of them. Another consultant agrees that new good solutions often can be found, and that *the result of the EIA can lead to a design that is very much better for the environment. But it is important to come in early in the process* [R10].

Concerning Natura 2000 EIAs for DDPs, they are not seen as better or worse than other EIAs. *EIAs for DDPs are generally quite poor, and because the entire system is poor one could not expect the Natura 2000 reviews to diverge in any positive direction* [R11], says one respondent, claiming that Natura 2000 is poorly assessed in the spatial planning processes in the municipalities today. Some other respondents say that there is a tendency that EIAs done only for the Natura 2000 permission possibly hold a higher level. *Pure Natura 2000 EIAs are often better, but when the Natura 2000 assessment is a small part of a large EIA it tends to be forgotten* [R17], says for example a CAB official working with reviews. Anyhow, EIAs concerning Natura 2000 are getting better and better from what most respondents say, now when the meaning of the protection is more understood. *It took time for the consultants to grasp Natura 2000, and the EISs could be written as if they were made by high school students. That does not happen today* [R22], as one respondent puts it.

6.6.5 Consultancy for Blå Torget

At the municipality of Lerum, the procurement of EIA consultants is based on the framework contract that the municipality has. This is done according to the Public Procurement Act (Lagen om offentlig upphandling), and the five consultancy firms on the list have been chosen according to the hour price, but the tenders will also get points based on statements from referees and the quality of EIS documents that firm has produced. The points achieved will reduce the hour price, so that an overall assessment based on both price and competence is done.

For *Blå Torget*, it can be necessary to hire a consultant to complete the EIA work, depending on future findings and the requirements from the CAB later on. Among the municipal officials there were different views on whether the Master's thesis student was there to carry out such an EIA, and it was once said that *the other consultants are not better than you, and definitely not as ambitious*. There is certainly much disagreement about whether or not a student could have done this task, if there would have been enough time and financial resources for sub-consultants, deeper investigations and expert consultation.

As a member of the team working with *Blå Torget*, the author believes that there have been large opportunities to adapt the project and redefine the need for further investigations according to the findings along the way. The choice by the municipality to start looking at adaptations and to consult different stakeholders early in the process has likely created better possibilities to carry out the project without significant impact on the Natura 2000 site.

6.7 NGOs: Voluntary Responsibility or an Appreciated Bonus Check?

Non-governmental organisations (NGOs) have no formal responsibility in the EIA process, yet they are often seen to have an important role to play for the protection of nature and biodiversity. Do the NGOs have an impact on how the Natura 2000 regulations are interpreted and implemented in the EIA process, and what would have happened without their actions? And in what way do they contribute with their knowledge? These are some of the questions discussed in this chapter.

6.7.1 Responsibility and Engagement

A common first reaction when talking about a 'responsibility' of the NGOs is that *It is impossible to base legal systems on voluntary organisations taking responsibility* [R24] which is exemplified by an answer from one of the respondents *...but the NGOs de facto have a lot of knowledge and engagement to contribute with* [R24] the same respondent continues. Another comment confirms this view: *If the NGOs have any responsibility in the EIA? No, it lies with the proponent and the consultant* [R10]. Some of the respondents argue that NGOs have an essential role for the protection of Natura 2000 in the EIA process. *NGOs are often completely essential. In the cases where Natura 2000 is seriously reviewed before the case is taken to court, studies indicate that it is to a large extent because of NGOs. They are given a large responsibility due to the weakness of the system* [R11] says a researcher. Or as one respondent from an NGO puts it: *Someone needs to come with counter argument, and for that both knowledge and engagement is needed. This can come from the authorities, but in cases where it does not, it is up to NGOs to fill that gap* [R2]. At the municipality the NGOs are often seen as active parts of the consultation meetings. *NGOs often have opinions about the DDPs. They bring up natural values, and have more to lean on if the areas are protected by law, such as Natura 2000* [R30] says a municipal official. Kati *et al.* (2015) similarly claim that the involvement of NGOs leads to positive effects for the implementation of Natura 2000, according to surveys with scientists on nature conservation in the EU.

There seem to be a consensus that NGOs can have an important role to play, but at the same time many respondents highlight that they do not necessarily have this important role for all plans and projects. The engagement can be very large, but can also be much lower and vary depending on location in the country. Some comments expressing this randomness are *It can vary from place to place, and it is random which impact NGOs have in different cases* [R24], *Whether or not there is an active NGO raising the question is random. Everything becomes random, due to the lack of resources among NGOs as well as central administrative authorities. It is impossible to cover all projects that would be needed to ensure the protection of Natura 2000 sites* [R14] and *The engagement of the NGOs and the public depends very much on the persons that happen to be interested at a certain place, and their influence is therefore a bit random* [R2].

The usage of a resource gives a conservation purpose! [R8] as one NGO representative argue. NGOs in fishing and tourism are some actors that make use of nature, and that benefit from a well protected environment. For example, another respondent claims that *Well functioning ecosystems, biodiversity and the conservation are fundamental parts of the ecotourism is Sweden, where protected areas mean beautiful areas if they are well taken care of* [R7]. A shared interest in a healthy nature can thus lead to many advantages. *NGOs can be used for monitoring purposes, and spend an enormous amount of voluntary time on nature conservation. It is a win-win situation!* [R8], says an NGO member that also add that *when economic benefits can be used as an argument, then the politicians become interested. Economic incentives are always powerful* [R8]. Another NGO member point out that *tourism can give nature an economic value, which can be an incentive for protection* [R7]. The same person also note that *Protected areas and national parks in*

Sweden have a high share of foreign visitors, that are more often used to having to go to different kinds of reserves to see untouched nature. The Swedes are so used to the Right of Public Access that it makes it less unique for us [R7].

6.7.2 Local Knowledge

NGOs across the country can possess knowledge in various fields, and this can add to the knowledge of the authorities. What most respondents agree on is that NGOs seem to be able to add a lot of local knowledge. *It is too expensive to hire a consultant to go out and search for smooth snakes in the field* [R10]. NGOs are active in many EIAs, including those concerning Natura 2000. These consultation meetings are often seen as a valuable way to make use of their knowledge. One respondent says that *private individuals and NGOs can possess a lot of local knowledge. This is though usually in their heads, rather that in formal documents* [R2].

