Scaling Marine and Water Management

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Abstract

This book is concerned with the linkages between legal systems and the complexity of nature. It explores how legal delimitations of ecosystems and diffusion of management across different levels of administration affects priorities and outcomes of natural resource management. The book departs from the notion that law needs to be responsive in relation to the changing nature of social-ecological systems while still ensuring basic legal principles, such as the rule of law, legal certainty, and predictability. The book comprises two case studies that examine how priorities and outcomes of natural resource management are affected by the specific administrative level and spatial scale at which it takes place. The first case study concerns the Swedish system for coastal and marine spatial planning. Through the use of interviews, review of legal material and planning documents, the case study highlights how conceptions of marine and coastal areas are formed. The second study explores the fresh water management regime that is set up within the EU through the Water Framework Directive. It reveals how legal delimitations of ecosystems are generally based on an insufficient understanding of nature and scale. Using the map-making metaphor introduced by De Sousa Santos (1987), this work exposes distinct perspectives in natural resource management, where some interests and processes are highlighted and others are placed in an administrative periphery. The book contributes to a wider debate concerning how nature must be understood in law-making.

Swedish abstract

Den här studien fokuserar på hur rättsliga system hanterar naturens komplexitet. Den analyserar hur rättsliga avgränsningar av ekosystem och fördelning av förvaltningsansvar till olika nivåer av administrationen påverkar prioriteringar och utfall inom naturresursförvaltning. Den utgår från synen att rätten måste vara lyhörd i förhållande till de föränderliga egenskaperna hos sociala-ekologiska system. Den måste också tillgodose grundläggande rättsliga principer, som legalitetsprincipen, rättssäkerhet och förutsebarhet. Undersökningen sker genom två fallstudier där naturresursförvaltning studeras i termer av administrativ nivå och geografisk skala i förvaltningen. Den första fallstudien analyserar det svenska systemet för kust- och havsplanering. Genom intervjuer, studier av rättsligt material och planeringsdokument sätter fallstudien strålkastarljuset på hur föreställningar om kust- och havsområden påverkas av den administrativa nivå där förvaltningen är placerad. Den andra fallstudien fokuserar på den vattenförvaltningsregim som följer av EU:s ramvattendirektiv. Studien undersöker hur ekosystem definieras rättsligt och hur dess avgränsningar bygger på en alltför förenklad förståelse av såväl naturmiljön som betydelsen av valet av förvaltningsskala. Genom att använda begrepp från kartografin som en metafor för lagstiftande, inspirerat av De Sousa Santos (1987), visar boken att det finns distinkta perspektiv inom naturresursförvaltningen som kan knytas till olika nivåer och skalor och som gör vissa processer centrala medan andra blir placerade i en administrativ periferi. Bokens bidrar till en fördjupad kunskap och diskussion om naturresursförvaltning och särskilt hur rättssystemet förhåller sig till naturmiljön.

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Abbreviations

CAB – County Administrative Board
CBD – UN Convention on Biological Diversity
CFP – EU Common Fisheries Policy
CIS – Common Implementation Strategy
COP – Conference of the Parties
DG – Directorate General (EU)
ECJ – the European Court of Justice
EEZ – Exclusive Economic Zone
EPD – Environmental Permit Delegation
EQS – Environmental Quality Standard
ICES – International Council for the Exploration of the Sea
IoG – Instrument of Government
LEC – Land and Environment Court
LECA - Land and Environment Court of Appeal
LGA – Local Government Act
LMNR - Law on the Management of Natural Resources
MPA – Marine Protected Area
MSFD – Marine Strategy Framework Directive
MSP – Marine Spatial Planning
MSPD – Marine Spatial Planning Directive
PBA – Planning and Building Act
RAS – Recirculating Aquaculture System
SEA – Strategic Environmental Assessment
SEC -the Swedish Environmental Code
SwAM – the Swedish Agency for Marine and Water Management
UNCLOS – UN Convention on the Law of the Sea
WFD – Water Framework Directive

Part I – Introduction

1 Presenting the problem

1.1 Prelude – The Danish sewage water

In the late spring of 2020, headlines in major Swedish media reported that the municipality of Copenhagen was about to discharge 290,000m3 of unprocessed sewage water into the Sound between Sweden and Denmark.[1] The regular sewage system in Copenhagen would not be accessible for a couple of days, due to new housing developments in the city and, thus, the discharge would go straight into the open waters. The planned discharges led to protests on the highest political level, by local and regional agencies, as well as private organizations on both the Swedish and Danish sides of the Sound. The regional agencies in Sweden expressed concern that the emissions would contaminate bathing waters on the Swedish south coast. Other worries raised were that this local emission would, on a wider geographical scale, create a risk of algal blooming due to increased nutrient loads, as well as adverse effects on breeding birds and spawning fish.[2] The discharge was eventually postponed and subsequently stopped.

The example highlights issues that are central to this book. First, it illustrates how municipal planning and development is connected to areas beyond the local. The failure of the municipality of Copenhagen to include a safe way of handling sewage water in the housing development project risked affecting water quality in both Sweden and Denmark. Second, it illustrates the importance of understanding how the priorities and perspectives in natural resource management are affected by the level of government (local, regional, national, etc.) at which decisions are taken. To the municipality of Copenhagen, the convenience of discharging unprocessed sewage water into the Sound seemed, at least initially, to outweigh the risks. From a regional, and even international, perspective the planned discharge was instead highly

[1] Sveriges television, <https://www.svt.se/nyheter/lokalt/skane/orenat-avloppsvatten-dumpas-i-oresund> .
[2] Kvällsposten, <https://www.expressen.se/kvallsposten/protester-mot-det-danska-bajsvattnet/> .

problematic. Without reaping any of the benefits from the housing development, the surrounding areas would be negatively affected by the discharge. Third, it demonstrates that nature, in general, and water in particular, pays no respect to human administrative boundaries. While the municipality of Copenhagen did not intend to harm the Sound or the Swedish coastal communities, it did not take the fluid nature of aquatic environments into account.

Ideally, the situation should have been handled in a manner that took all the connections between and across ecosystems as well as administrative boundaries into account. However, when it comes to regulating human activities that affect natural systems, the process of lawmaking entails simplifications. Legal systems cannot embrace the full complexity of ecosystems while still ensuring basic legal values such as legal certainty, predictability, and the rule of law. It is through simplifications that nature becomes legible for administrative systems.[3] Nature is complex, and an essential challenge in lawmaking is to design legal systems that reflect this complexity while still providing functional steering mechanisms from a human, administrative, perspective. This entails making ecosystems understandable, or legible, in the eyes of the law, by dividing them into manageable units. This book explores how the diffusion of management across different administrative levels and geographic scales creates challenges for a functional and effective marine spatial planning and water management.

1.2 Aim and research questions

The aim of this book is to discuss how law can take the complexity of nature into account. Specifically, how the level of management and legal delimitation of ecosystems affect marine and water management. In doing so, it also explores the potential of law in fostering adaptive management. The challenges presented above resolve into three essential research questions:

1. *How does the division of planning competence between different levels of management affect the priorities and outcomes of coastal and marine spatial planning processes?*
2. *How does the legal and physical delimitation of ecosystems affect the outcomes of permit processes when it comes to freshwater management?*

[3] See James C. Scott, *Seeing like a state: how certain schemes to improve the human condition have failed* (New Haven, New Haven : Yale University Press 1998), and Nicholas Blomley, *Simplification is complicated: property, nature, and the rivers of law* 40 Environment and Planning A 1825 (2008).

3. *Based on these two questions, how can the spatial aspects of the ecosystem approach be understood in marine and water management, and how can this understanding inform the design of adaptive management regimes in marine and water law?*

These questions are explored in two case studies carried out in a Swedish context. The first study addresses issues relating to the level of management and focuses on the emerging Swedish marine spatial planning (MSP) system. The second case study addresses the geographical delimitations of ecosystems, or the spatial scale of management. Here, focus is placed on the Swedish implementation of the EU Water Framework Directive (WFD)[4] and the body of case law that has followed.

The first case study is aimed at answering the first research question. It focuses on how management perspectives differ between levels of government and thus how the choice of level affects decision-making in environmental management. In 2014, the EU adopted the Directive on Maritime Spatial Planning (MSPD).[5] This directive mandates that all member states adopt spatial plans for their marine areas by March 2021.[6] The Directive covers all marine areas except for coastal waters falling under a Member State's town and country planning.[7] In Sweden, municipalities are responsible for the planning of coastal waters and the territorial sea, while the central government plans the territorial sea and the exclusive economic zone (EEZ).[8] The municipal and national planning of marine waters thus overlap in the territorial sea.

The main purpose of the first case study is to understand how different levels of management within the planning system conceive of nature in different ways. This includes both how nature's potential uses and functions are conceived, and how nature is geographically delimited in decision-making. While the case concerns the Swedish system for marine and coastal planning, it has a bearing on the European system for marine planning, as the Swedish division between levels of management follows the same logic as the EU MSPD.

[4] Directive 2000/60/EC of the European Parliament and of the Council of the 23 October 2000 establishing a framework for Community action in the field of water policy 2000.
[5] Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2016 establishing a framework for maritime spatial planning 2014.
[6] Ibid, arts 4 and 15(1).
[7] Ibid, art 2(1).
[8] See chapter 5 for elaboration on the concept of MSP as well as how the maritime zones are defined.

The second case study relates to the second research question, concerning the scale of management. This case study focuses on water management in the EU and Sweden. The main legal act concerning the management of water in the EU is the WFD. The purpose of this directive is to safeguard the ecological quality of freshwater and coastal waters.[9] Thus, in parts, it has the same geographical scope as the municipal planning studied in the first case study. The Directive has been in place since the year 2000 and has an elaborate system for dividing European waters into manageable units, so-called "water bodies". At the water body scale, the ecological status must meet the equivalent of what is considered at least a "good status". The aquatic environment is consistently monitored, and measures need to be taken in order to achieve or uphold the prescribed standard, which is determined through ecological quality standards (EQS). In Sweden, EU law and the WFD have been hugely influential in the management of aquatic environments. The Directive includes measures to address freshwater management on the level of entire river basins, through measures directed at public agencies. But it also includes more specific rules that affect individual operations.[10] In most permit processes where there is an emission to a body of water, the WFD and EQS are discussed. This makes an interesting case for analyzing the scale of ecosystem management. How can the scale of management be understood, and what consequences do the choices of scale have for management outcomes?

Both case studies relate to EU law in general and to Swedish law in particular. They should be seen as examples of how law delimits nature and what happens when the administrative responsibility of managing natural resources is placed on a local, regional or national level. The findings are relevant beyond the Swedish or European context. They are also relevant beyond marine and water management, as these issues occur in all types of management systems focusing on the relation between social and natural systems, be it forestry, agriculture, or climate change. The contribution of this book is thus to provide a theoretical analysis and discussion concerning the level and scale of natural resource management, based on case studies situated in a Swedish context.

The reason for choosing the MSPD and the WFD as study objects is that they provide good examples of the challenges of finding appropriate levels

[9] 2000/60/EC 2000, art 1.

[10] The Directive and its different management tools will be further elaborated in Part III, chapter 10.

and scales of ecosystem management. Both, at least in the Swedish context, entail clear divisions of nature through either management levels or ecosystem scales. In addition, the two regimes partly overlap geographically in the coastal waters. In terms of marine environmental management, coastal areas are vital. It is in these areas that many of the important ecosystem components, pressures on the marine environment, as well as interests for human activities, are located.[11] The implementation of the MSPD and the WFD highlights the consequences of choices in management level and scale. Through such an analysis, we can attain vital knowledge of natural resource management. The planning of marine areas is divided between a local and a national level. As such, it serves as a useful example for studying how perspectives of management differ between administrative levels. The WFD system is one of few examples of legislation that is based on the properties of the natural environment rather than pre-existing administrative structures. It thus makes for a good case to study legal delimitations of ecosystems. The following section will briefly present some concepts that are central for the arguments made in this book.

1.3 Key concepts

This book addresses the interplay between human administrative systems and the natural environment. Specifically, it deals with legal systems governing marine and freshwater resources. Marine and freshwater ecosystems occur in many shapes and forms. While their size spans from the smallest pond to the largest ocean, they are also interconnected: large ecosystems consist of networks of smaller ecosystems.[12] In dividing and delimiting them, there is a need to understand the interplay between different scales: how they are interconnected and what happens when certain parts or elements are excluded from a management regime.

The book explores the process through which the responsibility to manage a natural resource is placed at a certain level of legal and political administration. It also studies how the geographic boundaries of ecosystems

[11] See The Swedish Agency for Marine and Water Management, *Symphony — integrerat planeringsstöd för statlig havsplanering utifrån en ekosystemansats* (2018), pp 27, 29-36 and The Swedish Agency for Marine and Water Management, *Marine spatial planning — current status 2014* (2015), ch 3, and UNEP, *Marine and coastal ecosystems and human well-being: a synthesis report based on the findings of the Millennium Ecosystems Assessment* (2006), table 1.1.

[12] Steven A. Murawski, *Ten myths concerning ecosystem approaches to marine resource management* 31 Marine Policy 681 (2007), p 687.

are "determined" by law and how this affects what is and what is not considered important for policy and legal developments.

Three concepts are recurring throughout the book and these concepts need a brief introduction to facilitate an understanding of the formulation of the aim and research questions presented above. They will be briefly introduced here and further developed in chapter 2. The concepts are:

- The ecosystem approach;
- Adaptive management; and
- Law as a layered system

The ecosystem approach: The challenges facing the marine environment all highlight the need for a more holistic perspective, wherein different sectoral interests are not treated separately, but are seen as parts of a common pressure on ecosystems. The ecosystem approach is frequently promoted as a way to obtain such a holistic perspective. There is an explicit requirement both in the MSPD and in the Swedish Ordinance on Marine Spatial Planning to apply the approach.[13] While the ecosystem approach is not as clearly expressed within the WFD, the Directive can be seen as resting on the same foundation.[14] There are a number of definitions of the ecosystem approach, and section 2.4 elaborates how the concept is used and understood in the present work. In short, however, the most famous definition of the approach, and the one used here, is that formulated through the Malawi principles adopted by the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD).[15] Here, the ecosystem approach is understood as "[…] a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way".[16] Within this book, the spotlight is placed on two of the Malawi principles. These principles both relate to spatial aspects of ecosystem management. The principles require that management is conducted on the appropriate spatial and temporal scale as well as the appropriate level. The scale perhaps most clearly reflects spatial aspects, but the level of management inherently entails a specific jurisdiction within which a

[13] See 2014/89/EU 2014, art. 5, and Ordinance (2015:400) on Marine Spatial Planning, sec 10.
[14] European Commission, *EU marine strategy: the story behind the strategy*, (2006), p 24.
[15] 1992 United Nations Convention on Biological Diversity 1992, see section 2.4.
[16] UNEP/CBD/COP/5/23, *Decision V/6 Ecosystem Approach,*, Convention on Biological Diversity (CBD) COP, (2000), pp 103-104.

government agency or municipality acts, which can be seen as an administrative space.[17]

Adaptive management is closely related to the ecosystem approach, as one of the Malawi principles highlights the fact that change is inevitable in ecosystem management.[18] The basic idea with adaptive management is that both human and natural systems are in a state of constant change. Legal regimes focusing on natural resource management need to be sensitive to this and prescribe management that is not static, but rather adaptive to changing conditions and new information.[19] As will be seen in section 2.2.2, the relationship between law and adaptive management has been discussed at length in the environmental law literature. Many authors argue that there are challenges with incorporating adaptive management in law since such management does not sit well with basic legal principles such as the rule of law, legal certainty and predictability.[20] In this book, however, it is argued that how these challenges are perceived is contingent on how law is understood. Law can both foster adaptive management and maintain its basic principles, if the adaptive elements are placed in the right parts of the legal system.

As the term "management" is frequently used in this work, there is a need to clarify how it is used and how it relates to the concept of "governance". Governance "encompasses both governmental and nongovernmental participation in collective choice and action".[21] Governance thus covers a larger set of practices than those that are of primary interest here. To narrow it down, the term "management" is used to describe the activities of public agencies in relation to the governing of the natural environment. Management, as it is used here, is one constituent part of the broader governance concept; it should not be understood as excluding governance practices. Rather, governance and nongovernmental action is important in tackling all of the challenges facing social-ecological systems. Law can function as a facilitator for governance, in that it allows for nongovernmental initiatives as well as government-based action. This book focuses on how law

[17] Clearly, there are other principles that include spatial implications as well, such as the need to understand effects on adjacent ecosystems. But for the purposes of this book, focus is placed on the level and scale of management, see section 2.4. For further elaboration on how the concept of space is understood in this book, see section 3.1.
[18] UNEP/CBD/COP/5/23, (2000), p 106.
[19] See T. Dietz, E. Ostrom and P. C. Stern, *The struggle to govern the commons* 302 Science 1907 (2003), p 1909.
[20] See section 2.2.2.
[21] Barbara A. Cosens and others, *The role of law in adaptive governance* 22 Ecology and Society 1 (2017), p 1.

can be formulated in terms of government action. In doing so, it focuses on the management aspects of governance.[22]

The third concept is *"layers of law"*, or law as a layered system. In relation to the adaptive capacity of law, one of the book's arguments is that law can be understood as consisting of at least two layers. The two layers fulfill different functions and complement each other. The first layer is a structural layer, where *inter alia* planning legislation operates. Within this layer, legislation should be aimed at capturing the complexities of social and ecological systems. One example of this is spatial planning, such as marine planning or municipal comprehensive planning. Both types of plans strive to take into account all activities, present and future, within their boundaries. Through a planning process it is determined where new operations and activities can take place. Within freshwater management, river basin management plans, programmes of measures and EQS shall identify all activities and pressures affecting the water quality in a river basin district and through a thorough analysis determine where new operations can be allowed and where additional measures are needed to improve water quality. EQS can be seen to translate overarching objectives into more measurable standards to be applied in concrete decision-making.[23]

Both types of planning become guiding for subsequent decisions concerning *inter alia* detailed development plans or environmental permits. These decisions are here understood as being placed in the second layer, called the "operational layer". In permit processes, there is a need to ensure the basic principles of legal certainty and predictability. Predictability can be ensured by using the guiding plans from the structural layer to decide where and how a specific operation can be permissible. Once a permit is given, the plans in the structural layer may need to be adapted to take the new conditions into account. The structural layer is thus characterized by a process where it is evaluated and adapted as new information or changing circumstances occur. The main point of this argument is that if law is understood in this way, it is easier to understand where adaptive aspects of law need to be focused so that they do not interfere with the basic legal principles. Both of

[22] For a more in-depth review of adaptive governance and its relation to law, see Barbara Cosens and others, *Designing law to enable adaptive governance of modern wicked problems* 73 Vanderbilt Law Review (2020).

[23] H. F. M. W. van Rijswick and Ch W. Backes, *Ground breaking landmark case on environmental quality standards? The consequences of the CJEU 'Weser-judgment' (C-461/13) for water policy and law and quality standards in EU environmental law* 12 Journal for European Environmental and Planning Law 363 (2015), p 377.

the case studies concern regulations in what is here referred to as "the structural layer".[24] In this regard, both cases pertain to the possibilities of law to foster adaptive management, and how the understanding of geographic scale and administrative level of management affect these possibilities.

1.4 Delimitations

The central aim of the book is to discuss how law can take the complexity of nature into account. This could be discussed and investigated through the lens of multi-level governance.[25] Multi-level governance is a well-established field of research and may have been useful for some of the inquiries of this book, especially those pertaining to MSP. However, the multi-level governance literature is often interested in the relations between different levels of government and the development of policy.[26] While such inquiries have clear connections to the MSP case study, they are less relevant to the case concerning water management.[27] Furthermore, the current work focuses more on the linkages between natural and human systems, and how law can be designed to take these linkages into account. For that endeavor, multi-level governance is not the best suited theoretical approach.

In terms of marine governance, MSP is just one of many legal tools to govern the use of marine areas. Within the EU, there is *inter alia* the Marine Strategy Framework Directive (MSFD)[28] and the Common Fisheries Policy (CFP).[29] While the MSFD also takes its cue from the natural environment,

[24] See section 2.3.

[25] See Ian Bache and Matthew V. Flinders, *Multi-level governance* (Oxford : Oxford University Press 2004).

[26] Liesbet Hooghe and Gary Marks, *Unraveling the central state, but how? Types of multi-level governance* 97 American Political Science Review 233 (2003); Henrik Enderlein, Sonja Walti and Michael Zurn, *Handbook on multi-level governance* (Cheltenham, Cheltenham : Edward Elgar 2010); Jenny Fairbrass and Andrew Jordan, *Multi-level governance and environmental policy* (1 edn, Oxford University Press 2004).

[27] There have been studies examining the WFD from a multi-level governance perspective, see Charlotta Söderberg, *Complex governance structures and incoherent policies: implementing the EU Water Framework Directive in Sweden* 183 Journal of Environmental Management 90 (2016). However, this is not how the Directive is approached here.

[28] Directive 2008/56/EC of the European Parliament and of the Council of the 17 June 2008 establishing a framework for the community action in the field of marine environmental policy (Marine Strategy Framework Directive) 2008.

[29] Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy 2013.

the WFD has a more elaborate way of defining individual ecosystems.[30] There is also more case law in which the WFD has been applied. This provides more material to study how the delimitations of ecosystems affect management decisions.

There are a number of regional and international agreements to which Sweden is a party. One highly important such regime is the United Nations Convention on the Law of the Sea (UNCLOS),[31] in which *inter alia* the maritime zones are defined.[32] UNCLOS, and other international legal acts covering specific sectors, affect how planning can be performed and what type of decisions can be taken. These regimes will not be covered here to any great extent. The case study concerning MSP is the one in which marine areas are covered the most. The aim of MSP is to integrate all of the different sectors in an overarching structure. The foundation of both planning and the ecosystem approach is to move away from sectoral policymaking toward comprehensive management systems that can integrate and negotiate the need of all sectors and interests. The main field of interest here is how different management levels frame and understand this comprehensive management regime, where all of the sectoral legislation and objectives are included.

The scope of the first case study is mainly MSP within the territorial sea and the internal waters, since coastal states have greater possibilities and mandates to legislate within these areas. When necessary, the EEZ will be covered to situate MSP within a wider context.[33]

Finally, the issue of how human administrative systems interplay with one another, as well as with nature, is not new. The seminal article "Tragedy of the Commons" by Garrett Hardin, published in 1968, raised the question of how to create a system of sustainable use of natural resources.[34] The ideas forwarded in the article have since been elaborated, discussed, and criticized.[35] Much of the research concerning the commons has focused on how local

[30] See *inter alia* Ángel Borja and others, *Marine management – towards an integrated implementation of the European Marine Strategy Framework and the Water Framework Directives* 60 Marine Pollution Bulletin 2175 (2010), p 2176, where the MSFD is described as taking a holistic, functional approach, while the WFD takes a more deconstructing, structural approach to management.
[31] United Nations Convention on the Law of the Sea 1982.
[32] See section 5.2.
[33] For an elaboration on maritime zones, see section 5.1.
[34] Garrett Hardin, *The tragedy of the commons* 162 Science 1243 (1968).
[35] See Dietz, Ostrom and Stern (2003); Elinor Ostrom and others, *Revisiting the commons: local lessons, global challenges* 284 Science 278 (1999); Elinor Ostrom and others, *The drama of the commons* (Washington, DC, Washington, DC : National Academy Press 2002).

institutions and actors can govern resources in a sustainable way, and how these institutions are affected by formal, national or international, institutions. This stream of research has perhaps been most famously represented by Elinor Ostrom, in her book *Governing the Commons: The evolution of institutions for collective action*.[36] While much of the literature on social and ecological resilience draws on Ostrom's findings and ideas, the present book has a different focus. The examples used by Ostrom tend to cover local resource management and so-called "common-pool resources". This work focuses on larger processes, and in that sense, it is more connected to studies on large-scale collective action.[37]

To sum up, designing a research project entails a number of choices. For this work, I have deemed that multi-level governance and common-pool resource theory fall outside the scope of the research, and as such these streams of research are not elaborated on further.

1.5 Structure

This work is divided into four parts. Part I presents the point of departure of the research as well as the aim and research questions. In addition, relevant research within the field of natural resource management is discussed in relation to the current work. This first part ends with a presentation of the theoretical and methodological approaches used and how these relate to the aim and research questions.

Part II comprises the first of two case studies. This case study concerns the Swedish system for MSP and municipal planning of coastal areas. First, it covers formal regulation governing MSP and municipal planning and provides an overview of how planning theory has evolved during the last century. Second, Part II contains a review of municipal and national planning documents, as well as an interview study based on talks with municipal planners and politicians, regional coordinators, and an official from the national planning authority, the Swedish Agency for Marine and Water Management (SwAM). Part II answers the first research question, relating to the level of management.

[36] Elinor Ostrom, *Governing the commons: the evolution of institutions for collective action* (Cambridge, Cambridge : Cambridge Univ. Press 1990).
[37] See *inter alia*: Sverker C. Jagers and others, *On the preconditions for large-scale collective action* 49 Ambio 1282 (2020).

In Part III, the second case study is presented. It examines the management of freshwater and how the WFD regime affects outcomes in permit processes. This part comprises a review of the legal framework of the WFD, a literature review of research relating to the topics discussed, as well as a review of case law pertaining to environmental quality standards from Swedish environmental courts. It responds to the second research question, concerning the scale of management.

Part IV is a concluding part, where the results from the two case studies are analyzed together to provide an answer to the third and final research question, on how the spatial aspects of the ecosystem approach can be understood in marine and freshwater management, and how this understanding can inform the design of the structural layer of law.

2 Situating the research

2.1 Human and natural systems

In the last twenty years, a growing body of literature has emerged, concerned with how human and natural systems are connected to each other. Two major streams in this research are resilience theory[38] and earth system governance theory.[39] While there are differences between the two streams, they both carry a number of commonalities that also have a bearing on this book. The main commonality is a focus on the interconnectedness between social and natural systems. Within the resilience literature this is often referred to as "social-ecological systems" (SES).[40] This concept builds on the idea that the social world and the natural/ecological world cannot be seen as two separate entities. Rather they are part of one connected system, or, as Berkes and others succinctly put it in one of the early texts of resilience research: "the delineation between social and natural systems is artificial and arbitrary".[41] Both case studies highlight problematic aspects of focusing too much on either natural or social systems when designing legal acts for natural resource management. The first case study, concerning planning of marine and coastal waters, shows how the administrative level of management that is chosen affects how management is performed and the interests that are promoted. The second case study, concerning water management, reveals how too much focus on biological criteria, and the ecological aspects of a problem, leads to

[38] See Carl Folke and others, *Resilience thinking: integrating resilience, adaptability and transformability* 15 Ecology and Society Art. 20 (2010); C. Holling and others, *Resilience, adaptability and transformability in social-ecological systems* 9 Ecology and Society n/a (2004); Victor Galaz R, *Global environmental governance, technology and politics the anthropocene gap* (Cheltenham, Cheltenham : Edward Elgar 2014).

[39] See Frank Biermann and others, *Navigating the anthropocene: the Earth System Governance Project strategy paper* 2 Current Opinion in Environmental Sustainability 202 (2010).

[40] Folke and others (2010), p 2, Reinette Biggs, Maja Schlüter and Michael L. Schoon, *An introduction to the resilience approach and principles to sustain ecosystem services in social-ecological systems* in *Principles for building resilience: sustaining ecosystem services in social-ecological systems* (Cambridge University Press 2015), pp 5-6.

[41] Fikret Berkes, Carl Folke and Johan Colding, *Linking social and ecological systems : management practices and social mechanisms for building resilience* (Cambridge, Cambridge : Cambridge Univ. Press 1998), p 4.

one-sided management. This, in turn, leads to a loss of understanding of the social aspects of decision-making. To be able to tackle complex problems, complex legislation is needed, where the interconnections between social and natural systems are taken seriously.[42]

Resilience research is preoccupied with the capacity of social-ecological systems to handle pressures, to absorb and deal with change, and to recover from, or adapt in the face of, unexpected shocks.[43] To be able to understand the resilience of social-ecological systems, there is a need to understand cross-scale interactions, namely that a system "at a particular focal scale will depend on the influences from states and dynamics at scales above and below".[44] For example, a river can be seen as an ecosystem in its entirety. But it can also be divided, as in the WFD framework, into smaller ecosystems. In this sense, there are a number of different scales operating simultaneously and interacting with each other. These interactions and linkages are often referred to as "panarchy".[45] "Panarchy" can perhaps most easily be understood in relation to "hierarchy", where the latter is characterized by systems in which lower-level processes are dominated by higher-level processes. In a panarchy, change can be triggered in a bottom-up fashion and it is the interlinkages, rather than the structured relations, that characterize the system.[46]

The concept of social-ecological systems was developed mainly by natural scientists,[47] although it has since been further developed for the social sciences.[48] The key idea with social-ecological systems is that the system will self-regulate and adapt to ever-changing conditions.[49] One criticism that has been raised in this regard is that much of the resilience literature fails to recognize that the "well-being of individuals is not directly and immediately

[42] See Biggs, Schlüter and Schoon (2015), p 12, which discusses the same issue but in terms of governance approaches.
[43] Ibid, pp 5-6.
[44] Holling and others (2004), p 3.
[45] Ibid, p 3; Lance H. Gunderson and C. S. Holling, *Panarchy: understanding transformations in human and natural systems* (Washington : Island Press 2002).
[46] Ahjond S. Garmestani, Craig R. Allen and Heriberto Cabezas, *Panarchy, adaptive management and governance: policy options for building resilience (Resilience & Environmental Law Reform Symposium)* 87 Nebraska Law Review 1054 (2009), p 1037.
[47] Folke and others (2010); Berkes, Folke and Colding (1998).
[48] Andreas Duit and Victor Galaz, Governance and complexity— emerging issues for governance theory 21 Governance 311 (2008); Victor Galaz, Global environmental governance, technology and politics the anthropocene gap (Cheltenham, Cheltenham : Edward Elgar 2014); Jonas Ebbesson and Carl Folke, Matching scales of law with social-ecological contexts to promote resilience in Ahjond S. Garmestani and Craig R. Allen (eds), Social-ecological resilience and law (2014).
[49] Biggs, Schlüter and Schoon (2015), p 12.

affected by changes in the natural environment",[50] and that failures in governance are often linked to the "nature and politics of public administration".[51] The first case study relates to this criticism. While it was clear in the process leading up to both the Swedish regulation on MSP and the EU MSPD that coastal areas are important for the overall status of the marine environment, political interests led to them being excluded from the scope of both systems.[52]

Resilience literature focuses largely on how to build resilient institutions and ecosystems. Earth system governance builds on resilience theory but applies a more overarching, planetary perspective. The interconnectedness of all social and natural systems is a cornerstone of this approach. One of the aims of earth system governance is to understand the "complex relation between global transformation of social and natural systems".[53] This research interest, by necessity, focuses more on institutions and governance. Earth system governance theories can illuminate how the legal systems of today suffer from shortcomings in addressing the interconnectedness of social and human systems. Some scholars have suggested that the Sustainable Development Goals (SDGs) and international law should be guided by a single priority norm: a norm that would focus on protecting the integrity of the earth system.[54] Others have argued that law, as we know it, may be unsuitable to regulate the response to the changing conditions of Earth, commonly referred to as the "Anthropocene".[55] Kotzé and Kim argue that law has failed to prevent the crossing of critical planetary boundaries.[56] A new, planetary law needs to be informed by both natural and socio-economic processes that are elaborated within the earth system science.[57] Not all earth system governance scholars argue for such revolutionary regime shifts, but

[50] Andreas Duit, *Resilience thinking: lessons for public administration* 94 Public Administration 364 (2016), p 372.
[51] Ibid, p 373.
[52] See chapter 5.
[53] Biermann and others (2010), p 203.
[54] Rakhyun E. Kim and Klaus Bosselmann, *Operationalizing sustainable development: ecological integrity as a grundnorm of international law* 24 Review of European, Comparative & International Environmental Law 194 (2015).
[55] Louis J. Kotzé and Rakhyun E. Kim, *Earth system law: the juridical dimensions of earth system governance* 1 Earth System Governance urn:issn:2589 (2019), p 3.
[56] For elaboration on the concept of 'planetary boundaries' see Johan Rockström and others, *Planetary boundaries: exploring the safe operating space for humanity* 14 Ecology and Society 302 (2009); Will Steffen and others, *Planetary boundaries: guiding human development on a changing planet* 347 Science 1259855 (2015).
[57] Kotzé and Kim (2019), p 8.

the need to question the functioning of current legal systems is a recurring theme.[58]

A common feature of both resilience theory and earth system governance is the idea of adaptiveness. Both human and natural systems are adapting to, or need to be able to adapt to, changing conditions, new knowledge, and in the face of sudden crisis.[59] Thus, there is a need for adaptive management. From the perspective of law and legal design, legal scholars as well as resilience researchers have raised concerns that law cannot foster adaptive management, *inter alia*, due to the requirements of legal certainty and predictability.[60] It has been argued that "[in] a system anticipating transformation, in a flip from one state to another, laws are truly of limited help, because the transformed system has unknown key variables and processes and unknown risks and opportunities emerge".[61] From a legal perspective, there are those who see the same type of challenges: "[…] there is good reason to doubt whether regulation by adaptive management is possible without substantial change in the deeply entrenched fabric of administrative law".[62] The argument of this book, however, is that regulation by adaptive management is possible without substantial changes to the legal system as we know it. The understanding of law as consisting of layers facilitates an understanding of the adaptive capacity of law, and the two case studies are used to illustrate this.[63] This argument is central, namely that many legal systems already exhibit traits that can foster an adaptive management. But this is only possible if law builds on an understanding of how human and natural systems function. Both of the case studies concern systems for legal management of natural resources and human activities affecting these resources. In addition, both aim to apply a holistic perspective, where measures are proposed and reviewed on a regular basis, based on the overall objectives as well as new information and changing conditions in the natural environment. This is an adaptive approach. It is not so much the frequency with which management is reviewed that is the problem, but rather what is

[58] See Sarah Burch and others, *New directions in earth system governance research* 1 Earth System Governance urn:issn:2589 (2019).
[59] Holling and others (2004), Derek Armitage, *Governance and the commons in a multi-level world* 2 International Journal of the Commons 7 (2008),p 5; Galaz (2014), ch 2; Burch and others (2019).
[60] J. Ruhl, *Panarchy and the law* 17 Ecology and Society 31 (2012); C. S. Holling, *Response to "Panarchy and the Law"* 17 Ecology and Society (2012)
[61] Holling (2012).
[62] Ruhl (2012), p 3.
[63] See section 2.3 below.

included in the management. If legal systems do not encapsulate the complexity of the social and ecological systems, the adaptive approaches will fail to provide sustainable management. To be able to make that case, there is a need to first elaborate on the concept of adaptive management/governance.

2.2 Adaptive management

2.2.1 Adaptive management as a concept

Adaptive management should be understood, in the context of this book, as management "[…] where experiments become policy and results are continuously monitored to further inform that policy".[64] Most scholars use the broader concept of governance when discussing the adaptiveness of law, since much environmental legislation also pertains to non-state actors. Consequently, this concept will also recur throughout the text, although mainly in relation to what other scholars have written.

The basic idea of adaptive management is that it is a process, rather than a one-shot decision where everything is accounted for.[65] Adaptive processes have also been described as "[…] flexible by being open to revision, employing iterative decision-making, and engaging with experimentation. They are innovative and participatory. They are polycentric, meaning they are spread across multiple centers of activity, social networks, and environmental stakeholders in a pluralistic decision-making context".[66] Some argue that this approach differs from much traditional environmental law. Historically, environmental law has circled around permit processes, where a permit agency tries to anticipate all possible effects from an operation. Decisions are taken at the "front-end" of a process, before the effects can be completely known.[67] Adaptive approaches function in a more experimental fashion. Theories are tested and then evaluated at the "back-end" of the process. This

[64] Brian C. Chaffin, Hannah Gosnell and Barbara A. Cosens, *A decade of adaptive governance scholarship: synthesis and future directions* 19 Ecology and Society (2014), p 6.
[65] Craig Robin Kundis and J. B. Ruhl, *Designing administrative law for adaptive management* 67 Vanderbilt Law Review 1 (2014), p 7.
[66] Daniel A. DeCaro and others, *Theory and research to study the legal and institutional foundations of adaptive governance* in Barbara Cosens and Lance Gunderson (eds), *Practical panarchy for adaptive water governance: linking law to social-ecological resilience* (Springer International Publishing 2018), p 270.
[67] J. B. Ruhl, *Regulation by adaptive management — is it possible?* 7 Minnesota Journal of Law, Science & Technology 57 (2005), p 30.

enables informed decisions to be taken when the effects are known. In such processes, decisions are not final, but rather designed to be evaluated and amended.[68]

2.2.2 Law and adaptive management

Adaptive approaches to decision-making undoubtedly present some challenges for legal systems and the central principles of predictability, legal certainty, and rule of law. These challenges have been subject to much debate among environmental law scholars. Cosens and Gunderson note that law presents barriers to adaptive governance. Both government and law are designed to provide social stability, and the introduction of flexibility can be seen as risky. Nevertheless, they also note that there are existing tools in law to facilitate adaptive governance.[69] Allen and others argue that legal certainty "does not mesh well with environmental unpredictability".[70] Law limits the possibilities of experimentation sought for in an adaptive management regime.[71] Ebbesson and Hey note that the rule of law may hamper flexibility, but also that it can foster trust, and thus help to create a capacity to adapt and persist.[72] It is thus the very characteristics of law that foster trust in society that can also support unsustainable practices and inflexible governance.[73] In a frequently cited paper on the governance of commons, Dietz and others conclude that "Fixed rules are likely to fail because they place too much confidence in the current state of knowledge […]".[74] Finally, Cosens and others argue that there are other tools available, and that "adaptive management is not appropriate when the decision-making is messy, involving consideration of both science and socioeconomic factors, or when aimed at governance functions and processes such as setting broad goals and policies (e.g. planning) or building collaborative relationships".[75] This quotation refers

[68] Ibid, p 30.
[69] Barbara Cosens and Lance Gunderson, *An introduction to practical panarchy: linking law, resilience, and adaptive water governance of regional scale social-ecological systems* in Barbara Cosens and Lance Gunderson (eds), *Practical panarchy for adaptive water governance: linking law to social-ecological resilience* (Springer International Publishing 2018), p 12.
[70] Craig R. Allen and others, *Adaptive management for a turbulent future* 92 Journal of Environmental Management 1339 (2011), p 1343
[71] Ibid, 1343
[72] Jonas Ebbesson and Ellen Hey, *Introduction: where in law is social-ecological resilience?* 18 Ecology and Society (2013), p 1.
[73] Ibid, p 2.
[74] Dietz, Ostrom and Stern (2003), p 1909.
[75] Cosens and others (2017), p 8.

to management, and the authors continue to discuss what law can and cannot contribute to within governance processes. They find that even though law can mandate certain types of processes, many such collaborative processes cannot be directly legislated.[76] Rather, governance is needed, and this goes beyond the scope of law.

However, it could also be argued that there are no situations that are not "messy". The term "messy" is used here as it is the term used by Cosens and others. These situations have also been described as "wicked problems", where goal formation, problem definitions, and solutions are contested, and objective expertise is not enough on its own to solve the challenges.[77] This is closely related to the discussions concerning rational planning, presented in chapter 6 of this book. Law and management need to relate to messy situations and take into account the interconnections between politics, nature, and social systems.[78] Cosens et al conclude that law might not be able to determine exactly how the processes should be carried out, but a legal framework needs to be in place to facilitate such processes.[79] How legal acts governing marine and water management can be responsive to the complexity of social and ecological systems is a core interest of this book.

Many of the quotations above, and much of the scientific discussion on how law can be used in adaptive governance/management, indicate an understanding of law as a relatively one-dimensional tool. The challenge for law in adaptive management is then to ensure the rule of law, legal certainty, and predictability. In this book, law is understood in a different way, which facilitates an analysis of the possibilities of law in a system of adaptive management. Adaptive management does not require revolutionary changes to the core values of law. Rather, we need to make use of the different tools that are available in the legal system. Focus should be placed on making sure that these tools are tuned to take the complexity of social-ecological systems into account. The following section provides an overview of how law is understood in the current work and what constitute the greatest challenges for law in fostering adaptive management.

[76] Ibid, p 8.
[77] See Cosens and others (2020), p 1689.
[78] See *inter alia* Josselin Rouillard and others, *Protecting and restoring biodiversity across the freshwater, coastal and marine realms: is the existing EU policy framework fit for purpose?* 28 Environmental Policy and Governance 114 (2018) who discusses how EU policies directed at biodiversity protection are counteracted by other EU policies with different objectives, highlighting the need for policies to take into account all sectors affecting the natural environment, not only directly.
[79] Cosens and others (2017), p 8.

2.3 Layers of law

There are numbers of challenges for law in striving to foster an adaptive management of natural resources. There are those who argue that the time has come for a new type of law, one that can be flexible and that takes into account the complex interconnections of human and natural systems.[80] However, I argue that there is great potential in the legal system as it is designed today. Ventures to completely reshape law may be redundant, and to some extent unrealistic. Much of the literature discussed here conveys a picture of law as *one* object, which has the purpose of maintaining basic legal principles of the rule of law, predictability and legal certainty. This is perhaps not an understanding of law that is representative of all scholars cited in the previous section. Nevertheless, much of the argumentation seems to build on such an understanding. As described in section 1.3, this book builds on an understanding of law as a layered construction where different laws perform different functions in relation to adaptivity and the more traditional legal principles. Such an understanding offers the chance to foster adaptivity within the current system of law.

Law needs to be understood as consisting of at least two layers. The first layer is structural and has the purpose of setting and achieving long- and short-term objectives and providing processes for how these objectives can be met. This layer consists of the legal acts providing overarching planning tools, setting quality standards, or providing more holistic objectives for management. The second layer is operational. This layer regulates the foundations for how *inter alia* permit processes are designed, and what can or cannot be part of these processes. This understanding of law makes possible a discussion on the adaptiveness of law in a more substantive manner.[81] Both layers thus relate to the application of law and what interests and objectives that can be taken into account in different processes.

Legal certainty, due process, and predictability are central concepts within any state founded on the rule of law. Adaptive management builds on the idea that law needs to be able to adapt in the face of new conditions. At first sight, these values seem to be in conflict with each other. A company applying

[80] See Kotzé and Kim (2019).

[81] It should be noted that the layers of law introduced here should not be confused with the *levels* of law as discussed by *inter alia* Tuori in Kaarlo Tuori, *Ratio and voluntas: the tension between reason and will in law* (Farnham, Ashgate 2011), ch 5. Tuori discusses a normative surface level and sub-surface levels consisting of legal principles and legal culture. The layers of law introduced here are of a much more concrete character, and would all fall into the normative, surface level of Tuori's system.

for an environmental permit needs to know what the playing field is. The values of legal certainty and rule of law can foster trust in the legal system, and thus build a resilient and robust society. But at the same time, these values support inflexible governance which may lead to the maintaining of unsustainable business practices, which would be contrary to an adaptive management regime.[82] This can be exemplified by the process concerning larger infrastructure projects, such as roads. Once a project has been granted a permit, and the construction work commences, it is not possible to subject the project to an adaptive management process characterized by experimentation and adaptation.[83] Once the road is built, it is even more difficult to subject it to any type of adaptive management. This example pertains to decisions that are taken in, what I choose to call, the operational layer. In this layer, the principles of legal certainty and predictability are central. Nevertheless, all decisions in this layer are informed by other decisions, that have been taken in the structural layer of law.

The structural layer of law consists of legal acts that have a strategic, or structural, function, as opposed to the more concrete, operational regulations governing *inter alia* permit processes. Municipal comprehensive planning, the MSPD, and the WFD are all part of the structural layer. These tools all have adaptive characteristics. They build on continuous evaluation, so that new information can be used to inform and adjust plans or quality standards to be able to meet the overarching objectives in changing conditions. The processes in all three regimes mandate public participation and different levels of government are involved.[84] The final result of these processes are different types of plans. The plans provide information and guide the decisions in permit processes by setting *inter alia* EQS for water, or by allocating areas for certain uses through comprehensive spatial planning. Granted, there are also differences between the types of tools. Marine plans and municipal comprehensive plans have a guiding function, while EQS are binding and need to be respected in both planning and permit processes.

To illustrate how the structural layer of law functions, a permit process concerning a pulp mill can be used. It starts in the structural layer with a comprehensive plan which points out areas in the municipality where heavy

[82] Ebbesson and Hey (2013), p 2.

[83] Robin Kundis and Ruhl (2014).

[84] See chapters 5, 7, and 10. In municipal planning, public participation is an important aspect, and the central government is included in the process through the CABs, the MSPD requires participation of relevant stakeholders and the WFD also builds on a participatory approach.

emitting industries can be located. In the plan, such industries are situated in a broader context of society and the needs of, and possible effects on, the natural environment. The second and third steps (simply put) are the production of a detailed development plan and a permit application. These processes, that take place in the operational layer of law, are facilitated by the fact that there is already a comprehensive plan pointing out where and how the mill can be of most use while having the least detrimental impact on the environment. In this process, predictability and legal certainty are relatively high. Once the permit is given and the operations are up and running, all other plans and strategies in the structural layers need to take it into account. If problems occur that could not be foreseen in advance, the plans need to adapt to these new circumstances. In the name of predictability and legal certainty, the possibilities to amend or repeal a permit are relatively limited. The mill can of course be shut down and the damage can be mitigated if it turns out that the negative effects on the natural environment are too big. Nevertheless, once an operation is located in one place, the cost of moving it may outweigh the environmental interest in doing so, and cases where an operation gets its permit repealed are rare.