NGOs often raise questions in the Land and Environment Court. They can have very much knowledge and contribute with their own investigations. *NGOs provide local knowledge that the courts lack for obvious reasons* [R23], a district court judge says. Statements in different consultation processes show that many NGOs refer to the Habitats Directive and the ecological status. Apart from their voluntary engagement, NGOs can have other roles too. For example, they can be hired as consultants in cases that require knowledge in a specific field. This can be seen as a more formal way to make use of their knowledge.

Another respondent, however, plays down this importance of the local knowledge, doubting that NGOs are that essential. *NGOs can bring up the questions, but they do rarely influence with their leading-edge skills because usually it comes down to a very detailed level. Therefore, they do not influence that much in the questions of fact, but in raising the questions* [R16]. The same respondents though add that the *NGOs form an important signal system in the EIA process* [R16]. *NGOs are very active! They are not essential but important and their work is admirable* [R23], says another respondent. A central administrative authority official is on the same track: *They [the NGOs] can be very active, and a great asset! They are not essential, but important. They do not have any responsibility in the process, but it is hard to say if they drive changes that otherwise would not have run through* [R27]. Even if deficiencies shall be picked up by the reviewing authorities along the way, it still seem to be a matter of fact that mistakes can be done. *They [the NGOs] often appeal, and can show weaknesses in the EIS performed. Often they contribute with their own investigations* [R23], says one district court judge. *There are many examples where NGOs have proved the county administrative board wrong, meaning that they changed their decision* [R8], says a NGO member.

6.7.3 A Right to Litigate and a Fair Approach

NGOs are extremely important in environmental cases because they belong to the limited group with the right to litigate [R18]. This comment is just one of many pointing out that legally NGOs have a possibility to voice their arguments, that private individuals do not always have. Many NGOs have this right, and actors from different groups emphasise that it is often used in courts. The criteria to obtain the right to litigate are explained in chapter 4.10. NGOs are seen as much more active than private individuals in the EIA process. *During the consultation there are usually many NGOs arguing for different aspects. The amount of private individuals coming with opinions is very much lower. It is probable to think that the entire process is too complex to engage in* [R6], says a municipal project manager. *Private individuals have harder to understand the regulations around Natura 2000, and they do not have the right to litigate* [R14], says another respondent.

The same theme is also taken up by one respondent saying that *they [NGOs and the public] have the right to get information and large possibilities to express opinions, but with that comes large duties to be engaged in the planning process or in the EIA consultation. The legislation's requirements on participation in this process are high, maybe even too high?* [R3]

Having the right to litigate means an extended possibility of being heard, and among the NGOs many feel that they have the power to influence and that their work is well known by the authorities. How well the NGOs are listened to can also depend on their approach, some respondents say. *The approach is very important. It is about being objective and well informed rather than brash. By doing that, we are listened to. Some organisations are too radical and others do not dare to co-operate with them* [R8] says one of the NGO representatives. *We are listened to, and try to stay objective and knowing and hold on to facts. And you can go far with a fair approach and a sense of humour!* [R13] another NGO member adds in a different comment.

6.7.4 Levels of the Organisation

The organisation of the NGOs varies, but many of them are umbrella organisations with a national board and local committees. The approach and the way to work do not have to be the same at the different levels. Many of the NGO respondents say that there has to be a selection of the cases that are handled at a national level. With a limited amount of time and resources, these cases need to be of high importance for the nature conservation, and to serve as precedents later. Larger cases can then be coordinated nationally for discussion with the Parliament and the Government. *The national engagement is general and can work towards a better protection of the natural values in Sweden, but the local committees can ask for advice and support* [R7], says a national board member, and adds that *the national board of an NGOs represent the interests of their members* [R7], meaning that the board shall do what its members wants it to do.

The national level of the NGOs can provide guidance to their local committees, and the local committees can tell their national board about operations across the country. *The local committees do not always have the competence to appeal, but they can inform the national organisation that can decide about actions needed in the specific case* [R18], someone mentions. *We give supervision to the local committees, that usually need judicial advice* [R15], tells another. *The engagement in specific cases depends to a large extent on the local committees, and what the members want to run. It does not necessarily go up to the national board* [R2], a local NGO member explains. Several NGO members that are operating at different levels confirm this picture. Even if local committees belong to a larger umbrella organisation *it is worth to note that the local committees are independent and do not necessarily express the opinion of the national board* [R8].

Collaborations between the NGOs can be a way to be heard in the discussions, and several NGO members claim that the NGOs gain a lot by doing this. *The NGOs often collaborate in large important questions, which gives extra strength in the argumentation* [R7] says one of them, and another confirms this picture saying that *Ad hoc collaborations where different NGOs work together are common and give more weight to the questions* [R11]. Collaboration can also mean to share knowledge. *NGOs can help each other with advice and guidance* [R18], one NGO employed respondent says. This collaboration seems to be valuable for the NGOs, as they can face large and powerful proponents in the courts. *Economically the NGOs have a disadvantage compared to the firms, and that can be hard sometimes* [R15].

6.7.5 NGOs in Floda

In the municipality concerned for the case study, Lerum, the local branch of the Society for Nature Conservation (Naturskyddsföreningen) is a consultation body (remissinstans) to the municipality. The initiative came from the NGO, but can be very useful also for the municipality. The local committee of the Swedish Anglers (Sportfiskarna) also possesses a great deal of knowledge about the fishing waters and the River Säveån. The local NGOs show much gratitude of being informed about the plans and ongoing projects in the municipality. Floda is well known by the municipal officials for the many strong wills among NGOs and private individuals. This engagement can sometimes be an obstacle when the planning department tries to carry out the political decisions in the municipality, but it can also be beneficial if these actors and the municipality work together. A local organisation of property owners regularly meet some of the planners and project managers to stay up to date and share their ideas. When these NGOs have personal interests to speed up processes, they can even perform their own biological surveys and investigations by hired consultants. Being aware that the objectivity of these must be considered, the municipality could make use of such information. This does not in theory differ much for all other EIA documents, since the proponent always is responsible and can be seen as subjective.