Dealing with the consequences of any operation requires adaptation in management, changing or perhaps limiting the disturbances from other planned projects. If the consequences are accounted for in planning, i.e. the structural layer, it will be clear for new developers what their chances are in a permit process. This is the same type of processes that are needed when unforeseen changes occur in the natural system due to climate change, earthquakes or extreme weather. Change can be induced both directly and indirectly through human activities, but also by natural processes. Through planning, adaptability is ensured, while the core principles of the legal system are upheld. Of course, there are some adaptive traits within the operational layer as well. EQS have some adaptive characteristics also in the operational layer. Once a permit is given to an operation that leads to increased pressures on a certain water body, this will affect the possibilities for future operations to be located in the same area. Furthermore, environmental permits are reviewed on a regular basis, and they can also be revised due to new, unforeseen circumstances.[85] However, the length of time between general revisions is longer than that of the plans in the structural layer. In addition, they do not fulfill the same overarching function as the comprehensive plans,

[85] Swedish Environmental Code (1998:808), ch 24 sec 5.

marine plans or river basin management plans do. This book is focused on the legal design of certain parts of the structural layer of law.

The argument presented in the previous paragraphs could indicate that there is little work left to do to achieve a functional legal system for adaptive management. Unfortunately, this is not the case. But this way of understanding law points to where legal scholars should look so as to understand the real challenges for law in promoting adaptive management. If the structural layer is to inform decisions, and if this is the core of adaptive management, then there is a need to study how the legal acts in this layer are designed. Such studies need to address if these acts actually manage to take the complexity of social-ecological systems into account. Both the MSPD and the WFD are to some extent built on the idea of adaptive management.[86] Nevertheless, as this work will show, there are a number of challenges built into these two legal regimes. To understand what these challenges are, it is important to study what happens in the implementation phase, when the plans and EQS from the structural layer are used to inform decisions in the operational layer. In essence, the aim is to understand what law *becomes*, rather than what it *is*.

While much of the literature on adaptive law does not recognize the layered structure of law, it is not an entirely new concept. Soininen and Platjouw discuss law in terms of levels of abstraction, where they differentiate between a project level and a planning level.[87] Yet, they do not make the same clear distinction concerning the roles in an adaptive law system that is formulated here.

To be able to study and understand the structural layer of the Swedish legal system pertaining to marine and water management, there is a need to understand what traits a legal system needs in order to foster adaptivity, and to reflect a social-ecological system. Here, Cosens and others have developed a framework to understand the role of law in adaptive governance. Cosens and others argue that the structure needs to be characterized by polycentricity, integration, and persistence.[88] Polycentricity means that there needs to be multiple centers of authority, which are nested through representation among and between levels of decision-making. In such a system, redundancy is

[86] See Niko Soininen and Froukje Maria Platjouw, *Resilience and adaptive capacity of aquatic environmental law in the EU: an evaluation and comparison of the WFD, MSFD, and MSPD* in David Langlet and Rosemary Rayfuse (eds), *The ecosystem approach in ocean planning and governance: perspectives from Europe and beyond*, vol 87 (Brill 2019).
[87] Ibid, p 23.
[88] Cosens and others (2017), p 2.

needed, as in multiple levels of management that are responsible in the same areas. In addition, subsidiarity – that is, having decisions taken at the lowest appropriate level – is crucial in a polycentric system.[89] Integration entails that all sectors that affect a resource are included in the process. Finally, persistence and stability in decision-making ensures trust and fosters legitimacy.[90] All of these traits of an adaptive system resonate with the requirements of the ecosystem approach, as formulated in the so-called "Malawi principles"[91]. The ecosystem approach could thus be seen as an important legal tool to foster and implement adaptive management regimes.

2.4 The Ecosystem Approach

2.4.1 Introduction to the concept

The "ecosystem approach" has become a common tool in environmental management and law since the turn of the millennium.[92] The basic idea of the approach is to engage in management from a holistic, ecosystem perspective, rather than managing pressures on the environment on a sector-by-sector basis.[93] The ecosystem approach, in all its different shapes and forms, is a complex concept. It is at the same time a legal and a scientific concept. To be able to understand the legal definitions and uses of the ecosystem approach, it is necessary to first study its origins, and how it came to be such a prominent concept within environmental governance.

The ecosystem approach is a rather elusive concept and it can be quite challenging to define.[94] It has been noted that while there are difficulties in

[89] Ibid, p 2.
[90] Ibid.
[91] UNEP/CBD/COP/5/23, (2000), These principles are further elaborated in section 2.4.2. Within EU law, the ecosystem approach is referred to as "the ecosystem-based approach". Within this book there is no differentiation made between these two concepts and the term used will be "the ecosystem approach".
[92] See ibid; Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention), 1992, Annex V art 3(1)(iv); HELCOM, *HELCOM Baltic Sea Action Plan, (BSAP), adopted on the 15 November 2007 in Krakow, Poland by the HELCOM Extraordinary Ministerial Meeting*, (2007), p 19; 2008/56/EC 2008, ch 1 art 1(3); 2014/89/EU 2014, art 5(1).
[93] See Edward Maltby, *Ecosystem approach: from principle to practice* (Ecosystem Service and Sustainable Watershed Management in North China: International Conference, Beijing, PR China, August 23 - 25, 2000) (2000).
[94] David Langlet and Rosemary Rayfuse, *Challenges in implementing the ecosystem approach: lessons learned* in David Langlet and Rosemary Rayfuse (eds), *The ecosystem approach in ocean planning and governance: perspectives from Europe and beyond* (Brill | Nijhoff 2018), p 448.

understanding all factors affecting an ecosystem, it is rarely the scientific factors that limit the application of an ecosystem approach. Rather, it is the political systems that lack the will to make controversial decisions in uncertain circumstances.[95] Much has been written on the approach, both evaluating different definitions and their content,[96] and evaluating specific management regimes from an ecosystem approach perspective.[97] The novelty of this work is that it focuses on the spatial aspects of the ecosystem approach and discusses in greater depth the practical and theoretical challenges involved in trying to integrate them in marine and water management. While the ecosystem approach builds on the idea of integrated management, and the Malawi principles are all interconnected, it is important to understand the different building blocks of the approach in and amongst themselves. By not aiming to assess the entire approach, the delimitations allow for a more qualitative and comprehensive review, which can be of use when designing new management systems where the ecosystem approach is to be applied. This book will enhance the understandings of how choices in management level and scale can affect the possible outcomes of ecosystem management. In turn, this can also inform other aspects of the approach, such as participation and adaptivity.

As discussed above in section 1.2, the application of an ecosystem approach in MSP is prescribed by both the EU directive and the Swedish ordinance.[98] Neither of these acts include any further definition of what the ecosystem approach is, nor how it is supposed to be implemented concretely. Given that the ecosystem approach is promoted by the EU as a central principle in marine environmental management, it is important to understand

[95] Murawski (2007), p 684.
[96] R. Edward Grumbine, *What is ecosystem management?* 8 Conservation Biology 27 (1994); Robert C. Szaro, William T. Sexton and Charles R. Malone, *The emergence of ecosystem management as a tool for meeting people's needs and sustaining ecosystems* 40 Landscape and Urban Planning 1 (1998); Katie K. Arkema, Sarah C. Abramson and Bryan M. Dewsbury, *Marine ecosystem-based management: from characterization to implementation* 4 Frontiers in Ecology and the Environment 525 (2006); Trine Skovgaard Kirkfeldt, *An ocean of concepts: why choosing between ecosystem-based management, ecosystem-based approach and ecosystem approach makes a difference* 106 Marine Policy 103541 (2019).
[97] See M. Vlachopoulou and others, *The potential of using the ecosystem approach in the implementation of the EU Water Framework Directive* 470-471 Science of The Total Environment 684 (2014); Sara Söderström and Kristine Kern, *The ecosystem approach to management in marine environmental governance: institutional interplay in the Baltic Sea region* 27 Environmental Policy and Governance 619 (2017); Alison R. Holt and others, *Mismatches between legislative frameworks and benefits restrict the implementation of the ecosystem approach in coastal environments* 434 Marine Ecology Progress Series 213 (2011)
[98] Ordinance (2015:400) on Marine Spatial Planning art 10; 2014/89/EU 2014, art 5(1).

what it is, as well as the rationale behind applying it in MSP. As for the WFD, there is no mention of the ecosystem approach in the directive. Nevertheless, the European Commission has claimed that it is to be considered consistent with the ecosystem approach.[99]

The first section of this section maps out some of the definitions of the ecosystem approach that can be found in the literature. The concept has been framed in a number of ways, and one difficulty in understanding it is the number of different names that have been attributed to it. The MSFD and the MSPD both call it an "ecosystem-based approach",[100] some scientists call it "ecosystem-based management",[101] others talk about the "ecosystem approach to management"[102]. Whether these different terminologies encompass one and the same concept, or if the differences actually have consequences for how the management is performed, will be discussed later in this section. The following paragraphs will be concerned with a more general introduction to some of the basic characteristics of the ecosystem approach.

The origins of the ecosystem approach can be traced to the 1930s and '40s when a few American ecologists recognized that, in addition to species protection, entire ecosystems needed protection. Although such an approach was promoted by some scientists in the following years, it was not until the 1980s that the ideas really caught on in the scientific community.[103] The growing interest in ecosystem management had its basis in the realization that the traditional management of natural resources was leading to loss in biodiversity and decreased sustainability.[104] One of the basic ideas with ecosystem management was, and still is, that it entails an attempt to use a more holistic approach as opposed to previous management, which had been concerned with individual projects, or species.[105] In this sense, it is easy to see why the approach is a prominent feature in MSP, as it is based on the same recognition: namely that a sector by sector approach will lead to the degradation of the environment.

[99] European Commission, (2006), p 24.
[100] 2008/56/EC 2008 preamble (8); 2014/89/EU 2014 preamble (3).
[101] Michael Fogarty J. and James Mccarthy J., *The sea: marine ecosystem-based management*, vol 16 (Michael Fogarty J. and James Mccarthy J. eds, Harvard University Press 2014)
[102] Söderström and Kern (2017).
[103] Grumbine (1994), p 28.
[104] Szaro, Sexton and Malone (1998), p 2.
[105] Ibid, p 2.

Since the mid-1990s, there have been a number of research papers aiming to identify common denominators in the different definitions of the ecosystem approach. The first such paper was published in 1994 by Grumbine, who reviewed academic literature to identify if it was possible to find consensus around some basic elements in ecosystem management.[106] Ten principles for ecosystem management were identified. Although humans were mentioned as an integral part of ecosystems, it was clear that the focus for ecosystem management at this time was on biological processes.[107] In the last 20 years or so, the ideas concerning ecosystem management (or the ecosystem approach, as it is more popularly called now) have shifted to a heavier focus on the human dimension. In fact, already in 1998, Szaro and others highlighted that humans are an integral part of ecosystems.[108] There have been more attempts to identify the core of the ecosystem approach since then. These have been directed at supplying both academic and more practical definitions.[109] It is evident, when going through these papers, that the human dimension moves more and more to the center of the ecosystem approach and that decisions regarding ecosystem management are increasingly considered to be a matter of societal choice. This is clear in, for example, the Malawi principles presented below in section 2.4.2, where the objectives of management as a matter of societal choice is promoted as the first of 12 principles for the ecosystem approach.

The different reviews of the ecosystem approach concept all highlight that most of the definitions share some basic features. Many of them make no distinction between ecosystem-based management and ecosystem approach.[110] On the other hand, other researchers claim that these two concepts are distinct and should not be viewed as being the same. Ecosystem-based management is aimed at governing an environment, placing the needs of the ecosystem first, while the ecosystem approach is more aimed at governing human activities within that environment, and sustaining the ecosystem for human benefits, and thus has a more anthropocentric

[106] Grumbine (1994).
[107] Ibid, pp 30-31.
[108] Szaro, Sexton and Malone (1998).
[109] See e g Arkema, Abramson and Dewsbury (2006); K. L. McLeod and others, *Scientific consensus statement on marine ecosystem-based management* (2005); Rachel D. Long, Anthony Charles and Robert L. Stephenson, *Key principles of marine ecosystem-based management* 57 Marine Policy 53 (2015); Söderström and Kern (2017).
[110] See Long, Charles and Stephenson (2015), p 54.

perspective than ecosystem-based management.[111] In sum, it is difficult to find a coherent, agreed-upon, understanding of the different concepts and their internal relation.[112]

2.4.2 Use of the concept in this book

Most of the definitions of the ecosystem approach share some basic commonalities and there is no need to further elaborate on the potential differences between them here. For simplicity's sake, "ecosystem approach" will be used consequently throughout the book, except in direct citations. The reasoning for this is that EU directives, when mentioning the "ecosystem-based approach", draw on an understanding of the concept derived from the Malawi principles,[113] which will be further elaborated below. Suffice it to say that the Malawi principles refer to an "ecosystem approach".

The most prominent definition of the ecosystem approach within international law is found in a decision by the COP to the CBD. While having a clear environmental focus, this definition also highlights the human dimension of ecosystem management, opening with a statement regarding natural resource management being a matter of societal choice, and making a reference to ecosystem services.[114] As this definition has been agreed upon by the international community, and is the definition that is most commonly referred to, it will be the starting point for the discussions on the ecosystem approach in this book.

It was under the aegis of the CBD that the ecosystem approach gained a more formalized status in the international community. While not included in the original text of the convention from 1992, the COP to the CBD adopted the ecosystem approach as "[…] the primary framework of action to be taken under the Convention" at its second meeting, in 1995.[115] At its fifth meeting, in Malawi in 2000, the COP adopted a decision, stipulating 12

[111] See Andrew J. Plater and Jake C. Rice, *Review of existing international approaches to fisheries management: the role of science in underpinning the ecosystem approach and marine spatial planning* in Sue Kidd, Andy Plater and Chris Frid (eds), *The ecosystem approach to marine planning and management* (Earthscan 2011), pp 135-136, see for further discussions Vito De Lucia, *Competing narratives and complex genealogies: the ecosystem approach in international environmental law* 27 Journal of Environmental Law 91 (2015).
[112] Kirkfeldt (2019).
[113] See section 2.4.3.
[114] UNEP/CBD/COP/5/23, (2000).
[115] UNEP/CBD/COP/2/19, *Decision II/8: preliminary consideration of components of biological diversity particularly under threat and action which could be taken under the convention*, Convention on Biological Diversity (CBD) COP, (1995).

principles for the application of the ecosystem approach. In this decision, the COP also adopted a general definition for the ecosystem approach as being: "[…] a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way".[116] The 12 principles, commonly referred to as "the Malawi principles", are as follows:

1. The objectives of management of land, water and living resources are a matter of societal choice.
2. Management should be decentralized to the lowest appropriate level.
3. Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.
4. Recognizing gains from management, there is usually a need to understand and manage the ecosystem in an economic context. Any such ecosystem-management programme should:
    a. Reduce those market distortions that adversely affect biological diversity;
    b. Align incentives to promote biodiversity conservation and sustainable use;
    c. Internalize costs and benefits in the given ecosystem to the extent feasible.
5. Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.
6. Ecosystems must be managed within the limits of their functioning.
7. The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.
8. Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term.
9. Management must recognize that change is inevitable.
10. The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.
11. The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.
12. The ecosystem approach should involve all relevant sectors of society and scientific disciplines.[117]

[116] UNEP/CBD/COP/5/23, (2000), annex A.1.
[117] Ibid, annex B.

2.4.3 The Ecosystem Approach in legislation

In addition to the general definition adopted by the COP to the CBD, the ecosystem approach is mentioned both in national legislation, and in EU directives and policy. Furthermore, it has been endorsed *inter alia* by the contracting parties to the Convention on the Protection of the Marine Environment of the Baltic Sea (the Helsinki Convention) and Convention on the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention).[118] The following section examines how the ecosystem approach has been pronounced within EU marine policy and in the Swedish MSP legislation, with the aim of deepening our understanding of how the concept is defined and used in these legal acts.

Neither the MSFD nor the MSPD include clear definitions of the ecosystem approach, even though the term is used in both of them.[119] However, in an early proposal for a directive on a marine strategy (which would later become the MSFD) from 2005, a reference was made to the International Council for the Exploration of the Sea's (ICES)[120] Guidance document on the application and implementation of an ecosystem-based approach.[121] The definition of the ecosystem approach forwarded in this document draws on *inter alia* the Malawi principles, but formulates six central principles instead. Among the similarities to the Malawi principles could be mentioned the importance of appropriate scale for management action, as well as the statement that ecosystem management is a matter of societal choice.[122] An additional aspect in ICES' definition is that it is stressed that the linkage between the terrestrial and marine environment should be taken into account in marine management. The ecosystem approach is furthermore elaborated to some extent in the EU CFP.[123] This definition pertains mainly to fisheries management and will not be further elaborated here.

[118] HELCOM & OSPAR, *Declaration of the First Joint Ministerial Meeting (JMM) of the Helsinki and OSPAR Commissions. Bremen 25-26 June 2003*, (2003).
[119] The MSFD includes a definition of the ecosystem approach. However, this definition is too short and general to give any concrete guidance to the practical application of the approach. See 2008/56/EC 2008, art 1(3).
[120] ICES is a global organization, constituted of researchers, that develops science regarding the sustainable use of the oceans.
[121] European Commission COM(2005) 505, *Proposal for a Directive of the European Parliament and of the Council establishing a framework for community action in the field of marine environmental policy (Marine Strategy Directive)*, (2005), p 5.
[122] ICES, *Guidance on the application of the ecosystem approach to management of human activities in the European marine environment*, (2005), p 2.
[123] CFP 2013, art 4(1)(9).

In the Swedish ordinance on MSP, it is stated that SwAM is supposed to apply an ecosystem approach when developing the marine plans.[124] In itself the provision does not give any guidance on how important the ecosystem approach should be within the Swedish MSP, nor what definition it draws upon. However, in the preparatory works it is highlighted as an important principle for all work with MSP. The preparatory works draw heavily on the human dimension of ecosystem management, and an ecosystem-based planning is described as a form of planning in which politically decided goals shall be formulated from an ecosystem perspective. In addition, it is stated that the central meaning of the ecosystem approach is that humans are part of the ecosystem, and that ecosystems produce goods and services on which humans are dependent.[125] It is also clear that the government commission felt hampered by the instructions from the government, where the administrative boundaries were already fixed to one nm seaward of the baseline. It is expressed in the report that such a delimitation may be inconsistent with the ecosystem approach definition used by the commission, as scale integration is an important factor there.[126] In a subsequent memorandum on MSP by the Ministry of Environment, the ecosystem approach was covered in a shorter section and it was concluded that the concrete application of the approach would be elaborated in the practical MSP process.[127]

As a step in the further elaboration of the interpretation of the ecosystem approach in Swedish MSP, SwAM published a report in 2012. Here, the ecosystem approach was described as "[…] a strategy for the conservation of natural values, sustainable use and a fair distribution of natural resources". The goal was to safeguard the ecosystem services on which humans are dependent in the long-term perspective.[128] The SwAM report identified six central principles that relate to one or more of the Malawi principles. Hence, the aim was to apply, more or less, the same definition of the ecosystem approach as the one promoted by the CBD.

The ecosystem approach, as a concept, is difficult to exactly define, its application may be equally difficult to assess. An attempt to evaluate all of the principles and how they are being applied in a specific context seems an onerous task. Thus, there is a need to break it down, and find a more feasible

[124] Ordinance (2015:400) on Marine Spatial Planning, sec 10.
[125] SOU 2010:91, *Planering på djupet*, (2010), p 264.
[126] Ibid, p 270.
[127] Miljödepartementet, *Promemoria hushållning med vattenområden*, (2013), pp 31-32.
[128] The Swedish Agency for Marine and Water Management, *Tillämpning av ekosystemansatsen i havsplaneringen* (2012), p 16.

approach to discussing the application of the ecosystem approach. Choices in geographical scale, as well as administrative management levels, are central for this book. Consequently, the two principles that deal with these issues are used to illustrate how the spatial aspects of the ecosystem approach are being applied and can be understood, both in the EU in general, and in Sweden more specifically. In addition to these two principles, the principle that managers should consider effects of their activities in adjacent ecosystems[129] has clear spatial connotations. However, as that principle is intrinsically connected to the jurisdiction of the level of management, it will not be covered to any further extent in this book. The two principles studied are:

- "Management should be decentralized to the lowest appropriate level"; and
- "The ecosystem approach should be undertaken at the appropriate spatial and temporal scales".[130]

The need to decentralize management to the lowest appropriate level is stressed by both the Malawi principles and SwAM.[131] ICES' guidance document mentions the connection between the geographical span of management and ecological characteristics as one of principles of the ecosystem approach.[132] The appropriate scale and level of management are core concepts in this work: How can the concept of appropriate level of management and geographical scale of governance be understood, if the aim is to reach a holistic ecosystem management? With the inherent complexity of ecosystems, this question is impossible to answer in a definitive way. Still, it is relevant to discuss how the human management of ecosystems can take all of these complexities into account, as well as how these management systems can operate functionally in an integrated manner in and between different ecosystem scales.

It is important to stress that all of the Malawi principles need to be understood as interconnected, and in relation to this the research aim and questions, the principles of recognizing effects on adjacent ecosystems,[133]

[129] See above, principle no 3.
[130] UNEP/CBD/COP/5/23, (2000), pp 105-106.
[131] Ibid, principle 7, The Swedish Agency for Marine and Water Management, *Tillämpning av ekosystemansatsen i havsplaneringen*(2012), p 10.
[132] ICES, (2005) p 2.
[133] Principle no 3, UNEP/CBD/COP/5/23, (2000).

understanding the context of ecosystem management,[134] and recognizing that change is inevitable,[135] are of course also relevant. Nevertheless, the analysis will depart from the two principles concerning level and scale of management, to illustrate some of the challenges in implementing an ecosystem approach. Even though the approach should be implemented as a whole, each of its constituent parts need to be considered when designing a management regime, and this book focuses on two of these parts.

A point of departure for this research is that these spatial aspects need to be understood as something more than identifying the lowest appropriate level or scale. In fact, there is no such thing as an "appropriate" level or scale. Rather, any natural resource management regime needs to be constantly adapted and re-adapted to the evolving preconditions that nature presents us with. Choices regarding management level and ecosystem scale, and the consequences that follow from these choices, need to be explicit in legislative processes. It is important that the different levels of management are compelled to cooperate with each other at all stages. This is equally essential for selected ecosystem scales. Too strong a focus on one scale may lead to problems in others. The analysis of the book is informed by the understanding of social and natural systems as interconnected, as discussed above in section 2.1. Such an understanding also makes the dichotomy of anthropocentric and biocentric worldviews superfluous, and perhaps false. It is impossible to separate humans from nature, and vice versa. The challenge is to build management systems that take this interconnectedness seriously.

2.4.4 Ecosystem scale and management level in the literature

Although few authors have focused specifically on the matter of appropriate management level and ecosystem scale, these are recurring sub-themes in much ecosystem management literature. The complex nature of ecosystems, and the challenges of designing appropriate management systems is a recurring theme. This relates to both who performs the management, and how certain ecosystems are delimitated.[136] The current work revolves around the idea that choices in scale and levels matter, and that, in a way, such choices

[134] Principle no 4, ibid.
[135] Principle no 9, ibid.
[136] Bradley C. Karkkainen, *Collaborative ecosystem governance: scale, complexity, and dynamism* Virginia Environmental Law Journal 189 (2002), Murawski (2007).

construct nature.[137] This is not to say that physical ecosystems cannot be defined or found in nature. Rather, the point is that identifying an ecosystem scale entails choices, where some processes may be found and others lost. There may be great benefits in choosing a local scale to study an ecosystem, as local governance structures can be novel and highlight new ways of addressing ecosystem challenges. However, there are a multitude of factors affecting an ecosystem, and local structures need to integrate other scales as well.[138] Choosing an appropriate scale for ecosystem management is thus largely dependent on what the identified problem is.[139] This applies to the temporal aspects of management as well. Lag effects are characteristic of ecosystem processes that lead to certain issues not being visible in a short-term perspective.[140] This is one of the challenges in the formulation of the Malawi principles. It is acknowledged that the ecosystem approach is an integrated framework, that it is not possible to separate certain issues from others. The wording of a principle in terms of finding an appropriate scale is contradictory to the overall purpose of the approach, as such an identification would require a certain set of problems to be identified and others ignored. The WFD serves as a good example of this, which will be further discussed in part III of the book. Within the frame of the Directive, the water body is identified as the appropriate scale to assess water quality. This identification inevitably leaves out factors that may be equally important for an integrated, holistic management, but which are only visible on other scales. As for the level of management, for quite some time now there have been calls for collaborative, or systems perspective, governance.[141] These calls stem from the knowledge of ecosystems as complex systems, and that a comprehensive management needs to understand the system as a whole.[142] Yet, this understanding of ecosystems rarely coincides with existing management structures.[143]

As will be shown in part II, every level of management has its own perspective of governance. These perspectives will highlight some processes

[137] David Delaney, *Making nature/marking humans: law as a site of (cultural) production* 91 Annals of the Association of American Geographers 487 (2001).
[138] H. Österblom and others, *Making the ecosystem approach operational—can regime shifts in ecological- and governance systems facilitate the transition?* 34 Marine Policy 1290 (2010).
[139] Murawski (2007).
[140] Brita Bohman, *Transboundary law for social-ecological resilience? A study on eutrophication in the Baltic sea area* (Stockholms universitet 2017), p 85.
[141] See Karkkainen (2002) and Grumbine (1994).
[142] Karkkainen (2002), p 204.
[143] Ibid, p 212.

and interests, and neglect others. This can be compared to specific scales of ecosystem management only being able to cope with specific problems. Few authors seem to think that there is actually *one* appropriate level for managing ecosystems. Yet, the literature is silent on the issue of how choices in management level affect management outcomes. It has been proposed that MSP should build on a hierarchical approach, where each level provides context for the lower levels.[144] But there is a need to understand differing perspectives and interests between management levels. The argument in the present work builds on the idea that if a more holistic, overarching management ideal is to be implemented, this needs to be informed by how objectives and rationales differ between levels of management, otherwise it will be impossible to negotiate between these objectives.

[144] Paul M. Gilliland and Dan Laffoley, *Key elements and steps in the process of developing ecosystem-based marine spatial planning* 32 Marine Policy 787 (2008), p 789.

3 Theoretical and methodological considerations

If the map could be ideally correct,
it would include, in a reduced scale,
the map of the map; the map of the map, of the map;
and so on, endlessly […]
– Alfred Korzybski[145]

3.1 Legal geography

3.1.1 Delimiting nature

This chapter presents the theoretical framework through which the research questions posed in the previous chapter will be analyzed.[146] Focus is placed on the implications that choices of management level and ecosystem scale may have for an adaptive management of natural resources based on the ecosystem approach.

Marine management, by definition, entails the dividing of marine areas into different territories.[147] The sea is a large ecosystem, which, for functional governance, needs to be broken down into smaller, more manageable, units. A key question for such governance is the following: What is manageable? And perhaps of greater importance, what are the appropriate delimitations in terms of ecosystem functionality? These questions must always be related to the land-based activities and geographical claims of human institutions, such as nation states.

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[145] Alfred Korzybski, *Science and sanity: an introduction to non-Aristotelian systems and general semantics* (4. ed. edn, Lakeville, Conn., Lakeville, Conn. : The International non-Aristotelian library publishing company 1958), P 58.

[146] Parts of the present section have been previously published in Aron Westholm, *Appropriate scale and level in marine spatial planning – management perspectives in the Baltic Sea* 98 Marine Policy 264 (2018); Aron Westholm, *Delimiting marine areas: ecosystem approach(es?) in EU marine management* in David Langlet and Rosemary Rayfuse (eds), *The ecosystem approach in ocean planning and governance: perspectives from Europe and beyond* (Brill Nijhoff Leiden 2018).

[147] See Leslie Acton and others, *What is the Sargasso Sea? The problem of fixing space in a fluid ocean* 68 Political Geography 86 (2019), on the challenges of delimiting the Sargasso Sea for management purposes.

The first two research questions – concerning the level of management and ecosystem scale – have geographical implications: scale relates to the spatial delimitations of ecosystems; level concerns the competence, or jurisdiction, of potentially relevant management units and their restriction in relation to other management levels as well as geographies. Both of these questions also relate to the spatial aspects of the Malawi principles, as discussed in section 2.3. The Malawi principles that relate to an appropriate scale of management and lowest appropriate level both give rise to one crucial question: What is *appropriate*? There may be no simple answer to this question. Ecosystems are complex and intertwined, land is inseparable from sea, and administrative boundaries never correspond completely to those of an ecosystem.[148] Nevertheless, choices of scale and management level need to be made. From an EU perspective, directives aimed at governing marine ecosystems, through the application of an ecosystem approach, need to be specific as to what ecosystems are to be governed. The same applies for the nation state. While ecosystems do not lend themselves to being easily delimited, and the appropriate scale or level depends on the aim of a specific management regime, some consistency would be desirable. This would render some substance to the term *appropriate*. From a Swedish perspective, the appropriate level should be one that can ensure that the purposes of MSP, and an ecosystem approach, can be met. One of the main purposes, for both MSP and the ecosystem approach, is to ensure an integrated and holistic management of the marine environment. Yet, looking at the three main legislative acts of the EU pertaining to the marine environment, it is clear that there is no consistent system of delimiting and understanding marine areas.[149] In the Swedish legislative process regarding MSP, it seems as if the questions of appropriate ecosystem scales and management levels were largely ignored, in favor of other, apparently more pressing, political considerations.[150]

3.1.2 Understanding law through map-making

In fictional literature, the map, and its relation to reality, is a recurring topic, spanning from Lewis Carroll's *The Hunting of the Snark* and *Sylvie and Bruno Concluded*, to more modern works such as Michel Houellebecq's *The Map and the Territory*.[151] These works all take an interest in how maps represent physical reality and what such representations do to our understanding of the world. There are obvious connections between the legal world and such representations. Most of the lines in maps that distinguish one area from another are based in law. In that sense, law creates and represents reality in a process that is then deployed in map-making. The following section will provide an understanding of how map-making is a useful metaphor for lawmaking and, thus, can become an analytical lens through which both law and management structures can be studied. Such a lens facilitates an understanding of the implications of choices in management levels, as well as geographical scales of management. Although much has been written about the ecosystem approach,[152] little attention has been paid to how the legal system, paired with the geographic context in which the approach is applied, "creates" ecosystems.

As a theoretical framework, legal geography applies a broad approach to analyzing law. A basic element within this discipline of law and society studies is the concern with how law and space are intertwined, constantly constituting one another. Law is located in space, as much as it also renders legal significance to physical and social spaces.[153] For our purposes, the term "space" or "legal space" should be understood as administrative jurisdictions and geographic areas, delimited through law.[154] As a clarification, the legal space of municipal planning is comprised of the jurisdictions within which a municipality acts. This includes geographic as well as administrative delimitations. Geographic spaces that are delimited through law can perhaps most clearly be seen within the WFD, where the river basins and water bodies become legal spaces that exist within a general system of natural resource management. Legal geography can assist in understanding the consequences that different regulatory choices of spatiality have for the application of an

[148] See Tundi Agardy and others, *UNEP: taking steps toward marine and coastal ecosystem-based management — an introductory guide* UNEP Regional Seas Reports and Studies No 189 (2011).
[149] See Westholm (2018).
[150] See section 5.5

[151] Lewis Carroll, *The hunting of the snark: an agony in eight fits* (London, Macmillan and Co. 1876); Lewis Carroll, *Sylvie and Bruno concluded* (New York, Macmillan and Co. 1894); Michel Houellebecq, *The map and the territory* (Gavin Bowd tr, New York, Vintage Books 2012); Jorge Luis Borges, *Dreamtigers* (London, London 1973), p 90.
[152] See section 2.4.
[153] See Braverman and others in: Irus Braverman and others, *The expanding spaces of law : a timely legal geography* (Stanford, California : Stanford Law Books 2014), p 1.
[154] The theoretical inclinations of the concept of space has been extensively covered, by legal scholars, but also by geographers, sociologists etc. See Henri Lefebvre, *The production of space* (Oxford, Oxford : Basil Blackwell 1991); Doreen B. Massey, *For space* (London, London : SAGE 2005); Valverde, M in Braverman and others (2014); David Delaney, *The spatial, the legal and the pragmatics of world-making: nomospheric investigations* (London, Routledge 2010) offers a more legal discussion.

ecosystem approach. Such choices concern the administrative level of management as well as the geographic scale of a certain type of management. In this book, how these choices differ within a legal system is analyzed, creating overlapping legal spaces, with different, sometimes conflicting, management structures.[155] The legal spaces discussed can be divided into two categories: administrative levels/spaces and geographic scales/spaces.

One aspect of how law shapes nature is through simplification. Nature is complex. Natural processes cannot easily fit within the administrative understanding of the world that governs human action.[156] Through simplification, law can make nature understandable, or legible, for administration. Such simplification makes certain things clear and it becomes easy to systematically order nature. However, other aspects of nature will be lost in the process.[157] Thus, law entails a specific way of looking at nature.[158] The discussions in this book are not aimed at problematizing the simplifications of nature as such, nor are they meant to suggest that these simplifications are in fact simple.[159] Rather, understanding the representation of nature in law as a simplistic image allows for a discussion of what is not included in this image. Such an understanding also allows for a discussion of what could be included to give the image of nature in law a bit more depth, while still recognizing that simplifications in some form or shape are inevitable if nature is to be managed in human legal systems. As an example of this in action, the WFD prescribes an elaborate system to manage water resources in the EU, and although the Directive applies a river basin approach with the natural ecosystems as a baseline, the system is, by necessity, reductionist in relation to the complexity of nature. The system for marine and coastal planning equally entails simplifications. The different levels of management have different geographical and administrative jurisdictions that only cover parts of the natural and social systems. However, if there is an openness about these simplifications and the reductionist nature of law, it will be easier to discuss

[155] Franz von Benda-Beckmann and Keebet von Benda-Beckmann, *Places that come and go: a legal anthropological perspective on the temporalities of space in plural legal orders* in Irus Braverman and others (eds), *The expanding spaces of law: a timely legal geography* (Stanford, California: Stanford Law Books 2014), p 34.
[156] Scott (1998), 262.
[157] Ibid, p 11.
[158] Blomley (2008), p 1826.
[159] Simplification is a complicated process, a point made by both: Scott (1998), p 81, and Blomley (2008).

what is included and what is omitted, as well as what consequences this has for the aquatic environment.

De Sousa Santos uses map-making as a metaphor for lawmaking. He uses three concepts from the field of cartography to analyze legal systems. These three concepts provide the methodological lens through which the Swedish MSP and water governance are analyzed. The concepts are as follows: *scale*, *projection*, and *symbolization*. De Sousa Santos suggests that how these concepts are used constitutes a set of normative choices that will ultimately affect how the map is used.[160] In the following, the three concepts, as de Sousa Santos uses them, will be presented. The chapter then elaborates on how the concepts are inserted into this specific work.

Before outlining the concepts used by de Sousa Santos, there is a need to provide a short note on how the concept of scale is used in this work. As is clear by the research questions, the concept of scale is important within the ecosystem approach. This has led to the formulation of the case concerning water governance. Here, scale is discussed in a broad manner and as an overarching concept: what is an appropriate spatial and temporal scale in ecosystem management. A more theoretical introduction to this overarching type of scale is provided in section 3.2. The following sections will cover scale in the meaning discussed by de Sousa Santos, which is specifically in relation to lawmaking and legislative systems.

3.1.3 Scale

S*cale*, in relation to the research questions presented in section 1.2, is important in three ways: the geographical scale, i.e. the ecosystem delimitations of law; the level of administration where the planning takes place; and the temporal planning cycles within a specific planning system. Choices in scale will entail different grades of detail: a local scale will be detailed, while not showing the broader perspectives; a national/international scale, by contrast, may miss out on detail, but provide a better overview.[161] The choice of scale thus determines which details become meaningful and which features of a certain phenomenon are seen to be relevant.[162] De Sousa Santos uses a labor conflict as an example, illustrating well how the different

[160] Boaventura De Sousa Santos, *Law: a map of misreading — toward a postmodern conception of law* 14.3 Journal of Law and Society 279 (1987).
[161] De Sousa Santos uses the terms large/small scale. I have chosen to call this high/low resolution as I believe these are clearer terms.
[162] De Sousa Santos (1987), 287.

scales – local workers, union representatives, and a multinational corporation – approach and view the conflict differently.[163]

This understanding of scale provides a revealing lens through which to study the two cases, as the different levels of management and the delimitations of water bodies entail choices in scale where the grade of detail will inevitably diverge. It should be noted that the operation of these scales is not mutually exclusive; rather, all scales can be active in one and the same situation, in what de Sousa Santos calls "interlegality".[164] It thus becomes important to understand and identify how they relate to one another in specific situations. A third aspect of scale is what he calls "regulation thresholds" that determine what belongs within the realm of a certain scale and what does not.[165]

Choices in scale entail sacrifices, either in detail, or in how much of a "whole" is captured. For example, on a local level, smaller ecosystems may be visible and important, while the national level is concerned with much larger areas – such as an entire sea basin – and thus might not be able to take such small entities into account. Parts of ecosystems need to be broken down into smaller units to be studied, while others may gain from being studied on a larger scale. Patterns that can be found on one spatial scale may be invisible at another. In a study on how species variability changed in areas that were grazed to differing degrees, the ungrazed area showed the highest variability on a small scale, while the highest variability on a large scale was shown in the moderately grazed area.[166] This phenomenon has also been highlighted in resilience theory: policies based on a local perspective can be problematic on the macro level.[167]

In terms of management level, the choice of scale will be that of administrative entities: municipalities, national government agencies, etc. The legal scale defines the regulatory thresholds, what is or is not included or the limits of operations. For a Swedish municipality, the limits of operations are determined, *inter alia*, by the location principle. This is further elaborated in section 7.2.5, but, in short, the location principle states that municipalities can only decide on matters that are of public interest for the members of the

[163] Ibid, 288.
[164] Ibid, 288.
[165] Ibid, 290.
[166] Nathan Sayre, *Ecological and geographical scale: parallels and potential for integration* 29 Progress in Human Geography 276 (2005)p 279.
[167] Biggs, Schlüter and Schoon (2015), p 10.

municipality. The public interest is closely connected to the geographical boundaries of the municipality.

In addition to the management level and geographic scales, the temporal scale of management is of importance. For planning, the temporal scale can concern the time span of planning cycles. The MSPD stipulates that marine plans should be revised at least every 10 years.[168] The Swedish ordinance on MSP includes a section on planning cycles, stating that the plans should be revised at least every eight years.[169] The Planning and Building Act (2010:900) (PBA), which regulates municipal planning, has no requirements on revisions, but until April 2020, it stipulated that the municipal comprehensive plans had to be declared up-to-date at least once every term of office, which is four years.[170] Each plan, national marine plans as well as municipal comprehensive plans, have a planning horizon, a year by which the goals of the planning shall be achieved. This year differs among the municipal plans. Some were adopted in the early 2000s, while others have been adopted as recently as 2017. This, of course, entails different planning horizons. The national marine plans currently use 2050 as the horizon year, and 2030 for more short-term perspectives.[171] The temporal aspects of planning are of importance, as the benefits from a certain type of management can be seen differently depending on when the goals are supposed to be achieved. For example, costs for mitigating climate change may be high in a short-term, or even medium-term, perspective. However, in the long run, such efforts may repay themselves with ease. Thus, using a long-term planning horizon will highlight other benefits than a short-term one will.

Within water management, there is a historical scale, where the quality of the aquatic environments is measured against reference conditions. These are what the quality status of a water body would be under imagined "undisturbed conditions".[172] Furthermore, there is a future-oriented temporal scale. The objectives of the WFD need to be met within certain timeframes: 2015, 2021

[168] 2014/89/EU 2014, art 6.3.
[169] Ordinance (2015:400) on Marine Spatial Planning, sec 21.
[170]. As of April 2020, every municipality needs to adopt a planning strategy within two years of an election. The first such strategies will thus be adopted 2024 at the latest, Planning and Building Act (2010:900) (PBA), ch 3 sec 23.
[171] The Swedish Agency for Marine and Water Management, *Miljökonsekvensbeskrivning havsplan — Bottniska viken diskussionsunderlag i tidigt skede* (2017), p 24.
[172] 2000/60/EC 2000, see Annex V table 2.1.

or 2027, thus determining the temporal scale against which the environmental effects from certain emissions or disturbances are measured.[173]

3.1.4 Projection

In map-making, the projection determines how the earth is represented on a flat map. As the Earth is a globe, spreading it out on a flat map will distort the perspectives of certain parts of the map. De Sousa Santos mentions that during the Cold War era, Western media tended to use a projection where the Soviet Union seemed bigger than it actually was, to underscore the communist threat.[174] Projection is also a way of determining what becomes central in a map, and what is peripheral. Choosing a certain projection will distort or obfuscate areas that are then seen as peripheral in relation to the center. The further something is from the center, the more distorted it becomes.[175]

Projection is a useful concept in relation to understanding legal systems governing ecosystem management. By focusing on certain aspects of ecosystems in management, others may be considered unimportant or peripheral. Within the WFD framework, the emission of *inter alia* nutrient loads to a certain water body becomes central in permit processes. However, the potential positive benefits of the emitting operation, that may occur in other places, is peripheral and can hardly be taken into account, due to the logic of the Directive. The same can be said for interests of a municipality in planning: issues that are local will be at the center of attention, while larger, distant processes may be of a more peripheral concern. The projection may affect how processes can be detected and treated. In terms of management, the projection can be jurisdictions, legal boundaries of operations that affect how the surrounding areas are treated, but also more informal factors, such as economic constraints or what the interests of a specific municipality happen to be. From a temporal perspective, projection may be the planning horizon, the year to which the planning extends. Choices concerning planning horizons may hide consequences of the planning endeavors that would have been clearer with another horizon year.

The choices of scale and projection with regard to ecosystems are closely interlinked. The difference, as I see it, is that scale concerns grade of detail,

[173] See chapter 10.
[174] De Sousa Santos (1987), 285.
[175] Ibid, 292.

while projection concerns what is placed at the center of attention, and what is pushed to the periphery. The projection affects how neighboring areas are treated. An example of this would be choosing a national government agency as the appropriate management level. This could be seen as a medium resolution, and the projection would be national, the marine environment in neighboring states would be less focused on than the national, while at the same time, local details may be lost, due to the prioritization of national interests.[176] A municipal planning projection places the interests of the municipality at the center. The national interests are peripheral and perhaps seen as obstacles to overcome in order to reach municipal objectives. Sometimes the projection is local, focusing only on the individual municipality, while in other cases it is regional, where the municipality is strategically placed as part of a region, and those interests that can strengthen the region are promoted as central.[177]

3.1.5 Symbolization

Symbolization is explained by de Sousa Santos as the way certain features and details of reality are represented graphically in maps[178]. Within legal systems, he makes the distinction between a "Homeric" and a "biblical" style of law. The Homeric, he explains, is more formalistic and everyday life events are broken down to specific elements, such as contracts and legal disputes. He calls this an instrumental legality. The biblical symbolization, on the other hand, is more iconic, emotive, and informal. Such symbolization can be seen in codes of ethics of international cooperation, for example through concepts like "reciprocal trust" and "common interest".[179]

The distinctions made by de Sousa Santos are not directly transferrable to the cases examined in this book. However, the concept of symbolization is useful to understand the different perspectives that follow the choices of scale and projection. In water governance, the symbolization is mainly seen in the use of environmental quality standards and quality factors, which could be seen as a type of Homeric style of law. In planning, on the other hand, symbolization is seen more in the practices than in the formulation of the legal acts. The coast is commonly symbolized as attractive or unique in the

[176] Ibid, p 278
[177] See section 8.2.
[178] De Sousa Santos (1987), s 285.
[179] Ibid, pp 295-296.

municipal plans, thus motivating certain prioritizations. On a national level, however, blue growth and the ecosystem approach may be important symbolizations. This bears some similarities with what de Sousa Santos calls the biblical style of symbolization. As for both scale and projection, there is a temporal aspect of symbolization. The symbolization used in national planning is planning as a process, constantly ongoing, where knowledge from previous processes is used to develop new plans. This is usually visualized as a spiral moving towards the future.[180] Municipal comprehensive plans are realized through detailed development plans and building permits; as such, they need to have a more static, formalistic, character and are rarely revised more often than every eight years. Symbolizations can follow both from the legal act governing the planning,[181] and from the internal perspectives of the different levels of administration undertaking the planning.[182]

All these choices, in scale, projection, and symbolization, lead to different planning outcomes, or practices, and are thus important to understand in order to attain a deeper understanding of the planning system as such. Symbolization becomes the clearest expression of the political process in the examples, as it is used to promote specific perspectives and interests.

De Sousa Santos has been criticized *inter alia* for not engaging sufficiently with how the temporal scale affects the scale of the map. For long-term timescales, a larger map is preferred, while shorter timeframes usually require a smaller, more detailed map.[183] Furthermore, Valverde argues that the concept of "interlegality" used by de Sousa Santos implies a more complex system than can be encapsulated by a single map. While maps are self-contained, legal spaces exist always in relation to, and intertwined with, other legal spaces, and together they constitute the socio-legal life.[184] These are issues noted by de Sousa Santos in his original text as well, and it is perhaps subsequent readings of the text rather than the text itself that are open to Valverde's criticism. Although the map-making metaphor may not be perfect, I would argue that maps may be self-contained, but to attain a complex understanding of the world, more than one map needs to be studied. In that sense, maps are in a constant dialogue with each other and cannot be studied

[180] See The Swedish Agency for Marine and Water Management, *Förslag till inriktningen för havsplaneringen med avgränsning av miljöbedömning* (2015), p 29.
[181] See section 5.5.3.
[182] See chapter 8.
[183] Mariana Valverde, *Chronotopes of law: jurisdiction, scale, and governance* (Abingdon, Oxon New York, NY : Routledge 2015), p 49.
[184] Ibid, p 50.

in isolation. This relates to a view of scales as fluid and ever-changing, rather than as fixed boundaries. This view may be more in line with the notion of scale that is prevalent in a human geography context, discussed in section 3.2.