6.8 Guidance and Tools

When the regulations for Natura 2000 are interpreted and decisions are made, there can be a need to turn to authorities or manuals for guidance. During the interviews, there have been many discussions about where to find advice and to look for guidance about Natura 2000, and what analytical tools that can ease the assessment. The results of this reasoning are presented in this section.

6.8.1 Guidance from Authorities

For Natura 2000 it is the Swedish EPA that most respondents mention as the authority to turn to for more overall guidance. Their statements, documents or involvement in court cases are often seen as one of few sources for guidance in Natura 2000 cases. As many Natura 2000 sites are marine sites, the Swedish Agency for Marine and Water management has a corresponding role for water. The debated environmental quality standards for water also lie on them to handle. For more general directives on how to deal with EIAs for DDPs it seems natural to turn to the Swedish National Board of Housing, Building and Planning, which most of the planners mention before the other agencies. But the latter does not provide much information on Natura 2000 on a more detailed level, and therefore the planners have to turn to other authorities as well. *We as planners can get support from the manual by the Swedish National Board of Housing, Building and Planning [2006], and from more experienced colleagues. We also look at the Environmental Code directly to see what it actually says* [R29], says one municipal planner. When there are discussions on how the guidance for CABs and municipalities could be improved, many actors see the EPA as the one that could lead the way. *The EPA could have an important role here since they provide the guidelines for the environmental works for others to lean on* [R8], says for example one respondent. The importance for the CAB to get clearer guidelines from above is highlighted by one official: *The CABs get support for our decisions from the EPA, and from decisions in the courts. There could have been clearer guidance from the EPA, but it is given indirectly when they engage in large cases such as Bunge* [R17].

Both consultants and municipalities agree that the CAB is a natural part to turn to for guidance. *The county administrative board gives good guidance. They go through the delimitations well* [R21], says one for example. The consultation meetings are an occasion where the significant impact on Natura 2000 can be discussed. *There is a consultation with the county administrative board before the consultation with the public, where the screening is gone through. This is usually done with the planning department, but for more specific matters concerning for example nature reserves or Natura 2000 we can turn to other departments, such as the department of nature conservation or the department for water management* [R29], one municipal planner explains. Many say that the guidance from the CAB has a large influence on the limitations and the outline of the EIA, and for the continuation of the DDP work. *The judgement of the county administrative board about the significant impact on Natura 2000 is very important, and their statement on if the project shall be taken up by the Government according to 7 chapter 29 a § of the environmental code (1998:808) or not* [R6], says a project manager working with a large urban planning project. Some point out that it is not certain that the CAB knows much more than the municipal officials in all cases. *The county administrative board is not the sharpest tool. They cannot necessarily say more than we already know* [R4].

Internally at the CAB, the support and guidance from other departments at the CAB is seen as essential. As an official at the department of planning explains: *The planning department trusts the department of nature conservation and the legal department in matters about Natura 2000. The role of the planners is a lot about coordinating to work and setting delimitations, not making decisions about the matter of fact for Natura 2000. The judicial support from the legal department is very important, especially in large cases*

with powerful actors having five lawyers on their side [R27]. This internal communication is something that other respondents see as important too, since it can be possible to get different answers from different departments at the CAB.

6.8.2 Manuals and Checklists

The manual from the Swedish EPA (2003) is widely used, and is often found on the tables during visits and interviews. As seen as one of the best documents about Natura 2000 in Sweden, several respondents emphasise that it needs to be updated, which seems to be coming. *There is much to do, with limited resources where we do the best we can. Currently there is work underway with an update of the manual and the maintenance plans is ongoing. A lot has happened since 2003 when it was published, and new praxis gives guidance* [R24], says one respondent from the central administrative authority. The same respondent say that the manual primarily is directed to the CABs, but hopefully it can be useful to consultants and proponents as well.

The municipal planners say that there are few documents where they can get guidance for Natura 2000, and since this is outside their scope it is more important for them to have good tools and guidelines for the screening of the DDPs. They do not refer to the EIA constitution and its appendix 4, but rather turn to Sweden's National Board of Housing, Building and Planning (2006). The municipalities also have internal guidance such as checklists, meetings with other planners and interdisciplinary consultations within the municipality. *The administrative official for the DDPs have the responsibility for the screening of the EIA, and there is a checklist to use for this. This can be looked through together with the municipal ecologist or the department of nature conservation if needed* [R29], says one of the municipal planners. These documents can be helpful for the reviews in court too. *The courts can take support from manuals, such as the one by the Swedish EPA [2003], from databases, maintenance plans and action plans. We look at everything we find relevant* [R26], a technical judge says.

6.8.3 Maintenance Plans with Potential

Every Natura 2000 site shall have a maintenance plan describing the species and habitats that are subject to the protection, which is described in chapter 3.3.4. This document can be an important source of knowledge and understanding for each and every one of the specific sites in the network. These plans are mentioned as important for the assessment of Natura 2000 by all the different groups of actors. They give good conditions for Natura 2000 reviews, as well as for a higher quality of the EIS. *Good maintenance plans makes it easier to do hard assessments* [R24], according to an official at a central administrative authority.

The maintenance plans is an important instrument, or they *should be* an important instrument. However, many respondents see that there is a need to update these plans. This has resulted in comments such as *It is supposed to be a dynamic document but it does not seem to happen much in reality* [R8], *They* [the maintenance plans] *have a fading existence in the implementation. Make them useful!* [R22], *In many cases there are no updated maintenance plans, and it is hard to be able to do correct actions and impact assessment* [R19] and *If they* [the maintenance plans] *were easier to use, the municipalities could have been better procurers and the consultants could have done a better job. The threats need to be illustrated from a geographical point of view* [R16]. Another respondents ask for clearer description of the site that could give a more holistic picture. *One can note that the maintenance plans need to be concretised and point out the objectives of the conservation. What is the purpose? What is important to conserve in terms of the totality? Especially for large areas. Otherwise these areas will be eaten up little by little* [R26].

Officials at one of the CABs are self-critical, and admit they need to continue the work with the maintenance plans so that they can serve as a support for proponents, municipalities and consultants. Several answers indicate that this work is underway. It is known that there are cases where maintenance plans are missing, meaning that one has to go back and read the cause for the nomination of the site. The reason for how the maintenance plans are formulated partly lies in the unfamiliarity with the concept when the Natura 2000 network first was introduced. *It is important to note that the conditions are changing, and many maintenance plans were developed very early in the history of Natura 2000. The Swedish EPA was not 100% sure about how they should be framed, and could therefore not give much of advice* [R17].