This book explores the types of rationales that lay behind planning decisions on different administrative levels, as well as how the scales of water management affect the outcomes of permit processes. By applying the framework presented above, the different perspectives, or rationales, of management can be broken down and highlighted.

Figure 1 below shows how de Sousa Santos' concepts are used and understood in the two cases examined here. The examples provided in the figure are based on the findings presented in chapters 7-12.

	Marine and coastal planning	**Water management**
Scale	National and municipal scales of planning are determined by law. The Local Government Act, and the Planning and Building Law, together with the geographic scale of the municipality determine the scale of municipal decision-making.	River basins and water bodies. By applying a certain geographical or temporal scale, some processes become highlighted while others may be hidden.
Projection	National prioritizations are peripheral in municipal planning. Focus is on the competitiveness of the municipality, how it can be strengthened and framed in relation to surrounding areas.	Processes and emissions in specific water bodies are at the center of the WFD governance framework. Positive effects that may occur in other water bodies or parts of society are peripheral.
Symbolization	In the national and EU MSP, the ecosystem approach and blue growth are main symbolizations. Municipalities use the attractivity, uniqueness and identity as symbolizations of the coastal areas.	Environmental Quality Standards and quality factors are the main symbolizations. Scientific language which excludes and obfuscates social interests and legitimizes choices in scale and projection.

Figure 1: Systematization of the theoretical framework

3.1.6 A note on administrative preconditions for planning

The choices of management levels or geographic scales of management discussed in this section follow from a number of reasons. There are, generally, pre-existing administrative structures and bodies that can be tasked with new assignments. When it comes to transposing EU directives into national legislation, choices of responsible ministry or central agency may be guided by the legal bases for the directives. If a directive is based on article 192 of the Treaty of the Functioning of the European Union (TFEU), which concerns environmental protection, this should guide the national transposition, as it indicates that the purpose of the directive is to address an environmental issue. Nevertheless, for framework directives with multiple legal bases, such as the MSPD, the basic purpose of the directive is not so clear. This provides less guidance to individual member states as to how to interpret the directive in the transposition and implementation. Still, the constitutional infrastructure of a national administrative system will usually set the limits for the possible choices in management.

On an EU level, the differences in perspectives show between different Directorate Generals (DG). While DG environment[185] has a mission with a clear conservation perspective, DG MARE[186] has a more economic perspective. This has been described as leading to institutional tensions within the EU, as these DGs are responsible for implementing different directives, sometimes covering the same area.[187] Not only is the tension due to differences in mission, but also in how they are organized internally. DG MARE is divided into geographic directorates, while DG environment is divided thematically, leading to further challenges in coordination.[188]

All of these discussions concern the rationality in relation to planning. By choosing a certain level of management, a bundle of logics follows, and a certain rationale is chosen. Rationality is a central concept in planning theory, and in the formulation of marine spatial planning. It is also a concept that has been subject to extensive debate. In section 6.1 the concept of rationality in

[185] Directorate General for the Environment.
[186] Directorate General for Maritime Affairs and Fisheries.
[187] See Elizabeth M. De Santo, *The Marine Strategy Framework Directive as a catalyst for maritime spatial planning: internal dimensions and institutional tensions* in Michael Gilek, Kristine Kern and Corbett Centre for Maritime Policy Studies (eds), *Governing Europe's marine environment: Europeanization of regional seas or regionalization of EU policies?* (Farnham, Surrey : Ashgate 2015), pp 95-119.
[188] Michael Gilek, Kristine Kern and Corbett Centre for Maritime Policy Studies, *Governing Europe's marine environment : Europeanization of regional seas or regionalization of EU policies?* (Farnham, Surrey : Ashgate 2015), p 99.

relation to planning is discussed, and in section 6.2.5 it is further elaborated how the concept is understood in the context of this book.

3.2 Scales of nature/Scales of law

For the purposes of the second case study, there is a need to elaborate on the concept of scale. The case study centers around the notion of the "appropriate spatial and temporal scale of management". Scale has been widely debated and problematized in the field of human geography.[189] The purpose here is not to develop theoretical understandings of scale, but there is a need to situate the research within the discussions of scale, and to give a brief introduction as to how the concept is understood and from where this understanding is drawn.

Scale is generally thought of as being socially constructed. Furthermore, scale can be understood as geographical boundaries around spaces, containing certain parts of the landscape, such as nation states or regions.[190] These boundaries, however, are fluid, meaning that they change over time and fluctuate, depending on how they are constructed. A key aspect in this regard is how different scales relate to one another. This is often discussed in terms of hierarchical connections or if they are interconnected. A number of metaphors can be found in the scientific literature on this topic, describing the relation between scales as a ladder, a Russian doll, or as concentric circles.[191] The current work draws on the understanding that has been promoted perhaps most prominently by Neil Smith, who regarded the differentiation of scales as a social practice. An event, or a phenomenon, can be local, national, and international, depending on the social value ascribed to it. [192] As Smith puts it: "There is nothing ontologically given about the traditional division between home and locality, urban and regional, national

[189] See Neil Smith, *Geography, difference and politics of scale* in Joe Doherty, Elspeth Graham and Mo Malek (eds), *Postmodernism and the social sciences* (Basingstoke : Macmillan 1992); David Delaney and Helga Leitner, *The political construction of scale* 16 Political Geography 93 (1997); Sallie A. Marston, *The social construction of scale* 24 Progress in Human Geography 219 (2000); Alice Cohen and James McCarthy, *Reviewing rescaling: strengthening the case for environmental considerations* 39 Progress in Human Geography 3 (2015).
[190] Andrew Herod, *Scale* (Milton Park, Abingdon, Oxon, England
New York : Routledge 2011), p 14.
[191] For an in-depth review of the development of scale as a concept within human geography, see ibid, in particular ch 1.
[192] See Smith, N., 'Geography, Difference and Politics of Scale', in: Joe Doherty, Elspeth Graham and Mo Malek, *Postmodernism and the social sciences* (Basingstoke, Basingstoke : Macmillan 1992), pp 57-79.

and global scales. The differentiation of geographical scales establishes and is established through the geographical structure of social interactions".[193] Through conceiving of scales in this manner, it is possible to examine different choices in scale.

In the 1990s, when the production of scale started to become a theoretically explored field, much of the discussions concerned the political organization of humans.[194] There seems to have been little theoretical attention given to how to define and create ecosystem scales in natural resource management. These questions have, however, become more explored since the turn of the millennium.[195] In relation to water governance, there was an anthology published in 2014, addressing scalar issues in watershed management.[196] Many of the chapters therein address how the use of watersheds in governance creates and reinforces power structures, and how this "natural" administrative scale has strong social implications. Interestingly enough, while discussing how definitions of river basins and watersheds affect management and participation issues, none of the articles provided a clear legal perspective of how watersheds are defined, and only one contribution was written by a socio-legal scholar.

Law creates spaces by defining ecosystems and dividing nature into units that are manageable and fit into our administrative systems. In this sense, water bodies can be seen as legally defined ecosystems. While much environmental management departs from pre-existing administrative structures, the WFD and most river basin management regimes use ecological preconditions as departure for management. The WFD mandates a management structured according to river basin districts, rather than local and regional administrative bodies.[197] Such a process has been referred to as "rescaling".[198] Rescaling can have implications for power structures, as some actors may have greater influence on certain scales than others.[199] This

[193] Smith (1992), p 73.
[194] Herod (2011), ch 1.
[195] See Sayre (2005); Cohen and McCarthy (2015).
[196] Emma S. Norman, Christina Cook and Alice Cohen, *Negotiating water governance: why the politics of scale matter* (Farnham, Surrey : Ashgate 2014).
[197] See Johnson. Corey, *Politics, scale and the EU Water Framework Directive* in Emma S. Norman, Christina Cook and Alice Cohen (eds), *Negotiating water governance: why the politics of scale matter* (Farnham, Surrey : Ashgate 2014).
[198] Frank Hüesker and Timothy Moss, *The politics of multi-scalar action in river basin management: implementing the EU Water Framework Directive (WFD)* 42 Land Use Policy 38 (2015), p 39, and Cohen and McCarthy (2015).
[199] Hüesker and Moss (2015), p 39.

perspective of scales and rescaling recurs throughout much of the human geography literature.[200] While acknowledging that choices in scale may have effects on the possibilities for different social groups to partake in the management and stewardship of resources, the present work focuses more on the legal implications of rescaling, that is, how the choice of scale affects the management of a resource.

The theoretical and methodological underpinnings of this book's two case studies require somewhat differing research methods and materials. The following chapter will present the approaches that are needed to be able to answer the different research questions.

[200] Erik Swyngedouw, *Scaled geographies: nature, place, and the politics of scale* in Eric Sheppard and Robert B. McMaster (eds), *Scale and geographic inquiry* (Blackwell Publishing Ltd 2008); Marston (2000).

4 Methods and material

4.1 Approaching the case studies

The line of inquiry in the two case studies – MSP in terms of the level of management and the WFD to investigate the scale – require somewhat different approaches when it comes to research methods and material. For both cases, there is a need to develop an understanding of the legal foundation for the different management regimes. The aim of the case study concerning municipal planning is to provide an understanding of, and highlight different perspectives and priorities in, planning and where these perspectives emanate from. This calls for a study that goes beyond the legal foundations, to study the more practical aspects of how planning is being performed. Through applying multiple methods when studying the municipal planning, this book illustrates how the scale, projection, and symbolization of municipal management clearly affect how planning is performed, and what are deemed to be the most important aspects of planning. For the case of water governance, the analysis will remain within the formal boundaries of law, and analyze the outcomes in permit processes, based on the theoretical and methodological approaches provided in the previous chapter. Building on the understanding of scale and how different scales are interconnected, the analysis applies the concepts used by de Sousa Santos to illustrate the consequences of scale in the Swedish water management system. The current chapter introduces the research methods applied in order to answer the research questions posed in section 1.2.

4.2 Legal foundations

The relationship between human and natural systems, and how it is taken into account in the management of marine and freshwater resources, is the point of departure of this book. Within both case studies there is a need to understand the legal foundations governing the management regime. In the case of municipalities, such a review will reveal what legal grounds there are for Swedish municipalities to plan their marine waters, what formal

instructions they have, and what types of considerations are made. The second case study, concerning the freshwater management, will explore how water bodies are defined legally, and what can and cannot be taken into account in legal processes where the quality of a water body is likely to be affected by a planned operation. These questions concern internal legal aspects, and they explore the formal boundaries of municipal planning and water management.

Examining the internal boundaries of law in a specific field requires a methodological approach that can answer relatively formalistic questions on law. Such answers can be found through studying the legal sources and using what is commonly referred to as doctrinal studies as the chosen research method. In the Swedish legal setting, doctrinal studies are generally called "the legal dogmatic method".[201] This method of research has been explained as the theoretical core of legal scholarship.[202] The legal dogmatic method is useful as a systematization of the legal system.[203] However, as Sandgren points out, what such systematization actually entails may be quite ambiguous.[204] For the purposes of the present work, the systematization may be defined as explaining the formal limits of municipal action, and the legal system for ensuring the quality of fresh and coastal waters, through studying the legal sources.[205] The internal hierarchy among these legal sources, as well as what is actually considered a legal source, differs between legal traditions, as do the definitions of doctrinal studies.[206] Nevertheless, as this part of the work will concern the Swedish internal legal system, the sources most commonly referred to in Sweden are used as a basis for the review.

The legal sources in this approach are generally as follows: legal provisions, preparatory works, case law, and doctrine.[207] There are more or less strict interpretations of what sources can actually be included, and some authors claim that there is a need to differentiate between sources of law and

[201] The 'legal dogmatic method' is similar (or the same) to what internationally is referred to as 'doctrinal studies', see Aulis Aarnio, *Essays on the doctrinal study of law: law and philosophy library 96*, vol 96 (1st Edition. edn, Germany: Springer Verlag 2011), p 19.
[202] Aleksander Peczenik, *Juridikens teori och metod: en introduktion till allmän rättslära*, vol 1. uppl. (Stockholm, Fritze 1995) p 34.
[203] Claes Sandgren, *Om teoribildning och rättsvetenskap* 16 Juridisk Tidskrift 297 (2005), pp 322-323.
[204] Ibid, p 323.
[205] Ibid, p 326.
[206] Aarnio (2011), p 148.
[207] For a further discussion on sources and their use within the legal system, see Aleksander Peczenik, *Vad är rätt?: om demokrati, rättssäkerhet, etik och juridisk argumentation*, vol 156 (Stockholm, Fritze 1995) p 209 ff.

sources of information. A legal rule, and the intention of the lawmaker as expressed in the preparatory works, would be sources of law, whereas texts discussing e.g. a precedent would provide information on how a certain legal rule should be interpreted, and are thus sources of information.[208]

For the first case study, the main legal sources used to understand the formal boundaries municipal and national planning are the main legal acts covering this area: The Swedish Environmental Code (SEC), the Local Government Act (LGA), the Planning and Building Act (PBA), and the Ordinance on Marine Spatial Planning. In addition to these act, preparatory works, such as government bills and government commission reports are used to interpret the legal acts. Case law and previous legal scholarship are used to understand how the provisions in the different acts have been interpreted since their adoption.

The second case study takes its departure in the WFD, which is an EU directive and thus requires a different set of sources to understand how it can be, and has been, interpreted. The most prominent source of information is of course the Directive and its annexes. In addition to that, documents relating to the Common Implementation Strategy (CIS) of the WFD have been used. The CIS is a coordination program set up by the Member States, the EU commission, and Norway to facilitate a coherent and qualitative implementation of the Directive.[209] These documents are helpful in understanding how the provisions of the Directive should be implemented in practice. There are currently (January 2021) 37 CIS documents published pertaining to different aspects of the implementation of the WFD. The CIS's are developed in collaboration involving the European Commission, Member States, accession countries, Norway and other stakeholders and non-governmental organizations. They represent a consensus on best practices. However not necessarily the official position of the European Commission.[210]

In addition to the CIS documents, relevant case law from the European Court of Justice (ECJ) has been analyzed. Finally, the second case study comprises an analysis of case law from Swedish courts, where the provisions of the WFD and the legal delimitation of ecosystems have been important

[208] Aarnio (2011), p 149.
[209] For more information on the CIS, see European Commission, (2020) <https://ec.europa.eu/environment/water/water-framework/objectives/implementation_en.htm> accessed 2020-12-29.
[210] See e.g. Common Implementation Strategy for the Water Framework Directive (2000/60/EC) Guidance Document No 2, *Identification of water bodies*, (2003).

for the outcome of the cases. The process of selecting these cases is presented further in section 11.1.

There have been lengthy debates on the function and scientific value of the legal dogmatic method,[211] and there is no need to go further into that debate here. The purpose of applying the method here is to create a foundation for further scientific analysis. The aim is to understand how the law determines the room of maneuver for municipalities, or what considerations can be made in a case concerning water quality, as these are central aspects of the discussions on scale and projection.

One feature of the legal dogmatic method that separates it from many other scientific methods is that it is used by both practitioners and researchers. As such, it can offer an understanding of how the law is conceived by the planners, who often lack a legal education, but in this case are the recipients of the law. Here, the aim is not to make any novel or innovative interpretations. Nor is it to argue that certain cases have or have not been consistent with what could be considered "valid law". Rather, the aim is to investigate how legal rules can be understood from a more general point of view. This can possibly clarify what, from a practitioner perspective, seem to be the limits of operation, and how this has been treated in case law. The legal dogmatic method is well suited for these purposes.

The legal dogmatic method may provide essential information on how certain perspectives become highlighted or neglected through choosing a specific level of management or spatial ecosystem scale. To understand how the planning is performed on a municipal level, and thus what the law becomes in practice, the study of legal sources is complemented by a study of planning documents. These are the explanatory documentation to the comprehensive plans that the municipalities are required to produce for the consultation process.[212] As the book concerns how planning and water management are performed more in practice, the analysis has to venture beyond the possibilities of the legal dogmatic method. The legal dogmatic method is concerned with the internal normative system of law.[213] Thus, other approaches, presented in the following sections, are needed to understand the more practical implications of the regulations: in essence, what law becomes when it meets the practical aspects of implementation.

[211] See Nils Jareborg, *Rättsdogmatik som vetenskap* Svensk Juristtidning 1 (2004) and Eva-Maria Svensson, *Genus och rätt: en problematisering av föreställningen om rätten* (Iustus, Stockholm 1997).
[212] PBA, ch 3 sec 9.
[213] Jareborg (2004), p 6.

4.3 Perspectives in planning

4.3.1 Analyzing differing perspectives

Following the initial analysis of the formal tasks of municipalities, the case study will proceed with a concentrated focus on the planning of coastal and marine areas. The aim is to deepen the knowledge of the rationales/logics of municipal planning: How are the costal zones treated in planning? How are issues related to conservation and exploitation purposes covered in the planning process? This part is based on the municipal comprehensive plans, in which local governments specify the long-term development goals for the built environment.[214] The municipal document analysis is supplemented by an analysis of state-level documents concerning MSP. By analyzing these documents, the specific perspectives of municipal planning can be understood. The scale of municipal planning is determined by law, which decides what can and cannot be taken into account. The projection is determined by the legal boundaries as well as practical factors, such as what is possible to plan and incorporate in a municipal planning process. The analysis provides an enhanced understanding of matters of projection that may be common to all, or many, municipalities. The symbolization can be seen in the planning documents in terms of how the coastal areas are discussed. This may vary between municipalities. However, there may be some general commonalities, such as the symbolization consistently being locally focused, among others.

A review of the policy text enables one to identify which interests and challenges are explicit and which are concealed, as well as which issues are seen as important or problematic. This in turn leads to others being silent. In other words, such texts serve to define and represent the problem at hand.[215] Through different understandings of a problem emerge different solutions. This is something de Sousa Santos' perspectives of law are able to disclose.[216] It may be important to state that this is not to identify intentional

[214] PBA, ch 3 sec 2.
[215] See Carol Bacchi, *Analysing policy : what's the problem represented to be?* (Frenchs Forest, N.S.W., Frenchs Forest, N.S.W. : Pearson 2009).
[216] Such an approach to analyzing the documents could also be framed as a discourse analysis, as has been done by inter alias Bacchi. However, for the purposes of this book, the de Sousa Santos framework provides a similar understanding of how different perspectives are promoted. Adding a discourse analysis layer would thus rather complicate the analysis without contributing to the study.

manipulation, but rather to examine underlying assumptions, intentional or not, that affect the formulation of a certain problem.[217]

Environmental problems can be seen as existing in both a natural context and a human, social context. The proposed solutions must build on the policymaker's understanding of these problems, grounded in both contexts.[218] The management of coastal resources is an example of how alternative understandings of these contexts and the connection between them leads to different symbolizations. The coastline could be considered as comprising a number of sensitive ecosystems with high values of biodiversity, these values then being intrinsic, without any connection to human life or health. They could also be considered valuable, as natural systems, for humans and our social life; the untouched coastline is what attracts tourists, and at the same time these ecosystems provide services that are of importance for human health and economy. These two diverging symbolizations of nature may lead to different management choices. Both conceive of nature as valuable, although one may lead to a strict conservationist management regime, whereas the other might focus more on how nature could be managed for human benefits.

Throughout history, nature has been represented differently depending on the interests depicting it and current social values. In the early parts of the 19th century, nature was frequently described as untamed and frightening, while it became viewed more as a resource for human consumption towards the end of the century.[219] In a Swedish context, the development of hydropower in the 20th century could also highlight how the formulation of nature changes over time. The Water Act from 1918 was influenced by the industrial needs of the time, with increasing demand for robust electricity systems. A development of hydropower stations in the streams and rivers of Sweden could meet this demand, and the law was formulated in order to facilitate such a development. In the 1980s, the view on nature as solely a provider for human needs had changed and focus turned to the fact that hardly any rivers were left untouched in Sweden. This led to changes in the legislation and the permit process started to include more environmental

[217] Carol Bacchi, *Introducing the 'what's the problem represented to be?' approach* in Angelique and Beasley Bletsas, Chris (ed), *Engaging with Carol Bacchi - Strategic Interventions and Exchanges* (University of Adelaide Press 2012) p 22.
[218] John S. Dryzek, *The politics of the Earth: environmental discourses* (3. ed.. edn, Oxford, Oxford : Oxford University Press 2013) p 9.
[219] John Hannigan, *Environmental sociology: a social constructionist perspective* (London, London : Routledge 1995), p 110.

concerns.[220] The subsequent adoption of the SEC further enhanced the environmental aspects, as the legislation needed to relate to EU legislation, and other international standards. Thus, an analysis of how nature is understood by those managing it is crucial in order to be able to grasp how choices in management level will affect decisions.

4.3.2 Comprehensive plans and policy documents – method of analysis

The analysis of comprehensive plans is central in the first case study. Understanding how municipalities frame their strategies for coastal and marine planning is essential for producing knowledge about how management is performed on different levels. This analysis also informs the selection of municipalities to include in the second part of the data collection, as it gives insight into differences in perspectives and planning interests among the municipalities.

The study of municipal planning can be seen as empirical legal research, and the analysis of the policy documents is a qualitative document analysis.[221] The benefits of applying such a method is that it can provide information concerning, *inter alia*, policy directions.[222] Furthermore, analyzing policy documents from municipalities is a fruitful way of understanding the values and norms that are driving development in a municipality at a certain point in time.[223] Van Leeuwen discusses four major types of legitimation of social practices that can be seen in texts, in particular in relation to public documents.[224] The main two types of legitimation that are relevant for this work are: *authorization* and *moral evaluation*. Through *authorization*, a policy is legitimized by reference to *inter alia* customs or law, or institutional authority.[225] In terms of the comprehensive plans examined for the first case study, such authority can be national environmental objectives, the UN

[220] Jan Darpö, *Tradition och förnyelse på vattenrättens område — om mötet mellan gamla tillståndsregimer och moderna miljökrav* 2014:2 Nordic Environmental Law Journal 101 (2014), p 102.
[221] Lisa Webley, *Qualitative approaches to empirical legal research* (Oxford University Press 2010), pp 938-939.
[222] Ibid, p 939.
[223] Karin Helgesson, *"Sortera smart": legitimering i kommunala informationsmaterial om sopsortering* in Karin Helgesson and others (eds), *Text och kontext — perspektiv på textanalys* (Gleerups Malmö 2017), p 111.
[224] Theo Van Leeuwen, *Legitimation in discourse and communication* 1 Discourse & Communication 91 (2007).
[225] Ibid, p 92.

sustainable development goals, or other legal requirements. Through *moral evaluation*, legitimation is performed by reference to value systems.[226] These value systems can be the objectives of individual municipalities, the promise of economic prosperity, or protection of a unique and beautiful coastline. This understanding of legitimation processes in public documents facilitated the reading of the comprehensive plans and informed the initial coding and selection. Through understanding the texts by way of legitimation, it is possible to analyze the documents and discover recurring themes in the different documents. This process of coding the content of the documents informed the subsequent analysis.[227] In the following, the process of analyzing the documents and identifying themes will be explained in more detail.

Planning documents from municipalities which have an overlapping plan area with the national plans were chosen for this study.[228] The two elements studied in these documents were: 1) the overall strategy and objectives of the comprehensive plan; and 2) the specific strategy for the coastal areas. There was little structural consistency between the plans, and there were significant differences in how up-to-date they were.[229] Coastal areas were treated within different sections of the plans (and sometimes hardly at all), which complicated the identification of relevant sections.

In the first, inductive phase of the study, the planning documents were analyzed and some general themes, or perspectives, were identified.[230] These perspectives could all be seen as legitimation of the municipal policies in relation to their coastal areas. By categorizing the comprehensive plans based on these findings, it was possible to make an informed selection of informants for the interview part of the study. In the following, the coding process, in which the main perspectives in the comprehensive plans were identified, is described. This is followed by an explanation of how the selection of respondents was made, and how the actual interviews were conducted and analyzed.

[226] Ibid, p 92.
[227] Webley (2010), pp 941-942.
[228] 13 coastal municipalities have plan areas that do not overlap with the national plans, even though the area covers coastal waters, as there are islands or archipelagos belonging to other municipalities between the national plan area and the coastal municipality. There are 65 municipalities that have an overlap in jurisdiction with the national MSP authority.
[229] The oldest plan was adopted in 2000 and the most current were proposals from 2017 that had been published for consultation.
[230] Mats Alvesson, *Tolkning och reflektion : vetenskapsfilosofi och kvalitativ metod* (Kaj Sköldberg ed, 2., [uppdaterade] uppl. edn, Lund, Lund : Studentlitteratur 2008), p 54.

In the section of the plans that covered coastal waters, the initial framing was deemed to be most important for the analysis. That is, in a large number of plans, the rationale behind the suggested preservation of coastal areas (some sort of preservation was usually the aim) was expressed in these sections. This could be in terms of a need to preserve the coastal areas because of their importance as "unique selling points" for the municipalities; they attract both tourists and businesses and thus promote municipal growth.[231] Another way of discussing the preservation could be that the coastal waters carry a value in their own right in terms of biodiversity or ecological sensitivity.[232] The identification of rationales enabled a systematization into two main categories of coastal management perspectives: "environmentally oriented" and "economically oriented". These categories were then paired with the overall strategy of the plans. This process is a sort of coding, based on the representation of the "problem" in the different plans.[233] The coding could also be seen as an analysis of the perspectives of local management of coastal areas. In the coding process, there were frequently situations in which a municipality would be on the borderline between two categories. In such cases, the overall purpose of coastal preservation was the guiding categorization of the municipality; if it was solely a result of the coast being attractive for humans, or if environmental protection was the overall purpose, or at least one of the overall purposes. The "environmentally oriented" category was thus quite broad, since environmental protection did not have to be the sole purpose of preservation. It should be noted that most municipalities mentioned natural conditions in some way. Still, there were differences in emphasis, where some identified nature clearly as a means for growth while others discussed it more in terms of inherent values. In addition, one municipality was coded as having a strictly environmental rationale for conserving the coast/marine environment, while four were considered to be more growth/economically focused than others, not mentioning protection of the environment even for human purposes. All five of these municipalities were treated as exceptions and not considered for the interview stage of the study, yet they were still included in the general analysis. The reason for excluding them from the interviews was that the aim

[231] See Kalix kommun, *Kalix översiktsplan*, (2009), p 70, and Båstad kommun, *Båstad översiktsplan*, (2008) p 19.
[232] See Landskrona kommun, *Översiktsplan Landskrona stad*, (2016) p 142, and Örnsköldsviks kommun, *Översiktsplan 2012 för Örnsköldsviks kommun*, (2012), p 67.
[233] Bacchi (2009).

of the study was to understand the broader, more general perspectives, which motivated a broad selection within the main categories.

An analysis of the overall strategies of the municipal comprehensive plans followed the coding of the coastal strategies. Every plan had an initial section where the general planning strategy was presented. These strategies are supposed to guide the entire planning process and were thus of interest for understanding the overall planning rationale of the municipalities. This part of the coding was conducted in the same way as the first and divided the municipalities into the two categories: "Focus: growth/people" or "Focus: environment/growth". Figure 2 shows the different coding options for each municipality:

Overall strategy	**Coastal strategy**
A. "Focus: growth/people"	1. "Attractive coast"
B. "Focus: environment/growth"	2. "Biodiversity to promote attractivity"

Figure 2: Coding of municipal rationales

Through the coding process, each municipality was placed in two of the boxes (A or B, and 1 or 2).[234] This process led to the identification of four categories of municipalities: "The Economically/Growth Focused" (Boxes A/1); "The Somewhat Environmentally Aware" (Boxes A/2 alt. B/1); or "The Environmentally Aware" (municipalities that fit in boxes B/2). Regarding the second category, there were two possible options in the categorization: either environmental concerns were mentioned in the overall strategy, but not in the coastal/marine management section; or no mention of environmental concerns in the strategy, while it being one of the main purposes for protecting coastal/marine areas. This coding of comprehensive plans is meant to address different approaches to planning of coastal waters. This does not imply that all types of growth and economic development are

[234] As previously mentioned, five municipalities did not 'fit' in these boxes, and were excluded at this stage.

per definition bad for the environment. A focus on the environment can of course be positive for social and economic growth in a long-term perspective as well. Nevertheless, some municipalities clearly mentioned environmental concerns as important, while other municipalities stressed that human needs and economic growth were the main interests in planning. These were recurring themes in the plans, and, thus, the reading of the plans gave rise to these categories. There could perhaps have been other categories as well, but the ones presented here were most prominent and of relevance for the current research.

Additional factors that were checked for in the plans were whether the ecosystem approach was mentioned, and if the municipality had the long-term aim of population growth[235]. The mentioning of the ecosystem approach was included as it is a core principle in MSP.[236] Analyzing the municipal use of the approach can inform the subsequent discussion on the appropriate level of management.

4.3.3 Delimitations and biases

There are some points to be made regarding the analysis. First, identification of the themes was difficult as there was an apparent risk of only identifying perspectives consistent with my own preconceptions. This requires transparency on the choices made while analyzing the documents, to show why certain sections of the plans were deemed more relevant than others.

The overall strategy may be the least problematic choice of parts to study, as it is usually stated clearly in the beginning of each plan. The identification of perspectives concerning the management of coastal waters was more susceptible to bias. Since there was a lack of consistency between the different plans, there was no possibility to choose one section that was identically covered/named in every plan. Instead, the section or sections in which the coastal area was covered were identified. In one plan this could be in a separate document with a focus only on coastal and marine waters,[237] while in another there may have been hardly any considerations at all concerning

[235] Population growth was included in the coding as a symbolization of temporal aspects, as a larger population may have effects on the pressures on the marine environment. However, it was left out from the final analysis as municipalities with a small population still can have large quantities of tourists etc, thus it is an unclear factor.
[236] See European Commission COM(2008) 791, *Roadmap for maritime spatial planning: achieving common principles in the EU*, Commission of the European Communities, (2008) p 10.
[237] See Skellefteå kommun, *Fördjupning av översiktsplanen för Skellefteå kommun — kusten*, (2010).

the coast.[238] Still, both of these types of plans contain perspectives concerning the coast. These perspectives can be explicit, highlighting certain aspects, but absences can be just as telling.[239] What is not discussed in the plans, or seen to be of no interest? This is also a type of perspective, albeit an inexplicit one.

When identifying the sections of the plans where the coastal environment was covered, careful attention was paid to possible differing perspectives to ensure parts of the plans where a certain perspective might be contradicted were not dismissed.[240] In this way, a complex set of perspectives could be discovered within a single plan, where the values of protecting untouched, biologically diverse coastal waters did not seem to stand in any contradiction to the aim of a growing municipality with attractive coastal living and a thriving coastal tourism industry. To be able to determine which of these perspectives carried more weight, the sections regarding coastal areas were compared to the overall strategy. If, for example, a section regarding the coast had both an environmental and an exploitation perspective, or highlighted them both as important purposes for protecting the coast, the overall strategy or vision might focus on how the business and public sectors could cooperate to develop the municipality.[241] This municipality would then be coded as having a heavier focus on growth and economic development than on conservation.

Most comprehensive plans covered specific projects. For instance, one municipality could highlight the importance of one specific industry for the future development of the business sector in the area. Since the evaluation of such specific projects was not feasible within the frames of the current work, they were not coded and included in the analysis. Rather, the study concerned the overall strategy regarding the coastal area, and how it was framed.

4.4 Talking about planning

4.4.1 Designing an interview study

The legal review of municipal competence and the analysis of municipal comprehensive plans were the first and second stages of the case study, respectively. However, the focus on formal strategies and formal planning

[238] See Kungsbacka kommun, *Kungsbacka översiktsplan*, (2006 (declared current 2013)).
[239] Bacchi (2009), pp 12-14.
[240] Ibid, p 20.
[241] See Örnsköldsviks kommun, (2012), p 23.

rationales could not provide a complete picture. To understand what lies beneath the planning decisions, and how these strategies affect the decision-making, there was a need go beyond the written documents and explore the everyday practice in which planning is performed. By accessing and interviewing the planners about the considerations in the plans, it was possible to examine in some depth the perspectives of municipal coastal and marine planning.

This stage was based on semi-structured interviews with open-ended questions. Initially, informants were planners on the municipal level. To complement these interviews and widen the field of analysis, three groups of respondents were added: municipal politicians; MSP coordinators at the County Administrative Boards (CAB); and an analyst involved in the MSP process at SwAM. By using multiple groups of respondents, it was possible to identify further differences in the view of the municipal role than might have been found within the first group alone.[242] This design of the study allowed for a horizontal (between municipalities) and a vertical (between municipalities, CABs, and SwAM) analysis of how the different levels within the MSP system are coordinated and how the different perspectives correspond to each other. The study was explorative, aiming to understand the system and the logics behind the decision-making.

Four interviews were carried out with municipal planners prior to the analysis of the written documents: two from the northern part of the Swedish west coast; and two from the northern part of the east coast. Those interviews facilitated the reading and analysis of the comprehensive plans, which in turn led back to more interviews. The initial interviews were based on a preliminary interview guide, and as my knowledge of the subject developed, the guide was gradually adjusted.[243] The initial four interviews were included in the study, as they gave the same kind of information as the subsequent interviews. In the following section, the selection process will be described in more detail.

[242]Monica Dalen, *Intervju som metod*, vol 2., utök. uppl. (Malmö, Gleerups utbildning 2015), p 66.
[243] Steinar Kvale, *Den kvalitativa forskningsintervjun* (Svend Brinkmann ed, 3. [rev.] uppl.. edn, Lund, Lund : Studentlitteratur 2014), p 155.

4.4.2 Selection

The empirical part of the case study was aimed at understanding the system and discovering nuances and underlying logics in municipal planning. The selection was strategic, seeking to cover as diverse a set of municipalities as possible. It is a qualitative study and, consequently, the selection was not aimed at being statistically representative. In the selection stage of this kind of interview study, there is an interest in reaching a variety, or a heterogeneous selection within a certain frame given by the researcher. The aim was not to look for outliers, but for variation in the "normality".[244] Some municipalities were excluded from the selection due to them failing to meet what was considered to be the normality of focus in the comprehensive plans studied. Bearing this in mind, the following paragraphs describe the process of selecting municipalities to be included in the interview study.

To begin with, the selection of informants was made based on the coding that followed the analysis of comprehensive plans. There are three national plan areas, with a different CAB in charge of coordinating the marine planning efforts for each area.[245] In order to create as varied a selection as possible, five municipalities from each plan area were selected. This should ensure that it would be possible to detect potential differences between municipalities as well as between the plan areas. Within each plan area, the aim was to choose at least one municipality from each of the categories described in section 0. That is: one "economically/growth focused"; one "somewhat environmentally focused in the strategy"; one "somewhat environmentally focused in relation to the coastal and marine waters"; and lastly, one "environmentally focused" municipality. As a third factor for selection, the size of the municipality was considered, where at least one of the larger and one of the smaller municipalities in each area was included. As size can be measured both geographically and demographically, there is a need to clarify that size here is referred to as the number of inhabitants. The reasoning is that larger municipalities may have greater resources for planning, and that there may be interesting differences between municipalities of different sizes. Thus, the number of inhabitants was an important factor. The municipalities were identified as being either "small" (<20,000 inhabitants), "medium" (20,000–50,000), or "large" (>50,000)[246] and all sizes were represented in the selection within each plan area. The division of municipalities into small, medium, or large was based on the median number of inhabitants in coastal municipalities included in the study. This gave 25 small, 22 medium, and 19 large municipalities.[247] When selecting municipalities within the different categories described here, the geographical size was factored in.

In the national plan areas for Skagerrak/Kattegat and the Gulf of Bothnia, there were no municipalities that were coded as being "somewhat environmentally focused in the strategy". Thus, municipalities in the same category, but where environmental concerns were one of the purposes behind conserving the coastal environment, were selected. This was not deemed to have much of an impact on the study, as both categories included a mix of perspectives. In addition, when there were not municipalities of every size and category in the different plan areas, priority was given to getting five municipalities from each area, and the other selection criteria were applied within that frame. For a visualization of the selection of municipalities, see Figure 3.

	Environmentally focused	Somewhat environmentally focused in relation to the coastal and marine waters	Somewhat environmentally focused in the overall strategy	Economically/growth focused
Large	X X	X	X X	X X
Medium	X	X X		X X
Small		X X		X

Figure 3: Selection of municipalities for interviews. Number of x in the fields represents the number of municipalities in each category.

4.4.3 Analyzing the material

All interviews were recorded with the respondents' consent. They were all informed that their responses and all quotes would be anonymized, although it may be possible to discern in what municipality something has been said,

[244] Jan Trost, *Kvalitativa intervjuer* (4., [omarb.] uppl.. edn, Lund, Lund : Studentlitteratur 2010), p 137.
[245] Ordinance (2015:400) on Marine Spatial Planning, art 8.
[246] 25 out of 65 municipalities have less than 20 000 inhabitants, 21 between 20 000 – 50 000, and 19 with 50 000+ inhabitants (2016). Statistics Sweden, *Sveriges befolkning 31 december 2016 — kommunala jämförelsetal*, (2016).
[247] There is an official categorization of municipalities, but it uses different categories and uses sub-groups based on population density, commuting etc and was thus not suitable to use for this study. See Sveriges Kommuner och Landsting, *Kommungruppsindelning 2017 — omarbetning av Sveriges kommuner och landstings kommungruppsindelning*, (2016).

as they all have unique characteristics. This was not seen as a problem by any of the respondents. During the interviews, extensive notes were taken. This was a crucial part of the method as it enabled a direct analysis of the material before transcriptions could be made. Furthermore, as note-taking takes time, it offers moments of silence in the interview situation, where respondents have a chance to reflect on their answers and also elaborate without being interrupted by new questions. The first stage of analyzing the material took place usually within 24 hours of the interview being carried out. This stage comprised transferring the interview notes from paper to a computer. Doing this shortly after the interview helped to facilitate an understanding of the notes, while any uncertainties in the text remained fresh in the memory. These extensive notes provided the initial basis for analysis of the interviews. All interviews were later transcribed by the researcher. The process of transcribing gave a close understanding of the material and the analysis of the notes could be complemented by any additional findings from the transcription process. The purpose of the interviews was to gain an understanding of the main perspectives and interests present in municipal planning. There was thus no need to perform a linguistic analysis or to analyze in detail the respondents' particular phrasing. This was reflected in the fact that the transcriptions were to some extent simplified to reflect the general sentiments of what was being said; they did not include every pause, hum or laugh. That said, the wordings were not adjusted, but hesitations and repetitions may have been excluded. The transcriptions were thus performed to meet the purposes of the research.[248] As for the quotations in the presentation of the study, these have been translated into English by the author, as the interviews were conducted in Swedish. In the process of translating the quotations, there is a fine line between keeping them as close to the original wording as possible, while still adjusting them to make sense in English. These considerations are evident in some of the quotations insofar as the expressions or formulations may seem somewhat unusual in English. This is a conscious choice on the part of the author to minimize any distortion of the original wording.

The analysis of the notes and transcripts could be described as, what Brinkmann refers to as, a theoretical reading of the texts.[249] This implies that there was no systematic method or computer software used to facilitate their

[248] Svend Brinkmann, *InterViews : learning the craft of qualitative research interviewing* (Steinar Kvale ed, 3., [updated] ed. edn, Los Angeles : Sage Publications 2015), p 213.
[249] Ibid, p 270.

interpretation. Rather, the theoretical framework alongside the three concepts introduced by de Sousa Santos were used as a filter through which to analyze the interviews. A criticism towards such a method of analysis is that it can provide biased interpretations where only certain aspects are noticed.[250] However, the theoretical framework applied here was not designed to exclude or to highlight perspectives. Rather, it provided a way of understanding the material, and to guide the search for pertinent topics of discussion.

In addition to interviews, the comprehensive plan of each of the selected municipalities was studied in greater depth to follow up the first reading of the comprehensive plans. As for the interviews, the analysis was performed using the methodological approach presented in chapter 3. Thus, the legitimation themes[251] found in the comprehensive plans were all coded as being about either scale, projection, or symbolization. Through such an analysis, a municipal way of framing coastal planning began to emerge. This could then be placed in relation to that of the national marine planning strategies.

4.4.4 Combining the material

Through analyzing the interviews in light of the comprehensive plans, as well as the national policy documents on MSP, it was possible to understand the implications of choosing the municipal level as appropriate for managing the coastal areas. It was also possible to discuss whether the municipal planning ideals, or rationales, seem to correspond to those of the national authorities. The study was carried out in the Swedish context. Nevertheless, an analysis of the MSP frameworks in countries around the Baltic Sea shows that there are a number of different management levels that need to be coordinated within the European MSP system, and that these issues can be translated to other contexts beyond the Swedish MSP.[252] The research methods presented in this chapter will help in answering the question of how management is performed at different administrative levels. They will also inform an analysis of how using a specific geographical scale of ecosystems in management affects outcomes of permit processes. Together, the two case studies answer questions about the challenges of designing management systems in the structural layer of law. The methods for approaching the two case studies differ. Consequently, the amount of text needed to describe and analyze the

[250] Ibid, p 272.
[251] See section 0.
[252] Westholm (2018).

cases also differs. The first case study, on MSP, builds on a legal analysis, interview material, and document analysis. This case study requires more elaboration and will thus constitute a larger part of the book. The second case study, on water management, consists of a legal review and analysis of relevant case law. The material analyzed is thus not as comprehensive and, as such, this case study constitutes a smaller part of the book as a whole.

Part II – Planning in the Marine Domain

5 Marine spatial planning in law

5.1 Introduction to Case I

Since the turn of the millennium, MSP has become a popular tool for the management of the marine environment. Traditionally, the management of the sea has been characterized by sectoral division, with little efforts to coordinate the different uses. Some activities, e.g. offshore wind power, have been decided on a permit-by-permit basis, while others, such as fishing and maritime transport, have been controlled through sectoral management regimes.[253] In the early 2000s, the growing pressure being placed on the marine environment by human activities led to initiatives for spatial planning at sea.

In 2002–2005 the United Nations undertook the "Millennium Ecosystem Assessment" (MEA), with the help of almost 1,400 scientists worldwide. The objective of the MEA was to assess the consequences of ecosystem change for human well-being, with the aim to enhance the conservation and sustainable use of those systems.[254] The MEA produced synthesis reports for different ecosystems, and one such report concerned marine and coastal ecosystems. An important finding of the MEA, presented in the report for marine and coastal ecosystems, was that marine ecosystems were deteriorating faster than other ecosystems, and that the major drivers of this degradation were anthropogenic.[255] The report found that marine and coastal ecosystems were among the most productive ecosystems, but also that coastal tourism was one of the fastest growing sectors of global tourism.[256]

In Europe, almost half of the population lives within 50km of the coast.[257] The problems with the marine ecosystems have been attributed to an increase in pressures on the environment, paired with a lack in coordination of

[253] Frank Maes, *The international legal framework for marine spatial planning* 32 Marine Policy 797 (2008), p 798.
[254] Millennium Ecosystem Assessment Board, *Living beyond our means — natural assets and human well-being* (2005), preface.
[255] UNEP(2006).
[256] Ibid, p viii.
[257] European Science Foundation - Marine Board, *Navigating the future III* (2006), p 9.

activities. MSP was seen by many as a remedy for the situation.[258] The basic idea with MSP is that it is an integrated and holistic management regime for marine areas, where all sectors are treated within one instrument. By planning in advance and allocating space for certain uses, the entire marine ecosystem can be taken into account. This ensures that the sum of all activities do not exceed the limits of the marine ecosystem.[259]

As a field of law, MSP is relatively new. The MSPD, which is a framework directive, was adopted in 2014. The same year a regulatory system for MSP was introduced into Swedish law. The Swedish government is expected to adopt three plans for the marine environment in 2021. The planning process is to be guided by an ecosystem approach to ensure integrated and holistic management of the marine environment.[260]

The area covered by the Swedish plans will be the marine areas, from one nautical mile seaward of the baseline until the end of the EEZ,[261] thus covering most of the territorial sea and the entire EEZ (see section 5.2 for a more elaborated introduction to the international concept of maritime zones). In Sweden, local municipalities have a planning monopoly; the exclusive right to plan the use of land and water areas within their borders, usually covering also the territorial sea.[262] Therefore, following the implementation of the MSP regulation, the municipal and state planning competences overlap in an area of 11 nautical miles. However, the area landward of one nm outside the baseline, i.e. the coastal waters,[263] is the most interesting area for the purposes of this book. This area is under the exclusive planning competence of local municipalities. Furthermore, many of the most important ecosystem components,[264] as well as many of the pressures on the marine environment, are located in the coastal areas.[265]

[258] See Fanny Douvere and Charles N. Ehler, *New perspectives on sea use management: initial findings from European experience with marine spatial planning* 90 Journal of Environmental Management 77 (2009).
[259] Charles Ehler and Fanny Douvere, *Visions for a sea change: report of the First International Workshop on Marine Spatial Planning* Intergovernmental Oceanographic Commission and Man and the Biosphere Programme (2007).
[260] prop. 2013/14:186, *Hushållning med havsområden*, (2014), p 12.
[261] SEC, ch 4 sec 10.
[262] PBA 2010, ch 1 sec 2.
[263] The definition of coastal waters as being the waters landward of 1 nm outside the baseline is found in 2000/60/EC 2000, art 2(7). The same definition is used in the MSPD, through a reference to the WFD (2014/89/EU 2014 art 3(4)).
[264] The Swedish Agency for Marine and Water Management, *Symphony — integrerat planeringsstöd för statlig havsplanering utifrån en ekosystemansats*(2018), p 27.
[265] Ibid, pp 29-36.

This case study concerns how the municipal planning of coastal waters fits into the larger idea of a holistic approach to marine management. The aim is to provide an answer to the first research question, namely how the division of management levels affects the priorities and outcomes of coastal and marine spatial planning processes. The analysis relates to a wider discussion of how the EU MSP directive is implemented in different member states. The Directive, as well as the Swedish MSP regulation, explicitly excludes coastal waters from its scope. Thus, they both risk suffering from the same potential shortcomings. The purpose of the case study is to understand and discuss the implications of the division of planning competences for the potential to apply an adaptive management regime, based on an understanding of the complex interactions between human and natural systems.