6.8.4 Quantitative Tools in Qualitative Assessment

In the hard struggle to assess impact on Natura 2000 sites, many consultants and authorities see a need for better tools to use. The study by de Jong et al. (2004) clearly shows that tools for assessment of natural values are missing, as well as tools to perform reasonable impact assessments. de Jong et al. also argue that because of the poor connection between research and practitioners, the existing tools are not used and new operational tools do not evolve. Even if this study was written over a decade ago, the situation seems to be similar today.

There are a few quantitative assessment tools, and some fields are easier to assess with this kind of methodology than others. *Noise is often simulated with credible results, but the background information varies a lot in many other different fields. When too little is known, the precautionary principle is, or at least should be, applied* [R1]. One consultant notes that *simulations are hard and time consuming, and the result is never better than the figures you feed it with* [R10]. Biological infrastructure is mentioned as a tool with potential. *Biological infrastructure is on the move up, which can be a useful tool where the network aspect of Natura 2000 comes in. This can also show if the protected areas of Natura 2000 are at the best location, or if the species have a more important habitat with higher concentration somewhere else* [R10]. Another consultant also mentions geographic information systems (GIS) and biological infrastructure as important tools that they develop and work with. *It makes it possible to analyse the impact on habitats and migration corridors on a larger scale. By doing this it is possible to work for a development that respects Natura 2000, and negative impact on the favourable conservation status can be avoided* [R19]. The use of scenarios is another useful approach when it is hard to tell what the situation is going to be like. The assessment of alternative land uses in EIA can also help the evaluation to find the best solution, and do comparisons between different designs.

Increased use of monitoring can be an efficient tool to learn from, where it can be evaluated if the impacts for a project or plan on e. g. habitats or species of Natura 2000 site seem to have been as they were expected to be. *There are cases where monitoring and follow up is required to decide on suitable compensatory measures. The idea may be good, but it is time consuming and there are little experience in this field from before* [R6], says one respondent when talking of this. Still, this can be an important way to go. *It is hard to assess and interpret the notion of significant impact for large areas. Follow up and documentation becomes important when there are uncertainties* [R21]. Sometimes there are economical complications for this follow up though. *A detector to measure fish could costs 1 million SEK, but the fine for not having done the controls is 150,000 SEK* [R10], one consultant tells about a previous case.

6.8.5 Guidance and Tools Used for Blå Torget

A maintenance plan exists for the Natura 2000 site Säveån (SE0530085), which was updated in December 2005. It contains descriptions of the protected species and habitats, but for an informed reader there are some details that are lacking. The maintenance plan is listing the salmon among the species that the site shall protect, even if it is noted that the salmon at the time was hindered by a hydroelectric power plant downstream the Natura 2000 site. It is also written that the CAB has made the comment that the salmon should be taken off the list by the Government, until the question of a possible fish way is investigated. Today, the fish way passing the concerned power plant has come into place, and another fish way is underway allowing the salmon to migrate all the way to Floda and the location of *Blå Torget*. A bird, the kingfisher, is mentioned in the maintenance plan but not listed among the species to protect, which has surprised many with deeper knowledge about the River Säveån.

A lot of guidance for *Blå Torget* has been provided by the CAB through an early consultation meeting. There is also a checklist at the municipality, describing important factors for DDPs that risk affecting the River Säveån. In addition to this, the municipality has a mentor in planning issues that was consulted regarding the conditions of the existing DDP and changes that could be needed to construct *Blå Torget*. There is a checklist for the screening of the DDPs, but not explicitly developed for Natura 2000. When those sites can be affected, the planners turn to someone else to make that assessment, often the official in nature conservation. In turn, that person can hand it on to consultants if needed.

7 Discussion

In this chapter, the results of the study will be discussed; how they relate to the research questions, to the literature and to earlier studies. The usefulness of *Blå Torget* as the of case study is touched upon, as well as some thoughts on the choice of methodology, the delimitations and potential sources of error.

7.1 Results, Research Questions and Other Studies

Overall, the results in this study are in line with the findings in other literature on similar topics. In some cases, challenges for Natura 2000 EIAs are often similar to other issues that can be problematic in EIA. The procurement of EIA consultants does not seem to be affected by the fact that Natura 2000 is concerned, and such requirements on specific competence seem to be unusual in the procurement process in other specific fields too. For example, Björckebaum and Mossberg (2009) writes about the actors' attitude and acting around the cultural heritage in EIAs for infrastructure projects, and concludes that procurement specifications rarely indicate specific requirements on how cultural heritage or the historic environment should be managed by the EIA consultant. It does not give the consultants any reason to change their approach or the EIS documents that they produce. Thus, they see no need to increase their competence in the cultural environment. From what many respondents in this study said, the consultants often believe that they are capable of assessing Natura 2000, and some indeed are. Others do not understand their own limitations, leading to poor assessments of Natura 2000 in EIA. The need to assure some kind of quality or competence of the consultants is bought up by some respondents, and this statement is also done in earlier literature. de Jong et al. (2004) suggest that a certification system of EIA consultants could improve the EIA and EIS quality, and Kali et al. (2015) also emphasise increased quality control of EIA as an important step to improve the implementation of the Natura 2000 protection.

A difficulty that is emphasised by several respondents is how to assess cumulative effects, and there are other studies specifically focusing on this issue. The findings by Wärnbäck (2010) show that cumulative effects are a weakness in EIA in general, not only for Natura 2000. Wärnbäck puts forward a vague environmental legislation both in Sweden and the EU as a potential reason, whereas the respondents asked in this thesis rather explain the lack of cumulative effects in Natura 2000 EIAs by the scientific difficulties, and the lack of knowledge and tools. A study on the challenges of implementing Natura 2000 by Kati *et al.* (2015) show that the picture among European scientists largely is consentient with what the actors in the Swedish EIA process express. The adequacy of the EU legal framework and the contribution of NGOs are some points that both studies lift forward as strengths of the Natura 2000 regulations. Understaffing of Natura 2000 management authorities is by Kati *et al.* considered to be one of the main weaknesses, which correspond with the results in this thesis: that the CABs are lacking time and resources to provide the important quality control of the EIAs concerning Natura 2000, despite sufficient knowledge in many cases. The surveys for the study by Kati *et al.* (2015) were completed in February 2010, but the authors believe that the satisfaction level of the respondents reflects the state of 2015, because of stability in the procedural, legal, policy and financial frames since 2010. The results from the interviews in this Master's thesis show that a majority of the respondents find that the main challenges in EIA concerning Natura 2000 are believed to be the same as they were in the beginning of the 21st century. However, the implementation of Natura 2000 in Sweden is constantly changing, in the sense that the reviews have become stricter over time. This thesis study also discusses how the regulatory framework of EIA influences how

Natura 2000 is assessed. There is a lot of literature on how the design of the laws and regulation affect the actors and the assessments in EIA. For example, Peterson *et al.* (2010) conclude that regulatory measures have a significant impact on the assessment of Natura 2000. The procedural frames in different national guiding documents in the EU appear to imply varying interpretations in the EIA process, and the guidelines from the EC give member states much room to interpret the assessment of Natura 2000 differently. This is shown e.g. through varying descriptions of the Natura 2000 assessment and its steps in the guidance documents of the countries.

The research questions of this report have been discussed from different angles with actors from many groups involved in EIAs concerning Natura 2000, and the reasoning behind the answers has been very interesting. The discussions among the respondents on the roles of other actors have contributed to identify possible responsibilities and goals, and gave a good complement to the debate about the own roles that the actors had. To try to see the different roles from some one else's perspective could likely be one way to gain understanding, and by that find ways to improve, the implementation of the Natura 2000 network.

7.2 Heterogeneity of Opinions

There are topics under Natura 2000 were most respondents have the same picture of the problems. For example, many point out the need for communication between the actors as very important, and most seem to agree on that the quality of the EISs produced by consultants can be very well done, extremely poor, and everything between. Furthermore, very few see that there is any way to change the legislation to ease the assessments of Natura 2000. It is not a change of the law that will lead to better EIAs for plans or projects affecting Natura 2000 sites. To a certain degree it is an issue of interpretation, because the difficulty to evaluate the 'significance' of an impact has to do with the interpretation of that word. No one seem to think that this is a simple task, neither is the scientific assessment of cumulative effects something that can be seen as trivial by any of the actors. Another topic with some sort of agreement is the importance of the CABs. Independent of the groups of actors, all respondents seem to see the importance of a well functioning review by the CABs, as the strict quality check that is needed for the other actors to have an incentive to perform assessments at a sufficiently high level to be able to ensure no significant impact on the species or habitats protected by the Natura 2000 network.

As some areas give similar answers by most respondents, there are other questions where the answers diverge. This is the case when the knowledge of the consultants is discussed, and the reason behind poor EIS documents to be found. Among the consultants themselves, most seem to believe that there is enough knowledge, except for occasional rotten apples in the group. Most consultants also believe that the EIA system in Sweden have the potential to ensure objective high-qualitative assessments. This can be compared to what several of for example the NGO members say: that basically all consultants are biased or coloured by the proponent, whether they are aware of it or not. This is seen as a widespread problem, not only applying to a few exceptions of unserious consultants. The distrust in the system where a proponent hires a consultant for the job is stronger among the NGO members working at a local level, than among those operating in the national boards.

When the very nature of Natura 2000, and the strictness that is implies, is taken up the different groups can have separate views. Actors whose focus and interest is on nature conservation look at this severity as something positive, but for actors working with development and urban planning the strong protection can be under discussion for being suboptimal. The dissidence

between researchers and practitioners when it comes to the importance of procedures and formalities can possibly be seen as a lack of understanding for the situation that other actors are facing in their profession while dealing with protected areas such as Natura 2000. It is noted that the different individuals within a certain group generally shared the same opinions and apprehension on the problems and challenges. This can possibly reflect a difference in attitude and culture between the groups, but a strong ascertainment is hard to get since the amount of interviewees from each group was limited to a few people.

7.3 The Case Study

The case study of *Blå Torget* is assumed to be representative for what the procedure can look like when a municipality is the proponent of a smaller project or DDP. A different case would certainly have given other findings, but for the purpose to exemplify the process *Blå Torget* is seen as a case as good as any other. The initial idea, that the thesis was partly to perform the EIA, was abandoned quite early, mainly because there was not enough time to do all investigations needed, to find relevant experts and to await the DDP process to start. It had also partly to do with the amount of experience and knowledge that was needed to carry out an EIA. In relation with the framework of writing a Master's thesis with academic research questions, it became just as rewarding to observe the procedure and the methodology that was used by the municipality, and it would have been peculiar to use *Blå Torget* as a case study while at the same time being the EIA consultant. As it all turned out now, it might still be seen as a biased observation from inside the team, but at the same time this has lead to findings and an understanding that probably would not have been possibly to see from the outside.

Many persons involved in the work with *Blå Torget*, including the author, seem to have learnt a lot during this autumn. The need for good communication was better understood, as well as where to turn for guidance. Useful documents were found both inside and outside the municipality, and the presence of these was highlighted among the municipal officials. Some clarification about the screening and the requirements for the EIA was also a result of the case study. It was noted that there are many knowledgeable and engaged persons in Floda, and it has been the ambition to use this as another source for inspiration and experience. Both environmental NGOs, property owners and the public provided input and new ideas to the project. At the municipality there is a growing insight that it is better to have those different actors informed and involved than to have them against you.

7.4 Methodology

This study could have been done in many different ways. Beforehand, there was a consideration whether to do interviews or questionnaires, or possibly both. Interviews of a more qualitative nature were chosen because of learning purposes, as it gave the opportunity to know more about the reasoning behind the answers. Since the aim of the study was to investigate and understand the underlying reasons to why the actors behaved the way they did, it became more relevant to get fewer but more reinforced and motivated answers. Most interviews have been done in the region around Gothenburg, except for some phone calls to other cities, and this means that it gives a picture about EIA and Natura 2000 for this region, rather than for Sweden as a whole. It is noted that virtually all persons that were contacted for the interviews did say yes, with a few exceptions that did not answer. Therefore it can hardly be seen as any selection between actors more or less willing to talk about their roles. However, respondents sometimes gave advice about other persons to contact, and if a large share of interviewees would have been found in that way

it could have narrowed down the distribution of actors reached. Now, this was the case only for a low share of the respondents.