As elaborated above in chapter 4, to understand the logics, or rationales, behind municipal planning, the case study will include a doctrinal study of the Swedish municipal system and the legal instruments and principles that govern decision-making. To further elaborate this discussion, and on a deeper level develop an understanding for municipal planning logics, the doctrinal study will be followed by a document study of comprehensive plans of coastal municipalities. This will inform a discussion regarding some of the ideas that underlie coastal management in the plans. In addition, interviews with municipal, regional, and national planners and ecologists have been conducted to acquire a deeper understanding of what considerations are deemed most important on the municipal level and how these relate to the overall goal of the national MSP system. Through these mixed methods of approaching the management system, this part of the book can provide an analysis of the consequences of choices of management levels when designing a planning system. It will also provide input to the wider discussion of this thesis, namely how the structural layer of law needs to be designed to be able to cater for adaptive management practices.[266]

To place MSP in a wider context, the current chapter introduces the legal framework for MSP in the EU and in Sweden. In chapter 6, the characteristics of MSP are presented, beginning with a short overview of the international legal system before moving on to a presentation of the development of MSP as a concept and how it relates to terrestrial planning. Chapter 7 covers the formal legal boundaries of municipal planning. In chapter 8, the results from the interview study and analysis of comprehensive plans are presented.

[266] See chapter 4 concerning methods and material.

5.2 Legal development

The emergence of MSP must be seen in its historical context. There have been legal debates on the freedom of the seas, and the possibility of individual political entities to limit such freedoms for centuries. Throughout history there have been different attempts to claim control over the seas. When Spain and Portugal divided the world between them through the Treaty of Tordesillas in 1494, they claimed sovereignty over the sea. This claim was, however, rejected by other states, such as England and the Dutch Republic.[267] In the 17th century, a scholarly debate on the freedom of the seas emerged, and some of these texts came to lay the foundation for how the sea was seen from a legal aspect for many years to come. The most prominent author of the time was the Dutch jurist Hugo Grotius (although some of his texts were found much later). His ideas laid the foundation for the Law of the Sea as we know it today.

The main ideas of Grotius were drawn from the Roman principle of freedom of the seas, even though he also acknowledged a right for states to exercise control over a narrow band of water adjacent to the coast.[268] Grotius' arguments eventually became the most prominent not on account of their academic and legal merits, but rather due to the political landscape at the time, insofar as Grotius' ideas suited the interests of strong maritime states.[269] Of course, the sea has been subject to further human intervention and legislation since the days of Grotius. The rights of coastal states were developed further by another Dutchman, van Bynkershoek, a contemporary of Grotius, who discussed the "cannon shot rule", which stipulated that a state's sovereignty extended as far as a cannon would carry from the shore.[270] This principle was the first recognition of a sovereign right for coastal states to control marine areas, and it was an early formulation of what today is the territorial sea. The "cannon shot rule" was an important factor in the increasing distinction between high seas and territorial waters in the late 17th and 18th century.[271]

[267] Tullio Treves, *Historical development of the law of the sea* in Donald Rothwell and others (eds), *The Oxford handbook of the law of the sea* (1 edn, Oxford University Press 2015), p 3. What the claim of sovereignty actually entailed is beyond the scope of this book. For a more in-depth discussion on the subject, see Philip E. Steinberg, *The social construction of the ocean* (New York, Cambridge University Press 2001), pp 75-89.
[268] Treves (2015), p 4.
[269] David J. Bederman, *The sea* in Bardo Fassbender and Anne Peters (eds), *The Oxford handbook of the history of international law* (Oxford University Press 2012), p 369.
[270] Treves (2015), p 5.
[271] Daniel Patrick Connell, *The international law of the sea. Vol. 1* (Ivan Anthony Shearer ed, Oxford, Oxford : Clarendon Pr. 1982), p 18.

However, until the creation of UNCLOS, there was no internationally agreed upon limit for the territorial sea.[272]

In relation to MSP, the provisions of UNCLOS regarding geographical boundaries of national jurisdiction are of great importance. Through UNCLOS it is determined which areas are within national jurisdiction and which are international waters. Furthermore, marine areas within states' national jurisdiction are divided into internal waters, territorial sea, and the EEZ. These zones are related to a baseline, which is drawn either along the low-water line of the coast, or through a straight baseline in places with large archipelagos or uneven coastlines.[273] The first zone counted from the shoreline is called "internal waters" and covers the waters landward of the baseline. The territorial sea consists of the area 12 nautical miles (nm) seaward of the baseline. The EEZ stretches from the end of the territorial sea until, at maximum, 200nm seaward of the baseline.[274] Beyond the EEZ lies the High Seas, individual states can have no claims. The extent of the territorial sea and the EEZ is contingent on the vicinity to neighboring states. For example, in the Sound between Sweden and Denmark, there is no EEZ, there is only a small stretch of territorial sea.[275]

The sovereignty of coastal states is extended, with some exceptions, to include the territorial sea. [276] This means that a coastal state can "exercise complete legislative and enforcement jurisdiction over all matters and all people in an exclusive manner unless international law provides otherwise".[277] This is an important factor for MSP, as it gives the coastal state the mandate to comprehensively plan the territorial sea. The right over the EEZ, however, is limited mainly to the sovereign right of "exploring and exploiting, conserving and managing the natural resources".[278]

[272] See The United Nations Convention on the Territorial Sea and the Contiguous Zone 1958, and UNCLOS 1982, arts 3-4.
[273] UNCLOS 1982, arts 5 and 7. The complete formal definition of the normal baseline is: 'Except where otherwise provided in this Convention, the normal baseline for measuring the breadth of the territorial sea is the low-water line along the coast as marked on large-scale charts officially recognized by the coastal State.' For the formal definition of straight baselines, see ibid, art 7.
[274] Ibid, arts 3, 8 and 57.
[275] See Act concerning the Territorial Waters of Sweden (1966:374), arts 2-3.
[276] UNCLOS 1982, art. 1.
[277] Yoshifumi Tanaka, *The international law of the sea* (2 edn, Cambridge, Cambridge : Cambridge University Press 2015) pp 85-86.
[278] This definition does not include the entirety of rights stipulated in the convention, for the exact definition, see UNCLOS 1982 art 56. It should be noted that the territorial sea, as well

5.3 Planning development

The management of marine areas has, traditionally, been based on sectoral planning, focusing on particular uses and permits for exploitation of resources.[279] There are a number of reasons for this historical reluctance to plan marine areas. Jay claims that the terrestrial focus in planning *inter alia* could be explained by comprehensive land ownership, and that by creating visible boundaries and settlements, it was easier to conceive of land as a reality.[280] Together with the historical absence of legislation, this made for a development where the marine environment was left outside the scope of physical planning endeavors. However, since the turn of the millennium, there have been increasing efforts to apply a more integrated and holistic approach, an ecosystem approach, to issues regarding sea use. The most frequently promoted system to implement such an approach over the last ten years has been MSP.

There are several explanations for the growing attention being paid to the idea of integrated marine governance in recent years. In general, economic interest in marine areas has multiplied, leading to greater pressure on the environment. In addition, many states are looking now to extend their jurisdiction over marine areas. Coastal states can pursue this goal by claiming the rights over the continental shelf beyond the EEZ. The continental shelf is a part of the seabed, in which the adjacent coastal state has sovereign rights to explore and exploit the natural resources.[281] Coastal states have the right to claim sovereignty over the continental shelf extending beyond the EEZ, up to a maximum of 360nm seaward of the baseline.[282] The number of claims since the turn of the millennium shows a clear increase in interest from coastal states in the continental shelf.[283] This indicates an increasing human pressure on, and interest in, the marine environment. Adding this to the rising interest

as the EEZ, needs to be claimed by the coastal state. In the area of concern for this case study all states have claimed their territorial sea and EEZ.

[279] Maes (2008), p 798.

[280] Stephen Jay, *Built at sea: marine management and the construction of marine spatial planning (report)* 81 Town Planning Review 173 (2010), p 175.

[281] UNCLOS 1982, arts 76-77.

[282] This is a simplified definition of the continental shelf and how it can extend outside of the EEZ. For the exact definition, see ibid, art 76.

[283] See <http://www.un.org/depts/los/clcs_new/commission_submissions.htm> accessed 2017-01-08. It should be noted that the increasing claims may have dual origins, since art 4 of Annex II, UNCLOS, stipulates that a state that intends to establish outer limits of its continental shelf beyond the EEZ, is obliged to submit the relevant information to the CLCS within ten years of the entry into force of the UNCLOS for that state.

in offshore energy and continuing fisheries and maritime transport, it seems relevant to draw a parallel between now and the time when the terrestrial planning system was developed in the late 19th and early 20th century.[284] Although the types of pressures and problems that occurred were different, the rationale behind the planning system at sea was quite similar to that of terrestrial planning; an increase in human pressure forced the development of a tool for an overall management approach to mediate between the various demands and projects.[285]

5.4 MSP development in EU legislation

The deterioration of the marine environment has been a growing concern for the EU in the last 15 years. In 2007, the Commission of the European Communities (the Commission) adopted an Integrated Maritime Policy (IMP).[286] The purpose of the IMP was to respond to the challenges created by an increase in pressures on the marine environment, while at the same time promoting economic development in the maritime economy.[287] The main focus of the IMP was on the latter of the two, promoting economic development and growth. However, there were some convincing measures proposed concerning environmental protection as well. These measures were pronounced in terms of, *inter alia*, support for the already proposed directive for a marine strategy, which was consequently realized through the adoption of the MSFD in 2008.[288] The MSFD is considered to be the environmental pillar of the implementation of the IMP,[289] aiming at ensuring that human pressures on the marine environment do not endanger the achievement or maintaining of a good environmental status by 2020.[290]

The economic dimension of the IMP is most prominently represented through the communication on Blue Growth, which was adopted in 2012.[291]

[284] See section 6.1.

[285] Sue Kidd and Geraint Ellis, *From the land to sea and back again? Using terrestrial planning to understand the process of marine spatial planning* 14 Journal of Environmental Policy & Planning 49 (2012), p 52, see section 6.2.2.

[286] European Commission COM(2007) 575, *An integrated maritime policy for the European Union*, (2007).

[287] Ibid p 2.

[288] 2008/56/EC 2008.

[289] Ibid, preamble (3).

[290] Ibid, art 1.

[291] European Commission COM(2012) 494, *Blue Growth - opportunities for marine and maritime sustainable growth*, (2012).

The communication promoted the development of maritime industries in a sustainable manner. Growth in the blue economy was forwarded as a way of steering clear of the European debt crisis.[292] The importance of meeting the environmental targets is stressed in the communication; however, this is promoted more as a foundation for innovation and growth, and less as something valuable in itself, as is the case in the MSFD.[293]

Within the IMP it is recognized that all matters related to the sea are interlinked, and that there is a need to apply a holistic perspective where growth and the environment are taken into account. Traditionally, there has been a division between sectors in EU legislation, with little internal coordination. While these pieces of legislation are still in force, MSP was identified as an important tool to strike a balance between them, within the IMP. MSP was found to be a "[…] fundamental tool for the sustainable development of marine areas and coastal regions, and for the restoration of Europe's seas to environmental health".[294] In the IMP, MSP was treated under the same section as Integrated Coastal Zone Management (ICZM).[295] The EU had already promoted ICZM as a means to implement a strategic approach to the management of coastal zones.[296] Although the European Council had recommended that member states implement ICZM already in 2002, no formal mandatory requirements had been adopted. Through the IMP, MSP was promoted as a tool to strengthen ICZM, and as a step in this process, the Commission adopted a Roadmap for Maritime Spatial Planning in 2008.[297] Through the Roadmap, ten key principles of MSP practice were identified:

1. Using MSP according to area and type of activity – Areas with higher density of use or particularly vulnerable areas might need more detailed plans. There are three dimensions to MSP, activities (a) on the sea bed, (b) in the water column, and (c) on the surface, which allows different uses in the same space.
2. Defining objectives to guide MSP – The objectives should allow arbitration in the case of conflicting sectoral interests.
3. Developing MSP in a transparent manner – Full information to all parties concerned will improve predictability and increase acceptance.
4. Stakeholder participation – inter alia a source of knowledge that can significantly raise the quality of MSP.
5. Coordination within Member States, simplifying decision processes.
6. Ensuring the legal effect of national MSP – In the same way that terrestrial planning set up a legally binding framework for the management of land, MSP should be legally binding if it is to be effective.
7. Cross-border cooperation and consultation – Ensures coherence of plans across ecosystems.
8. Incorporating monitoring and evaluation in the planning process – The planning process must be flexible enough to react to changes and allow plans to be revised in due course.
9. Achieving coherence between terrestrial and maritime spatial planning, relation with Integrated Coastal Zone Management (ICZM) – Terrestrial planning should be coordinated with MSP. The respective services should cooperate and involve stakeholders so as to ensure coherence.
10. A strong data and knowledge base – Planning needs to evolve with knowledge (adaptive management).[298]

In addition, the ecosystem approach was forwarded as an overarching principle for MSP.[299]

In 2013, the Commission published a proposal for a directive on MSP and ICZM.[300] In the impact assessment accompanying the proposal it was stressed that a joint legislative initiative, in which both of these systems of

[292] Ibid, p 3.
[293] 2008/56/EC 2008 preamble (3).
[294] European Commission COM(2007) 575, (2007) p 6.
[295] Ibid, p 6.
[296] Council Recommendation 2002/413/EC, *Recommendation 2002/413/EC of the European Parliament and of the Council of 30 May 2002 concerning the implementation of integrated coastal zone management in Europe*, (2002), chapter 1.
[297] European Commission COM(2008) 791, (2008), P 10.
[298] Ibid, p 9. These principles have since been debated within the scientific community. This debate, however, will not be covered here, but in the section on MSP development in research.
[299] Ibid, p 10.
[300] European Commission COM(2013) 133 final, *Proposal for a Directive of the European Parliament and of the Council establishing a framework for maritime spatial planning and integrated coastal management* {*SWD(2013) 64 final*}, (2013). In the proposed Directive, ICZM was referred to as ICM, but for the sake of consistency I will call it ICZM throughout this book and make no distinction between the two terminologies.

marine and coastal management were covered, was important.[301] However, when the directive on MSP was adopted in July 2014, ICZM was no longer a part of it.[302] By contrast, coastal waters or parts thereof falling under the town and country planning of member states were explicitly excluded from the Directive.[303] This was a result of the referral round where, among others, the Committee of the Regions[304] expressed concerns that the directive, as proposed, would affect planning competences held at regional and/or local level within member states. Even with the proposed wording that the directive should be without prejudice to member states' competence for town and country planning, it was considered to be too intrusive an interference in the local and regional administrations jurisdiction to include ICZM.[305]

The MSPD is formulated as a framework directive, stipulating the minimum requirements for a member state's MSP legislation. The basic requirements are that each member state shall establish and implement MSP, where the ecosystem approach is applied, and that the plans shall be adopted by March 2021 at the latest.[306] In addition, there are a number of relatively open minimum requirements, which give little guidance as to how the MSP process should be designed, as well as what the outcomes are supposed to be. In terms of ecosystems and the appropriate scale of management, there is a reference made to the marine regions as defined in the MSFD.[307] There is no further instructions on how to delimit ecosystems into manageable units, such as in, for example, the WFD.[308] Thus, the MSPD opens up the way for vast differences in the transpositions in member states, both when it comes to delimitations of ecosystems/scales of management and in the choices of competent authority and responsible ministry. In the following section, the Swedish MSP system is presented to give a more in-depth background to the problems discussed here.

[301] European Commission SWD(2013) 65, *Impact assessment accompanying the document "Proposal for a directive if the European Parliament and the Council establishing a framework for maritime spatial planning and integrated coastal zone management"*, (2013), p 56.
[302] 2014/89/EU 2014.
[303] Ibid, art. 2.1.
[304] The EU assembly for regional and local representatives.
[305] Committee of the Regions NAT-V-030, *Opinion on proposed directive for maritime spatial planning and integrated coastal management*, (2013), p 1 and sec. 26.
[306] 2014/89/EU 2014, arts 4(1), 5(1) and 15(3).
[307] Ibid, art 3(3).
[308] For a more detailed review on the different definitions of ecosystems within these three directives, see Westholm (2018).

5.5 The Swedish setting

5.5.1 Historic development

The Swedish planning system is characterized by decentralized planning. The municipalities have a planning monopoly, which means that they enjoy the exclusive competence to plan the use of land and water areas within the boundaries of the municipality.[309] As a point of reference, the Swedish municipalities vary in size, with the smallest having 2,454, and the largest 935,619 inhabitants. The median number of inhabitants in the 290 municipalities is 15,687 (2016).[310] In a European context, this approach to planning is relatively unique. The more common approach is to centralize planning further, placing the responsibility on larger, regional, administration. Examples of this type of planning can be seen in countries such as Italy, Belgium, France and Germany.[311] The present section will provide a historical overview of the development of spatial planning in Sweden, ending up in today's legal framework. The terrestrial planning system is important to understand, as it has influenced the design of the MSP system to a great extent.

The first regulation on local planning in Sweden was adopted in the early 20th century, through the City Planning Act. As in many other countries, increased urbanization and industrialism had led to an unsustainable situation in the cities. Outside of the cities, land use was still fairly unregulated.[312] The most important reform, which also created the foundation for the planning system of today, came in 1947, when the municipalities were given the exclusive competence for spatial planning, and the so-called municipal planning monopoly was instituted.[313] Between 1952–1974 a municipal reform was undertaken, where the number of municipalities went from 2,498 to 278 (today there are 290).[314] The reform led to the creation of larger municipalities, which gave a better economic base for the financing of public services.[315] However, this reform led to new problems in relation to planning.

[309] PBA ibid, ch 1 sec 2.
[310] Statistics Sweden, *Folkmängden i Sveriges kommuner 1950-2016*, (2016).
[311] Lee Pugalis and Alan Townsend, *Rescaling of planning and its interface with economic development* 28 Planning Practice & Research 104 (2013), p 104.
[312] Jan Nyström, *Planeringens grunder: en översikt* (Lennart Tonell ed, 3., [utök. och uppdaterade] uppl.. edn, Lund, Lund : Studentlitteratur 2012), ch 4.
[313] Ibid p 164.
[314] Donald Söderlind, *Svensk förvaltningspolitik* (Olof Petersson ed, 2., [omarb.] uppl. edn, Uppsala, Uppsala : Diskurs 1988), p 103.
[315] Nyström (2012), p 165.

One such problem was that there was an increased distance between the population and the decision-makers. In the late 1970s, a government commission was initiated to oversee the planning legislation. The commission's objectives included: increased stakeholder involvement; a stronger role for comprehensive planning; and a strengthened position for the municipalities. State involvement should be limited to specific interest areas.[316] Almost ten years after the first government commission report, in 1987, the first Planning and Building Act was adopted. Through this act, the planning instruments of today were created.

In parallel with the development of the PBA and municipal planning, there was a process of developing land use planning at the national level as well. When the standard of living rapidly increased in Sweden, in the middle of the 20th century, the population became more mobile and started exploring nature in new ways. This led to an increase in demand for recreational areas. At the same time, the industrial development called for new locations of industries, while emissions and environmental effects from the industries were also realized to a greater extent than before.[317] In short, the demand for physical space increased and a new, more general planning regime to cover conflicts in land use was needed. In the 1963 government bill proposing a new Nature Conservation Act, this need was expressed as an attempt to balance the demands of a modern society on nature, against the interest of preserving the natural world for future generations.[318]

The new Nature Conservation Act came into force in 1965. The act had a dual purpose: to conserve scientifically and culturally valuable areas; and to ensure that social interests were taken into account through preserving areas for recreation and outdoor life. Nevertheless, land use conflicts were still common, and the government saw the need to create a national land use planning policy.[319]

Sweden's national land use planning was developed over almost 20 years, with different phases of guidelines, programming and planning. The aim was to introduce a planning system for the entire country, moving away from the previous sectoral planning, which was characterized by a more short-term perspective. Many land use conflicts at the time were decided in favor of the

[316] SOU 1979:65, *Ny plan- och bygglag: betänkande av PBL-utredningen*, (1979) pp 131-139.
[317] SOU 2015:99, *Riksintresseutredningen — Planering och beslut för hållbar utveckling: Miljöbalkens hushållningsbestämmelser: slutbetänkande*, (2015), p 83.
[318] prop. 1963:71, *Angående riktlinjer och organisation för naturvårdsverksamheten, m.m.*, (1963), p 107.
[319] SOU 2015:99, (2015), pp 83-84.

interests of those wanting to exploit resources. This called for a planning system to prevent environmental damage and negotiate conflicts.[320] Municipal planning was highlighted by the minister of public administration as vital to this new national planning. *Inter alia* he saw the need for a more comprehensive municipal planning, while still acknowledging that municipalities naturally had a more local focus.[321]

Together with the municipalities, the central government developed the national land use planning further during the years 1975–1987. The importance of municipal planning gained increasing recognition. From the perspective of the central government, comprehensive planning was crucial in being able to decentralize planning. The municipal plans would, through a rational decision-making process, ensure the implementation of the national land use planning system.[322] In the end, these two types of planning were placed in different acts in 1987: the PBA and the Law (1987:12) on the Management of Natural Resources (LMNR). National land use planning was given its own act, as it had a broader scope than merely planning, and was supposed to be taken into account in other types of decisions as well.[323] The close connection between municipal comprehensive planning and the provisions concerning the management of land and water areas remains in place to this day. They are co-dependent; the implementation of the land and water management provisions is contingent on municipal planning, while municipal planning, on the other hand, is informed and sometimes restricted by those same provisions.

5.5.2 Contemporary Swedish planning

There are two legal acts of central importance for planning in Sweden: the PBA and the SEC. Although the PBA has been subject to substantial revisions during the years since its first adoption in 1987, the basic idea – to have an organized, comprehensive planning system at the municipal level – still remains. The SEC was adopted in 1999 and was the result of an effort to gather all environmental legislation in one place. In all, 16 separate environmental laws were merged into this single act.[324] The PBA and the SEC are interlinked as they both concern the use of the physical environment. It

[320] prop. 1972:111 Bil 2, *Regional utveckling och hushållning med mark och vatten*, (1972), p 126.
[321] Ibid, pp 129 and 175.
[322] SOU 2015:99, (2015), p 91.
[323] Ibid, p 91.
[324] prop. 1997/98:45, *Miljöbalk*, (1997), pp 1-2.

may be relevant to clarify that MSP is regulated in the SEC, while municipal planning is regulated in the PBA. There will be reason to return to this relationship in section 0.

There are two main types of planning instruments available for municipalities: comprehensive plans and detailed development plans. Comprehensive plans are strategic, non-binding plans covering the entire area of a municipality, while detailed development plans are binding, covering smaller areas.[325] As the comprehensive plans cover the entire geographic area of a municipality, in effect they cover the entire geographic area of Sweden.[326] Municipal plans are the only available instruments for a comprehensive planning system. This places a heavy responsibility on municipalities in terms of environmental governance. While there are quite a few national legal acts that pertain to the natural environment and have effects on municipal planning, municipal plans are important instruments to guide decision-making where there are competing land use claims. Comprehensive plans are non-binding, but they still carry some weight in subsequent permit processes, etc. The permitting authority rarely goes against recommendations in a comprehensive plan. The Land and Environment Court of Appeal (LECA) has, in a number of cases, concluded that municipalities have a wide discretion in planning their areas, and that comprehensive plans carry quite a heavy weight when deciding on land use issues.[327] This connects to the overarching theme and central research questions of this book. The comprehensive plans are legal documents that operate within the structural layer of law, guiding decisions in the operational layer. It is thus essential that these plans are well-informed and that they have the capacity and legal mandate to include social and environmental issues operating at different and sometimes conflicting scales.

5.5.3 Differing paradigms in land use law

The fact that MSP is regulated in the SEC and municipal planning in the PBA may be seen as merely a matter of practicalities. Nevertheless, there are

[325] PBA, ch 3-4.
[326] This is not entirely true, as they do not cover the EEZ.
[327] See e.g. *MÖD 2005:2* (Land and Environment Court of Appeal) regarding the establishment of a wind farm in an area that was assigned for other uses in the comprehensive plan, and *MÖD 2012:40* (Land and Environment Court of Appeal) where a property owner was denied a building permit for a new house based on the land-use considerations made in the comprehensive plan.

differences in the basic rationales of these two legal acts, differences that may also be expressed in the planning processes. The PBA has been described as building on a *planning paradigm*, where the central concern is changes in how different areas are used, and how a city or area could be developed. The basic idea behind the planning paradigm could also be explained as a "balancing between interests on a rational basis but through political decision-making".[328] This could be contrasted to an *environmental paradigm*, where decisions are made based on the best available scientific knowledge, which is one of the guiding objectives of the SEC.[329] Both of these paradigms are of importance for how planning is performed in Sweden. They can also feed in to the discussions about the appropriate scale and level of planning. Environmental issues, which are highlighted in the environment paradigm, are blind to municipal boundaries, and focus is placed rather on how to solve particular problems. Land use issues within the planning paradigm, on the other hand, may be well suited for a more local decision-making process, as the scale of new activities rarely reaches beyond the limits of a municipality.

The SEC builds on scientific ideals, and the first section of the Code, stating the overall purpose, stresses the need for sustainable development, with a focus on environmental issues.[330] However, when it comes down to actual decisions, social and political considerations tend to carry considerable weight, and it is not uncommon that the scientifically optimum solution for the natural environment is sidestepped by human interests.[331] This connects to discussions concerning *rationality* in planning, which is covered in section 6.2.5, and could be seen as a consequence of the shortcomings of purely scientific systems, as they can never take into account the full complexity of a social system. Nevertheless, using the terminology of a *planning paradigm* and an *environmental paradigm* may still be helpful to gain an understanding of what constitute the governing principles for municipal planning. The PBA has a somewhat different purpose to that of the SEC. This can be highlighted by comparing the first sections of the two acts. Both stipulate the purpose of the respective acts, and they both use the term "sustainability". However, section

[328] Lars Emmelin, *Planera för friluftsliv: natur, samhälle, upplevelser* (Stockholm, Stockholm : Carlsson 2010), p 306.
[329] Lars Emmelin and Peggy Lerman, *Styrning av markanvändning och miljö* (2006), p 2.
[330] SEC (SEC), ch 1 sec 1.
[331] See *MÖD 2017:7 - Bombmurklan* (Land and Environment Court of Appeal), where the interests of an individual property owner was seen as more important that the protection of an endangered mushroom, a case that highlights how other pieces of legislation affect the environmental aims of the SEC.

1 of the PBA mentions sustainability in terms of living conditions and stresses the need to safeguard the freedom of the individual and societal development with equal living conditions. It is thus a different type of sustainability that forms the basis for the PBA as compared to the SEC.

The conflict between these two paradigms, or at least a discrepancy in the underlying rationales of planning systems, has also been noted in the relation between marine and terrestrial spatial planning, in a more general sense. The development of marine planning has largely been driven by an increased awareness of the environmental implications of human activities, while terrestrial planning has generally been focused more on economic and social development.[332] This may also be reinforced by the fact that MSP in Sweden is regulated in the SEC, while municipal, mainly terrestrial, planning is regulated in the PBA. This notion was mentioned by a number of the respondents in the interview study: that planning is about weighing interests against each other, rather than environmental protection;[333] that planning according to the PBA required different types of interventions from national authorities than according to the SEC;[334] or that the relation between the two plans is unclear and that the PBA planning has an established system in place, which the new MSP system interferes with.[335]

5.5.4 Development of a Swedish MSP

In parallel with the development of the EU directive on MSP, the Swedish government was working on the development of a national framework for MSP. The first version of a system for MSP was presented by a government commission in 2008. The report was not specifically aimed at MSP as such, but identified a need for a national framework for MSP as part of the management of the marine environment. It identified that the increase in claims on sea use had negative impacts on the environmental status of the marine areas, creating an unsustainable situation for the marine ecosystems.[336] At this initial stage, the government commission considered the role of MSP as providing a system for the protection of the environment. Existing EU and

[332] Sue Kidd and others, *The ecosystem approach and planning and management of the marine environment* in Sue Kidd, Andy Plater and Chris Frid (eds), *The ecosystem approach to marine planning and management* (Earthscan 2011), p 28.
[333] Interview 4, *Respondent from large municipality in the Baltic Sea* (2018).
[334] Interview 18, *Respondent representative from CAB* (2019).
[335] Interview 17, *Respondent representative from CAB* (2019).
[336] SOU 2008:48, *En utvecklad havsmiljöförvaltning*, (2008), p 151.

international legislation were seen as embryonic forms of marine planning based on an ecosystem approach.[337] A system for marine planning could be a tool for civil servants and politicians. But it was also seen to offer a chance for the public to gain insight into, and influence, the priorities made in the development of the marine environment.[338] The aim was to create a system in which planning of the territorial sea was performed regionally, on a county level. The plans would also cover internal waters, as it would otherwise be difficult to apply a holistic perspective to sea use management.[339]

The proposal concerning a regional MSP was opposed by most of the consultative bodies, and in the subsequent government bill,[340] a system where the municipalities retained the planning competence of internal and coastal waters, was proposed. With regard to the territorial sea, the government bill concluded that the planning options needed further investigation.[341] The main reason for retaining the planning competence of internal waters at the municipal level was that the bulk of municipal interests were located in this area.[342]

As a result of the bill 2008/09:170, a new government commission was appointed. In the instructions from the central government to the commission, it was clearly stated that the area to be included in the MSP should reach from one nm seaward of the baseline until the end of the EEZ and that planning should be guided by the ecosystem approach. Planning was to be executed by a central government agency.[343] The commission was to take municipal planning into consideration when suggesting the new national planning system.[344]

Consequently, a proposal for a law on Swedish MSP, based on the instructions given to the commission, was presented.[345] One important feature of the proposed MSP, in addition to those features mentioned above, was that the national plans would overlap with the municipal plans. There was quite an extensive review of how the coordination between the two types of plans should be organized. The municipalities were supposed to participate

[337] Ibid, p 153.
[338] Ibid, p 154.
[339] Ibid, p 155.
[340] prop. 2008/09:170, *En sammanhållen svensk havspolitik*, (2009).
[341] Ibid, pp 40-41.
[342] Ibid, p 41.
[343] Miljödepartementet, *Havsplanering i svenska vatten — kommittédirektiv 2009:109*, (2009).
[344] Ibid, p 3.
[345] SOU 2010:91, (2010).

in the development of marine plans, and at the same time the municipalities would have a responsibility to clearly state how their comprehensive plans were coordinated with the marine plans.[346]

The new government commission proposed the adoption of a law on MSP and relatively substantial changes to the SEC and the PBA.[347] During the referral round, concerns were raised by several of the consultative bodies, prompting the Ministry of Environment to present a substantially revised proposal for a legislative system for MSP. This proposal was presented through a memorandum from the Ministry of Environment in 2013, where the proposed law on MSP was taken out.[348] In general, the memorandum entailed fewer changes to already existing laws than had been proposed by the commission. Instead of creating a new law on MSP, one paragraph was to be added to chapter 4 of the SEC, accompanied by an ordinance on MSP. Furthermore, the obligation for municipalities to coordinate their comprehensive plans with the purpose of the marine plans was excluded. Instead, the comprehensive plans were now supposed to correspond to the marine plan from the outset. However, there was nothing preventing them from being changed at a later stage to no longer correspond with the national marine plan.[349] In addition, no changes to this effect were introduced to the PBA or the SEC. Furthermore, it was stated in the memorandum that there was no need to clarify the internal hierarchy between the two types of plans.[350] This legal construction opens up the way for a situation with potentially two different non-binding plans, covering the same area but establishing different priorities. It will be up to the court system to decide which plan shall be given more priority in individual permit processes, an order that disputes the fundamental purpose of the MSP system as a comprehensive and holistic management regime. Furthermore, it counteracts the function of the plans as sources of information and thus predictability in *inter alia* permit processes. Both the comprehensive plans and the marine plans are supposed to be guiding in these processes, fulfilling the function of the structural layer of law. Leaving the courts to decide on the hierarchy between the two plans risks undermining the principles of predictability and legal certainty.

[346] Ibid, p 195-96.
[347] Ibid, p 375 ff.
[348] Miljödepartementet, (2013).
[349] Ibid p 100.
[350] Ibid, p 50.

To sum up the Swedish MSP legislation, a tenth paragraph was added to chapter 4 of the SEC in 2014, and a supplementary ordinance was adopted in 2015. The government is expected to adopt the actual plans in 2021. In accordance with the MSPD, the development of the Swedish marine plans is supposed to be governed by an ecosystem approach.[351] The plans will cover the Swedish marine areas, from one nm seaward of the baseline until the end of the EEZ, thus covering most of the territorial sea. The coastal waters, i.e. the waters landward of one nm seaward of the baseline, are under the exclusive planning competence of municipalities.

The current chapter has described the development of legal frameworks for MSP in the EU and in Sweden. To complement this review, the following chapter will discuss the concept of MSP as such, in relation to both current research and terrestrial planning history.

[351] Ordinance (2015:400) on Marine Spatial Planning, sec. 10.

6 Approaches to planning and MSP

6.1 A brief history of planning

Throughout history, different versions of town and terrestrial planning have followed where humans have organized themselves in larger cities. In the Roman Empire, cities of large populations needed a system for organized transportation and water supply, which required a comprehensive planning system. During the 17th and 18th centuries, architectural design and planning was promoted, with the building of the Palace of Versailles in France, and entire cities being planned in Germany.[352] The first real theoretical conceptualization of planning was formulated in the same period. It was then described as being "rational action as a consistent selection of actions subject to pre-stated goals".[353] More modern types of planning initiatives came to light in the mid-19th century, where civil engineering became the main discipline for planners.[354] In only a century, a city like London grew from one million inhabitants to 6.5 million creating an acute demand for organized city planning. Lack of sewage systems and clean water accessibility created a situation where epidemics easily spread in crowded cities.[355]

The driving factors that brought about a planning regime for the terrestrial environment already in Roman times have clear echoes in the environmental issues behind the development of MSP today. In addition, rationality, which is a key concept in MSP, has had a prominent position in the development of terrestrial planning as well. The conception of planning as a rational activity recurs in the planning literature throughout the 20th century. Although often criticized, it is still a concept to which all planning theorists need to relate. MSP is commonly referred to as an instrument to achieve a more rational use of sea space. Thus, it is relevant to discuss the concept of rationality when

[352] Peter Geoffrey Hall, *Urban and regional planning* (Mark Tewdwr-Jones ed, 5th ed.. edn, Abingdon, Oxon, England ; New York, Abingdon, Oxon, England ; New York : Routledge 2011) pp 11-12.
[353] Michael Wegener, Kenneth John Button and Peter Nijkamp, *Planning history and methodology* (Cheltenham, Cheltenham : Edward Elgar 2007), p xv.
[354] Ibid, p xv.
[355] Hall (2011), pp 13-15.

studying the policy area of MSP. The following paragraphs contain a short introduction to the concept of rationality in planning, to give the reader an understanding of how it is used here.

In 1935 (in English 1940), the sociologist Karl Mannheim, who was a central figure in the early days of planning theory formulation,[356] initiated a discussion on planning theory in his book *Man and Society in an Age of Reconstruction*. Mannheim prescribed a scientific approach, whereby planning authorities should base their decisions on empirical grounds, drawing on the scientific study of society.[357] Furthermore, he emphasized the need to take into account irrationalities of humanity, in a rational manner, where spontaneity could occur and be accommodated within a planned system.[358] Mannheim also opted for a comprehensive form of planning and viewed the current state of affairs as being the "[…] chance product of spasmodic interference with the course of social events […]".[359] Although Mannheim has been described as less of a positivist than other contemporary planning theorists,[360] this was an early formulation of the rational planning ideal. This is an ideal that can be traced in many modern models of comprehensive planning for entire cities or regions that have supposedly been developed through a rational process where preferences could be calculated and consequences predicted solely on scientific grounds.[361]

Whether there is such a thing as a rational planner/planning has been, and indeed continues to be, widely debated, as is the meaning of such *rationality*.[362] Even though, as we have seen above, rational planning was discussed already in the 1930s, it was a more design-based planning. It was not until the 1960s that the view of planning as a rational process was really established. During this time, planning activities started to become viewed more as a rational process, based on scientific ideals rather than on aesthetic values.[363] As with

[356] John Friedmann, *Planning theory revisited* 6 European Planning Studies 245 (1998), p 245.
[357] Karl Mannheim, *Man and society in an age of reconstruction: studies in modern social structure* (Rev. and enlarged ed., repr.. edn, London, London : Routledge 1966), p 266.
[358] Ibid, p 267
[359] Ibid, p 268.
[360] John Friedmann, *Planning in the public domain: from knowledge to action* (Princeton, N.J., Princeton, N.J. : Princeton Univ. Press 1987), p 105.
[361] Elisabete A. Silva and others, *The Routledge handbook of planning research methods* (London : Routledge 2015), p xxxi.
[362] See Franco Archibugi, *Planning theory : from the political debate to the methodological reconstruction* (Milano, Milano : Springer Verlag 2008) and Nigel Taylor, *Anglo-American town planning theory since 1945: three significant developments but no paradigm shifts* 14 Planning Perspectives 327 (1999). The concept of rationality is further discussed in section 6.2.5.
[363] Taylor (1999), p 334.

any movement, there were also critics of the idea of planning as a rational activity. These critics claimed that there is no such thing as a rational planner; on the contrary, plans are, by their very nature, political and will always be the result of political considerations.[364] The contested notion of rationality discussed here was one in which planning decisions were based solely on *technical reason*,[365] freed from political considerations. In his seminal work on planning theory, John Friedmann was skeptical of the scientific planning ideal as being too simplistic to be able to cope with the complexity of the "real world".[366] This approach to planning is the most common one used today. Planning activities are now seen as a way of mediating between competing interests and stakeholders.[367] The idea of the planner as a rational expert has faded and been replaced by one where the planner uses information from stakeholders to mediate between interests. The type of expertise required has thus shifted somewhat in the planning profession; technical knowledge is still important, but it is equally important to maximize the interests that can be catered for in the planning process.

It is not possible to clearly identify when one approach is substituted by another in the general debate on planning.[368] As a matter a fact, debates on planning as a rational activity have not been completely abandoned. Rather, they have shifted their focus to definitions of what rationality actually is.[369] However, that is a discussion best left to the literature on planning theory, as it falls outside the scope of the present work.

The mainstream theory of planning in the 21st century is one where planning is seen as an incremental process, with stakeholder participation as a leading ideal.[370] Such communicative planning is based on the ideas that all affected groups should be heard in the planning process, even those commonly most marginalized, drawing on Habermasian discourse ethics.[371]

[364] Norton E. Long, *Planning and politics in urban development* 25 Journal of the American Institute of Planners 167 (1959), p 168.
[365] Friedmann (1987), p 10.
[366] Ibid, p 11 (footnote 4).
[367] Wegener, Button and Nijkamp (2007), p xvii.
[368] Pier Carlo Palermo and Davide Ponzini, *Inquiry and design for spatial planning: three approaches to planning research in late modern cities* in Elisabete A. Silva and others (eds), *The Routledge handbook of planning research methods* (London : Routledge 2015).
[369] See Archibugi (2008) ch 1 and Nigel Taylor, *Urban planning theory since 1945* (London, United Kingdom, London: SAGE Publications Ltd 1998), ch 9.
[370] Wegener, Button and Nijkamp (2007), p xvii.
[371] Tore Sager, *Role conflict: planners torn between dialogical ideals and neo-liberal realities* in Jean Hillier and Patsy Healey (eds), *The Ashgate research companion to planning theory: conceptual challenges for spatial planning* (Farnham, Surrey : Ashgate 2010), p 188.

A stakeholder is anyone who has a legitimate concern about a place that is about to be planned for new purposes.[372]

This form of modern-day, participatory planning has also been subjected to some critique. Many of the large-scale problems and challenges society faces today – such as increased globalization with migration and climate change – are so complex that incremental planning is not able to fully take them into account.[373] Furthermore, participation, while being an inclusive term, is always in some ways exclusive. Some groups are generally over-represented in collaborative exercises, while others may be marginalized.[374] In addition, the geographical boundaries for what and who is concerned in a certain matter will have to be drawn somewhere, thereby excluding areas and people outside of this limit.

Although these different traditions or theories of planning have all been subject to some degree of criticism, it is important to highlight the progress that has been made. From a top-down, design and science perspective on planning, where relations between different stakeholders were relatively invisible, to a more democratic perspective, where the aim is to hear as many voices as possible in the planning process so that all options are on the table. In such planning, interests that previously had little influence in the planning process now have the possibility, at least in theory, to affect the end result.

After this short introduction to planning theory and how it has developed over the last century, I will turn to MSP and how it has evolved and come to be an important tool for marine management in the 21st century.

6.2 Marine spatial planning

6.2.1 Origins of MSP

The Millennium Ecosystem Assessment showed how increased pressures on the environment were affecting coastal and marine ecosystems.[375] MSP was one of the solutions promoted.[376] There had previously been a few examples of MSP initiatives around the world, mainly with a focus on marine protected

[372] Patsy Healey, *Collaborative planning in a stakeholder society* 69 Town Planning Review 1 (1998), p 3.
[373] Wegener, Button and Nijkamp (2007), p xvii.
[374] Wytske Versteeg and Maarten Hajer, *Is this how it is, or is this how it is here? Making sense of politics in planning* in Jean Hillier and Patsy Healey (eds), *The Ashgate research companion to planning theory: conceptual challenges for spatial planning* (Farnham, Surrey : Ashgate 2010), p 165.
[375] See section 5.1.
[376] European Commission COM(2008) 791, (2008), p 2.

areas. Two such initiatives were the Great Barrier Reef Marine Park in Australia, and the Florida Keys National Marine Sanctuary in the United States.[377] In 2006, UNESCO hosted the first international workshop on marine spatial planning with a focus on an integrated use of the marine environment. The workshop resulted in a document called "Visions for a Sea Change",[378] and marked the beginning of the European project for MSP. The definition of MSP promoted here is relatively widely accepted:

> MSP in its broadest sense is about analyzing and allocating parts of the three-dimensional marine space to specific uses, to achieve ecological, economic, and social objectives that are usually specified through the political process.[379]

While this definition may leave room for different interpretations as to the more concrete meaning of MSP, it is the definition that has provided a basis for much of the subsequent discussions regarding MSP. MSP has also been described as providing a vision for the future development of an area, where all affected parties have been able to provide input. This vision can be used as providing information to subsequent permit decisions and for stakeholders in their planning of future activities.[380] The outcome of a planning process is, simply put, a map and an accompanying explanatory document, with recommendations on how the marine areas should be used. Some areas will be pointed out as suitable for conservation and nature protection, while others show characteristics that make them viable for offshore wind power, fisheries, etc. The Swedish marine plans are supplemented by environmental impact assessments, where the long-term effects on the marine environment are estimated.[381] For such estimations, there needs to be a planning horizon, a specific year by which the results of the planning shall be achieved. In the Swedish national MSP system, the horizon year is 2050 for the long-term goals, and 2030 for the more short-term perspective.[382] MSP is commonly described as a process, where the plans are continuously evaluated. From a legal point of view, the consequences of such a constant evaluation are

[377] Douvere and Ehler (2009), p 79.
[378] Ehler and Douvere (2007).
[379] Ibid, p 24.
[380] Douvere and Ehler (2009), p 79.
[381] The Swedish Agency for Marine and Water Management, *Miljökonsekvensbeskrivning av förslag till havsplan Östersjön — samrådshandling* (2018).
[382] The Swedish Agency for Marine and Water Management, *Miljökonsekvensbeskrivning havsplan — Bottniska viken diskussionsunderlag i tidigt skede*(2017), p 34.

unclear, but there is a provision in the MSPD stating that plans should be reviewed at least every 10 years[383] and a corresponding section in the Swedish ordinance on MSP stipulating eight-year planning cycles.[384]

Apart from these general definitions, there are some main characteristics of MSP recurring in the literature. The aim of the following section is to map some of the most important characteristics, and to provide a deeper understanding of MSP as a baseline for the further analysis.

6.2.2 The novelty of MSP

The basic concept of MSP is similar to that of terrestrial planning: a comprehensive planning that can provide a vision for how a certain area or environment should be developed. Yet, it is frequently stressed that although MSP may seem as an extension of terrestrial planning, there are some distinct differences between the two concepts.[385] Such differences stem from both the political organization of space and the more physical characteristics of the two types of environments.

Traditionally, terrestrial land use has been politically connected to local authorities, who are held accountable on a local level. The use of marine space, on the other hand, has been under the control of more centralized, often sectoral, management regimes.[386] MSP provides a tool that may depart from this sectoral approach.