There has inevitably been a process of interpretation when transforming the interview answers into results. What has been said has first of all been perceived by the author in a, hopefully, rather correct way. Then it has been translated to English and compared to other comments and literature. This means that there are several steps from source to endpoint. To ensure that the answers by the interviewees have been correctly interpreted, this report has been sent around to all the respondents to get feedback, which hopefully has reduced the risk of misunderstandings as a potential source of error. The interview guide has been slightly modified between the interviews, and in the beginning it was harder to ask relevant questions. As more and more knowledge and understanding was gained, it became easier to be a good interviewer. This means that the first and the last interviewees possibly got different opportunities to discuss Natura 2000 and EIA in depth.

Being new to the field, with no practical experience of EIA, can be both a strength and a source of error; a strength because of the lower risk of having preconceptions or prejudices because of earlier impressions or cases, a source of error because of the difficulty to formulate relevant questions and because of potential misunderstandings when receiving the answers. Because the results are based on interviews with many skilled and experienced actors, the results still hopefully show relevant issues and challenges for Natura 2000 EIAs.

7.5 Delimitations

To reach a good result of this thesis, it was of high importance to find delimitations and not go too broad in the research questions. From the author's perspective, it is perceived as an advantage to limit the study to only EIAs in Sweden where Natura 2000 could be affected. The focus on spatial planning with municipality as the proponent narrowed down the scope even more, but it was sometimes easier to speak in general terms about Natura 2000 EIAs. All actors had not come in contact with the municipality and the DDPs specifically, but still had very much interesting to say about how Natura 2000 is assessed in EIA. Sometimes the discussions even became more on the Swedish EIA framework than those for Natura 2000, and therefore it may be hard to say how much of the results here that applies to spatial planning and DDPs in particular, and what is a general problem in EIA of Natura 2000 sites.

8 Conclusion

This chapter presents conclusions based on the results of the study. It shall be said that it is difficult to draw any strong general conclusions based on the rather local sampling of interviewees, but there are still tendencies and trends that have been backed by most of the interviewees, and that are supported by the scientific literature in the field.

Knowledge of Natura 2000 has been growing since the Habitats Directive was implemented in the Swedish legislation. In the very beginning, Natura 2000 was not even fully understood by the authorities that other actors relied on for guidance and advice. This means that the implementation of the Natura 2000 protection has changed, because the interpretation has changed. Still today, about 15 years after Natura 2000 was introduced, there is some confusion about how to use it. Something that is perceived as complex by experts and researchers likely becomes very difficult to grasp by actors whose main focus is not biodiversity, and who only come across the Natura 2000 regulations for other reasons.

Natura 2000 is seen as a strong form of policy instrument for the protection of biodiversity. The practical implementation goes towards a stricter protection that better correspond with how many actors perceive the regulations in theory. It is though important to see Natura 2000 as the network it is meant to be, and it is unfortunate that the relation between sites not always is taken into account. Compared to ordinary nature reserves, Natura 2000 means a stronger protection thanks to the EU directive and international legislation. The fact that it is science-based without clear physical borders can make the implementation difficult, since many actors do not understand the nature of indirect and cumulative effects.

The Swedish legislation around Natura 2000 and EIA can be seen as a jungle of paragraphs, and judicial knowledge is important for all actors in the process. The Swedish EIA system, with the proponent as responsible to carry out the EIA, can be problematic but there are different opinions about this. A cultural clash between EU law and the Swedish legislation derives from different legal traditions, and the fact that Natura 2000 does not do compromises with other societal interests is unfamiliar for many actors in Sweden. The relation between Natura 2000 and other legislations, e.g. the environmental quality standards and the Planning and Building Act, is sometimes creating conflicts.

One tendency is that the Natura 2000 reviews by the CABs and the Land and Environment Courts are getting stricter over time, but in the end it is very much about the interpretation of 'significant impact'. The CABs have an important but challenging task to guide and review EIAs for projects that risk affecting Natura 2000, and the municipalities have a larger responsibility for EIAs of DDPs. Even if the CABs generally possess enough knowledge, the rigidity is sometimes questioned and it is a problem that the decisions are so inconsistent from case to case. A lack of time and resources can be a reason when the CABs do not live up to the high expectations from other actors, and the importance of internal communication between their departments is often emphasised. The Land and Environment Courts are seen as more consistent in their Natura 2000 reviews, but not necessarily stricter. The court procedure means different requirements compared to the reviews by the CABs, which some actors think can be a problem but is necessary for the legal security. Praxis around Natura 2000 is seen as very useful, and precedents from the Land and Environment Court of Appeal can be an effective means to create new praxis.

The proponent has an important role as responsible for the EIA, but the knowledge about Natura 2000 differs a lot between proponents. Larger actors with a public responsibility tend to know more than smaller actors, and the latter can have a higher risk propensity. Even if the proponent in most cases hire a consultant to perform the EIA, it is important to have enough procurement skills and understanding of Natura 2000 to create possibilities for the consultant to do a good job. The municipality has a special role as the proponent for DDPs, and apart from the procurement of the EIA consultant the municipality is also responsible for the screening and the adoption of the DDP. A lack of knowledge about the particular EIAs for Natura 2000, with the 'appropriate assessment', is an element of risk. The departments for planning and nature conservation need to communicate in those issues, which is not always well functioning today. It is also seen as important to consult different stakeholders in an early stage so that the EIA results can have an impact on the design of the projects or plans.

When EIA consultants are procured, there are generally no specific requirements from the proponent on knowledge or experience of Natura 2000 and the appropriate assessment. The skills of the consultants performing Natura 2000 EIAs range from poor to very high, as does the quality of the EIS documents. To determine the significance of an impact is a complex and difficult step in EIA, which is not different for impacts on Natura 2000. The understanding of the cause-effect chain is crucial, but this step in the assessment is often missing or inadequate in both ordinary EIAs and EIAs for Natura 2000. The fact that a Natura 2000 site is concerned influences the way the consultants work, and can be something to lean on in the discussions with the proponent. Pressure from the proponent to deliver a specific result is not seen as a big problem, but it is rather about time and the formulation of the task. In the end, it is about profitability and competitiveness for the consultancy firms, but they also have a responsibility to call out when more assessments are required to be able to determine the significance of the impact on Natura 2000.

NGOs often have an important role to play for the protection of Natura 2000. Even if they do not have any formal responsibility, they can have large influence and bring up important questions, and the NGOs could also contribute with local knowledge that no other actors reasonably can collect in every case. Their engagement is seen as random, since it varies from place to place depending on the local committees. These local committees mostly work independently from the national boards, which have to prioritise their actions and provide extra guidance to the local committees in cases of extra importance. Many of the challenges for Natura 2000 and EIA are found in the case study for *Blå Torget*, such as the need for internal communication at the municipality, and the difficulty to know if there is a risk for indirect effects on a Natura 2000 that makes it hard to even know if a Natura 2000 EIA is needed. In Floda, cumulative effects from other projects and from other municipalities are important to understand, but this is hard and calls for a more strategic approach.

Even if most actors say that they have (and must have) a trust in the others, many still keep an eye on each other. The approach to handle Natura 2000 can differ, and there is sometimes a gap between the actors that are further away from practical implementation (such as researchers and higher judicial instances) and those closer to it (such as the municipalities and the local NGOs). Problems or issues that are highlighted by some actors can be looked at differently by others. This goes for example for the consultants' competence, the essentiality of the NGOs or the need for such very rigid regulations around Natura 2000. All in all, it still seems that there is a positive trend regarding most of the challenges that Natura 2000 in EIA is facing, and most actors believe that the way to handle this network is settled more and more, ensuring the strong protection of biodiversity and nature that it is meant to be.

9 Recommendations for the Actors

This section aims to give some recommendations to the actors involved in EIA where Natura 2000 is concerned, to improve the quality of the assessments and ensure that the strict regulations are met.

Being a central actor with responsibility to audit quality and guide other actors, it is desirable for the CABs to have a more consistent approach where other actors can feel confident about the reviews as objective and thorough. Calibration between different CABs could also be improved, so that the demands are on the same level in all parts of Sweden. Many actors working with Natura 2000 see the maintenance plans as one of the best guidelines available, and therefore it is important that these documents are up to date. Monitoring issues are also lacking behind, and here the CABs have been widely criticised. However, it is not necessarily knowledge and competence that is missing, but time. Therefore it is probably more important to work against problems with understaffing rather than more education of the existing personnel. With this background, it is recommended that the CABs should be given a better financial support to be able to live up to the high expectations that other actors have, and should have, on them. Thus, the reviewers' role has to be strengthened so that other actors know that the bar is set high for Natura 2000 reviews.

Many consultants are very knowing and competent, but there are some problems connected with consultancy of EIA for Nature 2000 sites. First of all, it is crucial to have knowledge in biology and environmental risk assessment, so that the cause-effect chains can be identified and the significance of the impact on Natura 2000 determined. In case the consultants do not possess enough competence in a certain field they should understand their own limitations, and if the consultants are given to little time to perform a good job they must inform their commissioners. Lack of time should not be seen as an excuse for poor performance. Since the CABs have to spend a lot time returning insufficient EISs, which additionally costs time and money for the proponents, it is desirable that the consultants do not hand in material that is not enough elaborated.

Guidance around Natura 2000 is mostly provided by the central administrative authorities and the CABs. The manual by the Swedish EPA (2003) is one of the most used documents for guidance on Natura, and an update of this manual is desirable. It is good to hear that a new version of it is underway. Possibly the Swedish EPA could help coordinating the CABs and improve the calibration between them, if given more resources.

Researchers possess a lot of knowledge in this field, but how can the tools that are developed be spread to the practitioners? Education and seminars can be a way to go, and more practical tools are desired by practitioners. Quantitative assessments tools are few, and when or if new tools are developed they must be able to implement in reality. Thus, a closer link to practise and a more pragmatic view might be needed, together with the insight that all actors do not have the knowledge, or even the interest, in the conservation of biodiversity. Research on the relationships and communications between the fields that are affected by the Natura 2000 legislation, i.e. between natural science, policy and society, is wished for.

The municipalities are advised to work with the internal communication, so that they can become responsible procurers that formulate the tasks correctly for the consultants. It is also of importance that the municipality as the EIA commissioner ensures that the consultants they hire have the right competence and experience for the specific case. Furthermore, the municipalities

have to make sure that there are officials with sufficient knowledge of the protected sites in their own area, and allow these people to have enough influence in the EIA work. Municipal planners must know who to turn to for advice about Natura 2000, and do not hesitate to do so. It can be beneficial to have an early dialogue with the public and NGOs, who can contribute with local information. The use of the strategic plans as a means to get a more holistic picture of the nature conservation could be increased, and by doing that the cumulative effects could be addressed more at a strategic level.

The NGOs are praised by many for their competence, and are hoped to continue their work in an objective and just way. Constructive input to the proponents, CABs and courts is seen as very valuable. The national boards could need to provide their local committees with judicial knowledge in important cases, as they have said they are prepared to do.

10 Recommendations for Further Research

In Europe as a whole, academic research about Natura 2000 has predominantly focused on the ecological systems, and has been conducted from a scientific perspective. Studies integrating the social-policy and ecological field seem to be under-represented for Natura 2000, and therefore it could be valuable to investigate and analyse tradeoffs between economic and social interests in relation to the targets for ecological targets and biodiversity.

As this Master's thesis mainly focuses on Natura 2000 in Swedish EIAs with municipality as the proponent, and it would be interesting to talk to other groups of proponents to see what their approach to Natura 2000 can be like. Moreover, studies on how geographic or cultural conditions influence the interpretation or implementation of Natura 2000 in EIA could be looked into, comparing different parts of Sweden. Likewise, it would be interesting to put Sweden in a European context to see how EIA and Natura 2000 are handled abroad. The role of the municipalities' comprehensive plans and the use of strategic environmental assessment (SEA) is another topic that could be looked into for the sake of Natura 2000.