As regards the physical characteristics, the marine environment is commonly described as exhibiting more significant temporal variations, both in the short term and over more extensive timescales.[387] While the terrestrial environment is relatively static, the marine environment is in constant flux. This also affects the seabed, which is more mobile than terrestrial land masses.[388] Added to this is a dimensional factor. The marine environment is frequently described as being three-dimensional,[389] and in much of the literature this statement seems to be taken for granted. The terrestrial environment, on the other hand, is usually considered as being two-

[383] 2014/89/EU 2014, art 6.3.
[384] Ordinance (2015:400) on Marine Spatial Planning, art 21.
[385] See Kidd and Ellis (2012); Robert W. Duck, *Marine spatial planning: managing a dynamic environment* 14 Journal of Environmental Policy & Planning 67 (2012); Jay (2010), p 174.
[386] Wanfei Qiu and Peter J. S. Jones, *The emerging policy landscape for marine spatial planning in Europe* 39 Marine Policy 182 (2013), p 188.
[387] Kidd and Ellis (2012), p 51.
[388] Duck (2012), p 70.
[389] See Ehler and Douvere (2007).

dimensional. In the rare instances when this is elaborated, the terrestrial environment is described as consisting of land and atmosphere, while the marine areas are comprised of the seabed, water column, and the air mass above the water.[390] Such a three-dimensional perspective allows for a planning process in which multiple activities can exist at the same time within the same space, as activities on the seabed do not necessarily conflict with activities on the surface. Furthermore, as there are more temporal variations in activities, the possibility for combined uses within one dimension is greater in the marine environment. Land use planning tends to have longer, more static, time perspectives. Ownership of land is usually more privatized than that of marine areas, and where terrestrial planning often concerns housing development or other permanent constructions, marine areas are to a larger extent used for more temporary activities.[391] It should be noted here, however, that one of the original driving factors for MSP development was related to an increase in permanent constructions in the marine environment, such as offshore wind power, something that would move MSP closer to terrestrial planning.[392]

Regardless of the differences or similarities between these two planning systems, it is clear that they need to connect with one another. The natural and social processes at sea are closely connected to those on land and such processes must be taken into account. This was one of the main considerations put forward by the EU when initiating the process to adopt a directive on MSP.[393]

6.2.3 Stakeholder involvement

As discussed in section 6.1, modern spatial planning has a heavy focus on stakeholder participation and involving all concerned parties in the planning process. In this regard, MSP is no different from its terrestrial cousin. The importance of including relevant stakeholders in the planning process is highlighted by the MSPD. In article 6(2)(d), with reference to article 9, involvement of stakeholders is promoted as one of the minimum requirements for MSP in EU member states. Nevertheless, it is not obvious who should actually be considered a stakeholder. In terrestrial planning,

[390] Duck (2012), p 69.
[391] Ibid, p 69.
[392] Jay (2010), p 177.
[393] See section 5.4, and European Commission COM(2008) 791, (2008), p 11.

participation is largely based on land ownership; property owners who are affected by a plan are considered to be stakeholders (simply put). As discussed in the previous section, the marine domain to a great extent lacks this type of ownership. Thus, the concerned group of stakeholders is different from that of terrestrial planning.[394]

In the early MSP processes, it was found that although there were quite well-developed methods for undertaking a detailed mapping of the biophysical environment, the "social landscape" was less documented. The existing documentation largely consisted of locations for certain activities, taking little notice of the social dimension of these activities.[395] In addition, the importance of active stakeholder involvement was stressed as a means of gaining a better understanding of the ecosystems and resolving areas of conflicts, *inter alia*.[396] To this end, it was crucial to identify who could be affected by different planning decisions. Pomeroy and Douvere discuss how such identification can be made. Some of the criteria proposed suggest that stakeholders should be individuals, groups or communities in some way affected by, or interested in, certain activities, and that stakeholders commonly have "considerable political and/or economic influence over the resource".[397] They define "communities" as politically or socially defined groups with more or less common interests.[398] A challenge in the process is to identify these groups or individuals, as the geographic boundaries may not correspond to the interest of stakeholder groups or communities. In the process of developing plans for the Irish Sea, it was noted that tourists come from all over England to visit the coast, and that there were fishermen from a number of countries holding fishing rights in the area.[399] Both of these groups could be considered stakeholders in a planning process. Still, it may prove difficult to include them in a constructive way. To ensure that the voices of stakeholders are heard, different methods need to be applied, such

[394] Heather Ritchie and Geraint Ellis, *"A system that works for the sea"? Exploring stakeholder engagement in marine spatial planning* 53 Journal of Environmental Planning and Management 701 (2010), p 702.
[395] Kevin St. Martin and Madeleine Hall-Arber, *The missing layer: geo-technologies, communities, and implications for marine spatial planning* 32 Marine Policy 779 (2008), p 780.
[396] Robert Pomeroy and Fanny Douvere, *The engagement of stakeholders in the marine spatial planning process* 32 Marine Policy 816 (2008), p 816.
[397] Ibid, p 818.
[398] Ibid.
[399] Gilliland and Laffoley (2008), p 795.

as community-based workshops and interviews, and negotiation and consultation.[400]

How participation is performed is central for the usefulness of the information, as well as for the legitimacy of the decision. Although it is widely recognized that participation is important for a democratic planning process, critical voices have been heard lately with regard to how the participation is designed.[401] Two central questions are: who is participating? and what actual possibilities for impact are there? A recurring problem is that the participation phase is introduced late in the process, when the most important, normative, decisions have already been made.[402] In those scenarios, participation becomes more of a symbolic part of the planning, rather than a concrete way for stakeholders to affect important planning decisions. Participation, or rather communicative planning, has also been subject to some critique, as stakeholders tend to have a local perspective and give priority to local interests over the larger picture. Furthermore, it presupposes some kind of consensus, which may be neither desirable nor attainable.[403]

The challenges with participatory processes highlight some of the core difficulties in MSP. In the following, the transboundary aspects of MSP are discussed. Transboundary cooperation has some similarities to participation, as it concerns a type of participation across borders.

6.2.4 Transboundary cooperation

The third aspect of MSP that is frequently discussed in the literature, as well as promoted by the MSPD, is transboundary cooperation.[404] The boundaries of marine ecosystems rarely coincide completely with the administrative boundaries set up within, or between, countries.[405] For ecosystem management to be successful, it has to be undertaken at the appropriate scale. The challenge in this regard is that the scale of environmental and ecosystem processes rarely coincides with that of nation states. Nor are marine activities strictly confined within the boundaries of a single state. Fishing, maritime

[400] St. Martin and Hall-Arber (2008), p 781; Pomeroy and Douvere (2008), p 817.
[401] See Wesley Flannery, Noel Healy and Marcos Luna, *Exclusion and non-participation in marine spatial planning* 88 Marine Policy 32 (2018).
[402] Ibid, p 33.
[403] M. Tewdwr-Jones and P. Allmendinger, *Deconstructing communicative rationality: a critique of Habermasian collaborative planning* 30 Environment and Planning A 1975 (1998), p 1978.
[404] See 2014/89/EU 2014, art 11.
[405] Gilliland and Laffoley (2008), pp 789-90.

transport and marine pollution are examples of activities, or pressures on the marine environment, that pay little respect to administrative borders. Hence, transboundary cooperation is essential in all ecosystem management, not only between, but also within countries.[406]

There are a number of international legislative acts that include regulations on transboundary cooperation. There is UNCLOS, which stipulates that cooperation is required for the protection of the marine environment.[407] For enclosed or semi-enclosed seas, such as the Baltic Sea, there is an increased demand for cooperation.[408] Furthermore, the CBD requires states to ensure that their activities do not damage the environment in other states.[409] There is also the United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment in a Transboundary Context (the Espoo Convention), which has a bearing on MSP as it requires states to take appropriate measures to "prevent, reduce and control significant adverse transboundary environmental impact from proposed activities".[410] In addition, there are a number of regional conventions and initiatives for transboundary cooperation.[411]

Cooperation across borders may take on different shapes and forms across the globe. These differences also create challenges in creating a legal framework for cooperation that would be internationally viable. As such, local and regional variations need to be taken into account when designing cooperation strategies. Flannery and others have identified a number of key factors in successful cooperation. These include: policy convergence; joint vision and strategic objectives; shared experience; and existing transboundary institutions.[412] It has also been stressed that these cooperation exercises need

[406] Stephen Jay and others, *Transboundary dimensions of marine spatial planning: fostering inter-jurisdictional relations and governance* 65 Marine Policy 85 (2016).
[407] UNCLOS 1982, art 197.
[408] Ibid, arts 122-123. For a discussion on how this 'duty' should be interpreted, see Erik Franckx and Marco Benatar, *The "duty" to co-operate for states bordering enclosed or semi-enclosed seas* in *Chinese Taiwan yearbook of international law and affairs* (Brill 2015).
[409] CBD 1992, art 3.
[410] UNECE Convention on Environmental Impact Assessment in a Transboundary Context (ESPOO Convention) 1991, art 1. See Petra Drankier, *Embedding maritime spatial planning in national legal frameworks* 14 Journal of Environmental Policy & Planning 7 (2012) for a more detailed review of the international legal framework.
[411] See Convention on the Protection of the Marine Environment of the Baltic Sea (Helsinki Convention) 1992, and Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention), 1992.
[412] Wesley Flannery and others, *Evaluating conditions for transboundary marine spatial planning: challenges and opportunities on the island of Ireland* 51 Marine Policy 86 (2015), p 87.

to take cultural and social dimensions into account, as well as geographical and ecological dimensions.[413]

While much of the literature on transboundary MSP focuses on cooperation between states,[414] this work is more concerned with cooperation challenges within a single state. The national level is fundamental in reaching a policy convergence and joint vision internationally or regionally. By this I mean that if an international policy or approach is not also accepted on the more local levels of management, it will be difficult to achieve its set objectives. By studying the national MSP system of Sweden, and the challenges in coordinating planning efforts, it is possible to say something more general about the challenges facing transboundary MSP efforts in Europe. There are multiple systems for MSP where different local, regional, and national administrations are involved. These administrations, and their different interests need to be reconciled, both on a national and international level, for a successful cooperation. The way the MSPD is formulated, as a framework directive with few distinct obligations for member states, means that there are multiple options in the subsequent national transpositions. A comprehensive analysis of the Swedish marine planning system has the potential to provide critical information about rationales and perspectives in planning, and the theoretical framework proposed in chapter 3 offers an opening for general conclusions based on the Swedish case study.

6.2.5 A rational organization of the marine space

The notion of rational planning has been discussed extensively in relation to terrestrial planning over the course of the last century.[415] Even though many terrestrial planning theorists have discarded the idea, it has also found its way into marine planning. In addition to the definition of MSP provided in the previous section, MSP has been described as an instrument for a "[…] more rational organization of the marine space and the interactions between its uses […]".[416] It has also been said to provide "[…] a coordinated, cross-sectoral

[413] Jay and others (2016), p 87.
[414] See Jan P. m Van Tatenhove, *Transboundary marine spatial planning: a reflexive marine governance experiment?* 19 Journal of Environmental Policy & Planning 783 (2017); Daud Hassan, Tuomas Kuokkanen and Niko Soininen, *Transboundary marine spatial planning and international law* (London ; New York : Routledge 2015).
[415] See section 6.1
[416] Fanny Douvere, *The importance of marine spatial planning in advancing ecosystem-based sea use management* 32 Marine Policy 762 (2008), p 766.

and future-oriented approach to marine management, [offering] the potential of establishing more harmonious and rational patterns of sea use".[417] These two quotations encompass the idea of the rational use of space, which is frequently invoked when describing MSP. In short, the idea is that MSP, through consistent processes of planning that are coordinated between and within states, will enable the use of sea space with a capacity to prevent the exceeding of limits of the marine ecosystem. This approach is expected to ensure a rational use of space.

The idea of rational spatial planning has echoes of the debates on terrestrial planning in the mid-20th century, when the pursuit of scientific objectivity hit its peak, also in the social sciences. However, it seems as if much of the modern-day MSP discussions fail to recognize the developments made within the terrestrial planning theories and rarely problematize the concept of rationality in planning. Recently, the idea of a rational MSP has been subject to debate, and it is an issue that is gaining more interest gradually.[418] Some scholars claim that MSP is closely connected to the contemporary ideals of terrestrial planning, and that by using experience from the theoretical history of terrestrial planning, MSP can move forward with the understanding that planning is largely a social and political process.[419] Nevertheless, it seems as if the outcomes of the terrestrial planning debate of the last century were ignored for a long time in much of the MSP discussions.[420] Certainly, the idea of participation and planning as a process that mediates between different interests is promoted, but the problematizing of the rational ideal seems to have been forgotten, at least in the development of new MSP legislation.

[417] Stephen Jay, Geraint Ellis and Sue Kidd, *Marine spatial planning: a new frontier?* 14 Journal of Environmental Policy & Planning 1 (2012), p 2.
[418] See Flannery, W., and Ellis, G., in: Wesley Flannery and others, Exploring the winners and losers of marine environmental governance/Marine spatial planning: Cui bono?/"More than fishy business": epistemology, integration and conflict in marine spatial planning/Marine spatial planning: power and scaping/Surely not all planning is evil?/Marine spatial planning: a Canadian perspective/Maritime spatial planning – "ad utilitatem omnium"/Marine spatial planning: "it is better to be on the train than being hit by it"/Reflections from the perspective of recreational anglers and boats for hire/Maritime spatial planning and marine renewable energy 17 Planning Theory & Practice 121 (2016) Ralph Tafon, The "dark side" of marine spatial planning: a study of domination, empowerment and freedom through theories of discourse and power (Södertörns högskola 2019), and Wesley Flannery and Ben McAteer, Assessing marine spatial planning governmentality Maritime Studies (2020).
[419] Sue Kidd and Dave Shaw, *The social and political realities of marine spatial planning: some land-based reflections* 71 ICES Journal of Marine Science: Journal du Conseil 1535 (2014).
[420] Flannery and others (2016), p 123.

To understand how MSP will affect the use of the marine environment, and how that environment will be managed, it is important to understand the concept of rationality in planning. Friedmann discusses different types of rationality. There are the broad terms "market rationality" and "social rationality", where all planning activities are governed by the latter. Social rationality is territorially fixed and connected to a certain social group, such as a nation, municipality or smaller community.[421] Planning will always depart from the interests of the community or social group for which it is planning. According to Friedmann, such planning needs to relate to the ideas of market rationality, which in his case entails the "unrestricted pursuit of self-interest by individuals and corporations […]". Yet, the market rationality is only taken into account insofar as it is for the benefit of the community, and thus it is still based on a social rationality.[422] In terms of the Swedish MSP system, the rational choice from a market rationality perspective might be to concentrate port activities around a few large hubs where the benefits of an economy of scale would lower the costs of handling goods. However, in municipal planning, which is driven by more of a social rationality, the rational choice would be to promote the expansion and use of the local port since this will generate more benefits locally.

These two conceptions of rationality are relatively wide. While they can inform some of the discussions of MSP, other notions of rationality may also have effects on planning decisions. Two such notions are "formal rationality" and "material rationality". Formal rationality is based on scientific ideals, where the prevailing idea is that decisions can be deduced logically through a scientific process, ending in the most rational considerations/decisions. Material rationality is the opposite of formal rationality and relates to the achievement of certain explicitly declared purposes in planning.[423]

In the following, rationality will be discussed on the basis of these understandings of the concept. There is social rationality, which guides planning activities at all levels. As social rationality is connected to a community, and territorially fixed, it is different at the level of a central government than at the level of a local municipality. In the same way, material rationality, which is connected to the purposes or ideological underpinnings of planning, will differ from one actor to another. As an example, a Ministry of Finance may have a different material rationality than a Ministry of

[421] Friedmann (1987), ch 1.
[422] Ibid, p 28.
[423] Ibid, p 98.

Environment. These formulations of rationality are theoretical, but they provide a deeper understanding of the concept. When an MSP process is described as "rational", it has connotations that imply a formal rationality. This is problematic, as it suggests that MSP is merely a process whereby science can provide the answer to what is the most rational use of sea space. The fact that the basic purposes may diverge in different MSP systems is obfuscated by the use of the term. Furthermore, such an understanding of the concept of rationality is hollow, and risks overlooking or obscuring power relations that may affect the outcomes of planning processes.[424]

In the planning process, it is important to understand how different material rationalities affect the end result: the plans. The MSPD was adopted as a part of the strategy to promote blue growth,[425] and thus based on a growth-oriented material rationality. On the other hand, the ecosystem approach is also an important tool in MSP, implying a social and ecological rationality. In the end, the rationality of planning decisions will be decided by the actor carrying out the actual planning. This case study shows how rationalities express themselves at a municipal level. By doing so, it highlights and empirically shows that it is impossible to discuss MSP in terms of a single rationality, but rather that it consists of multiple rationalities, both on a more general, overarching level – different social rationalities – but also on a more concrete, material, level. The discussion above shows that rationality as a concept is not helpful when used as a generic statement concluding that MSP leads to a "rational organization of marine space". Rather, what actually constitutes an instance of rational planning will differ immensely between management levels and social contexts. This is one of the key findings from the empirical review of Swedish municipal planning in this work.[426]

[424] Flannery and McAteer (2020).
[425] See section 5.4.
[426] See chapter 8.

7 Municipal autonomy and planning

7.1 Legal foundations

The previous chapter has provided an understanding of MSP in general as well as the EU MSPD and the Swedish system for MSP. The aim of this first case study is to answer the first research question. The question concerns how the division of planning competence between levels of management affects the priorities and outcomes of planning. To be able to answer this question, it is important to understand the regulatory system governing municipal planning in Sweden, as the municipalities are responsible for the coastal waters' planning. This task is twofold. First, there are formal boundaries of municipal action; even though municipal autonomy is a cornerstone of the Swedish constitutional system, it has limits. The present chapter covers the formal limits of the municipal autonomy, in relation to planning. The term "limits", in this context, refers to what interests and objectives the municipalities are legally obliged to take into account when developing comprehensive plans, and what is considered to fall outside of the municipal competence. Focus is placed on marine and coastal water planning. In a sense, the legal framework determines which perspectives are highlighted on the municipal level of the planning system. The planning legislation mandates that the municipalities take certain interests into account in planning, while other aspects of planning have a more voluntary character.

While the first part of this case study provides an understanding of the legal foundations that shape municipal planning, the second part concerns the more practical aspects of municipal planning. These aspects relate to what the municipalities actually find important, how they view their coast, and why they plan in certain ways. This is equally important to understand so as to be able to answer the research question. Thus, in the second part of the case study, which is presented in chapter 8, municipal planning documents are analyzed, together with interviews with planners on municipal, regional, and national levels, to be able to understand the more practical aspects of both municipal planning of coastal waters and the national marine spatial planning.

As discussed in chapter 3, the methodological framework is developed on the basis of the writings of Boaventura de Sousa Santos. He discusses law in terms of *scale, projection,* and *symbolization*.[427] In this theoretical conception of law, de Sousa Santos sees three different legal spaces that are separated by the scale at which they aim to govern social action. In a sense, they create different legal realities. These three spaces are: the local; the national; and the international.[428] Issues that are of paramount importance on a local level may be just one piece of a larger complex of issues on a national level. The same holds for the relation between the national and international levels. The following exploration of the legal reality of municipalities will provide an understanding of the legal scale at which municipalities act. The Local Government Act (2017:725) (LGA) and the PBA both operate on a local scale and determine the level of detail in municipal decision-making and planning. It is thus these two legal acts that are the objects of interest. Municipal decision-making can only cover issues that are of interest to the inhabitants of the municipality. This relates to the so-called "location principle".[429] In addition, municipalities plan their areas and can decide where specific activities should be located and how land use is best organized within their boundaries. The scale is thus highly detailed in relation to the national scale, which can be seen in both the national marine plans[430] and in the regulations concerning national interests.[431] The LGA and the PBA also formulate the projection of municipal action. This entails a determination of what objectives and interests are mandatory to include in municipal decision-making, what objectives and interests can be included, and what is deemed to fall outside of the competence.

The final sections of this part of the case study cover three different national objectives that municipalities are mandated to take into account in their planning, where the national scale of law aims to interact with the local scale. These objectives are the following: national interests as formulated in

[427] De Sousa Santos (1987).
[428] Ibid, p 287. It should be noted that this is the definition of scale used by De Sousa Santos. In is a simplistic understanding in relation to the broader debates on scale that are prevalent in the realms of human geography. As presented in section 3.2, this is another type of scale which will be discussed further in the concluding chapters of the book. For the present understanding of the municipal system, I will be using scale in the same way as De Sousa Santos does.
[429] See section 7.2.5.
[430] See section 8.7.
[431] See section 7.4.1.

chapters 3–4 of the SEC;[432] environmental quality standards;[433] and shore protection regulations.[434]

To fully understand the Swedish MSP system, it is important first to understand the role of municipalities and municipal planning in the Swedish democratic system, both historically and in the present. The historical aspects of planning have consequences for how the MSP system is designed. Furthermore, understanding the history of municipalities in Sweden will facilitate a discussion of the principles that guide municipal decision-making.[435] These guiding norms and principles, together with the political interests of individual municipalities, provide the scale of municipal action and planning, and affect both the projection and the symbolization. The projection and symbolization of municipal planning are different from those of national actors, since municipal decision-makers have a clear interest in issues on a local level. The question is how this can be understood in light of the overall objectives of national marine planning. Furthermore, this legal review aims at clarifying what types of matters are within the competence of a municipality to decide upon. Understanding these issues is crucial in any discussion of the implications of allowing the planning competence of the coastal waters to remain exclusively on the municipal management level. A clear example of the discrepancies between the different planning levels is how the ecosystem approach is treated. On the EU and national Swedish levels, it is one of the foundations of MSP. Yet, for municipal planning, there is no requirement to apply an ecosystem approach. Without a functional application of an ecosystem approach on the local level, the national application will be flawed as well, as entire marine areas are not covered. This, in turn, affects the possibilities to foster an adaptive management, as the structural layer of law is designed without a clear understanding of how the social and natural systems are connected. As such, it is important to grasp the perspectives of municipal planning in order to be able to understand how a form of holistic management can be ensured across levels of government.

The main act in Sweden governing municipal action is the LGA. The LGA provides the central guiding principles of municipal action. The act is relatively generic in its construction, so as to cover all types of municipal decisions. In addition to the LGA, there are a number of legal acts regulating

[432] Section, 7.4.1.
[433] Section 7.4.2.
[434] Section 7.4.3.
[435] Section 7.2.4.

specific areas of municipal action. Within the frame of this case study, the most important of these acts is the PBA. The PBA regulates municipal planning and stipulates what sectoral legislation needs to be adhered to in the planning process.

Furthermore, from an environmental perspective, there are some central objectives that need to be taken into account when planning coastal and marine waters. These can be found in the SEC, in particular chapters 3–4, which include provisions concerning the management of land and water areas.[436] In addition, the SEC chapter 5 and the Ordinance (2004:660) on management of the quality of the aquatic environment affect the autonomy of municipal planning. These two acts regulate EQS and represent the Swedish transposition of the WFD.[437] Finally, there are the shore protection regulations in chapter 7 of the SEC. All of these are national regulations, where municipal autonomy is restricted. In the process of developing municipal comprehensive plans, the national government, through the CABs, is obliged to ensure that these interests are sufficiently taken into account.[438] How such control is performed and enforced is discussed in section 7.5.

In addition to these general provisions limiting municipal autonomy, there are other areas of national regulations, such as nature protection, that affect planning decisions. However, those areas concern binding decisions that affect the planning preconditions. As these are specifically appointed areas, they will not be part of the present analysis, which is focused on the limits of municipal autonomy on a more general level.

7.2 Municipal autonomy and competence

7.2.1 Constitutional setting

Municipalities in Sweden hold a strong position as autonomous local governments. This is clearly articulated in the first section of the Instrument of Government (IoG). The autonomy is a means to realize the democratic values of freedom of opinion and the right to vote on a local level.[439] It is also stipulated in the IoG that municipalities govern local and regional matters of public interest on the basis of the municipal autonomy.[440] Through the LGA,

[436] More on this in section 7.4.1.
[437] More on this in section 7.4.2.
[438] PBA, ch 3 art 10.
[439] The Instrument of Government (1974:152) 1974, ch 1 sec 1 para 2.
[440] Ibid, ch 14 sec 2.

the role of municipalities is further specified. Here, the so-called "general competences" of municipalities are stipulated.[441] There are two different types of municipal competences: general competences and special competences. General competences establish the basic principles of municipal action – what is or is not a matter of municipal interest.[442] These principles were originally developed through case law. However, when the previous LGA was adopted in 1991, they were codified in law and given their own chapter, in order to create a better overview.[443] Special competences are areas of law where the competence has been delegated to the municipal level from the central government, such as social services, schools and spatial planning.[444] Municipal autonomy encompasses both types of competence, as it covers all municipal action, even though the central government can both expand and limit this autonomy through law.[445]

Understanding the constitutional role of municipalities in the Swedish democratic system is fundamental to understand the Swedish planning system. The legal limits of municipal action determine what can be included in municipal decision-making. The basic principles of municipal action, such as the location principle, create a way of thinking in decision-making, a sort of municipal logic. This logic can permeate all decisions, even when there are other objectives that could have been included to allow for broader considerations.[446] The following review of the role of municipalities will take its departure in the municipal autonomy and general competences of the LGA, and continue to examine the special competence of spatial planning, which is regulated in the PBA.

7.2.2 Municipal autonomy

The autonomy of local governments in Sweden dates back 150 years, when the first municipal regulations were adopted.[447] The creation of strong municipalities was a response to a changing society with growing industrialism,

[441] Local Government Act (2017:725) 2017, ch 2,; prop. 2008/09:21, *Kommunala kompetensfrågor m.m.*, (2009).
[442] prop. 2009/10:170, *En enklare plan- och bygglag*, (2010), p 28.
[443] prop. 1990/91:117, *En ny kommunallag*, (1991), p 26.
[444] prop. 2008/09:21, (2009), p 18. See Tom Madell and Olle Lundin, *Kommunallagen: en kommentar* (Olle Lundin ed, Andra upplagan edn, Stockholm : Norstedts juridik 2019), p 39.
[445] IoG 1974, ch 14 sec 2; prop. 2009/10:80, *En reformerad grundlag*, (2009), p 211.
[446] See section 0 on how the general competence relates to the special competence of planning.
[447] prop. 1990/91:117, (1991), p 6; Alf Bohlin, *Kommunalrättens grunder*, vol 7., uppl. (Stockholm, Wolters Kluwer Sverige AB 2016) p 17.

where local structures were no longer capable of meeting social needs.[448] The first regulation on municipalities saw the light of day in 1862, through what is referred to as the municipal reform. As a result, around 2,500 municipalities were established, and these were territorially divided according to the pre-existing division into church parishes. More than half of these municipalities had fewer than 1,000 inhabitants.[449] Before the municipal reform, rural areas were governed mainly through the church parish, with a mandate to decide on certain local issues. For the cities, there were magistrates that had once been an extension of the Crown but had become autonomous during the 18th century. The magistrates, together with a city treasury, consisting of the burghers, managed the economic affairs of the cities until 1862.[450]

The municipal reform enjoyed political support from all parts of the political spectrum. The conservatives saw it as offering an opportunity to strengthen the support for the current governance model among the people, while at the same time making management of the state cheaper. The liberals, on the other hand, saw municipal autonomy as a means of achieving a more equal society and breaking down class structures, all in the spirit of popular sovereignty.[451]

Municipal autonomy dates back to this first municipal regulation, although it was not as clearly expressed then as it is today.[452] As is still the case, the content of the concept of municipal autonomy was not regulated or clearly defined, but the ideology behind the autonomy was rooted in the pursuit of decentralizing power.[453] The division of tasks between state and municipality was inspired by the ideas of the French Revolution, with a (conceived) clear distinction between matters in which the municipalities had "natural" authority, and matters that were delegated to the municipalities by the central government. Even though such a distinction may have been clear in theory, deciding which issues should be considered municipal in the early years was subject to extensive debate.[454] In the late 1800s, however, matters concerning the common order and house holding administration were considered to fall

[448] Söderlind (1988), p 102.
[449] Ibid, p 103.
[450] Gunnar Carlquist and Josef Carlsson, *Svensk uppslagsbok*, vol 16 (2., omarb. och utvidgade uppl. edn, Malmö : Förlagshuset Norden, Malmö : Förlagshuset Norden 1947), pp 541-543.
[451] Fritz Kaijser, *Återblick på utvecklingen av förhållandet mellan stat och kommun* (1965), p 196.
[452] In the regulations from 1862 it says that the members of a municipality may by themselves see to their own common order and house holding interests, Ordinance (1998:896) on the Management of Land and Water Areas.
[453] prop. 1990/91:117, (1991), p 6.
[454] Kaijser (1965), p 196.

within the competence of the municipalities.[455] Throughout the 20th century, the autonomy was subject to a number of changes, both narrowing and broadening the responsibility of municipalities. In the first half of the century, the clear distinction seems to have become blurred. While the municipal responsibilities in some areas increased, the central government saw a need to centralize management in other areas, thus limiting municipal autonomy. At this time, the division of tasks seemed to be decided more on the basis of practical, administrative, and economic considerations than any "natural" delimitations.[456] Nevertheless, traces of the 1862 division can be seen in the LGA of today, where the general competences can be considered remnants of the "natural" authority, and many of the tasks within the special competences could be seen as delegated responsibilities from the state.[457] Although the central government could, and still can, dictate what the municipalities are supposed to do, the latter are in charge of the implementation, and the standard of measures is dependent on the economic resources of individual municipalities.[458] To this end, the municipalities have a mandate to levy taxes.[459]

To conclude, the historical review above points to a rather imprecise definition of municipal autonomy, where the state has been quite free to decide the limits of such autonomy.[460] To this day, there is still no legal definition of municipal autonomy. However, the IoG stipulates that the municipalities, on the basis of municipal autonomy, are responsible for local and regional concerns of *public interest*.[461] The public interest is thus of central concern for municipal operations, and as a part of the location principle, it determines the outer limits of municipal action.[462] Limits that can only be further circumscribed or expanded through law.[463]

[455] SOU 1965:54, *Författningsfrågan och det kommunala sambandet - Länsdemokratiutredningen* (Stockholm, Stockholm 1965), p 37.
[456] Ibid, p 40.
[457] See LGA 2017, ch 2; SOU 1965:54 (1965), p 39.
[458] SOU 1965:54 (1965), p 46. Too large differences between municipalities can, nonetheless, be dealt with by the state through a local government equalization system (the Swedish Ordinance: Ordinance (2017:725) on local government fincance equalization).
[459] IoG, ch 14 sec 4.
[460] SOU 1965:54 (1965), p 40.
[461] IoG 1974, ch 14 sec 2.
[462] prop. 1990/91:117, (1991), p 28.
[463] See IoG 1974, ch 8 sec 2 (1.3).

7.2.3 Determining municipal autonomy and public interest

Much like municipal autonomy, the "public interest" is a somewhat elusive concept. Through using the concept of public interest, together with not elaborating municipal autonomy further in law, it has been possible for the legislator to leave the limits for autonomy relatively open to interpretation. One reason for such a construction is that the public interest may change with developments in society and that conditions differ between municipalities. Based on this rationale, the legislator widened the room of maneuver for municipalities through the 1991 LGA, although this was not framed in terms of public interest specifically.[464] This resonates well with the early development of the Swedish municipalities, where the definition of municipal matters varied over time. Lindquist and others claim that, within a certain margin of interpretation, it is possible to adjust public interest decisions to a specific situation, or place in time, without infringing on the autonomy of municipalities.[465]

An example of how difficult it is to determine what is and what is not a matter of municipal concern is the municipalities' possibility to decide on matters regarding foreign policy. Generally, foreign policy is considered to fall outside the scope of the municipal competence, as it is matter that should exclusively be handled by the national government.[466] Yet, it seems the definition of what actually is considered to be foreign policy may be difficult to discern. The most famous case in this regard was one where a municipality declared its territory to be a nuclear-free zone, which meant that no ships carrying nuclear weapons were allowed to enter its port. The Supreme Administrative Court found this declaration to fall outside of the municipal competence, since it had clear foreign policy implications.[467] More recently, this issue came to the fore again, though this time it was considered to fall within the competence of the regional municipality of Gotland to decide whether a Russian company could use a port in Gotland as a part of the construction of an underwater pipeline.[468] This case was never brought to court, so it has not been tried. However, I argue that it could just as well be seen as an issue with foreign policy implications, and that the outcome of a

[464] prop. 1990/91:117, (1991), p 19.
[465] Ulf Lindquist, Olle Lundin and Tom Madell, *Kommunala befogenheter*, vol 8., [uppdaterade] uppl. (Stockholm, Wolters Kluwer 2016), p 20.
[466] See LGA, ch 2 sec 2.
[467] *RÅ 1990 ref. 9* (Supreme Administrative Court).
[468] See news reports *inter alia* Sveriges Television, <https://www.svt.se/nyheter/lokalt/ost/visby-ja-till-investering-i-slite-hamn> .

court proceeding would have been far from certain.[469] One indication that it may be a matter relating to foreign policy, or at least a matter that should not be left to municipal decision-making, is that the central government initiated a government commission to prepare a new law concerning the sale and lease of property of significant interest for defense purposes after this issue had been up for debate.[470]

In another case, from a lower court, it was found to be outside the competence of a municipality to join an international network of cities, lobbying for a nuclear-free world by 2020.[471] Yet, 26 other municipalities are still members of the same network. The lower court ruling has no precedential effect; nevertheless, the case highlights another interesting fact with regard to the public interest and its esoteric nature. As long as no member of the municipality challenges a decision as not being of public interest for the members of the municipality, the decision will stand. In this situation, the central government has no legal remedy to try a municipal decision, even if it is clearly outside of the municipal competence and within the jurisdiction of the central government.[472] Such a remedy would be considered contrary to municipal autonomy, as it would enable the state to interfere in municipal matters. Another way of looking at it is that this is also a way of keeping the definition of municipal autonomy somewhat fluid. If the central government had the means to challenge municipal decisions that could be considered to fall outside of the public interest of the municipality, this could be tested by a court and through case law a definition would be chiseled out. As the system currently works, it is more arbitrary, since a test of how a decision stands in relation to the municipal competence is entirely contingent on the individual members of a municipality. The current review shows that this can lead to different applications in different municipalities, such as the situation in which some municipalities are members of a network of municipalities, which in others is considered to deal with foreign policy matters.

[469] For a more in-depth discussion on this, see Per Ahlin, *Regeringen ska sköta utrikespolitiken* 3/2017 Förvaltningsrättslig Tidskrift 445 (2017).
[470] SOU 2019:34, *Förbättrat skydd för totalförsvaret*, (2019).
[471] *FR 1395-13* (Administrative Court of Falun).
[472] There are other situations where the central government can try if a decision falls within the limits of municipal action, *inter alia* when a municipality has decided on regulations for the local order. The competence for making such decisions can be found in IoG 1974 ch 8. See Per Ahlin and Åsa Örnberg, *HFD 2018 ref. 75 tiggeridomen — ännu en gång* 2/2019 Förvaltningsrättslig Tidskrift 263 (2019) for an in-depth discussion on the subject.

Although the review in this chapter indicates relatively wide possibilities of interpretation in terms of the public interest, some guidance to the limits of the concept can be found in the preparatory works to the LGA of 1994. Here, it is emphasized that the public interest is decided by what is suitable, practical, and reasonable.[473] What is important is that the matter is considered to be of public interest. This assessment should not be decided based on the needs of the whole municipality. It may well include actions that are directed at a small part of a municipality or of its members.[474] As noted earlier, the autonomy is relatively generous. Still, it is limited by the competence limiting principles in the LGA.[475] In addition, there are possibilities for the national government to expand or restrict this autonomy, through law. Restrictions are, however, required to stand in proportion to their purpose.[476] As will be elaborated in section 0, planning of the marine environment in the territorial sea primarily falls within the jurisdiction of municipalities. On account of this, there was a discussion in the preparatory works to the new section on MSP, concerning how the new regulations would affect municipal autonomy. However, since the national plans and the municipal plans would be equally significant in the area of overlap, the new MSP system was not considered to be a restriction of municipal autonomy.[477] In line with the argument above, on the open interpretation of municipal autonomy, in another place in time this might have been considered a restriction. Even though municipal plans, formally, carry the same weight as national plans, the new provision on MSP in the SEC clearly states that the national plans will have a guiding function in relation to municipal plans.[478] In meetings during the process of developing

[473] My translation, the original wording is 'lämpligt, ändamålsenligt, skäligt'.
[474] prop. 1990/91:117, (1991), p 148.
[475] See below ch 7.2.4.
[476] IoG 1974, ch 14 sec 3.
[477] prop. 2013/14:186, (2014), pp 30-31.
[478] SEC, ch 4 sec 10.

the new marine plans, the notion that these plans have a stronger position than municipal plans has been reiterated on a number of occasions: in one of the interviews concerning the MSP setup, this view on the internal relation between the plans was expressed, and it was noted that this had been clear in meetings with the Swedish National Board of Housing, Building and Planning.[479] The same interpretation has been seen in statements from the Swedish National Board of Housing, Building and Planning and the County Director-General of Västra Götaland.[480]

7.2.4 Principles limiting the autonomy

To further understand municipal autonomy, there is a need to map the most important principles governing municipal activities. These relatively open principles can be said to comprise the limits of municipal action.[481] They also assist in defining what constitutes the public interest.[482] These principles constitute what is commonly referred to as the *general competence*.[483] This means that they cover all municipal action, as long as the area of action is not specifically regulated. While the PBA regulates the special competence of spatial planning, it is important to start this review in the general competence, which is regulated in the LGA. The reasoning behind this structure is that the general competence is the basic regulation for all municipal action, and it is important to have an understanding of this competence before venturing deeper into the special competences. In a sense, the principles of the general competence create the foundation for a municipal logic or mode of thinking.

[479] Interview 10, *Respondent from medium municipality in Skagerrak/Kattegat* (2017).
[480] The statements were made during a referral meeting for the Marine Plan of Västerhavet 2018-03-13, Gothenburg.
[481] These limits can be expanded through law, see *inter alia* Act concerning certain municipal competences (2009:47) 2009. However, for non-specially regulated municipal action, the competence limiting principles described here provide the outer limits of municipal action.
[482] For a discussion on the relation between the general competence limiting principles and the public interest, see prop. 1990/91:117, (1991), p 148.
[483] See prop. 2008/09:21, (2009), pp 17-18.

There are five general principles that could be said to be determining the outer limits of municipal action. In addition, there are three general principles that function as limitations within the boundaries.[484] The five general principles of municipal autonomy are:

- the location principle;
- the principle that a municipality shall not engage in matters that should be handled by the national government, another local or regional municipality, or anyone else;
- the prohibition against subsidies to individual members of the municipality;
- the prohibition against subsidies to individual businesses; and
- the prohibition to engage in business operations with a purely speculative purpose.[485]

In addition to these competence limiting principles, there is a more overarching proportionality principle that has been used primarily in case law, to ensure that municipal measures in a certain area stand in relation to their purposes.[486] This principle will prove important, as it has been used to decide on how the competence limiting principles should be interpreted in relation to the public interest, in some of the cases presented in this section. In the following section, the most important principle for our purpose, namely the location principle, will be presented, along with a review of relevant case law so as to gain an understanding of the logic governing municipal decision-making. In short, the location principle infers that municipalities are responsible for concerns of public interest that have a connection to the area of the municipality, or its members.[487] This makes it the most important of the general principles here, because it has a geographical aspect and determines what type of matters a municipality should involve itself in. To some extent, the principle concerning matters that should be handled by the central government or anybody else is also relevant. The remaining three

[484] For a discussion on this, see Bohlin (2016), ch 4.2.2, and Åsa Örnberg, *Kommunal verksamhet genom privaträttsliga subjekt* (Jure 2014), ch 4.3.2.3.
[485] LGA 2017, ch 2.
[486] See *RÅ 85 2:76* (Supreme Administrative Court), *RÅ 1999 ref. 67* (Supreme Administrative Court), and *RÅ 2006 ref. 81* (Supreme Administrative Court), all of which are discussed further below in ch 7.2.5.
[487] LGA 2017, ch 2 sec 1.

competence limiting principles listed above will thus not be covered to any extent, other than when it is of direct interest to a point being made.

7.2.5 The location principle

The location principle is of importance on account of its foundational role in the municipal administration.[488] It geographically narrows the municipal field of vision, through law.[489] Municipal concerns are such matters that pertain to the members of the municipality; other matters fall outside of the municipal competence. The location principle narrows down the "public interest" to cover only local interests.[490] Together with the other competence limiting principles, it guides the way in which municipalities act, and limits their autonomy. Coupled with more obvious factors, such as the fact that there is a four-year term of office, and decisions during these terms will affect the outcome of elections, the location principle has an impact on the scale of municipal decision-making. The local element of the location principle gives municipalities a certain focus in their decision-making. Larger issues, such as the overall health of the marine environment, may not be directly connected to the interest of the members of a municipality, as their individual contribution to this health is fairly small. Thus, this could be seen as falling outside of the location principle.

It was stated in the preparatory works that the location principle should not be understood as a purely geographic policy. It needs to be adjusted to the mobility of people and the flaws in the geographic division of municipalities. The interest of the members of the municipality as a whole is thus guiding for the principle.[491] The legislator did not see the need to give the principles a more detailed wording, and instead left this to case law as this was deemed more suitable to be able to adjust the principles as the surrounding society developed.[492] There are number of court decisions, regarding the location principle, which highlight the fact that the interest of the municipality members, rather than the geographic location, is of importance.

[488] prop. 2008/09:21, (2009), p 21.
[489] As will be shown later in this chapter, the location principle is not purely geographic. Still, it has strong geographical implications.
[490] Ulla Björkman and Olle Lundin, *Kommunen och lagen: En introduktion* (2011), p 40.
[491] prop. 1990/91:117, (1991), pp 146-147.
[492] Ibid, p 28; Örnberg (2014), p 171.

In the oldest case in this regard, from 1941, the municipality of Gothenburg planned to buy property in an adjacent municipality, Kungälv. The property was located 30km from Gothenburg. The city argued that it had become an important public interest, especially for larger cities, to facilitate and strengthen its inhabitants' life outdoors, to have more energy to carry out their daily work. While critics of the proposal claimed that it could not be considered a matter of interest for the municipality to purchase property so far from the city, the Supreme Administrative Court found it to fall within the municipal competence, and ruled in favor of the municipality.[493]

In a second case from Gothenburg, the city had decided to not only fund, but also construct, an access route from a highway through a neighboring municipality. The question at hand was whether this was outside of the municipality's competence. The Supreme Administrative Court concluded that, generally, this would fall outside the competence. But the municipality of Gothenburg was already constructing a large part of the access route, located within the municipality. This, together with the fact that it was of importance for the municipality that the route was built, meant that the construction was within the boundaries of the municipal competence.[494]

In another case, a municipality had given a donation to a professor's program at a university in another city in the region. This was considered to be consistent with the location principle, as the amount donated stood in proportion to the positive impact that the program would have on the region as a whole.[495] Conversely, it was considered to be outside the scope of the location principle for a municipality to give a donation to a school located within the municipality in another case tried by the Supreme Administrative Court. A regional municipality together with a forest industry association operated the school, and the donation was deemed too large in relation to the interest of the local municipality.[496]

In a final case, the municipality of Stockholm had made a large contribution to a foundation with the purpose of promoting research on water management. This research would have an international focus, and the benefits for the municipality of Stockholm were, besides the gains in knowledge, an increase in publicity for the city, especially since a prize was to be handed out every year, with a ceremony taking place in Stockholm. The

[493] *RÅ 1641 ref. 4* (Supreme Administrative Court).
[494] *RÅ 1977 ref. 77* (Supreme Administrative Court).
[495] RÅ 1999 ref. 67 (Supreme Administrative Court).
[496] RÅ 85 2:76 (Supreme Administrative Court).

Supreme Administrative Court found that this could indeed be of benefit for the municipality. However, since the main focus for the foundation was international research, it could not be seen as falling within the municipal competence to co-fund it. The case might have turned out differently had the contribution to the foundation not been such a substantial amount of money (60 million SEK). Here, the contribution was seen as disproportionate in relation to the benefits to the municipality.[497]

As is evident in most of these cases, the competence limiting principles are interpreted through the lens of the proportionality principle. The economic cost of a certain measure needs to stand in proportion to the municipality's gains. These cases mark the boundaries for the location principle, guiding all municipal decision-making. All of these cases have in common that, for a decision to fall within the municipal competence, there must be a direct connection to municipal matters or municipal members.

The location principle puts the focus on local issues, which from the outset could be interpreted as excluding broader sustainability issues. But the principle needs to be seen in the light of the special competence of planning, set out in the PBA. The PBA broadens the perspectives by mentioning sustainable land use in a wider sense.[498] Nevertheless, the location principle is a foundational principle in municipal decision-making. Thus, I argue that it is engrained in the logic of municipalities. Through this central position, the principle will affect municipal decision-making. This was evident in one of the interviews when the cooperation with neighboring municipalities was discussed and the respondent expressed a view of the location principle that is even more narrow than what is evident from case law: "But it is not possible to use tax money in other municipalities. That would be to do wrong".[499] In chapter 8, where the results from the interview study are presented, and where the comprehensive plans are further examined, there will be reason to come back to the location principle and its importance. For now, however, it will be set aside in favor of the more detailed planning competence.

[497] RÅ 2006 ref. 81 (Supreme Administrative Court).
[498] PBA, ch 1 sec 1.
[499] Interview 1, *Respondent from large municipality in the Gulf of Bothnia* (2017).

7.3 Municipal planning

7.3.1 Comprehensive plans: Function

Terrestrial, and to a certain extent marine, planning in Sweden is regulated through the PBA.[500] It is clearly stated in the opening sections of the act that it is a municipal affair to plan the use of land and water.[501] This is commonly referred to as the municipal planning monopoly, and it rests on the idea of local democracy.[502] The historical development of the Swedish planning system has been described more in detail in section 5.5. The following review will thus cover the practice of the current planning system, the possibilities and limitations of the municipal planning monopoly.

The main goal of the PBA is to achieve sustainable land use, from an environmental, social, and economic perspective.[503] Every municipality is obliged to develop a comprehensive plan that addresses the direction for the long-term development of the physical environment.[504] These plans are not legally binding, but instruments for the municipalities to realize their political programs.[505] To enforce their goals and visions, municipalities adopt binding detailed development plans and specific area regulations.[506] The comprehensive plans function as guidance in these processes, as well as in other processes concerning land use, such as building permits, or environmental permit processes. The municipal planning monopoly entails a strong position for the municipalities in determining the most suitable use of a certain area.

Although non-binding, the comprehensive plans have a strategic role for municipalities in formulating their objectives in coastline development. The LECA has concluded in a number of decisions that the comprehensive plans carry a heavy weight in subsequent decisions regarding land use. Therefore, they perform an important function in the future development of a municipality, and the projection and symbolization of the plans will be reflected in subsequent decision-making.

In a case concerning the establishment of a land-based wind farm, the LECA concluded that a thorough and current comprehensive plan carries a

[500] Since the municipal planning monopoly extends to cover also parts of the territorial sea that lies within the boundaries of a municipality, marine planning is covered by the PBA. However, I do not refer to MSP in this case.
[501] PBA 2010, ch 1 sec 2.
[502] prop. 1985/86:1, *Förslag till en ny plan- och bygglag*, (1986), p 90.
[503] PBA, ch 1 sec 1.
[504] Ibid, ch 3 sec 1-2.
[505] prop. 1985/86:1, (1986), p 123, and PBA, ch 3 sec 3.
[506] PBA, ch 4.

heavy weight in permit processes, even though individual cases need to be examined on the basis of the specific circumstances at hand.[507] The LECA has come to the same conclusion in relation to building permits in a number of cases, *inter alia* a case concerning an advance notice, where the court stated that municipalities have a wide margin for deciding on the development of the built environment and land use within the municipality. The comprehensive plan was in this case, together with other circumstances, enough to decline the application for advance notice, as the land in question was designated for other uses than residential, in the plan.[508] This wide margin of municipal discretion could also be seen as a reflection of municipal autonomy.[509]

Since the comprehensive plans have no legally binding effect, there is no legal remedy to challenge their content. The only way to challenge the adoption of a comprehensive plan is through a legality review.[510] Such a review can only try the formalities of the decision, not the material content of the plan.[511] Only members of a municipality can initiate such a legality review.[512] A member of a municipality is a person who is a registered inhabitant, owns property, or is obliged to pay municipal tax in the municipality.[513] From this it follows that the central government has no possibility to challenge a municipal comprehensive plan. In that sense, the division between the municipality and the central government is the same as for municipal decisions based on the general competence, as discussed in section 7.2.

The central government is obliged to partake in the planning process, even though there is no legal remedy if there is a disagreement between the

[507] *HovR M 3352-15* (Land and Environment Court of Appeal), For similar reasoning, see *MÖD 2005:66* (Land and Environment Court of Appeal); *MÖD 2008:41* (Land and Environment Court of Appeal); MÖD 2005:2 (Land and Environment Court of Appeal), that all concern the establishment of wind farms.
[508] *HovR P 7184-14* (Land and Environment Court of Appeal).
[509] See the discussion above in section 7.2.3 on municipal action covered by the autonomy.
[510] PBA, ch 13 sec 1.
[511] The issues that can be tried through a legality review follow from Local Government Act (1991:900), ch 13 sec 8 and are the following:
1. Decisions that have not been decided in accordance with law. This mainly applies to procedural errors in the decision-making process.
2. Decisions that pertain to matters that are not a concern for the municipality. Thus, decisions that are beyond the scope of the municipal competence.
3. Decisions that where taken by the wrong body of the municipality.
4. Decisions that are in other ways is contrary to law or other provisions.

[512] LGA, ch 13 sec 1.
[513] Ibid, ch 1 sec 5.

municipality and the central government representative concerning the comprehensive plan. This situation is further elaborated in section 7.5. The cases presented above highlight the fact that the visions presented in a comprehensive plan are of importance for future land use decisions. The next step is to identify what information a comprehensive plan is required to contain, and what other legislation there is that affects the planning decisions.

7.3.2 Comprehensive plans: Content

As previously mentioned, the basic function of a comprehensive plan is to articulate the strategy for the use of land and water areas in an entire municipality. In doing so, there are some general aspects of land use that need to be covered.

The regulations regarding comprehensive plans can be found in chapter 3 of the PBA. This chapter also refers back to the public and private interests found in chapter 2 of the PBA that need to be considered in a comprehensive plan. These interests aim to ensure that land and water areas are used in the most suitable way, in relation to their characteristics, location, and needs.[514] Of particular interest, in connection to the discussion relating to the location principle, is that the municipalities are mandated to take environmental and climate aspects, as well as inter-municipal and regional relations, into account when planning. Such regional and inter-municipal issues that historically have been of importance are *inter alia* cooperation regarding infrastructure initiatives and other issues that go beyond the geographic limits of single municipalities.[515] As seen in the case above concerning the access route to Gothenburg, such initiatives are in line with the location principle, as the logic behind such cooperation is that it is of benefit to the members of the concerned municipalities. Regarding the public and private interests of chapter 2, the plan shall *inter alia* promote efficient and sustainable living conditions from a social, environmental, and economic perspective.[516] In addition, these interests cover the location of new buildings both in terms of the suitability of the location as such, and in relation to pre-existing land use interests.[517]

[514] PBA, ch 2 sec 2.
[515] prop. 1985/86:1, (1986), p 189.
[516] PBA, ch 2 sec 3 para 2.
[517] Ibid, ch 2 sec 4-6.

While the interests in chapter 2 of the PBA are of a general nature, there are some more explicit interests that also need to be taken into account when developing a comprehensive plan. These are expressed in chapter 3 of the PBA. The provisions in the chapter refer to the national interests in chapters 3–4 of the SEC, environmental quality standards, and shore protection regulations. These regulations, and their relation to municipal planning, will be presented in section 7.4. In addition to them, there is also a more general provision stating that the municipality needs to declare how the comprehensive plan will take into account national and regional goals, plans, and programs of importance for a sustainable development within the municipality. Although the wording of the provision seems to indicate that it is only the sustainable development within the municipality that is of concern (if that is even possible), the preparatory works to the most recent major revision of the PBA highlight the importance of integrating national, regional, and local issues in the planning. What is meant by national and regional in this context is not clarified. There is, however, a reference made to sustainable development, which could indicate larger environmental concerns.[518] Requiring that such considerations are taken into account in municipal decision-making may be considered an expansion of the location principle, clarified through the special competence of the PBA. However, this does not necessarily mean that the location principle is without importance in municipal planning. The underlying role of the principle in municipal decision-making, together with the voting system, and the fact that municipal politicians have as their main responsibility to tend to the interest of the municipality, may well be also reflected in planning decisions. Especially so, as it can be difficult for individual municipalities to see their own role in a more aggregated planning regime, based on the ecosystem approach and a sustainable development discourse. This difficulty is highlighted in chapter 8, where it becomes evident through the interviews that placing municipal planning in such a context is not done either in the comprehensive plans or in the responses. It is also important to note here that to establish an obligation for municipalities to include interests such as the ones discussed above, it needs to be legislated. Statements in preparatory works can never create an obligation.[519]

[518] prop. 2009/10:170, (2010), p 176.
[519] See Örnberg (2014), p 166.

7.4 Limits of the municipal planning monopoly

7.4.1 National interests

The previous sections described the function of municipal spatial planning, and basic content of the planning monopoly. In the following, some of the internal limitations to planning will be described. Municipalities, while acting within their competence, are obliged to explicitly account for how certain aspects of national legislation are treated. Interests with a broader application than those of single municipalities are guarded by the central government and they restrict the autonomy of municipal planning. In that sense, there are different legal scales, operating at the same time within municipal planning. De Sousa Santos calls this *interlegality*. Although these scales all operate on the scale of a municipality, they have different grades of detail, leading to different prioritizations.[520]

National interests provide one of the most important factors that municipalities need to take into account in their planning decisions. These are areas that have been deemed to be of high importance for their function in relation to certain uses, and therefore safeguarded by the central government, through CABs.[521] Since all municipal planning needs to respect the national interest, they affect how a municipality can plan the use of its land and water areas. The national interest regulation is an important instrument for planning on a national level in Sweden, in both the terrestrial and the marine environment.

The provisions concerning the management of land and water areas were divided into two categories in the LMNR:[522] general provisions and specific provisions. General provisions were constituted by important sectors with land use claims. They were not geographically specified, but rather general statements that areas of interest for these uses should be protected. Special provisions were geographically specified areas of importance for nature conservation, cultural heritage, tourism and recreation.[523] The provision remained relatively intact until they were, with minor revisions, incorporated in the SEC in 1999. In the government bill preceding the SEC, the connection between municipal planning and national interests was highlighted once

[520] De Sousa Santos calls this 'different interpretive standpoints'. De Sousa Santos (1987), p 288.
[521] prop. 1997/98:45, (1997), pp 239-245.
[522] For a background to the regulations See section 5.5.1
[523] prop. 1985/86:3, *Förslag till lag om hushållning med naturresurser m.m.*, (1986), p 80.

again. It was noted that the knowledge concerning where land and water uses of national interest were located had largely been identified through municipal comprehensive plans. These plans should also in the future be the most important sources of information in decisions regarding the use of land and water areas.[524] The municipalities, on the other hand, are obliged to take chapters 3–4 of the SEC into account in all planning decisions.[525] As will be shown below and also in the analysis of the interviews, the national interests significantly affect municipal planning and thus influence which perspectives and interests can be promoted on a local level of planning. It is thus important to understand what these management provisions are, as well as their legal status in relation to municipal planning. The following paragraphs contain a review of the most important aspects of chapters 3–4 of the SEC.

The division between general and specific provisions from the LMNR, remains in the third and fourth chapters of the SEC today. Chapter 3 contains general provisions concerning the management of land and water areas. Each section in the chapter covers one or more sectoral interest that needs to be safeguarded in land use conflicts. The sectors that are covered can be divided into two categories: exploitation/use sectors and conservation sectors. All the sectors have in common that the uses are contingent on the availability of land and water areas. Professional fisheries (sec 5), or energy production (sec 8), for example, are both dependent on the availability of areas with specific characteristics. Nature conservation and outdoor recreation (sec 6), on the other hand, are dependent on the non-exploitation of areas. It is not uncommon for there to be two or more sectors that claim an interest in the same area. The provisions in chapter 3 stipulate that areas that are of importance for a certain sector shall be protected, as far as possible, from intrusions that may significantly harm or interfere with the interest of the sector. In addition, for some of the sectors, there is a second paragraph to the sections stipulating that if the area is of national interest for a certain use or conservation measure, it *shall* be protected from such intrusions. There are thus two different levels of protection provided in the chapter.

The application of the chapter can be quite dynamic, as the geographic locations of the areas are not specified in law. The intention was that areas relatively unique to the country or to a specific region should be covered by the higher level of protection: national interests. For natural protection or

[524] prop. 1997/98:45, (1997), part 2, p 29.
[525] PBA, ch 3 sec 5(3).

recreation, or for fisheries and reindeer husbandry, the areas were supposed to be of significant importance for the survival of the sector.[526] For each sector with potential national interests, there is a government agency tasked with identifying those interests.[527] These identifications do not entail a statutory protection of the area. When a new operation or plan may be in conflict with an appointed interest, a permit authority needs to determine if the area actually should be considered of national interest, and if so, determine if the proposed operation will cause significant harm to the interest at hand. After this, a decision can be made regarding whether the operation is permissible or not.[528]

In cases where an area has been deemed of national interest for more than one purpose, such as fisheries and tourism, or wind farms and reindeer husbandry, the authority issuing the permits needs to consider the most suitable use of the area, as well as the possibilities of combined usage. All the while taking the sustainable long-term perspective into account.[529] The municipal planning, once again, serves as a means of interpretation here, since it can inform the decisions concerning competing claims of usage.

Chapter 4 of the SEC contains special provisions concerning land and water management in certain areas. Specifically, the chapter includes areas that are of interest for nature conservation, cultural heritage, tourism and recreation.[530] These are geographically specified areas that are of either great cultural or great natural importance. In contrast to the provisions in chapter 3, the provisions in chapter 4 are statutory and do not require a permit authority to try their validity. Large parts of Sweden's west coast, the southern east coast, and the High Coast are covered by chapter 4, as they are of national interest for the purposes of tourism and outdoor recreation. In these areas, development projects or other interventions can only be undertaken if they are not incompatible with the interests, and if they do not significantly damage the natural or cultural assets, of the areas.[531] Development projects that significantly harm an area can, however, still be allowable if they contribute to the development of existing urban areas or local industry, or are

[526] prop. 1985/86:3,, p 161 ff.
[527] See Ordinance (1998:896) on the Management of Land and Water Areas, sec 2.
[528] prop. 1997/98:45, (1997), p 242.
[529] SEC, ch 3 sec 1 and 10, see Gabriel Michanek and Charlotta Zetterberg, *Den svenska miljörätten* (Fjärde upplagan edn, Uppsala : Iustus förlag 2017), p 151 ff.
[530] SEC, ch 4 secs 1-2.
[531] Ibid, ch 4 sec 1.

needed for the purposes of the total defense.[532] To provide an illustration of how the national interests affect municipal planning, Figure 4 shows the national interests appointed in the coastal area of the municipality of Tanum. All of the layers on the map represent different national interests, and, as can be seen, the entire coastline is covered by a number of interests that need to be taken into account in planning. The municipality of Tanum can only develop its coastline if such development does not entail significant damage to any of the national interests. When the entire coast of a municipality is covered by national interests in this way, it is thus of great importance how the concept of significant damage is interpreted.

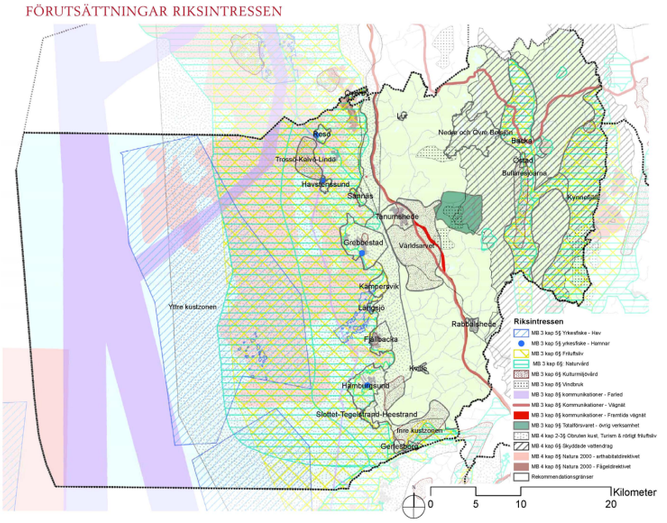

Figure 4: Map of appointed national interests in the Municipality of Tanum.[533]

One of the main issues in the application of chapters 3 and 4 of the SEC is what constitutes significant damage. Any development project that does not entail significant damage to the protected interest will be allowable in an area. This is important from a municipal planning perspective as the national interests need to be taken into account already in the comprehensive plans. Being the first step in the spatial development process of a municipality, the plans need to consider what can be allowed without causing significant

[532] Ibid, ch 4 sec 1 para 2.
[533] Tanums kommun, *Översiktsplan 2030*, (2017), part 1, p 34.

damage. The concept of significant damage is of importance as many of the coastal municipalities have multiple national interests appointed in their coastal areas (see Figure 4), and to be able to develop these areas, the municipalities need to ensure that significant damage is not caused to any of the interests.

Although there is no legal definition of what is considered to be significant damage, in the preparatory works to the SEC, it is stated that the intended measures are such that would have a permanent negative impact on an interest, or have a temporary, highly significant, effect on the same.[534] Cumulative impacts also need to be accounted for. If there is a high pressure on an area, in terms of exploitation, even smaller operations may be forbidden, as they could create expectations for further development. It is important to be careful also when allowing smaller projects in an area of national interest, since these kinds of decisions can become precedents.[535] This clarification offers some guidance to the definition, yet it remains unclear how it should be interpreted in individual cases. Looking to case law can help in informing the interpretation. However, most of the cases where significant damage has been up for discussion in the LECA or the Supreme Administrative Court end up with the court ruling that no significant damage to the interest will occur.

Worthy of note here is a Supreme Administrative Court case from 2014 where a concession application for a nickel mine was tried, in an area of national interest for reindeer husbandry. The case was first decided by the government. In the decision, there was a discussion as to which of the interests would bring the most benefits to society. Here the mine was deemed to be of most importance. There was no explicit discussion of significant damage. Nevertheless, there was a relatively extensive discussion of the possibilities of continued reindeer husbandry in the areas surrounding the concession area. The government came to the conclusion that it would be possible to continue the reindeer husbandry if sufficient conditions concerning precautionary measures were decided in a subsequent permit process. The case was appealed to the Supreme Administrative Court, which agreed with the decision of the government and argued that the extent of the damage to reindeer husbandry could not be foreseen in the present process, as it only concerned the right of concession. Damage could thus be avoided

[534] prop. 1997/98:45, (1997), part 2, p 30.
[535] Kerstin Hugne and Claes Göran Guinchard, *Boken om översiktsplan. D. 3, allmänna intressens behandling i översiktsplanen* (1. uppl. edn, Karlskrona, Karlskrona : Boverket 1996), p 22.

by conditioning the mining permit in a subsequent permit process. By doing so, the court did not have to decide on how the damage should be avoided, only that it was possible.[536] In 1993, a permit was given to build a bridge through an area covered by (current) chapter 4 of the SEC. The bridge was not deemed to cause significant damage to the interest, as it would only affect a small part of the larger area. The bridge was 1,867 meters long with 40 meters headroom, and was at the time of building the ninth longest bridge in the world.[537] Finally, the LECA did not consider it to constitute significant damage to the interest of communication that ships transporting goods up- and downstream a river would have to wait for the opening of a bridge to a greater extent than before, in a ruling from 2016.[538]

These cases have in common that they provide a negative determination of significant damage, by concluding what is *not* significant damage. What actually is considered significant may be harder to discern. The government commission, "Riksintresseutredningen", found that the description of the interests within areas of national interest tends to be rather general and unclear. This leads to unclear decisions by courts and authorities. As a consequence, the determination of significant damage has not been satisfactorily settled through case law.[539] There is a tendency from the permit authorities to settle the issue of significant damage through subsequent conditions or mandating compensatory measures. It is thus important to ensure that the conditions or compensatory measures are able to sufficiently mitigate the damage to the interest so that it does not reach the level of significance.[540] I am not certain if that was proven in all of the above presented cases. One possible explanation of the outcomes of these cases, at least concerning the large bridge and the nickel mine, is that both the concession and the bridge were considered to be of such importance that they needed to be prioritized. In the case of the concession, this was evident from the consideration of interests that was made for the concession area, where reindeer husbandry was not considered to be a prioritized interest. For the

[536] *HFD 2014 not 65* (Supreme Administrative Court).
[537] *RÅ 1993 not. 550* (Supreme Administrative Court).
[538] *Hov*R *M 8396-14* (Land and Environment Court of Appeal).
[539] SOU 2015:99, (2015), p 274.
[540] It should also be noted here that in cases concerning concessions for mineral extraction, the provisions in ch 3-4 of the SEC shall only be applicable in the concession process, not the subsequent permitting process, see the Mineral Act (1991:45) ch 4 sec 2 para 4. This raises a question on what grounds the precautionary measures shall be conditioned. However, this is a matter for a different book.

surrounding areas, the argumentation was less clear. The problem is that instead of entering into a discussion of prioritization between interests, the courts chose to rule that there was no significant damage. If this interpretation is correct, namely that the ruling is a consequence of the concession and the bridge being such high value interests, this should have been more transparent. There are legal recourses for the weighing of interests, and if these possibilities lead to unsatisfactory rulings, the law needs to be changed. As it stands now, the bar for what can be considered significant damage seems to be unreasonably high, or at least determined by how important the conflicting interest is.

The point of this argument is not to say that there are no cases where the operations are deemed to entail significant damage. In a recent judgment from the LECA, an application concerning concession for an airborne electric cable was declined on account of the risk of it causing significant damage to national interests.[541] In this case, there was little discussion of the damage, and the Swedish EPA, the CAB, and comprehensive plan covering the area were opposed to the concession as it would run through an area covered by multiple national interests, in both the third and the fourth chapter of the SEC. Nevertheless, the review above shows that the bar for what is to be considered significant damage to a national interest seems to have been set relatively high, and that there are ways around it if a certain operation is considered necessary.

This section has provided an understanding of the provisions concerning the management of land and water areas. Many of the municipal representatives interviewed stated that these provisions are central in comprehensive planning, as they can limit *inter alia* the possibilities of developing certain parts of the municipality. However, the relationship is reciprocal; the municipal plans are important for the national interests as well. The open definitions of the interests, coupled with the high bar for significant damage, seem to leave quite a lot of room for maneuver in municipal planning.

[541] *Hov*R *M 4874-18* (Land and Environment Court of Appeal).

7.4.2 Environmental quality standards

The legislation regarding EQS is another important factor that municipalities need to take into account in their planning.[542] Municipal planning needs to be performed in accordance with the EQS.[543] The Swedish regulation on EQS is new, compared to the regulations on shore protection and national interests. When the SEC was adopted in 1999, EQS were introduced for the first time. The point of departure for the EQS system is that the environment is a recipient of different types of emissions and human behavior needs to be adjusted to what the recipient can bear.[544] The EQS are tools to determine such limits and any new operation that risks affecting the EQS negatively should be adjusted or prohibited.[545] There are three main areas where EQS are used: water, air, and sound. Naturally, this review will focus mainly on the water standards, and their application in planning decisions, even though much of what is said is generally applicable to all types of standards. In the following, a short introduction to the EU WFD is provided, as this directive has had a major influence on the Swedish system for EQS for water.

In terms of water, EU regulations have had a great impact on the Swedish regulation of EQS. The most important piece of legislation in this regard is the WFD. The WFD was adopted in the year 2000, and covers all surface water, and groundwater, in the member states, including coastal waters up to one nautical mile seaward of the baseline.[546] It thus covers the same area as the exclusive municipal planning competence. A key feature of the WFD is that, in contrast to the MSPD, it requires member states to organize the management of surface water and groundwater based on river basin districts, rather than using pre-existing administrative structures.[547] The aim is to reach a management that better fits the geographical span of ecosystems than what was previously the case.[548] The Swedish waters are divided into five river basin districts, each with its own "water authority" assigned to it, in charge of overseeing the implementation of the regulations. The water authorities in Sweden are not completely new administrative entities. Rather, five of the

[542] The EQS and the WFD will be elaborated further in case study II, in chapters 10-11. The present review is to give the reader an idea of how the EQS affect municipal planning, and is not aimed at providing a full understanding of the WFD system.
[543] PBA, ch 2 sec 10.
[544] prop. 1997/98:45, (1997), p 252.
[545] SEC, ch 5 sec 4.
[546] 2000/60/EC 2000, arts 1 and 2.
[547] Ibid, art 3(1).
[548] For a deepened discussion on the differences in application of the ecosystem approach in the WFD, MSFD and MSPD, see Westholm (2018).

CABs were tasked with water management in accordance with the WFD and new units within them were created, called "water authorities". However, the idea is that existing administrative boundaries should not be determining the jurisdiction for each authority; rather, the natural limits of the river basin districts are used.[549] Within each river basin district, the waters are further categorized as being either river, lake, transitional water, or coastal water. These subcategories are then typed based on their physical characteristics and by such typing divided into smaller fragments called "water bodies". The physical characteristics differ between types of water bodies, but for coastal waters the types are based on *inter alia* ecoregion, mean depth, and salinity.[550]

To determine the ecological status for a body of surface water, its current status is first identified as being either high, good, moderate, poor, or bad.[551] This identification is based on a number of different quality factors. These are divided into three categories: biological elements; hydromorphological elements; and chemical and physico-chemical elements. For ecological status, the latter two are supporting elements for the biological elements.[552] Supporting in the sense that elements such as river continuity and water flow, or salinity and thermal conditions will affect the biological elements. The aim of the Directive was to achieve at least good status in all water bodies within 15 years of the adoption of the directive.[553] Water bodies that do not meet the criteria can, under certain circumstances, get a prolonged time for achieving good status.[554] There is a strict non-deterioration policy within the WFD. Member states shall prevent deterioration of the status of all bodies of surface water.[555] The implementation of the WFD in member states is completed through so-called "programmes of measures".[556] The programmes of measures are directed at authorities managing water quality and the aim is to have a plan for measures to achieve the environmental quality objectives.[557]

[549] Michanek and Zetterberg (2017), p 185.
[550] 2000/60/EC 2000, Annex II.
[551] Ibid, Annex V.
[552] Ibid, Annex V.
[553] Ibid, art 4(1)(a)(ii).
[554] Ibid, art 4(4).
[555] Ibid, art 4(1)(a)(i). There are exceptions where the non-deterioration rule is not applicable. However, the purpose of this text is to give a short insight into the role of EQS in planning, thus the intricacies of the WFD are best left for someone else to describe.
[556] Ibid, arts 4(4) and 11.
[557] Christina Olsen Lundh, *Panta rei: om miljökvalitetskrav och miljökvalitetsnormer* (Havsmiljöinstitutet ed, Göteborg, Göteborg : Havsmiljöinstitutet 2016), p 379.

In Sweden, the programmes of measures are decided by the water authorities, but implemented by other authorities on different government levels, including municipalities. For a long time, the programmes of measures and EQS were considered not applicable in individual cases. The EQS function to determine maximum or minimum levels of certain substances, such as nitrogen or oxygen, a recipient (such as a lake, stream or coastal waters) can bear while still maintaining a good ecological status. The environmental quality can also be determined through analyzing bioindicators, such as the occurrence of a certain fish species in a lake.[558] Chapter 5 of the SEC regulates EQS, and in section 2, four different types of EQS are presented:

1. Limit value standards – These norms indicate a limit value for certain substances, that cannot be exceeded or should be reached. These standards are accompanied with a time limit within which they need to be achieved.
2. Target standards – much like the limit value standards, the target standard determines levels that should not be exceeded. However, these standards are not binding, but rather indicate limits that should be strived for.
3. Indicative norms – through the use of indicators, such as occurrence of certain organisms, the environmental quality in a water body can be assessed.
4. Other norms that follow from EU-law obligations – This rather wide formulation indicates a possibility to decide on standards that are needed to achieve goals in EU environmental legislation.[559]

In 2015, the ECJ stated in the so-called "Weser Case",[560] that the non-deterioration provision of the WFD was applicable in individual cases. Furthermore, the court concluded that the deterioration of a single quality factor, even if it does not mean that the status of an entire water body is lowered, is covered by the non-deterioration provision in art 4.1 of the

[558] Ibid, pp 61-62.
[559] SEC, ch 5 sec 2, and Olsen Lundh (2016), p 62.
[560] *Case C-461/13 Bund für Umwelt und Naturschutz Deutchland e.V. v Bundesrepublik Deutschland* (ECJ).

WFD.[561] In Sweden, the Weser case led to amendments to, *inter alia*, chapter 5 of the SEC in the beginning of 2019. These amendments were, however, mostly directed at operations in fresh waters and rivers, as most of Sweden's inabilities to adhere to the WFD in this respect relate to hydro power production.[562] The amendments did not warrant any changes to the municipal planning regulations.

As a part of the special competence of planning, municipalities are required to take EQS into account in all of their planning decisions.[563] There is no distinction made between the different types of standards presented above. This indicates that all standards shall be respected. In the comprehensive plans, municipalities are required to account for how the EQS are being respected in the proposed use of land and water areas.[564] Even though the comprehensive plans have no binding effect, they can function as a tool for the municipalities to show how the EQS will be affected by subsequent binding decisions. The Swedish National Board of Housing, Building and Planning published a handbook for EQS in spatial planning. These are some of the examples for what a comprehensive plan could include in terms of EQS that are mentioned in the handbook:

- Clear accounts, with text and maps, of land and water areas that suffer from high levels of nitrogen dioxide, particles or poor water quality.
- Highlighted areas where there is a risk that EQS will not be met.
- Municipality goals, recommendations, and strategies for how the above-mentioned areas will be treated in subsequent plans
- Consequence analyses regarding the proposed strategies.[565]

The handbook concludes that, since the comprehensive plans are generally long-term documents, the information may not always be up to date. It is important for subsequent planning decisions to include other types of information, such as traffic plans and environment programmes.[566] As for the programmes of measures, there is no obligation for municipalities to

[561] Ibid, para 69.
[562] See prop. 2017/18:243, *Vattenmiljö och vattenkraft*, (2018).
[563] PBA, ch 2 sec 10.
[564] Ibid, ch 3 sec 5(3).
[565] Boverket, *Miljökvalitetsnormer i fysisk planering en orientering för handläggare*, (2005), p 32.
[566] Ibid, p 32.

respect them in planning decisions. Nevertheless, for the system to work, the programmes of measures concerning water quality and the comprehensive plans should inform each other, in a way similar to the case of national interests.[567] One challenge here is that it may be hard to foresee how planning decisions made in a comprehensive plan will affect a certain EQS. Still, the considerations in these plans are important in subsequent permit processes. The establishment of new industries, housing or shopping malls may all have effects on the EQS. These are generally planned for in comprehensive plans, which carry a heavy weight in permit processes. The central government thus needs to be active in the comprehensive planning process to ensure that the EQS will not be violated. Nevertheless, EQS are different from national interests. The strict non-deterioration policy that follows from EU law can outweigh non-statutory considerations made in a comprehensive plan. This makes it all the more important for municipalities to plan for EQS, as planning is a way of providing predictability in subsequent permit processes. Here, both the EQS and the municipal plans act in what I have discussed as the structural layer of law.[568] Both the EQS and the plans inform permit processes, and both are subject to cyclical revisions, adaptive processes. It is thus important that they are also in coherence with each other, since otherwise the structural layer will fail to provide the information necessary to ensure predictability for decisions in the decision layer of law.

7.4.3 Shore protection regulations

In addition to national interests and EQS, the shore protection regulations are an important factor determining how the municipalities can plan the use of their land and water areas, in particular the coastal areas. The shore protection regulation is more clear-cut than the national interests and EQS, and there are also fewer possibilities for a weighing of interests in the planning process. The shore protection regulations are discussed to a lesser extent in the comprehensive plans, compared to national interests. The reason for this is that much of the coastal areas in Sweden enjoy a relatively high degree of formal protection and the exemptions that are generally possible to make in comprehensive plans are not applicable here. Nevertheless, these regulations are highly important in planning of the coastal areas as they affect the scope of the specially regulated municipal planning competence. The shore

[567] Olsen Lundh (2016), p 88.
[568] See section 2.3.

protection regulations thus affect the perspectives of the municipal level of management. Furthermore, it is clear from the interviews that shore protection is an important aspect of municipal planning.[569] The following sections will provide an introduction to the Swedish shore protection regulations and how they affect municipal planning.

Shore protection in the Swedish legislation is found in SEC chapter 7. In short, the shore protection regulations entail a prohibition to erect new buildings, change the current use of buildings if these will restrict the public access to shore areas, dig or carry out other preparatory construction work, or take measures that will substantially change the living conditions of animal or plant species.[570] The purpose of the shore protection is to ensure public access to shore areas and preserve good living conditions for animal and plant life on land and in water.[571] The general protection covers an area of 100m from the shoreline, both seaward and landward.[572] The following sections will provide a background to the shore protection, and the development since its inception in the 1950s.

In the 1950s, the first shore protection regulations were adopted in Sweden. The new statutory right to vacation, together with the mechanization of labor, led to an increase in pressure on the Swedish shore. At the same time, the government saw that these areas were of immense value to the entire population, and thus needed legal protection, especially in urban areas.[573] The first regulations provided the CABs a possibility to declare specific shore areas to be protected. The presumption was that new buildings in shore areas could be permitted, as long as the CABs had not protected the areas through the shore protection regulations. In the 1970s, the building of holiday houses in the vicinity of water had started to increase, and the existing regulations seemed unable to ensure a satisfactory level of protection.[574] As a result, a general protection for the shore areas was proposed and subsequently adopted in 1975. Instead of giving the state, through the CABs, the possibility of protecting certain areas through shore protection, the new regulation protected all areas within 100m of the shoreline, and gave the state, through

[569] See section 8.5.3.
[570] SEC, ch 7 sec 15.
[571] Ibid, ch 7 sec 13.
[572] Ibid, ch 7 sec 14.
[573] SOU 1951:40, *Förslag till lagstiftning om förbud mot bebyggelse m.m. inom vissa strandområden - Strandutredningen*, (1951), p 11.
[574] prop. 1974:166, *Kungl. Maj:ts proposition med förslag till ändringar i naturvårdslagen (1964: 822) och skogsvårdslagen (1948: 237)*,, (1974), pp 28-29.

the CABs, the possibility to decide on exemptions to the shore protection in certain areas, provided it was apparent that they had no value for swimming or outdoor life. A possibility to extend the protection up to 300m was added to the regulations.[575]

The next major revision of the shore protection came in 1994. In addition to the interests of swimming and outdoor life, the important biological function of shore areas had been recognized. Although the regulations, as they were, entailed an indirect protection of natural values, the government saw the need for a more explicit ground for protection as well. This was done through adding living conditions for plants and animals to the section where the general purpose of the shore protection was expressed.[576] The changes in 1994 strengthened the shore protection further. There was a discussion in the preparatory works concerning a differentiated shore protection; in rural areas, where access to lakes and streams was bountiful, it would be easier to decide on exemptions from the shore protection. Municipalities, in consultation with the CABs, should be able to point out areas in their comprehensive plans where shore protection exemptions could be made.[577] However, the final amendments to the LMNR, where shore protection was regulated, did not include any provisions to that end, and the strong protection was kept intact.

When the SEC was adopted, the shore protection regulations were incorporated almost exactly as they had stood in the LMNR. The major change was that the protection for animal and plant life was strengthened.[578] In the preparatory works to the changes in both 1994 and 1999, it was highlighted that a reason for strengthening the protection for animal and plants was that the interest of preserving shore areas needed to be seen in a long-term perspective; here, future values needed to be accounted for.[579] With the introduction of the SEC, shore protection in Sweden reached a formal legal peak. Since then, further possibilities to exempt areas from the protection have been introduced. The fact that the shore protection was general and covered all shore areas in Sweden, while the pressure on the resources varied widely around the country led to decreasing legitimacy for the regulation. In addition, unclear statements in the regulation were believed to lead to a loss in substance of the law. Some of the problems were linked

[575] Ibid, p 4.
[576] prop. 1993/94:229, *Strandskydd*, (1994), pp 4 and 10.
[577] Ibid, p 11.
[578] prop. 1997/98:45, (1997), part 2, p 85.
[579] prop. 1993/94:229, (1994), p 4 and prop. 1997/98:45, (1997), part 2 p 84.

to the fact that there was no coherent application of the law and little government control over decisions.[580]

In 2009, further changes were made to the shore protection regulations to come to terms with the differences in interpretation of the rules and to create a system adjusted to its purposes.[581] Through the introduction of a differentiated shore protection, which had been discussed 15 years earlier, local authorities were given greater possibilities to repeal the protection in rural areas. The municipalities were given a greater responsibility for shore protection exemptions.[582] The basic idea was that municipalities, in their comprehensive plans, could identify areas for rural development in locations close to the shore.[583] In these areas the shore protection could later be repealed through decisions in a detailed development plan.[584]

In 2014, the possibilities to decide on exemptions were further increased. These changes covered shore areas adjacent to smaller lakes and streams. The background was that the purpose that was added in 1994 – protection of the living conditions of animals and plants – had substantially limited the possibilities to exempt areas from the shore protection regulations.[585] In the preparatory works to the 2014 amendments, it was stated that the acceptance and understanding of a regulation is dependent on how appropriate it is in relation to its purpose. The shore protection regulation needed to be well warranted and balanced. This was not considered the case if it was to be applied in full also adjacent to the smallest lakes and streams.[586] Protection for those areas of importance for the purpose of protecting living conditions was already ensured through *inter alia* regulations concerning the protection of biotopes in other parts of the SEC chapter 7.[587] The latest agreement between political parties for the governing of Sweden (2019) also included measures to create greater possibilities to open up for exemptions from the shore protection in rural areas.[588] These amendments have yet to be realized.

[580] prop. 2008/09:119, *Strandskyddet och utvecklingen av landsbygden*, (2009), p 32.
[581] Ibid, p 98.
[582] Ibid, ch 10.
[583] See SEC, ch 7 sec 18(e).
[584] PBA, ch 4 sec 17.
[585] Michanek and Zetterberg (2017), p 227.
[586] prop. 2013/14:214, *Strandskyddet vid små sjöar och vattendrag*, (2014), p 17.
[587] Ibid, p 18.
[588] Centerpartiet Socialdemokraterna, Liberalerna, Miljöpartiet de gröna,, *Utkast till sakpolitisk överenskommelse mellan Socialdemokraterna, Centerpartiet, Liberalerna och Miljöpartiet de gröna*, (2019), para 23.

As seen in the previous paragraphs, the role of municipalities with regard to shore protection has been strengthened since the turn of the millennium. When the differentiated shore protection was introduced in 2009, the long-term perspective of the comprehensive plans was highlighted as particularly suitable to handle certain aspects of it. The shore protection would be better adjusted to local conditions if the responsibility for making decisions regarding rural development areas was placed on the municipalities. This would ensure that the protection was treated in a well-informed, transparent process where all interested parties would be able to weigh in.[589] The basic idea was that the repealing of shore protection would work in the same way as national interests: a municipality appoints certain areas in the comprehensive plan. The appointment then becomes guiding in subsequent processes.[590] The possibility for municipalities to decide in a binding manner to repeal the shore protection in certain areas was placed in the PBA.[591] In such decisions, it is considered a special reason to repeal or admit exemptions if an area is appointed as a rural development area in a comprehensive plan.[592]

In relation to the coastal areas, it is important to highlight that it is not possible to repeal the shore protection on the grounds of rural development in the coastal areas of the entire west coast, the islands of Öland and Gotland, as well as the east coast from the southern-most point until Forsmark, and the High Coast.[593] There are possibilities for municipalities to repeal the shore protection in certain cases through a detailed development plan. However, only the areas for rural development are required to be included in the comprehensive plans.

Generally, all comprehensive plans should be accompanied by a strategic environmental assessment (SEA). [594] Such assessments should include all of the different regulations that need to be accounted for in a comprehensive plan. This requires evaluations on how EQS are affected by the plan, as well as environmental effects of the repealing of shore protection. As SEAs are means for the municipalities to show that they have taken all relevant environmental concerns into account in the planning process, they are a part of the description rather than the actual considerations and will not be further

[589] prop. 2008/09:119, (2009), p 56.
[590] Ibid, p 58.
[591] PBA, ch 4 sec 17.
[592] SEC, ch 7 sec 18(e) para 2.
[593] Ibid, ch 7 sec 18(e) p 4.
[594] PBA, ch 3 sec 4, and Ordinance (2017:966) on Strategic Environmental Assessment, art 2(2)(c).

examined here. Still, it is important to note that SEAs are required in comprehensive planning.

7.5 The role of the central government

7.5.1 Review statements

The previous sections have covered some of the regulations and interests that feed into the municipal planning monopoly. To ensure that these interests are respected in the comprehensive planning, the central government, through CABs, is given a mandate to be part of the planning process. This mandate was seen as necessary when the first PBA was adopted. However, it was designed with respect to municipal autonomy.[595] The mandate was clarified through the latest major revisions of the PBA.[596] As the comprehensive plans only have a guiding function, there is no possibility to retry the adoption of a plan. Instead, the CABs are required to give a review statement concerning how the plan takes certain interests into account.[597] If the municipality does not incorporate the comments from the review statement in the plan, or does not agree with the comments, this needs to be explicitly declared in the plan.[598] It is thus of great importance how the CABs act in the process of developing a comprehensive plan: if the CAB does not agree with how a certain interest has been treated in a plan, and comments on this in the review statement, the function of the plan for subsequent decisions in this regard will be less guiding. If, on the other hand, the CAB has not had any comments on specific interests in the review statement, a municipality should be able to trust that the state will have no further objections when the plan is implemented through subsequent decisions.[599] This has been tried by the LECA, in a case from 2015.

In this case, a company had applied for a permit to erect three wind power turbines in an area that was pointed out as important for recreation and outdoor life in the municipal comprehensive plan. In connection to the adoption of an earlier plan, concerning the establishment of wind power in the municipality, the CAB had observed that the area was deemed to be of national interest for the production of wind power by the Swedish Energy

[595] prop. 1985/86:1, (1986), pp 76-77.
[596] prop. 2009/10:170, (2010), p 183.
[597] PBA, ch 3 sec 16.
[598] Ibid, ch 3 sec 20.
[599] prop. 1985/86:3,, p 34.

Agency. However, when the new comprehensive plan was adopted, no such comment was made in the review statement. The LECA cited the preparatory works to the LMNR and stated that since the CAB had not made a comment in the review statement, the comprehensive plan, which was well prepared, should have a stronger guiding position. The Court made the same interpretation.[600]

Although this specific case and the statement in the preparatory works concern national interests, there is no reason not to see them as equally applicable in terms of shore protection. In the preparatory works for the new exemptions for rural development, it was stated that as long as the CAB has not had any objections in the review statement, there should be no reason to depart from the considerations of the municipality in a subsequent process.[601] For EQS, however, it may be connected to more challenges for the CAB to foresee the exact consequences of a comprehensive plan, due to its general nature. In addition, the EQS are binding and the CAB is more likely to be successful in subsequent processes if an EQS runs the risk of not being respected, than concerning national interests and shore protection, even if there has been no mention of potential risks in the review statement. Finally, there is no provision mentioning that the comprehensive plans should be guiding in deciding on exemptions from EQS. Thus, those regulations give less leeway for the municipalities.

In addition to the review statement, the CABs are required, once every term of office, to provide the municipalities with a report. This report is supposed to include information concerning matters of importance for state or inter-municipal interests that may affect the topicality of the comprehensive plan.[602] The report, however, does not have the same function as the review statement and is not used in the same way in permit processes.

7.5.2 Involvement in planning processes

It is evident from the previous section that how the state is involved in comprehensive planning processes is highly important for subsequent decisions. In the planning process, the CABs are responsible for coordinating

[600] *MÖD 2015:15* (Land and Environment Court of Appeal).
[601] prop. 2008/09:119, (2009), p 58.
[602] PBA, ch 3 sec 26.

state interests.[603] This section will discuss how active the CABs have been in recent years concerning the interests presented under section 7.4. In chapter 8, I will examine how the different interests have been treated in the comprehensive plans of the coastal municipalities. Such an examination will provide an interesting comparison between state intervention and the content of municipal planning.

In 2018, a government committee, tasked with reviewing how the comprehensive planning could be amended to facilitate subsequent planning, presented a report where they had studied review statements from 40 comprehensive plans adopted between October 2014 and December 2017.[604] The study showed that 75 percent of the review statements included comments on national interests not being sufficiently taken into account. The report also claimed that there were discrepancies in how the CABs formulated their review statements. A number of them commented on more issues than they were mandated to in the PBA chapter 3, section 16. The statements were also unclear on the causes for intervention, which made them difficult to handle for the municipalities. On the other hand, few municipalities noted in the comprehensive plans if the CAB had any objections, even though this is a legal requirement according to the PBA.[605] Only two percent of the 1,520 detailed development plans adopted in 2017 were subject to review processes by the CABs. Fifty percent of these review processes were based on health and safety issues. National interests and shore protection were two additional prominent bases for review.[606] The low frequency of intervention by the CABs can be interpreted in a few different ways: either potential conflicts between municipal objectives and national interests are managed through consultation in the planning processes; or the municipalities have made considerations that are consistent with the priorities of the central government; or the CABs do not have enough resources to initiate all the necessary review processes. The figures do not provide any answers to these alternative interpretations, but they clearly show that the CABs rarely intervene after a plan has been adopted.

National interests as regulated in chapters 3–4 of the SEC seem to be the main reason for intervention from the CABs in comprehensive planning processes. However, the overarching character of the national interests

[603] Ibid, ch 3 sec 10.
[604] SOU 2018:46, *En utvecklad översiktsplanering: att underlätta efterföljande planering*, (2018).
[605] Ibid, p 96.
[606] Ibid, p 95.

provide a legal landscape that lacks clear steering mechanisms. The areas that have been deemed to be of national interest are often vaguely described, which leads to unclear decisions from the courts and other permit authorities.[607] Furthermore, a government committee report from 2015 found that courts and other authorities rarely refer to the content of comprehensive plans when assessing permit applications.[608] Yet, there are a number of cases from the LECA where the court clearly states that the content of a comprehensive plan is important for the outcome of the process.[609] Nevertheless, it indicates that few decisions concerning detailed development plans are actually reviewed by the CABs on the basis of national interests. There are also discrepancies between the types of national interests. For example, the interest in recreation is commonly so imprecisely described that the CABs cannot use it as a basis for a review statement in a planning process. The interest in nature protection, on the other hand, seems to be a lot more useful.[610]

In 2006, the National Board of Housing, Building and Planning published a report on municipal planning in the coastal zone. In the report, a review from the CABs was cited. The review showed that only a few of the municipal comprehensive plans included any real analysis of conflicts in land and water use. Such an analysis should be included and used to inform the consideration between exploitation and conservation. This was partly explained by the poor planning information given by central authorities.[611] Both the municipalities' lack in considering interests and the poor information given by the CABs were deemed to be consequences of insufficient funding. The economic resources for a small municipality, or a CAB, cannot cover keeping the information up to date with all government goals and requests from sector authorities.[612] The report further concluded that comprehensive plans alone cannot tackle all the challenges facing a coastal area: the crisis of fisheries,

[607] SOU 2015:99, (2015), p 274.
[608] Ibid, p 276.
[609] See MÖD 2005:66 (Land and Environment Court of Appeal); MÖD 2008:41 (Land and Environment Court of Appeal); MÖD 2015:15 (Land and Environment Court of Appeal).
[610] SOU 2015:99, (2015), p 198. In 2020 the central government gave six sectoral agencies the task to review the criteria for appointments of national interests according to ch 3 sec 6-8 of the SEC. The work resulted in a report, Boverket, *Översyn kriterier riksintressen — regeringsuppdrag till Boverket att samordna fem myndigheters översyn av kriterierna för riksintresseanspråk* (2020), but no formal changes has yet been implemented.
[611] Boverket, *Vad händer med kusten? Erfarenheter från kommunal och regional planering samt EU-projekt i Sveriges kustområden*, (2006), pp 67-68.
[612] Ibid, p 68.

urbanization, and eutrophication are all challenges that need further measures in addition to comprehensive plans.[613] Still, there are a number of factors that a comprehensive plan needs to account for, and as the plan is guiding in subsequent processes, it has implications for all of the challenges listed in the report. It is also acknowledged in the report that although some of these challenges fall outside the control of a comprehensive plan, they are still covered in the planning process.[614]

EQS were not mentioned among the factors triggering action from the CABs above. This may be due to the fact that it can be difficult to assess the effect on an EQS from general statements in a comprehensive plan. One of the functions of the state here is that the water authorities develop programmes of measures, which can help inform the comprehensive planning process. In return, when there is no local programme of measures developed for a certain area, a comprehensive plan may indicate which areas need to be further studied in relation to water quality.[615]

These last sections have focused on the role of the central government and national objectives in municipal planning. The following section connects the municipal planning with the national MSP process, and how the legal scale of municipal planning relates to that of the national MSP.