11 Closing Remarks

Aiming to investigate Natura 2000 in a vertical way, it has been interesting to hear the views from actors at so many levels; from the municipality officials having the projects on their table, all the way up to the Land and Environment Court of Appeal and the researchers with academic understanding of this field. It is important to be able to understand the problems that every actor faces. Equally, one needs to be humble in the sense that it can be easy to sit high up in the system and think that the workers 'down there' are lax or ignorant. It can also be easy to have the practical issues at hand and not understand why everything must be so complicated, with all the regulations and paragraphs. Thus, to communicate and understand each other's motivation and goals is important, and share knowledge and experience both in and between groups instead of getting stuck in a 'blame game'. The protection of our common nature is probably helped the most by collaboration and a prestige less approach.

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Appendix

AI Interview Guide

- What role do you have in the EIA process?
- How well do you know of the Natura 2000 network?
- What is your experience of Natura 2000?
- How is your work affected by the fact that Natura 2000 is concerned?
- Where do you turn for support and guidance in issues regarding Natura 2000?
- How does the different actors relate to the Natura 2000 classification?
- How much knowledge about Natura 2000 do you believe that the different actors involved in EIA have?

- Do the municipality and other proponent have the procurement skills for EIA consultants?
- What criteria are used for the procurement of EIA consultants?
- Are the specific requirements for consultants when Natura 2000 can be affected?
- What is the quality of the EIS for Natura 2000 produced by the consultants?
- How are cumulative effects taken into account in Natura 2000 EIAs?
- When there are inadequate EIAs or EISs for Natura 2000, what do you think that depends on?

- What do you think of the Natura 2000 reviews by the reviewing authorities?
- Are the reviewing authorities consistent in their Natura 2000 reviews?
- What is the importance of praxis and precedents for Natura 2000?

- What influence do NGOs have for the protection of Natura 2000 in EIA?
- What is the role of the public? What are their rights and duties in EIA?

- How well do you know the laws are regulations for EIA in Sweden?
- What do you think of the current Swedish EIA procedure?
- Is the legislation around EIA and Natura 2000 easy to understand and practice? If not, can the legislation be changed or is it up to the actors to learn more?
- How does the implementation of the EU legislation and the Habitats and Birds Directive into Swedish legislation work?
- How strong is the protection of Natura 2000 in theory and in practice?
- Do you see any trends for EIAs concerning Natura 2000 sites?

AII List of Respondents

Respondent 1	Investigator of the marine environment at a central administrative authority, that occasionally comes across Natura 2000 and previously has worked with research as well as EIA consulting.
Respondent 2	Board member of an environmental NGO at the local level, and a former university professor with consultancy experience.
Respondent 3	Consultant currently working with the early stages of EIAs at one of the largest consulting-firms with projects in Sweden and abroad. Engaged in academic research about EIA and green procurement.
Respondent 4	Architect with long experience from municipal planning in a municipality with several Natura 2000 sites.
Respondent 5	Employee at a construction company working with development of built project, often in contact with the municipality.
Respondent 6	Municipal project manager, now working with a large urban development project where Natura 2000 is brought up to discussion.
Respondent 7	Representative from an NGO engaged in outdoor recreation and tourism, and university professor in nature-based tourism.
Respondent 8	Official at an environmental NGO responsible for operational issues of fishery and nature conservation. *Interviewed together with respondent 9.*
Respondent 9	Regional area manager of an environmental NGO in fishery and nature conservation. *Interviewed together with respondent 8.*
Respondent 10	EIA consultant at a small consultancy firm, with long experience of EIA work for infrastructure projects and municipal urban planning.
Respondent 11	University professor that has been involved in research and education concerning EIA for several decades.
Respondent 12	Municipal ecologist responsible for nature conservation, with experience and knowledge about Natura 2000 in the concerned municipality.
Respondent 13	National chairperson of an environmental NGO actively working with environmental water issues.
Respondent 14	Official at a central administrative authority working with permission reviews and water activities, occasionally for Natura 2000 sites.
Respondent 15	Marine Policy Officer at an environmental NGO, operating at the national level of the organisation.
Respondent 16	Practising environmental lawyer with experience in research, education, the environmental courts and the Swedish National Board of Housing, Building and Planning.
Respondent 17	Official at the department of nature conservation at a county administrative board, working with the permission procedure for Natura 2000.
Respondent 18	Young environmental lawyer with education within EU law, now working for an environmental NGO with water issues and biodiversity among its foci.
Respondent 19	EIA consultant at a larger consulting-firm, with experience from both municipal project management and the county administrative board, now working with EIAs especially concerning protected areas and species.
Respondent 20	Architect with a long career in municipal planning, currently providing guidance in planning issues at all levels, including matters on the legislations of the Environmental Code and the Planning and Building Act.

Respondent 21	Biologist working as EIA consultant at one of the largest consulting-firm, with some experience from Natura 2000 cases. *Right after the interview, three colleagues with various but substantial experience of Natura 2000 joined the conversation. These respondents are referred to as respondent 21a, 21b and 21c.*
Respondent 22	Technical judge for planning and construction cases at the Land and Environment Court of Appeal, with a background at the county administrative board, as well as in teaching and consulting in planning and construction matters.
Respondent 23	District court judge at one of the Land and Environment courts, with academic experience from teaching and research within the field of environmental law.
Respondent 24	Administrative official at a central administrative authority, working with permit applications concerning protected areas and guidance on Natura 2000 permit applications.
Respondent 25	Project manager in a municipality with Natura 2000 as a recurring theme, educated in environmental science and management.
Respondent 26	Technical judge at a Land and Environment court, specialised in nature conservation and biology and with a background at the environmental authorities.
Respondent 27	Planner and human geographer now working at the department of spatial planning at a county administrative board.
Respondent 28	Lawyer working at the department of law at one of the county administrative boards, mostly working with environmentally hazardous activities but occasionally dealing with Natura 2000 matters.
Respondent 29	Urban planner at a municipal level, with EIA screening as a task included in the handling of the Detailed Development Plans.
Respondent 30	Municipal ecologist with theoretical knowledge about the Natura 2000 network but little practical experience, in a municipality with large Natura 2000 sites outside the urban areas.