7.5.3 Municipal planning and marine spatial planning

The relation between the municipal comprehensive plans and the national marine plans is left undecided by the legislator. They are equally guiding in decision-making, even though the aim is that the marine plans should inform and guide the municipalities when developing comprehensive plans.[616] The national marine plans enjoy a guiding function in relation to municipal planning.[617] This has been reiterated on a number of occasions since the regulations on MSP were adopted, even though what exactly this relationship entails has remained unclear.[618] Currently, it seems as if the national plans have a stronger guiding function than what is expressed in the preparatory

[613] Ibid, p 69.
[614] Ibid, p 70.
[615] Länsstyrelsen i Jönköpings län, *Miljökvalitetsnormerna för vatten och översiktsplaneringen*, (2010), p 22.
[616] prop. 2013/14:186, (2014), p 30.
[617] SEC, ch 4 sec 10.
[618] Inter alia in: The Swedish Agency for Marine and Water Management, *Miljökonsekvensbeskrivning av förslag till havsplan Bottniska viken — samrådshandling* (2018), p 16.

works.[619] In the preparatory works, it is stated that the plans are supposed to provide the municipalities with a better knowledge basis in their decision-making. However, it is clearly expressed that it does not infringe on municipal autonomy. Even though it is also stated that municipal plans need to correspond to the national plans at the outset, this may change over time.[620] Had it been decided that the national plans would outweigh municipal comprehensive plans, this would probably have been seen as a limitation of municipal autonomy. It should also be noted, as stated above in section 7.3.2, that any such limitations, or obligations, of the planning monopoly would have to be codified through law. In the end, whether it is or is not a limitation of the municipal autonomy may be of little importance, as few municipalities exhibit any real interest in the territorial sea outside of coastal waters. The coastal areas contain most of the possibilities for both recreation and business, and the territorial sea is generally left more or less void of municipal planning.

7.6 MSP and municipal planning

The national MSP process aims to provide the basis for a sustainable use of the marine environment. This requires an overarching perspective whereby as many relevant factors and sectors as possible are considered. Municipal planning, as presented above, has the same aim, but on a local scale.

The aim of this chapter has been to examine the municipal competence in relation to planning; what matters can be included and what should be seen as falling outside of the competence? Which themes and issues must be included? All of these concerns, together with the more general principles in the LGA, affect how the municipalities undertake their planning. To connect this to my theoretical position, it determines the scale and projection of municipal planning. In doing so, the chapter informs the answer to the first research question, concerning how choices in the management level affect planning priorities and outcomes.

One conclusion is that it is within the municipal competence to include issues of a more national character in the planning. This follows from the special competence of planning. In some instances, it is even a mandatory

[619] See prop. 2013/14:186, (2014), p 30. This notion has been expressed in both interviews and public seminars, see section 7.2.4.
[620] Ibid, p 30. There is no legal provision requiring municipal plans to correspond to the national plans, even though it is expressed in the preparatory works.

requirement, such as for national interests, shore protection, and EQS. However, this follows from a mandatory requirement to consider these specific interests. It is less clear how broader interests, such as sustainable development or a holistic marine management, can be incorporated in municipal planning. Nevertheless, such interests also fall within the competence of the municipalities. The purpose of the PBA is to promote a sustainable use of land and water. To achieve this, the municipalities are expected to take national and regional interests into consideration in their planning.[621] The PBA regulates a municipal special competence, and can stipulate rules that divert from the general principles of the LGA, such as the location principle. Yet, these types of more general concerns may be in accordance with the location principle as well. One way of looking at it is that since the location principle is not confined to the geographic boundaries of a municipality, a more general sustainable development perspective can be included as well. The location principle also needs to be understood in the light of the specifically regulated areas of municipal competence.[622] Municipalities are not isolated from the surrounding society, and what benefits the society might also be of benefit to individual municipalities. In any case, few would argue that a sustainable use of the environment is contrary to the public interest of a municipality. Rather, what such a use actually entails may be a more pressing issue. The most interesting question might be if there is a political will, and if the municipalities have the resources, to take larger considerations into account in their planning. How does the informal projection correspond to the possibilities offered by the formal scale?

To study this, and understand how local decision-making works, a review of the legal documents pertaining to municipal autonomy is not sufficient. A deeper take on these issues, specifically the ambiguous municipal projection and symbolization, can be gained through an interview study with planners and politicians within the municipalities. In addition, a study of the comprehensive plans of coastal municipalities can inform an understanding of what considerations are made in the practical reality of municipal planning. The review in the previous sections of this chapter has included an analysis of the location principle and the municipal planning monopoly. These regulations lay the foundation and provide an understanding of formal

[621] prop. 2009/10:170, (2010), pp 176-177.
[622] For a more in-depth discussion on the need to interpret the general competence in the light of special regulations, see Örnberg (2014), pp 198-199.

boundaries within which planners and politicians act. The following chapter includes a study of how these different interests have been taken into account in the comprehensive plans of coastal municipalities. It includes the results from the interview study with planners and politicians asking why certain decisions are made and how the municipalities view their own role in relation to the national MSP. It shows that the municipal projection and symbolization is often colored far more by local concerns and interests than by the limits provided by formal legislation.

8 Perspectives in municipal planning

8.1 Theoretical and methodological recap

The previous chapter focused on the scale and the formal projection of municipal planning. It also provided an introduction to the steering mechanisms that planners need to relate to in their everyday practices. We now turn to examine how the planning is performed in practice: which perceptions and objectives govern municipal decision-making, especially in coastal areas? The study is performed by analyzing comprehensive plans and interviewing planners at different levels of the planning system.

The analysis thus far has indicated a system where the boundaries of the municipal planning monopoly are relatively wide and unspecified. The location principle stipulates that municipal decisions need to be confined to matters of public interest for members of the municipality to stay within the municipal legal competence. The planning legislation widens this competence by requiring that regional and national interests are accounted for in the municipal planning. Furthermore, the planning legislation restricts the autonomy of the municipality by demanding that the municipalities adhere to national objectives, such as national interests, EQS, and shore protection.

This chapter concerns the more practical aspects of planning. In doing so, the comprehensive plans of the Swedish coastal municipalities are analyzed. One of the main questions put to the material is how different objectives and interests are being treated and incorporated in the planning documents.

This study is complemented by an interview study, conducted with individuals involved in municipal planning on different levels. The aim with the interviews is to understand how the formal legislation is interpreted on a practical level. The results will inform the discussion of what happens when planning decisions are placed exclusively on the municipal level. The analysis concerns the logics, or rationales, in management that follow from choosing a certain administrative level of management. By analyzing how the coastal and marine areas are treated in the plans, and how the planners talk about them, the second two aspects of law discussed by de Sousa Santos, namely projection and symbolization, will become clear. The term projection can be

understood as how a "[…] legal object favors a specific formulation of interests […]".[623] This is closely linked to what is seen as central and peripheral in a certain legal space. In contrast to the legal analysis, this analysis will focus on the informal projection: what is deemed important in the plans and by the planners. Symbolization is about how reality is represented within a legal space. De Sousa Santos claims that it is conditioned by the scale and projection.[624]

While the formal legal requirements of municipal planning in some ways define a concrete scale, projection and symbolization are more fluid concepts. In the following study of the municipal planning system, interview responses and comprehensive plans are analyzed under the overarching themes of projection and symbolization. Projection is the analytical concept used to explore which interests and objectives are placed in focus, and which are seen as peripheral/of less interest. In a municipal planning context, the municipality and its inhabitants are the center. The neighboring municipalities, neighboring regions or the national planning become the periphery. By analyzing the projection of municipal coastal planning in terms of center and periphery, it is possible to reveal how this planning functions and fits within the national marine spatial planning process. Section 8.2 starts out with an analysis of how the national MSP process, and the role of municipalities, is perceived by the municipal planners, and moves on to analyze a number of themes that recur both in the municipal plans and in the interviews.

Symbolization concerns how the coastal and marine areas are presented and discussed. This can be in terms of providing an identity for the municipality or as a pull factor for businesses and tourism. Together, the scale, projection, and symbolization define how municipal planning is formulated.

The concluding section of this case study discusses how the scale, projection, and symbolization of municipal planning relate to each other. How do the mandatory objectives affect planning decisions, and are there other, informal, considerations that seem equally important? This will open up the way for a discussion of how municipal autonomy functions in a more practical setting and how national objectives are treated in municipal decision-making. Through interviews with representatives from three CABs as well as SwAM, paired with an analysis of the proposed national marine plans, a

[623] De Sousa Santos (1987), p 297.
[624] Ibid, p 295.

discussion of how the different levels of planning can relate to each other is facilitated.

The analysis of comprehensive plans and the interview study will provide information on both the projection and symbolization of municipal planning. The present analysis provides an understanding of the informal projection: what the municipalities choose to highlight and focus on. The sections are divided into sub-sections based on themes that recurred both in the comprehensive plans and in the interviews. In terms of projection, the themes all circle around the idea of what is placed at the center of attention, and what is considered peripheral. This can be expressed both through silence – for example, the national marine planning is not mentioned in municipal plans – and through the highlighting of certain municipal interests, such as ports. The themes concerning symbolization all concern the reasoning behind why coastal areas shall be developed, or conserved, in a certain way. Such reasoning differs on the municipal and national levels and it affects how planning is undertaken.

8.2 Projection

Each legal order has a centre
and a periphery[625]

8.2.1 The relation between municipal and national planning

The main purpose of the Swedish MSP is to contribute to long-term sustainable development.[626] Furthermore, the MSPD concludes that "Maritime spatial planning will contribute to the effective management of marine activities and the sustainable use of marine and coastal resources […]".[627] These two statements are both consistent with the frequently cited definition of MSP, first expressed in the UNESCO report Visions for a Sea Change, where MSP is seen as being about achieving ecological, economic, and social objectives in respect of the use of marine space.[628] The

[625] Ibid, p 292.
[626] The Swedish Agency for Marine and Water Management, *Förslag till havsplaner för Sverige, Bottniska viken, Östersjön, Västerhavet — granskningshandling 2019-03-14*, (2019), p 10.
[627] 2014/89/EU 2014, preamble (9).
[628] Ehler and Douvere (2007), p 24.

achievement of the objectives is contingent on the delimitations of the plans, and whether there is a coherent process in the neighboring areas. The marine environment is fluid and in constant motion, and much of what happens in the coastal areas has a significant effect on the marine environment. For the national plans to be successful in achieving long-term sustainable development for the marine areas, the coastal municipalities need to be on-board with the project. The PBA extends the general competence of municipalities to reach further than the location principle and take national, regional, and inter-municipal goals into account.[629] The analysis in this section covers how the municipalities view their role in relation to the holistic, sustainable development perspective of the national marine plans.

The interviews with municipal planners were conducted between April and December of 2017. At this time, SwAM had just finalized the first consultation round concerning the early drafts of the marine plans. There was thus some uncertainty among the planners as to how the plans would affect them and vice versa.[630] Generally, the planners did not express any strong opinions in relation to the marine plans, or as one planner put it: "I cannot think of one issue where we have a conflict or a close relation to what is happening out there."[631]

None of the respondents saw any direct conflicts with the proposed plans. One respondent from the west coast mentioned that the municipality had some remarks concerning an early draft of the plan and that SwAM had taken these into account in a later version.[632] Three of the respondents expressed concerns regarding the scale of the marine plans, that the municipal plans were more detailed, and that the national plans were a bit crude.[633] One

[629] prop. 2009/10:170, (2010), p 177.
[630] *Inter alia*: Interview 2, *Respondent from large municipality in the Baltic Sea* (2017); Interview 5, *Respondent from large municipality in the Baltic Sea* (2017); Interview 6, *Respondent from large municipality in the Gulf of Bothnia* (2017); Interview 7, *Respondent from large municipality in Skagerrak/Kattegat* (2017); Interview 8, *Respondent from medium municipality in the Baltic Sea* (2017); Interview 10 (2017).
[631] Interview 13, *Respondent from small municipality in Skagerrak/Kattegat* (2017).
[632] Interview 15, *Respondent from small municipality in Skagerrak/Kattegat* (2017).
[633] Interview 2 (2017); Interview 11, *Respondent from medium municipality in the Gulf of Bothnia* (2017); Interview 12, *Respondent from medium municipality in the Baltic Sea* (2017).

respondent, from the north of Sweden, pointed to the long travel distance between the coordinating CAB and the municipality, in relation to the value attending these meetings. The respondent claimed that the municipality had few interests in the overlapping area and that the topics of the meetings needed to be of real importance for them to travel that far and that to date there had been no such meetings.[634]

One reason for the low interest in, or at least a lack of strong opinions concerning, the national plans could be that few municipalities have strong interests in the areas of overlap. This is in accordance with the reasoning behind the setup of the MSP system in Sweden. The planning of coastal waters was left to the municipalities as most of the municipal interests were located in those areas.[635] The low interest in the geographical areas overlapping the national plans also shows up in the comprehensive plans. Although municipal comprehensive plans are supposed to be reviewed every four years, they tend to not be updated on a regular basis, and the MSP legislation is relatively new in Sweden. Still, it has been in place since 2015, and the process of developing the legislation has been ongoing for many years. It should be possible to take the new MSP regulations into account in all plans adopted after 2014. Of the 15 comprehensive plans that have been analyzed in greater depth, seven were adopted after 2014, and thus had the possibility to refer to the national marine planning process. None of these plans included substantial comments regarding the national marine plans. Rather, it was noted that there was an ongoing national process for the marine areas. Granted, comprehensive planning is a lengthy process and most of the plans were adopted between 2015 and 2017, which gave little room to include any of the proposals presented from the consultation rounds by SwAM. In this regard, the interviews gave more information on how the national process was discussed in a municipal context.

[634] Interview 1 (2017).
[635] prop. 2008/09:170, (2009), p 41.

8.2.2 *The role of municipalities in a holistic planning perspective*

> *[The municipality] is part of the larger picture. Of course, what we choose to do on land affects what happens in the sea in the long term. But it requires a more structural take if you are to address the marine environment, than for merely one municipality to go in and do something here.*[636]

All of the respondents were asked how they saw the role of municipalities in relation to the overall holistic, sustainable development purpose of the national marine planning process. This was a question that clearly proved difficult to answer from the perspective of planners on the municipal level. Their main task is to plan the area of the municipality, and thus, the national, overarching, aspects become more peripheral. As a consequence, the responses varied in focus and theme. One respondent, from a large municipality on the east coast, mentioned that it was difficult to see the role of the municipality in the overall perspective, which was partly due to the fact that the municipal organization in itself was unclear in relation to the coastal waters:

> The role of the municipality, it is a bit difficult, at least in our municipality. I don't know how it is in other municipalities. But it is not as if I have the entire responsibility for the coast and the sea. We should have had a coordinator to try to identify what interests there are in our coastal areas. Now, we have a water coordinator, and he might get a clearer role as a specialist in all areas, but as it is now, we have different departments with different responsibilities. For example, the department for culture and leisure, they don't see it as their responsibility, even though they are in charge of all the guest harbors and most of the natural harbors, but they don't see the fairways as their responsibility. That is on us and the organization in charge of roads and streets. […] It's a bit of an unclear organization, at least in our municipality.[637]

Another respondent, who was quoted at the beginning of this section, highlighted the regional cooperation initiatives as important in capturing the bigger picture.[638] This was echoed by other respondents from medium-sized municipalities, that the funding from the state for regional cooperation (which will be covered further in section 0) could be seen as the state recognizing the importance of municipal planning for a sustainable use of the marine areas. One respondent from a medium-sized municipality on the west coast wanted to place some of that responsibility on the CABs, as they have a coordination role, but stated that the municipalities needed to participate in the national process as far as possible.[639] The same respondent also saw apparent risks in handing over the planning to national authorities:

> It could be that the national planning finds that all exploitation should be placed in one municipality, and all the conservation in another. The municipalities might not agree with this, so I guess our role is to try to be active, to the extent we can cope with, in their planning process as well. It gives us a broader perspective, and at the same time we can promote the interests of the municipality. What we find important.[640]

In the municipal plans, the national and international aspects tend to be treated in rather abstract terms. The closer the municipality is to a neighboring country, the more concrete the international aspects become. Malmö and Helsingborg are both closely connected to Denmark and thus highlight the strategic and important position of their respective city.[641] For municipalities located farther from international contexts, other issues of an international character can be highlighted. One example of this is how the municipality can contribute to national and international environmental objectives through planning.[642] Such contributions can be difficult to define, as the environmental effects from operations in a single municipality can be hard to assess. However, one such issue, known for its effects and where

[636] Interview 14, *Respondent from small municipality in the Gulf of Bothnia* (2017).

[637] Interview 6 (2017).
[638] Interview 14 (2017).
[639] Interview 10 (2017).
[640] Ibid.
[641] Malmö kommun, *Översiktsplan för Malmö — planstrategi*, (2018), p 22; Helsingborgs kommun, *ÖP 2010 — En strategisk översiktsplan för Helsingborgs utveckling*, (2010), p 15.
[642] Kramfors kommun, *Översiktsplan för Kramfors kommun 2013*, (2013), p 48.

there are clear international connotations, is the private sewage systems and eutrophication. This is one issue that many of the municipalities mention as important in their comprehensive plans.[643]

To conclude, the national planning and the overall purposes of the MSP process are not the primary focus of municipalities. Although sustainability is frequently mentioned in the opening strategies of comprehensive plans, such sustainability concerns the internal aspects of the municipality, rather than the role of the municipality in a national or international context. Private sewage systems are treated in the plans because they are a relatively well-known problem and a source of eutrophication, and as such a common point of discussion. The connection to the larger sustainability discourse could be seen as more of a side-benefit here, as it is a municipal responsibility to ensure the supply of water and handling of sewage when it is needed for human health and the environment.[644] Most municipalities have a plan for water and sewage services, although it is not a legal requirement.[645]

The analysis indicates a need for a system where the municipalities receive concrete guidance or regulations on how to handle issues of a more national or international character. It seems as if it is difficult to bring in the abstract or holistic aspects into local planning. This could be due to economic limitations, but such analyses would require too much work. It could also be related to the basic municipal competences and the location principle. The capacity of a municipality to take large-scale issues into account is obviously limited, due to both the legal system and financial resources.

[643] Haninge Kommun, *Översiktsplan 2030 — med utblick mot 2050*, (2016), p 100; Lysekils kommun, *Översiktsplan 06 Lysekils kommun*, (2006), p 12.
[644] Public Water Services Act (2006:412), art 6.
[645] The Swedish Agency for Marine and Water Management, *Vägledning för kommunal VA-planering*, (2014), p 13.

8.2.3 Regional aspects

We usually do not cooperate at all in planning, and this is something that you really need to cooperate around. There are no borders in the sea, it's all connected.[646]

The regional links and cooperation between municipalities is more elaborated than the links to the national level. The regional level of the administrative system in Sweden is multifaceted. There are formal regions, the counties, responsible for *inter alia* coordinating planning matters of interest for the state and inter-municipal importance.[647] There are 14 coastal counties in Sweden and in each county the central government is represented by a CAB. In the municipal plans there are also a number of different, informal, types of regions presented. There seems to be no coherent understanding of the concept of a region. Rather, what constitutes a region is decided on local terms, based on cooperation initiatives between municipalities. Some of the types of regions found in the studied plans are employment regions, administrative regions or business regions. Most of the regional cooperation initiatives discussed in the plans have in common that the region is something positive for the municipality, and that the cooperation projects are important.[648]

Between 2016–2018, SwAM granted in total 26 million SEK to municipal cooperation projects. The funding was administered by the CABs and could be applied for by municipalities within the respective counties. The purpose of the grants was to enhance the capacity of municipalities to participate in the national marine planning, and increase the support for inter-municipal cooperation.[649] These grants seem important, as regional cooperation clearly is contingent on external funding in many cases, which is what the respondent

[646] Interview 12 (2017).
[647] PBA, ch 3 sec 10.
[648] See Göteborgs kommun, *Översiktsplan för Göteborg*, (2009), pp 34 and 48; Malmö kommun, (2018), pp 5-6; Oskarshamns kommun, *Översiktsplan Oskarshamns kommun 2050 (proposal)*, (2018), part 1 p 10; Piteå kommun, *Vårt framtida Piteå — översiktsplan för Piteå kommun*, (2016), p 13.
[649] The Swedish Agency for Marine and Water Management, (2019) <https://www.havochvatten.se/hav/samordning--fakta/havsplanering/om-havsplanering/kompis---kommunal-planering-i-statlig-samverkan.html> accessed 2019-05-14.

in the opening quote of this section is referring to. In the interviews, the grants were a frequently recurring theme when the respondents were asked about regional cooperation. Five of the respondents explicitly referred to the grants as being important for cooperation initiatives.[650] Two municipalities had for a number of years been part of a project to develop an inter-municipal "blue comprehensive plan" for their marine areas.[651] Although these grants were useful in planning, even the effort to apply for them could become too large a task:

> We [the municipality together with three surrounding municipalities] were going to apply for funding together, which we did, but no one was able to… We didn't have the resources, any of us, to build this project. It was excellent and everyone was really satisfied and everyone had cleared it with their political side. […] But it failed in many ways. Unfortunately, but everyone was satisfied that we were able to cooperate.[652]

Those who had been granted resources used the grants to identify important points for tourism as well as ecosystem inventory.[653] One respondent from a medium-sized municipality on the east coast, located on the border between two different counties, mentioned that the different counties had different views on what the regional cooperation projects should focus on, and how to spend the money, and that this could be contingent on the individuals working in the different counties.

> As I understood it, they [one of the counties] did not want to have any more identified natural values because then they couldn't develop, while we see it the other way: if you know where there are high values, or you know that you have made an inventory in a specific bay and that there were no important values, then you know that you can focus development there. Or, if you have found incredible values in a bay, then you know you need to be careful and perhaps do things another way, but it doesn't necessarily mean a stop for development, but rather it is something to show. But they don't see it that way. […]

[650] Interview 6 (2017); Interview 7 (2017); Interview 8 (2017); Interview 11 (2017); Interview 12 (2017); Interview 14 (2017).
[651] Interview 13 (2017); Interview 15 (2017).
[652] Interview 4 (2018).
[653] Interview 6 (2017); Interview 8 (2017); Interview 12 (2017); Interview 13 (2017).

> It's funny, because we, in our part of the project, all have the same idea of what we want, what we applied for and what we need to deliver. It's to provide an information base for planning that we are to produce. While the other part of the project […] they have so much tourism there […]. They want to steer towards marketing, how to use the project to produce brochures and pictures from drones. That's a bonus, but not what we are supposed to deliver. […] That is the biggest difference, individuals from the other municipalities are very much focused on touristic activities.[654]

Another respondent, also from a mid-sized municipality on the east coast, mentioned that the grants were not sufficient to perform the type of detailed natural value assessment that they had wanted to. This respondent was also uncertain as to whether the municipality would contribute further funding when the grant was used up.[655] All of these interviews show how vital funding is for municipal regional cooperation. Especially in new emerging areas like planning of the coastal and marine waters, which, traditionally, have not been on the radar of municipal planning.

In addition to funding, there were different ways of understanding and visualizing the regional cooperation between the municipalities. Some of these differences can be traced to the size of the municipality. The three respondents who focused the least on regional cooperation were all from the largest municipality in their respective region. One respondent mentioned that the regional cooperation was not an important aspect of their planning, and was relatively clear about the fact that this was an issue for the smaller municipalities:

> […] well, it's not our highest priority, while the others, well you can see which municipalities that are most active, it is not us. The other municipalities are dependent on the coast for their survival, to be able to do what they want with it. That is what is driving the projects. To be frank, we are mostly involved to see that there are no strange things from our point of view. We are not leading the work that much.[656]

[654] Interview 11 (2017).
[655] Interview 12 (2017).
[656] Interview 3, *Respondent from large municipality in Skagerak/Kattegat* (2017).

Another respondent noted that the divergence in size between the municipalities in the region brought conflict into cooperation efforts:

> It is not that simple, we are bigger, quite a lot bigger, than the others and it is pretty filled with conflicts. It is hard to work, as a large municipality, with many smaller. […] To be able to do things, the municipality has to invest in that measure and with manpower, people that plan and provide information, to be able to get money from the shared funding. When those resources aren't available in many of the municipalities, this can lead to the feeling that it is unfair that so much is done in our municipality and they want us to fix it for them.[657]

In addition to differing aims and sizes between municipalities, the concept of a region is ambiguous in many of the comprehensive plans. Promoting the regional contexts can be a means of placing the municipality on the map. For small and medium-sized municipalities, the concept of a region is used to show a strategic location of the municipality, such as Kramfors – a small municipality in the north of Sweden whose comprehensive plan focuses on the surrounding areas and distance:

> Kramfors is situated in one of Norrland's most densely populated areas. Within 100km of Kramfors 250,000 people can be reached.[658]

Karlshamn, on the southern east coast, highlights the strategic positioning of the municipality in an international regional context by flipping the map upside down to show the relative closeness to other Baltic cities:

[657] Interview 1 (2017).
[658] Kramfors kommun, (2013), p 22.

Figure 5: Upside down map showing the role of Karlshamn as an important node for eastbound transports.[659]

Other projections related to regions can be to promote an employment region as the largest in a specific part of the country,[660] or to express the region's goal of growing and becoming a leader in Europe in a certain field of business.[661]

The above examples show how smaller municipalities frame themselves as being strategically located. However, this is not a perspective confined only to small/medium-sized municipalities; it can be found in all comprehensive plans. For example, Malmö, the third largest municipality in Sweden, focuses on the international aspects and promotes the Copenhagen-Malmö-Lund region as "[…] a connected metropolis that creates economic dynamism in the Sound region".[662]

The region in the south of Sweden has an interesting dynamic in this respect, as it illustrates the importance of who defines the region. Helsingborg is located in the northern part of the Sound region.[663] In their comprehensive plan, they discuss their role in the Sound region, where Malmö and Lund are also included.[664] In the plan of Malmö, however, Helsingborg is not mentioned as part of the regional strategy. On a local scale, Helsingborg was promoted as the central city in the north-west of Skåne in an interview with

[659] Karlshamns kommun, *Karlshamn 2030 — översiktsplan för Karlshamns kommun*, (2015), p 10.
[660] Piteå kommun, (2016), p 13.
[661] Lysekils kommun, (2006), p 10.
[662] Malmö kommun, (2018), pp 5-6.
[663] The Sound region is the region surrounding the Sound between Sweden and Denmark.
[664] Helsingborgs kommun, (2010), p 15.

a local politician.[665] These differences highlight the possibility of applying different projections and framing the municipality as a part of different regions, depending on where the center is placed.

In conclusion, regional cooperation and regional strategies are important tools for municipalities to position themselves in relation to other municipalities and regions. A strong regional position is expected to attract both capital and new inhabitants. Attracting capital and inhabitants entails an additional aspect, which leads to the next theme in terms of projection: competition.

8.2.4 Competition

Cities compete with each other over resources for growth.[666]

Competition is a recurring theme in the comprehensive plans. How the competition is framed, however, differs both between plans and within single plans. There is local competition, which is framed in relation to other, neighboring municipalities. There is also regional competition, in which the region often has the aim of growing and becoming more competitive in relation to other regions. The center can thus expand, or move, depending on where in a plan competition is discussed. The common denominator is the recognition of an external world, against which the competition is formulated. The comprehensive plan of Lysekil can serve as an illustration of the different types of competition. In the section on regional cooperation, it states that:

> There is an outspoken vision that "Fyrstad [regional cooperation initiative between four municipalities] in the year 2012 shall be a leading technology and industrial region in Europe". The vision builds on the idea that competence, technology, business environment, individual environment, communications and cooperation shall be developed in Fyrstad.[667]

[665] Interview 21, *Respondent politician from large municipality* (2018).
[666] Piteå kommun, (2016), p 8.
[667] Lysekils kommun, (2006), p 10.

In another section, where threats and weaknesses of the municipality are discussed, competition is framed in another way:

> External shopping malls close by in the neighboring municipalities and low shopping loyalty are threats to the commercial service, which thus far has been relatively good in the municipality.[668]

The municipality of Malmö distinguishes itself by linking to an extended geography, talking about strengthening the competitiveness of all of Scandinavia through its close connection to Copenhagen.[669] The municipality of Gävle, on the other hand, frames competition more explicitly in relation to a specific neighboring region:

> Attractive and sustainable living environments with service and communications close by will be an important competition factor for the development in relation to the Stockholm area.[670]

Although competition is framed in different ways, it is common that the surrounding areas constitute a clear periphery. The focus is on the center, local or regional, that needs to be strengthened to be competitive in relation to the periphery. Competitiveness can only be measured in economic figures, that is, attracting new inhabitants, attracting tourists, attracting businesses or producing value. As such, competition is important in relation to the overarching research questions of this book, as the idea of municipalities as competing administrative entities needs to be understood to be able to understand not only the rationales of municipal decision-making, but also their role in the MSP system. As one planner from a medium-sized municipality on the east coast put it:

> The economic sustainability always has priority, it is evident, you don't have to do so much with that, rather try to balance it.[671]

This statement follows from the logic that municipalities compete. To be competitive, the municipalities need to promote economic development.

[668] Ibid, p 8.
[669] Malmö kommun, (2018), p 23.
[670] Gävle Kommun, *Översiktsplan Gävle kommun år 2030 — med utblick mot 2050*, (2017), p 27.
[671] Interview 9, *Respondent from medium municipality in the Gulf of Bothnia* (2017).

Such promotion does not necessarily stand in direct conflict with nature conservation, as one of the most important sources of income in many small and medium-sized municipalities is the marine environment. However, it gives an indication of how municipal priorities are made and ranked.

8.2.5 Neighboring municipalities

These are political decisions, and I would like to see a politician that says we're not going to invest in this area in [the municipality] because they are investing in that area in [neighboring municipality]. That's out of the question.[672]

Municipalities cooperate over borders to be able to tackle broader issues, as well as strengthen their own competitiveness. They also need to relate to neighboring municipalities in their own planning. There is a difference between specific cooperation projects and a more general consideration of activities on the other side of the municipal border. The specific cooperation projects are visible in the planning documents; how the plans affect neighboring municipalities is less evident. The plans usually include a section called "inter-municipal aspects". This section generally covers the cooperation efforts that are ongoing between municipalities. For new development projects, or land use in coastal areas, considerations in relation to neighboring municipalities are rarely visible in the plans. For these aspects, the interview material can provide additional information.

One of the questions put to the respondents was: "How are the neighboring municipalities treated in planning your planning processes?" One category of respondents claimed that little attention was paid to planning in the neighboring municipalities or how their planning would affect neighboring municipalities, as illustrated by the quote under the heading of this section. A second category of answers mentioned cooperation efforts connected to specific issues. One answer, from a respondent from a small municipality on the east coast, was notable for highlighting how things occurring in neighboring municipalities were interconnected:

[672] Interview 10 (2017).

> If we appoint an area for rural development in the southern parts, then we have to look at it in a bigger perspective; it isn't certain that the closest service area is in [the municipality], it can be in [the neighboring municipality]. The idea with rural development areas is to strengthen local service, tourism and infrastructure. That means that you might get positive effects in the neighboring municipality. […] That's why it is important to have a bigger perspective both when you talk about regional and municipal development.[673]

Within the two main categories, seven municipalities of different sizes were placed in the category that hardly gave any consideration related to neighboring municipalities in the planning process. The main reason for this was that the municipalities had few interests in the outskirts of their area, on the border to the next municipality. One respondent from a large municipality on the east coast mentioned that the general coordination between them and neighboring municipalities was ensured through studying the neighbor's existing comprehensive plan. However, none of the neighboring municipalities had taken a more regional perspective for the planning of coastal and marine areas.[674] In the second category, which consisted of six municipalities, there were no general considerations about the interests of neighboring municipalities. Rather, it seemed that when there were specific issues, such as a cross-border wind farm,[675] coastal protection,[676] or when the attractiveness of a certain area grew,[677] the municipalities started to look across the borders. In general, there was little coordination, or at least little focus on what was happening in neighboring municipalities.

The question regarding how neighboring municipalities were treated only concerned areas where there were no previous initiatives for regional cooperation. There are initiatives where two or more municipalities have joined forces to tackle certain issues or to achieve a planning that covers a larger area of the marine environment. The answers to this specific question can indicate that in the absence of specific regional cooperation initiatives, there is little "spontaneous" cooperation. The plans are sent to neighboring municipalities as part of the review process. However, the political interests

[673] Interview 14 (2017).
[674] Interview 6 (2017).
[675] Interview 9 (2017).
[676] Interview 2 (2017).
[677] Interview 12 (2017).

of the municipality take precedence. Such interests usually entail increased attractivity, and there is little room to avoid exploitation simply because a neighboring municipality has already developed an area close by. Even though there is cross-border cooperation in specific areas, the municipalities still compete with each other over resources and businesses.

8.2.6 Ports

> *We have a big port which is of great importance for us; it is also important from a regional and national perspective. So, the port, which is appointed of national interest, and the shipping lanes, are of importance.*[678]

The final theme, in terms of projection, concerns ports. Ports serve as a good example of local municipal projection. The promotion of local businesses and industries can take various forms in the comprehensive plans. Ports serve well as an example of how a local interest is placed in the center of municipal planning, to motivate its existence and possible expansion. Many of the coastal municipalities have a port, and in the study of the comprehensive plans it became evident that the ports are of great importance for most of them. To motivate investment and planning of ports and related activities, it is important to show in the comprehensive plan why this specific port is important from a national, or regional, perspective. It should be clear from the outset that many of these ports have been deemed to be of national interest and there may be good reasons for planning for their development. However, by showing how municipalities promote their ports, the local perspective and how it stands out in the center/periphery dichotomy is brought to the fore. Local interests are favored when planning has such a local perspective.

Within the theme of ports, there are some differences between the municipalities. There are examples of municipalities with and without important industrial ports in small, medium, and large municipalities. However, this is a matter of framing. A small port can be highlighted as

[678] Ibid.

important, albeit from a specific perspective. One respondent from a small municipality on the west coast talked about their fishing port:

> We catch our food, and a big part of the Swedish food. [Village in the municipality] is a big fishing port when it comes to shellfish, nationally, even if physically it is a really small port, a jetty that is the landing station.[679]

The identification of a port as crucial in the country for a certain sector may lead to planning decisions in which that port is protected and possibly expanded. In the plans, the framing of the port as important for a certain sector, or the Swedish industry in general, was a recurring theme, even though the rationales differed somewhat. The aim for the port of Gothenburg, for example, was to be strengthened as the logistical hub of the North.[680] Others focused more specifically on the niche where their port was the largest:

> The port of Helsingborg is one of Sweden's ten most strategic ports when it comes to ferry traffic and container traffic and thus of national interest. As a container port it is the second largest in Sweden. The port is one of the cornerstones of the success of Helsingborg as a national logistical hub and an important precondition for the business sector.[681]

> The North port is a logistical hub for the entire region and distributes goods from all over the world.[682] Today CMP [the port of Malmö] is the biggest port in Scandinavia for the import of cars […].[683]

> The port of Luleå is the fifth biggest port in Sweden and it manages the largest amount of bulk cargo in the country. Important shipping lanes run through the archipelago […].[684]

> The port of Varberg is the biggest export port in Sweden when it comes to sawn wood products and it is also trafficked by a ferry line between Varberg and Grenå in Denmark.[685]

[679] Interview 13 (2017).
[680] Göteborgs kommun, (2009), part 1, p 36.
[681] Helsingborgs kommun, (2010), p 35.
[682] Malmö kommun, (2018), p 9.
[683] Ibid, p 52.
[684] Luleå kommun, *Program — resor och transporter*, (2013), p 10.
[685] Varbergs kommun, *Översiktsplan för Varbergs kommun*, (2010), p 21.

In all of these quotes, the size of the port is measured in relation to a national context, highlighting how the local port stands in a national perspective and why it needs to be safeguarded. There are similar ways of discussing ports from a regional perspective, where ports are promoted on account of their regional importance:

> The port of Karlshamn is among the biggest ports in the country and it is the biggest and deepest port in the south west of Sweden. In addition, it is the second largest transit port towards the Baltic states/Russia after the ports of Stockholm.[686]

Granted, this example can be seen as a mixture of the regional and national perspectives, where the port carries some national importance, but from a regional perspective is the most important. About 200km from Karlshamn, Oskarshamn is located. In their comprehensive plan, the port is promoted as the most important in the region. It is further stated that:

> […] a continued development of a strong and competitive port operation in Oskarshamn shall be enabled.[687]

This relates to the definition of regions, where two ports located relatively close to each other can both be promoted as most important in the region. With a different understanding of the "region", the argument may have been different. In this case, a third, relatively big port of national interest, Karlskrona, is located between the two municipalities. The port of Karlskrona is of national interest and identified as having a great potential for development in the comprehensive plan.[688]

Further up north, Gävle invests in their port with the aim of strengthening its position as a logistical hub, through expanding and developing the areas around the port.[689] The last example comes from Piteå, which is the neighboring municipality of Luleå. In their comprehensive plan, the port is covered as follows:

> The port of Piteå is strategically located by Haraholmen. The port is the leading forest product port in the Gulf of Bothnia and has an easily navigated shipping lane with a depth of 12.5m.[690]

The comprehensive plans reveal the economically important role that ports have in many coastal municipalities. It is also a matter of identity – cities and communities safeguard their historical role as connection points for trade and shipping.

Three of the municipalities discussed their ports in more cautious terms, or barely mentioned them. In the Falkenberg comprehensive plan, it is acknowledged that the port handles small volumes and that its future seems uncertain. Still, the plan expresses some hope that small ports can also grow in importance in the future, depending on the development of the transportation system.[691] In Tierp's plan, there is a brief mention of smaller ports for the commercial fisheries. However, little is said about the importance of these ports, only that they recall a time when fisheries played a significant role in the municipality.[692] In Haninge, situated next to Nynäshamn, which has a large port that is also under development, the only mention of ports is in relation to how the development of the port of Nynäshamn will affect the municipality.

8.3 Symbolization

8.3.1 A short re-introduction

Although covered in section 3.1.5, the concept of symbolization might need a re-introduction. Symbolization can be understood as the representation of reality. De Sousa Santos discusses two types of systems at work in how law symbolizes reality. He calls these the Homeric and the biblical styles of law. In short, they differ in that the Homeric style of law depicts reality in abstract, formal signs, whereas the biblical style uses more figurative and informal signs.[693] I have adapted symbolization to my analysis and given it a slightly different interpretation. Symbolization is understood as a broader formulation of how empirical realities are represented on the different

[686] Karlshamns kommun, (2015), part 2, p 41.
[687] Oskarshamns kommun, (2018), part 1, p 19.
[688] Karlskrona kommun, *Översiktsplan 2030 Karlskrona kommun*, (2010), p 110. This is the current plan when writing (2019), there is a new plan in development which has not yet been adopted.
[689] Gävle Kommun, (2017), p 54.
[690] Piteå kommun, (2016), underlag, p 62.
[691] Falkenbergs kommun, *Översiktsplan 2.0 för Falkenbergs kommun*, (2014), part 2, p 43.
[692] Tierps kommun, *Översiktsplan 2010-2030 för Tierps kommun*, (2011), p 103.
[693] De Sousa Santos (1987), p 295.

management levels. This can be, for example, in terms of "ecosystem approach", "attractivity" or "uniqueness".[694]

Analyzing how the symbolization of the coastline is materialized in the comprehensive plans and interviews provides an opportunity to discuss how the municipalities view the coastal and marine areas. It enables a discussion of their rationale for planning the use of coastal areas. Why is the coast important for a municipality, and what values are seen as worthy of protection or development? The symbolization is less concrete than the projection, as the projection concerns specific cooperation initiatives, or development strategies. The symbolization concerns the idea of the coast and the municipality. It informs the projection decisions. The review of both projection and symbolization can be linked to the temporal scale of management. Although time is a central aspect in all spatial planning, the time perspectives of different plans are not always clear. Nevertheless, to understand municipal coastal planning, the temporal aspects need to be included.

In the sources used for this study, the symbolization of the coastal and marine areas becomes visible mostly in the comprehensive plans of the municipalities. Symbolization in general is vague and goal-oriented. In the interviews, respondents had the opportunity to talk about practical issues and how they were dealt with. In the comprehensive plans, there is more room for visionary discussions about how the municipality could develop, as well as the most important goals and means of reaching those goals.

8.3.2 *Attractivity*

The coast is the attractive part of [the municipality], it is there most people want to live.[695]

Attractivity is the most prominent symbolization theme in the municipal planning of coastal and marine areas. Attractivity is expressed in different manners, but the common denominator is that the coastline and the marine areas are important for the municipality as they are attractive. This

[694] For further elaboration See section 3.1.5.
[695] Interview 7 (2017).

attractiveness is framed in relation to new inhabitants, old inhabitants, new businesses, old businesses, tourism and recreation. The attractivity is always connected to the economic aspects of municipal development. If a municipality is attractive to people and businesses, there are possibilities to grow and prosper. It is thus an important element of municipal planning to safeguard and strengthen the local attractivity.

There were some differences between the municipalities in what they regarded the most important aspects and objectives in their planning. These differences also related to the size of the municipality. The larger municipalities need to compete less for new inhabitants and coastal tourism is not usually one of the bigger sources of their income. The responses tended to focus on larger issues such as: choosing between exploitation and conservation, infrastructure, housing, shipping and ports, and trying to approach the planning more holistically. When attractivity was mentioned, it was mostly as a second or third factor in the planning process.[696] As exemplified in this quote from a respondent in a large municipality when asked about the most important issues for the coastal planning:

> First and foremost, it is about a healthy sea area, the bottom line of what this strategy is supposed to contribute to. We have looked at ecosystem services as well, value of the marine environment, and a positive view on coast-related leisure activities. But what is of most importance for the city, that is to ensure the port and the functionality of the shipping lanes. We have national shipping lanes that go in here, and the port is an important part of the city. So, we aim to ensure a coexistence between port and city, that is what it says in the plan.[697]

In the small and medium-sized municipalities, attractivity was mentioned earlier. It was clear that the coastal areas were vital in attracting businesses and people, both in terms of inhabitants and tourism.[698] Of course, there were other interests of importance as well for the smaller and medium-sized municipalities, but many of them highlighted the coast as attractive to explain what was important in terms of planning the coastal and marine areas. How

[696] Interview 1 (2017); Interview 2 (2017); Interview 3 (2017); Interview 5 (2017); Interview 6 (2017); Interview 7 (2017).
[697] Interview 2 (2017).
[698] Interview 9 (2017); Interview 10 (2017); Interview 13 (2017); Interview 14 (2017); Interview 15 (2017).

the attractiveness was expressed and safeguarded differed between municipalities.

> If I would say what is prioritized, it is year-round living, to increase that, to try to safeguard the attractivity. What is unique in this municipality is the coast, the contact with the coast. […] Given that, you try to facilitate for businesses that have connections to the sea, to give them the right preconditions.[699]

Others focused more on how to ensure both accessibility to, and housing in, attractive areas.[700]

> Housing is number one, really, we have an enormous pressure on housing. Especially when the communications to [large municipality in the region] have improved it is possible to commute in an entirely different way. […] The coast is the attractive part of the municipality; it is there most people want to live. I don't know the percentage but the absolute majority lives in the coastal area. […][701]

One respondent, from a large municipality, mentioned that an important aim for the municipality was that people should be able to live and work in the archipelago. To achieve this, in the last version of the comprehensive plan, they had moved towards more development-oriented planning.[702]

Another recurring theme for the attractiveness was recreation. The coastal areas were important both for inhabitants of the municipality and for tourism, as sources of recreational activities. One of the respondents, from a small municipality, referred to the natural values of the coast as a touristic raw product.

[699] Interview 15 (2017).
[700] Interview 7 (2017); Interview 12 (2017).
[701] Interview 7 (2017).
[702] Interview 4 (2018).

> It is the balance that is interesting to find, a lot of what we market ourselves with is the coastal area, it is the natural values, really. It is what I like to call the touristic raw product, what we sell, and then we also need to be careful with it. But at the same time, we need to find ways to make it accessible. This can be challenging at times, but it is also one of our big possibilities.[703]

Attractivity as a theme is prevalent within the planning documents in all of the categories of municipalities. It is obvious that all of the municipalities acknowledge the importance of conservation measures, as nature is a key factor in attractivity. This is expressed in the small/medium-sized as well as the large municipalities. The way it is framed may differ, but the general idea and understanding of the relation between the natural environment and development is the same. In the comprehensive plan of Falkenberg, this is expressed as follows:

> The coastal landscape is in itself the foundation because of its power of attraction for housing. The contact with the sea is not only valuable for those who seek it in their spare time, but also for those who have the coast as their everyday landscape, that is everyone who moves around in the landscape at all times of the year.[704]

Most of the coastal municipalities in Sweden have an explicit objective to grow in their comprehensive plans.[705] With this in mind, it is rational for the attractivity theme to have a prominent position in the plans. To be able to grow, factors that attract businesses and people need to be promoted in the planning process. In the national plans, the theme of attractivity is also evident. However, the attractivity of individual municipalities, and the goal of population growth, is not a prominent aspect of that attractivity.

[703] Interview 14 (2017).
[704] Falkenbergs kommun, (2014), part 2, p 57.
[705] 52 out of 65 municipalities mention population growth as a strategy in their comprehensive plans (studied 2017).

8.3.3 Identity/uniqueness

The fishermen are very important for the municipality […] it's a matter of identity, deeply rooted.[706]

The coast as an identity bearer for the municipality is a theme that is frequently recurring in the municipal comprehensive plans. This identity relates to the idea that the coastal areas of the municipality comprise values that are unique, both from a Swedish and an international perspective. What these unique values and identity bearers consist of differ between the municipalities. As for attractivity, the symbolization of uniqueness and identity is more prominent in the comprehensive plans of small/medium-sized municipalities. In the interviews, it was not as clearly expressed as in the planning documents. Only two of the respondents, both from small municipalities, mentioned identity or uniqueness. One of them mentioned that the fishermen were of great importance: that this was a matter of identity for the municipality and that the profession should be protected, as illustrated in the opening quote of this section.[707] The second respondent mentioned in passing that the local coastal environment was unique and thus should be safeguarded from any development of offshore wind plants.[708]

In the planning documents, on the other hand, the idea of the coast as an identity bearer for the municipalities is more pronounced. The composition of this identity differs between municipalities. However, most of them have statements that relate to identity in the sections of the plans covering the coast. The coast is not seen as something of only historical value; it also shapes the future of the municipal identity.[709] This is a common type of identity perspective found among the small and medium-sized municipalities, where the coast is what brings identity to the municipality. One expression of this was the following:

> The rural areas and the archipelago are important parts of the identity of the municipality and they create opportunities to conserve and develop the cultural landscape with values for the cultural environment, recreation and biological diversity.[710]

For the larger municipalities, city life close to the sea is an important factor for identity.[711] It becomes part of a larger, urban, identity where the proximity to water is one of many factors. All mentions of municipal identity have in common that they have a close relation to the attractivity of the coastline. The coastal identity can attract tourists, as well as new inhabitants. In this respect, there are few differences between the different sizes of municipalities.[712]

All but two of the municipalities mention uniqueness in relation to the coastal or marine values in their plans. For some, ecological values need to be safeguarded, such as a unique stock of salmon,[713] or unique and sensitive environments.[714] For others, the unique character of the archipelago makes the municipality an attractive destination.[715] It is clear that there is a need to describe and view the municipality as unique. There will be reason to come back to this, but it can be explained in part by the sense of competition with other municipalities or regions. If the values of a municipality are unique, this strengthens their position in relation to others. As expressed in the comprehensive plan of the small west coast municipality of Tanum:

> To offer unique and interesting experiences and attractions, a good public service, a qualitative and well-developed infrastructure as well as clear and accessible information, a good hosting and beautiful environments to visit is crucial for a sustained tourism industry in Tanum.[716]

Within the context of this case study, the themes of uniqueness and identity give an explanatory value to how the municipalities view themselves, especially in relation to other municipalities. It provides an understanding of the rationales behind municipal planning: why and how the coastal areas are of importance from a municipal point of view.

[706] Interview 13 (2017).
[707] Ibid.
[708] Interview 14 (2017).
[709] Lysekils kommun, (2006), p 5.
[710] Karlshamns kommun, (2015), utvecklingsstrategier, p 19.
[711] Luleå kommun, *Program kuststaden Luleå*, (2013), p 18;Helsingborgs kommun, (2010), p 22.
[712] See Göteborgs kommun, (2009), part 1, p 56; Lysekils kommun, (2006), p 5; Oskarshamns kommun, (2018), part 1, p 17.
[713] Falkenbergs kommun, (2014), part 1, p 36.
[714] Gävle Kommun, (2017), p 177.
[715] Luleå kommun, *Program kuststaden Luleå* (2013), p 10; Piteå kommun, (2016), p 35.
[716] Tanums kommun, (2017), p 204.

8.3.4 Natural values/ecosystem services

Already today we have offshore wind power, and then we have wave power, you can harvest biomass from the sea in different ways or make use of the algal blooming and make gas.[717]

All municipalities discuss the natural values of the coastal areas in their comprehensive plans, commonly in relation to tourism and recreation: as a part of the attractiveness or identity of the municipality. In some cases, however, natural values are described more in their own right, as important ecological values, or in terms of biodiversity. Natural values are then bundled together with ecosystem services as they both indicate that the municipality has performed a deeper analysis of nature's function, namely as something more than merely an attractive area for tourists and inhabitants. This section provides an overview of how natural values are treated in the parts of the plans where there are no legal requirements on form or content.

Only three of the respondents referred to natural values in relation to biodiversity or ecological sensitivity as one of the most important issues for the municipality. There is a high concern for natural values in the Sound between Denmark and Sweden. Respondents from both municipalities by the Sound mentioned the biological values as important issues, while at the same time stressing that ports and shipping were the most important issues in both municipalities.[718] In one medium-sized municipality on the east coast, the respondent stressed the importance of shallow bays as reproduction sites for certain types of fish. The respondent furthermore mentioned that knowledge concerning these areas was of importance for further planning as it could affect the location of *inter alia* wind farms.[719] The respondents in all three municipalities had a background or education in the natural sciences: one environmental strategist; one ecologist; and one geographer. This may have affected the focus of the responses. In the remaining interviews, one respondent mentioned biodiversity among the interests that were of importance for the municipality, but only after listing a number of other

[717] Interview 8 (2017).
[718] Interview 2 (2017); Interview 5 (2017).
[719] Interview 11 (2017).

interests.[720] Two responses concerned natural values for human consumption: biomass, as illustrated by the opening quote in this section, and tourism.[721] A third respondent discussed how an inventory concerning natural values had been undertaken by the CAB. However, the municipality had been active in initiating the inventory.[722]

Five of the studied plans mention ecosystem services in relation to the coastal and marine areas. Of these five, two mention ecosystem services in their sustainability assessment and impact assessment, respectively.[723] Out of the remaining three, two connect the ecosystem services to attractive living conditions,[724] and as a creator of job opportunities in the tourism sector.[725] One municipality mentions ecosystem services in connection to marine protection.[726] There are more plans that mention ecosystem services; however, in doing so they do not make any clear link to the coastal areas. A common use of ecosystem services in the plans is to define the concept and make a more general statement that the aim is to protect and preserve them. It is not a tool that is used in the plans to highlight and safeguard ecological values to any greater extent.

8.3.5 Ecosystem approach

The ecosystem approach is one of the main themes of symbolization when it comes to the national and EU legal frameworks for MSP, as well as within the more general concept of MSP. In the Swedish MSP process, it is mandated that the approach is applied. However, a word search through all current and proposed (spring 2017) comprehensive plans for Swedish coastal municipalities with areas that overlap the national marine plans yields a single hit. In a detailed comprehensive plan[727] for Åbyfjorden in the municipality of Sotenäs on the west coast, the ecosystem approach is mentioned. Apart from that there is no mention of the approach in any of the 65 comprehensive plans. This result is not surprising from a municipal planning perspective, as the ecosystem approach is not mentioned in any legislation related to

[720] Interview 1 (2017).
[721] Interview 8 (2017); Interview 14 (2017).
[722] Interview 10 (2017).
[723] Haninge Kommun, (2016); Tierps kommun, (2011).
[724] Oskarshamns kommun, (2018), pp 95-96.
[725] Tanums kommun, (2017), p 167.
[726] Malmö kommun, (2018), p 53.
[727] Detailed comprehensive plans are plans that cover a specific area of a municipality where there has been a need to perform a bit more detailed planning, while still on a strategic level.

municipal planning. Nevertheless, it is noteworthy that there is no application of an ecosystem approach in planning of the coastal waters of Sweden, which clearly shows the effects of dividing the planning competence between levels of management.

8.4 Temporal aspects

A long-term plan needs to address what is desirable to do in the present, while being open for an uncertain future. A basic challenge is that planning often leads to protection of phenomena that are worth protecting before it is possible to know what competing interests can emerge in the future.[728]

Time is an essential part of all planning. To be able to determine if a plan's objectives have been reached, there needs to be a time limit by when they shall be achieved. The two main temporal aspects in spatial planning are: when the plan was adopted; and when the objectives are supposed to have been achieved (the horizon year). When the plan was adopted matters, as the plan will be based on the knowledge that was available to the planners at that time. This requires an adaptive process, where there are tools for incorporating new knowledge in the plan, and possibilities to amend objectives accordingly. The horizon year matters, as it determines the temporal scale of the plan. Certain processes are important on one scale, while perhaps irrelevant on another. Climate change is a process that covers both of these aspects. The 2018 Special report on the impacts of global warming of 1.5°C above pre-industrial levels from the Intergovernmental Panel on Climate Change (IPCC) presented new data on how sea-level rise could be projected for the future, and how different temperature rise scenarios can affect this. The horizon for these projections were the end of the 21st century.[729] A municipal plan that was adopted in 2013 with a horizon year of 2030 will include no measures that can take these new findings into account. There are of course possibilities for municipalities to revise plans and to adopt more detailed comprehensive plans for specific areas. However, this requires substantial resources from the municipalities. As described in section 0, the studied plans of coastal municipalities (spring 2017) were adopted between early 2002[730] and 2017,[731] with horizon years spanning from 2015–2050. None of the plans adopt the same temporal scale as the IPCC report. This will affect prioritizations and considerations in the planning decisions.

Time is visible in various ways in the analyzed comprehensive plans. First, there are the historical aspects, which are closely related to the identities of the municipalities. Second, there are the future-oriented visions, which concern how the municipality can grow and develop. Most of the future-oriented visions in the plans focus on how the population in the municipalities can/will grow over the next 20–30 years.[732] It is in the plans' future-oriented statements that environmental concerns become most visible. The comprehensive plan of Oskarshamn can serve as an example:

> In the year 2050, the marine ecosystems are in balance, the coastal and marine environment is good, with a rich plant and animal life.[733]

The interesting aspect of time is that it can increase the geographical scale of planning as well, which makes it easier to make projections as to how the marine environment can develop. The quote above shows a more holistic perspective, which is not present in the municipal planning when it comes to more current planning initiatives, but also one that is beyond the control of a single municipality. The statements are also rarely followed up by any clear strategies for how these visions shall be realized.

[728] Tierps kommun, (2011), p 8.
[729] See chapter 3.3.9 in: O Hoegh-Guldberg and others, *Impacts of 1,5°C global warming on natural and human systems — supplementary material* (Global warming of 1,5°C An IPCC special report on the impacts of global warming of 1,5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, 2018).
[730] See Borgholms kommun, *Översiktsplan 2002*, (2002).
[731] See Gävle Kommun, (2017).
[732] See, Göteborgs kommun, (2009), p 40; Helsingborgs kommun, (2010), p 12; Gävle Kommun, (2017), p 10; Kramfors kommun, (2013), p 38.
[733] Oskarshamns kommun, (2018), p 95.

8.5 Formal regulation

8.5.1 Mandatory planning issues

There are some national regulations that a comprehensive plan is mandated to include. Three of these were discussed in section 7.4, covering the formal municipal competence in relation to planning. The following sections provide an overview of how these legal provisions are treated and discussed in practice in municipal comprehensive planning. In the interviews, all three types of regulations were covered under the same question, where respondents were asked what other national legislation they saw as most important to consider in their planning. By pairing the general analysis of how the interests were discussed in the plans with how the planners talked about them, it was possible to understand how they affect the rationale of municipal planning. The CAB review statements concerning the plans were used as important points of reference in the analysis, as the central government is represented by the CABs in the planning process. These statements highlight possible divergences between how the municipalities plan to respect the regulations in the plans and how the central government believe the they should be planned for.

8.5.2 National interests

> *We have some really big national interest areas for nature protection in the municipality. I mean a really enormous area, but where there are also buildings. It can't mean a stop for all development in the area.*[734]

Most coastal municipalities have a large number of national interests appointed in their coastal and marine areas. These need to be taken into consideration in planning, as it is through these interests that the national spatial planning objectives are incorporated on the municipal level. See Figure 4 for an illustration of how this can affect a coastal municipality.

In the comprehensive plans, the municipalities generally conclude that the municipal objectives for the development of coastal areas do not interfere

[734] Interview 11 (2017).

with the national interests, or that there may be some minor effects. In some cases, the adverse effects on one national interest are a consequence of the strengthening of another.[735] In other cases, the municipalities suggest adjustments to the existing interests,[736] while in others they recommend a clarification due to the interests being too broadly defined.[737] In general, municipalities encounter some difficulties in attempting to deal with the national interests. In the parts of the comprehensive plans where effects on the national interests are discussed, it seems as if municipalities plan according to their own interests, but do so while assuring the reader that the national interests are safeguarded. This finding is corroborated by the responses in the interviews.

In the interviews, eight of the respondents mentioned that there were some unclarities in respect of how the national interests should be treated. This was evident in the fact that respondents reported that they would have liked to see clearer considerations between interests from the CABs, or definitions of what an interest actually entailed.[738] Two of the interviewed politicians also pointed to this issue.[739] One of the planners expressed some frustration over the definitions of national interests:

> Those who are most critical towards the national interests claim that we can't build anywhere if we put them all together. […] The national interests are a damn mishmash. When the management of land and water areas came it was stringent. But after that they have expanded and changed over the years and the respective special interests have been included. […] For some of the national interests the background information from the state is really bad. That also makes it difficult to handle. […] They work with really broad strokes, making it easy for themselves. When we sit with the local perspective, they may sit with a regional perspective which makes it useful

[735] Tanums kommun, (2017), bilaga konsekvensbeskrivning, p 5; Lysekils kommun, (2006), p 131.
[736] Göteborgs kommun, (2009), part 2, p 54.
[737] Kramfors kommun, (2013), p 117.
[738] Interview 2 (2017); Interview 3 (2017); Interview 6 (2017); Interview 7 (2017); Interview 14 (2017).
[739] Interview 19, *Respondent politician from large municipality* (2018); Interview 22, *Respondent politician from small municipality* (2018).

> with broad strokes. But we don't need that. It makes it really hard for us.[740]

Four of the respondents viewed the national interests more as obstacles that needed to be circumvented.[741] This was a strategy to handle the overlapping interests, while still being able to develop the municipality.

> From a practical perspective, it [national interests, WFD and Natura 2000] is an obstacle that you need to go over or around. But if you zoom out a bit, the municipality of course has a great use of many of these protective interests as well. That is from my civil servant perspective. If you go to a politician, they may find it harder to see any positive aspects of the national interests.[742]

The remaining respondents did not discuss national interests in any detail, but rather mentioned that there had been no, or few, conflicts between interests in the municipality, or that the CAB had no objections to how they had treated the national interests in planning.

The criticism directed towards the national interests, namely that they are not sufficiently specific, is not new. As discussed in section 7.4.1, this was pointed out by the government commission report on the provisions concerning the management of land and water areas published in 2015.[743] It comes as no surprise, then, that a number of the planners found national interests problematic, rather than useful, in their planning. The vague definition of the national interests also explains why it is difficult to make out what effects can be expected by realizing the planning objectives in a specific municipality. The sections of the comprehensive plans where this is described are relatively short and mainly conclude that the national interests will be respected. This is problematic in relation to the concept of significant damage,[744] as the unclear treatment of national interests in the plans makes it difficult to determine whether significant damage will occur or not.

The lack of clarity concerning the national interests and effects of comprehensive plans goes both ways. A study of the review statements from the CABs shows that the latter have a hard time evaluating the possible effects

[740] Interview 3 (2017).
[741] Interview 1 (2017); Interview 4 (2018); Interview 11 (2017); Interview 13 (2017).
[742] Interview 13 (2017).
[743] SOU 2015:99, (2015), p 198.
[744] See section 7.4.1.

on national interests from the comprehensive plans. In 11 of the review statements, the CAB made a remark concerning how the national interests were defined or the difficulty in understanding possible effects on the interests. The following two quotes highlight the main objections:

> The strong strategic character of the plan makes it difficult in some cases to understand where there are conflicts of interests and what consequences the plan may have within such areas. The visionary form of the proposal leads to cases where it is difficult to understand where the municipality and the CAB are in agreement or not in agreement.[745]

> The municipality has, in its comprehensive plan, made considerations concerning the spread and delimitation of national interests. In general, the CAB does not, from the material provided, have the possibility to form an opinion concerning the proposed amendments. Clearer motivation and impact assessment are needed.[746]

The review statements are written as a part of the consultation process when developing a comprehensive plan. The municipalities are then mandated to show in the plan how the statements have been taken into account in the final stages of planning. However, the criticism shown here – that the plans in general are too vague concerning national interests – does not lead to any substantial changes in the plans. The study of the plans led me to the same conclusion as the CAB in many cases – that is, that the national interests, and the impact on them that the plan may have – are far from clear.

In conclusion, the system with national interests and comprehensive planning as a way of achieving a national land use planning suffers from a number of challenges. The strategic and non-binding character of the comprehensive plans, paired with the unclear definitions and semi-binding character of the national interests,[747] creates a system where none of the actors really understand the intention of the others. What it means from the

[745] Helsingborgs kommun, (2010), appendix Granskningsyttrande länsstyrelsen i Skåne län, p 1.
[746] Kramfors kommun, (2013), appendix Granskningsyttrande länsstyrelsen Västernorrland p 2.
[747] I call it semi-binding as activities that do not significantly damage the interests still are allowed, which gives quite a big margin for municipalities to plan for new types of land-use within their areas.

perspective of municipalities planning their coastal waters seems to be that there is a need to take the interests into account, but many municipalities view them as obstacles to circumvent, rather than important national interests that should be respected. Such an approach may be a necessity in some municipalities, where the entire coastline is covered by different, overlapping national interests.[748] This is not to say that the municipalities do not take national interests seriously. In many cases the interests are also important ones for the municipality, *inter alia* as sources of tourism. However, as has been discussed in terms of both projection and symbolization, the local perspective is driven by the idea of strengthening the economic situation of a municipality, and in that context, the national interests are only one among many aspects that need to be considered.

8.5.3 Shore protection

Most municipalities have appointed areas for rural development in their comprehensive plans. However, it is only the municipalities in the Gulf of Bothnia plan area where it is legally possible to appoint such areas in the coastal zone. Of the studied municipalities in the Gulf of Bothnia, Kramfors is located in an area where it is not possible to appoint such areas.[749] In addition, in many of the coastal municipalities, the CAB has decided on an extended shore protection that covers up to 300m from the shoreline.

In the comprehensive plans, three municipalities had appointed areas in the coastal zone where the shore protection was repealed under the regulation of rural development.[750] As for the other grounds for deciding on exemptions from the shore protection regulations, these are not specified in the comprehensive plans and thus not covered here.

In the interviews, shore protection was mentioned by seven of the informants when asked about the most relevant legal factors affecting their planning interests. Most of these respondents did not go into any detail as to how the shore protection affected their specific interests. Rather, they mentioned the existence of the regulations. In that sense it reflects the content of the comprehensive plans.

[748] See Figure 4.
[749] SEC, ch 7 sec 18(e).
[750] Luleå kommun, *Plan för landsbygdsutveckling i strandnära lägen*, (2013); Tierps kommun, (2011), LIS-utredning, p 13; Gävle Kommun, (2017), p 184.

8.5.4 Environmental quality standards

When the EQS were treated in the comprehensive plans, it was in general terms, claiming that the plan would not entail any further deterioration of the water quality. This was reflected in the review statements, where the CABs either expressed that the character of the plan made it difficult to assess whether a norm would be exceeded,[751] or that the material provided did not indicate that a norm would be exceeded.[752] In general, the plans gave too little information concerning the EQS for the CAB to be able to perform any in-depth analysis of the potential consequences. This was echoed in the interviews, where only five respondents mentioned the EQS or the WFD as one of the important legal objectives included in their comprehensive planning. Out of these five, two claimed that the EQS had little effect on the planning.[753] One respondent mentioned the EQS in relation to how the coastal waters had been defined. This was in the north of Sweden and the respondent was of the opinion that the water bodies system was not adjusted to the geographical conditions of northern Sweden, with rivers that are 600km and have a 50km-wide river basin. The size of the area created difficulties to muster any enthusiasm for management.[754] Only one respondent brought up the EQS as guiding for municipal planning, with reference to the Weser case.[755]

The EQS system shows similarities to the shore protection regulation when it comes to comprehensive planning. Both of these interests are extensively covered in the literature and in case law, but they do not have a natural place in the strategic planning decisions found in a comprehensive plan. The EQS and the shore protection are more prominent in the implementation phase of planning, when the consequences of specific development projects are easier to foresee.

[751] Länsstyrelsen Stockholm, *Granskningsyttrande, Översiktsplan 2030 — med utblick mot 2050, utställningsförslag, Haninge kommun*, (2016), p 2.
[752] Länsstyrelsen Hallands Län, *Granskningsyttrande enligt 3 kap 16 § Plan- och bygglagen över förslag till Översiktsplan 2.0, kommunomfattande översiktsplan för Falkenbergs kommun.*, (2013), p 4.
[753] Interview 9 (2017); Interview 13 (2017).
[754]Interview 1 (2017).
[755] Interview 15 (2017).

8.6 Regional perspectives

For them [the municipalities], they are like an ant looking up at the horse that tramples their anthill. There are very big differences in scale.[756]

8.6.1 Regional coordination

Within each of the three plan areas there is one CAB that is responsible for the coordination of the MSP process on a regional level. This task includes a responsibility to coordinate the work of all CABs, which in turn are responsible to coordinate the planning efforts of the municipalities within their respective county. For this part of the study, three planners – one from each of the coordinating CABs – have been interviewed. The questions have concerned how they view municipal planning of the coastal and marine areas. In addition, the interviews covered the role of the CABs and how their work has been undertaken.

One of the first aspects that all three respondents discussed was how the work was organized within and among the different CABs. It was evident in these interviews that the different CABs had interpreted their task in different ways. As a part of the national MSP process, all CABs had been granted funding equivalent to one full-time employee that was supposed to work with MSP-related issues. The three CABs tasked with the general coordination in the plan areas were given the equivalent of two full-time employees. However, there were no clear directions as to how the money was supposed to be used.[757] This was evident in the cooperation efforts, where not all of the CABs used the funding for MSP purposes.[758] One explanation offered by a respondent was that MSP is a new process, and a somewhat unclear one:

> It is a bit hard for the managers to set aside time for something that is unplanned over a long period of time. Even if SwAM has had a clear time plan that they have kept really well, it is hard for a CAB to see where it is going to end up in terms of workload over time […]. They haven't worked with this kind of regional or national planning before.[759]

The same respondent mentioned that a lot of the cooperation was contingent on personal relations, that the person responsible for coordination at the CAB had good connections to the municipalities and regional administrations.[760]

Differences within the different plan areas were mentioned as a challenge to coordination, that the CABs had different economic capacities. Within one plan area, the counties could differ a lot in their focus, both in how much the municipalities cooperated and in the efforts laid down by the CABs.[761] Another factor mentioned was the open character of the Ordinance on MSP. The ordinance is not exhaustive and needs to be filled with substance in the implementation phase, which makes it difficult for the CABs that want more guidance and clarity.[762]

8.6.2 Municipal planning and cooperation

Every municipality is an island.[763]

One of the roles the CABs have been assigned through the Ordinance on MSP is to encourage municipal participation in the MSP process.[764] Furthermore, through the PBA, the CABs have a responsibility to safeguard coordination regarding issues that affect more than one municipality in the municipal planning process.[765] The interviews covered these responsibilities in terms of what was seen as the most important aspects of planning for the municipalities, and how the coordination between municipalities functioned. One of the respondents claimed that the CABs have a limited amount of contact with the politicians and thus did not have an insight into exactly why certain decisions were taken, but that:

[756] Interview 16, *Respondent representative from CAB* (2019).
[757] Interview 17 (2019).
[758] Interview 18 (2019).
[759] Interview 16 (2019).
[760] Ibid.
[761] Interview 18 (2019).
[762] Interview 17 (2019).
[763]Interview 16 (2019).
[764] Ordinance (2015:400) on Marine Spatial Planning, sec 7(2).
[765] PBA ibid ch 3 sec 10(4).

> A basic precondition in the Swedish system, and how the municipalities perceive their task, is that everything that drives the municipality to the better, builds on that, there is economy in it. That is why it is important that planning, and all other municipal activities, contributes to a better economy. More taxpayers, more money to spend. As a municipality, you rather seldom say that you will impose more restrictions regarding exploitation because that is what leads to the improvements that you are looking for.[766]

Another respondent claimed that the coordination between municipalities was held at a minimum and that the responsibility to coordinate on the county level was limited to specific issues. This was connected to the political objectives of the municipalities, and personal interests of individuals involved in the planning. Population growth was frequently a superior interest.

> The municipal objectives, in our plan area, I have to limit myself to that area, are generally to attract new inhabitants. They do more or less anything to achieve this, they approve almost any exploitation, or the politicians do. If there is no comprehensive plan, or strategy for where the development ought to take place, it will happen slowly, a little, everywhere. I view this as the human factor, that is how we humans function, we are short-sighted. We look to the coming month, or the coming term of office, we have difficulties in implementing agenda 2030 in our day-to-day business. Or other national agreements, or the Paris agreement and such. It is really difficult to take it into account when you sit there with a shore protection exemption that you think, "well they should have it because everybody else got an exemption".[767]

A related aspect was the strategic, or visionary, character of comprehensive plans. The plans function as a tool for the municipalities to say "we want to grow" rather than to actually assess and tackle problems with *inter alia* eutrophication.[768] This supports the findings in the previous section that the potential effects from implementing the comprehensive plans are difficult to assess for the CABs. Furthermore, individuals and issues that have historically been of importance for a municipality need to be accounted for

[766] Interview 18 (2019).
[767] Interview 16 (2019).
[768] Ibid.

when trying to understand municipal planning. In certain areas, specific issues that have been a problem in the municipality can lead to increased planning and cooperation between municipalities.[769] Certain areas have seen more conflicts between uses than others, and this affects the development of planning. When an area is subject to a large demand for exploitation, it forces planning to mature. In other areas, where there is lower demand on the coastal space, all types of exploitation are welcome, as there is a strong need to increase attractivity.[770]

Previous cooperation projects have been facilitators when initiating new projects in the coastal areas.[771] Larger municipalities were considered more prone to initiate such projects – a reflection that was not corroborated by the interview study, where the larger municipalities expressed less interest in cooperation than the small and medium-sized municipalities. The CAB representatives also saw that the national plans in a way forced new planning initiatives to come about.

> There has always been some type of planning in the sea, such as the national interests. But the important factor, when it comes to the municipalities, is that we can see more co-operation now, and that may be a consequence of the MSP, that it has opened the eyes of the municipalities regarding those issues. But also, because they realize that in 2021, there will be a marine plan in place, we have to relate to that in some way and then we need to have an idea on how we want to use out marine space.[772]

In the northern west coast, there is a cooperation project between municipalities regarding a "blue comprehensive plan" that has been on-going for 15 years. This project was promoted, both by respondents from the CABs, and from respondents from municipalities all across the country as the most successful cooperation project. It is also the project that is most frequently raised in different settings where municipal marine planning is discussed.

The extent of cooperation efforts differs between the plan areas. Yet, the funding provided from SwAM has been helpful in creating new efforts. This was mentioned by all three of the respondents from CABs. However, it was

[769] Interview 17 (2019).
[770] Interview 16 (2019).
[771] Interview 17 (2019).
[772] Ibid.

uncertain what the outcomes were from these projects. One respondent said the funding was a positive factor for planning, but continued to say that there had been many mediocre projects that only consisted of data collection. In the plan area where this respondent was located, many of the projects had been specifically focused on the tourism industry, with a view to developing it. There had not been that much focus on national strategies on offshore wind, for example.[773] In 2019, the CABs published a report with the results from the projects funded by SwAM. The report echoes what the respondents expressed in the interviews, namely that the most successful projects had been cases where cooperation was already established before the new funding was provided.[774]

8.6.3 Municipal planning and national MSP

Few municipalities have a clear idea of how their planning is, or can be, integrated in the national system. Rather, few of the respondents considered the national MSP as something affecting their planning, and vice versa. The CAB representatives, on the other hand, saw the municipal role as important, since what happens on land affects the marine environment.[775] The CAB representatives pointed to the underlying differences between PBA plans and SEC plans. The municipalities and CABs have the PBA as the legal basis for planning, while the MSP is based in the SEC. The role of the CABs is clearer in relation to the PBA plans. They have a clear mandate there, while for the SEC plans, their opinions are merely advisory.[776]

> Some view the formal issue, that the state will adopt a plan that will overlap the municipal comprehensive plan, as a serious issue. That is the important aspect for some. Others think that it doesn't matter, since there are no big interests to plan for in the sea as it is today in our municipality. So, it can be both the form but also the matter that are the points of entry for the municipalities. But no matter their opinion there, most municipalities feel a bit as if the municipalities and the CABs work with the more established way of performing spatial planning according to the PBA. […] All of the sudden SwAM comes with a state planning where the municipalities have been invited to somehow cooperate in developing. And here I can feel that all of the sudden there is a new actor, SwAM, that in cooperation with other national authorities is supposed to develop this plan. But they do not have any advisory or guiding mandate towards the municipalities. Yet, the municipalities are supposed to use this material in their planning.[777]

[773] Interview 16 (2019).
[774] Västernorrlands Länsstyrelserna Kalmar, och Västra Götalands län,, *Slutrapport över KOMPIS-bidraget — Kommunal kust- och havsplanering i statlig samverkan under 2016-2018*, (2019), pp 63-64.
[775] Interview 16 (2019); Interview 17 (2019).
[776] Interview 18 (2019).

According to this respondent, some municipalities had false expectations of the new national plans. They thought that municipal planning would become integrated in the national plans. However, this is not the case; the national MSP process is only meant to coordinate interests of the central government, not municipal interests. This could have been communicated more clearly.[778]

Overall, the planning landscape of municipalities described by the CAB representatives is consistent with the one that emerges in the study of comprehensive plans and interviews with municipal planners. There are some cooperation efforts between municipalities, and the funding from SwAM has contributed to this. However, the role of municipalities in the national MSP process is unclear from both sides.

8.7 National marine plans

8.7.1 The national perspective

In the spring of 2019, SwAM published a review version of the national marine plans. These plans were sent out for a referral round, which lasted throughout the summer. By the end of 2019, the plans were sent to the government for adoption. In previous versions of the plans, there had been three separate documents, with many identical sections. In the last version, the plans were gathered in one document with a general introduction and ending, but three separate chapters for the respective plans.[779]

The main focus of the present review of the proposed plans is to understand how the municipalities are treated in the plans, as well as how neighboring countries are treated, as this is also a matter of transboundary

[777] Interview 17 (2019).
[778] Ibid.
[779] The Swedish Agency for Marine and Water Management, *Förslag till havsplaner för Sverige, Bottniska viken, Östersjön, Västerhavet — granskningshandling 2019-03-14* (2019).

cooperation. These aspects will be covered in the first section, projection. The second section concerns symbolization: how the marine environment is discussed; why it is important; and what interests are highlighted, both in relation to municipalities and in a more general sense. The review is thus divided in the same way as the review of the municipal planning system.

The purpose of the national MSP system is to contribute to long-term sustainable development.[780] This is similar to the purpose of the municipal planning. The main difference is that municipal planning aims at equal and proper living conditions and a clean and sustainable habitat, *with regard to the freedom of the individual.*[781] The individual perspective is not present anywhere in the regulations on MSP, where the focus is more on general issues. In the Ordinance on MSP, it is stated that a marine plan shall integrate business policy, social, and environmental objectives.[782] This relates to the fact that the basic planning mandate for the MSP comes from the SEC, making it a new type of plan, which may not be consistent with the planning traditions of the PBA. In addition to the differences in purpose, the scale of planning is different too: while the municipal plans cover the geographic area of a municipality, the marine plans each cover a third (more or less) of the entire Swedish marine area. The formulation of the basic purpose of, and the legal basis for, the marine plans affects the projection and symbolization of the marine plans. The following sections explore the differences in the projection and symbolization between the national marine planning and the municipal planning.

8.7.2 Projection – National MSP

> *Marine and water management affects many sectors in society. A basic principle for the management is that it shall be coordinated and integrated in all its parts. Inter alia because ecosystems do not know political and economic boundaries.*[783]

[780] SEC, ch 4 sec 10.
[781] PBA; ibid, ch 1 sec 1.
[782] Ordinance (2015:400) on Marine Spatial Planning, sec 4.
[783] The Swedish Agency for Marine and Water Management, *Förslag till havsplaner för Sverige, Bottniska viken, Östersjön, Västerhavet — granskningshandling 2019-03-14* (2019), p 16.

8.7.2.1 Neighboring areas

The analysis of the municipal comprehensive plans was divided into different themes. This analysis will be structured somewhat differently. The aim is to touch upon all of the themes covered in the municipal section, even though they may be less pronounced than in the municipal plans. The focus of the analysis is the center-periphery dichotomy of the national MSP process.

The quote above echoes the understanding of ecosystems promoted by most definitions of the ecosystem approach. By understanding ecosystems and ecosystem functions in this way, planning initiatives are placed in a specific context, where what happens in neighboring areas is closely considered. For the national marine plans in Sweden, there are two different types of neighboring areas: neighboring countries and neighboring municipalities. The first type is discussed in the opening sections of the proposed plans. Here it is stated that Sweden is playing an active part in regional cooperation projects.[784] One of these projects is specifically aimed at analyzing and comparing how different Baltic states have applied the ecosystem approach in their MSP. The results will be used in the continued MSP process in Sweden.[785] In these parts of the planning process, there is an aim to include the neighboring areas, and what is happening there, in the Swedish planning.

In the section where the municipal planning and its relation to the national plans is covered, the perspective is a bit different than in relation to neighboring countries. The connection between the two types of plans is acknowledged, but in the sense that the municipal plans can pick up on local and regional claims of relevance for the national plans. Furthermore, it is stated that:

> In cases where a municipality has accounted for clear intentions in regards to the future use of the marine areas that will be covered by both a comprehensive plan and a marine plan, these will be considered in the decision regarding a marine plan.[786]

The relation between the two types of plans is further elaborated in the section where the implications of the marine plans are discussed. Here, it is stated that the municipal planning is more detailed closer to land and along

[784] Ibid, p 14.
[785] Ibid, p 27.
[786] Ibid, p 29.

the coastline. This gives rise to the potential for a common development of planning between municipal, regional, and state levels to strengthen the land-sea interaction.[787] The national marine plans are promoted as a tool to create more clarity around sea use. The plans can support the municipal planning processes and contribute to an increased coherence between municipalities and other actors when it comes to considerations between interests.[788] This was echoed in the interview with the representative from SwAM:

> The national planning is supposed to guide the municipal planning, not to take over the municipal planning. The municipalities are supposed to have their om room for maneuver. Our maps are, in the end, relatively crude, when you look at them they seem quite sharp, but it is a really crude scale that the municipalities need to make more detailed and use. […] There is the municipal planning monopoly, and the municipalities need to retain their space for interpreting the national interests etc. That is how the Swedish system is built.[789]

There is one main difference between how the two types of neighboring areas are treated in the marine plans. In relation the neighboring countries, the aim is to understand and analyze how they plan, specifically in relation to the ecosystem approach. Through such an analysis it is possible to learn and integrate experiences in the national planning process.[790] The municipal planning, on the other hand, is mostly considered with the overlapping area. There is little interest shown in trying to analyze how municipalities view ecosystems and whether there is a more holistic perspective present in their planning. The municipal plans are to be guided by the national plans, not vice versa.

In the parts of the proposed plans that are specific to the respective plan areas, the coastline is covered in a bit more detail. The importance of the coastal zone for regional development is highlighted for the Gulf of Bothnia

[787] Ibid, p 138.
[788] Ibid, p 146.
[789] Interview 23, *Respondent representative from SwAM* (2019).
[790] The Swedish Agency for Marine and Water Management, *Förslag till havsplaner för Sverige, Bottniska viken, Östersjön, Västerhavet — granskningshandling 2019-03-14* (2019), p 27.

and the Skagerrak/Kattegat plans.[791] Tourism is expected to increase together with the pressure on the costal zones.[792]

The findings relating to how the municipal level is treated are interesting when examined in the light of the comprehensive plans and the interview study. Most municipalities were not that interested in the area of overlap, as they had few interests there. Connecting this perspective with that of the national MSP shows a disconnected system, where the two planning levels are coordinated mainly on paper. In the national MSP, it is noteworthy that the cooperation and learning from neighboring countries is more explicit than the coordination with municipalities concerning the areas that do not overlap. In relation to the neighboring countries, the Swedish planners want to share experiences and learn. In relation to the municipalities, the coordination is mainly focused on where there are diverging prioritizations. There are of course differences between these two situations, but there are similarities too, such as that the Swedish government does not have a planning mandate in any of the areas, even though they both affect planning decisions and are to some extent incorporated in the national plans.

8.7.2.2 Regional aspects

One of the objectives of the national marine plans is to create possibilities for regional development.[793] As seen in the municipal plans, the concept of a region can be defined and understood in many different ways. Furthermore, there was a clear competitive aspect between the regions in the municipal plans. The national plans do not make any distinction as to what definition of regions is applied, nor do they pick up on the competitive aspects; rather, there is a more abstract objective, namely to:

> […] give spatial preconditions for sustainable development, good quality of life, equality and attractive environments regionally and locally. Different places and areas have different preconditions and perspectives for the regional development. Thus, the marine planning shall strive for good preconditions for local and regional development along the entire coastline.[794]

[791] Ibid, pp 212-213.
[792] Ibid, p 13.
[793] Ibid, p 35.
[794] Ibid, p 35.

In general, the regional aspects of planning are not that visible in the proposed plans.

8.7.2.3 Ports

"Ports" is a recurring theme in the national planning, just as it is in the municipal planning. In the national plans, ports are highlighted as important for the business sector, as it is a sector that is dependent on a functioning transport system. Maritime transport is important for the export of raw products and other exporting businesses moving large quantities of goods.[795] The ports in Sweden are important logistical nodes, from a regional, national, and international perspective.

> In Sweden, there are more than 100 ports, both public and industrial ports of varying sizes, that handle goods and that function as combi terminals for the transshipment between sea and road and railroad.[796]

In the case of ports, there is a relatively coherent understanding of their importance between the municipal and national levels. The municipalities promote their ports as being of great importance and this is also reflected in the national plans. The national transportation system is in need of ports of different sizes to function. The important regional ports are promoted in the national plans just as in the municipal plans. Nevertheless, some of the importance attributed to individual ports in municipal plans has been lost in their national equivalents. One example is the port of Karlshamn. As the map from the comprehensive plan presented above shows, Karlshamn considers its port to be an important node for east-bound transportation. In the section of the national plan that covers maritime transport in the same area, it is noted that there is some traffic to the coastal areas, but most ships pass by to other Swedish and international ports.[797]

[795] Ibid, p 217.
[796] Ibid, p 218.
[797] Ibid, p 110.

8.7.3 Symbolization – National MSP

> *The marine plans shall work towards securing the ecosystem services needed by the maritime industries. The marine plans also work to secure ecosystem services for human welfare and possibilities for recreation.*[798]

8.7.3.1 Attractivity/identity

The proposed marine plans have an overall strategy, much like the municipal plans. The strategy is formulated in one overarching goal and nine supporting goals. The overarching goal is to achieve a good marine environment and sustainable growth. The supporting goals include *inter alia* regional development, marine green infrastructure, and promoting ecosystem services, accessibility, and sustainable shipping.[799] The supporting goals are of a relatively broad character. Some of the goals have a more local/regional focus, while others are more nationally, or even internationally, oriented.[800] This may lead to different types of symbolizations in the plans. All of the supporting goals could be discussed in terms of symbolization. However, the present review focuses mainly on those relating to the findings in the review of municipal planning.

Two central aspects of the municipal symbolization were the attractivity of the coastline and the coast as an identity-bearer. Neither of the two is prominent in the national plans, although they both occur. Attractivity is discussed at different scales in the plans. On the one hand, the coast and archipelagos can be attractive for Sweden as a whole and contribute to a long-term competitive tourism industry.[801] On the other hand, the aim is to promote attractivity on a local and regional scale as well.[802] Granted, these two scales are not mutually exclusive, but the examples illustrate how the national plans switch scales in the symbolization. This switching is important as it leads to differing ways of viewing sectors, or challenges for that matter. On a local level, fisheries are promoted as identity-bearers, and as a source of

[798] Ibid, p 64.
[799] Ibid, 34.
[800] For example, the goal of creating conditions for recreation is a local objective, while sustainable shipping has a more international character.
[801] The Swedish Agency for Marine and Water Management, *Förslag till havsplaner för Sverige, Bottniska viken, Östersjön, Västerhavet — granskningshandling 2019-03-14* (2019), p 159.
[802] Ibid, p 63.

land-based jobs.[803] On a more aggregated level, over-fishing is discussed as a problem and one of many stressors for the marine environment.[804] This can be said for tourism as well. Coastal areas need to be attractive to live and work in, as well as visit,[805] while jetties and marinas are negatively affecting the ecosystem in the coastal zones – an area that is important for the reproduction of many species.[806]

The attractivity of the coastline is mostly discussed in the general parts of the proposed plans. In the parts that are specific to the respective plan areas, it becomes clear that the national plans have limited effect when it comes to promoting attractivity. Each of the plans follow a number of themes, that largely correspond to the national interests in the SEC. Recreational and cultural values are among the national interest, but when they are considered in the national plans, it is obvious that these interests are situated outside of the planning areas, and the only planning measure available is to conclude that considerations need to be assessed in a local perspective.[807]

The main difference between the national plans and municipal plans in terms of the attractivity/identity is that the national plans can apply different scales. Both types of plans acknowledge the function of the coastline as an attraction for businesses and tourism. However, the municipalities generally do not take the bigger picture into account as much as the national plans. But then again, the national plans do not apply to coastal waters, which is the area where most of the interests pertaining to tourism and attractivity are located.

The temporal aspects of the national planning process are not prominent enough to warrant their own section. In the national plans, the cyclical process of planning is highlighted, where the adoption of one plan indicates the start of the next planning process. Planning is described as consisting of a number of steps that start with the collection of information and analysis of the present status, leading up to the adoption of new plans.[808] Similarly to how the municipal comprehensive plans treat the future, there is a goal year (2030) and a vision year (2050) in the national plans. Through the lens of the vision year, it is possible to discuss and think about the long-term perspective of planning.[809]

[803] Ibid, pp 54, 233, 234.
[804] Ibid, p 163.
[805] Ibid, p 63.
[806] Ibid, p 163.
[807] See ibid, pp 91, 98, 103, 108, 115, 116, 125 and 131.
[808] Ibid, p 20.
[809] Ibid, p 34.

8.7.3.2 Natural values/Ecosystem services

Ecosystem services is a concept that is frequently recurring in the proposed national plans. They are discussed both in relation to viable marine environments with ecologically functional structures,[810] and, as seen in the quote at the outset of this chapter, in relation to maritime industries and human welfare. Both of these ways of discussing ecosystem services were found in the comprehensive plans. However, they are given a more prominent position in the marine plans, where the concept of ecosystem services is frequently discussed or referred to. In the sections where the respective plans are being introduced, less is said about ecosystem services. They are more promoted as tools in the general chapters.

In general, the national plans take natural values into account more than the comprehensive plans, in terms of biodiversity and intrinsic values of nature. While natural values are discussed in many comprehensive plans, it tends to be in relation to attractivity. In the national plans, biodiversity and good environmental status have a more prominent position.[811] The interesting aspect of natural values, when it comes to the national plans, is that they are more in focus on the aggregated level than the regional or local level. This was exemplified above in relation to fisheries, that, on a local level, fisheries provide identity to the communities, but on the national level they might pose a threat to the biodiversity of the marine environment.

The application of the ecosystem approach in national MSP is mandated by both the MSPD and the ordinance on MSP.[812] In the proposed plans, the ecosystem approach is introduced and thoroughly described and there is a review of how the Malawi principles are interpreted and incorporated in the planning. The ecosystem approach has been covered in section 2.4, and the purpose is not to evaluate how it has been applied in the national MSP process. It suffices to say that it has a prominent position in the national plans, as opposed to the municipal plans.

[810] Ibid, p 49.
[811] Ibid, p 36.
[812] 2014/89/EU 2014, art 5(1); Ordinance (2015:400) on Marine Spatial Planning, sec 10.

9 Discussion – level of management

9.1 Scale, projection, and symbolization

The concepts of scale, projection, and symbolization have all been used to analyze the Swedish planning of coastal and marine waters. They provide a way of structuring and understanding how the choices in administrative level affect management. There are two levels of management in the Swedish marine planning system: the national and the municipal. The municipal level plans on a local scale, where the geographical boundaries are those of the municipality, and the legal boundaries are set by the LGA and the PBA. These two legal acts determine the scale, what is and what is not relevant for the municipal planning. The national scale of planning is present partly in the same areas as the local scale, but is defined through the Ordinance on Marine Spatial Planning and the SEC. The national scale is less detailed, but it moves from the overarching national perspectives, down to the regional and sometimes municipal scale. The municipal scale, on the other hand, is detailed and, like the national scale, can move between perspectives. These perspectives, however, span from the regional scale to specific projects within the municipality. The national scale is rarely included. Both of these scales are dynamic and can be adjusted to fit the issues that are being dealt with. Yet, they have clear differences in resolution and scope.

In terms of projection, the municipalities are primarily preoccupied with defining regional cooperation strategies and framing themselves in competition with surrounding municipalities and regions. By doing so, the growth of the municipality is placed at the center of attention, and national objectives and priorities become peripheral, as long as they do not coincide with the interest of the municipality. Often, the appointed national interests are seen as obstacles to be overcome. As for the national MSP process, the projection is clearly defined by law. Coastal waters are excluded from the national planning, which places them in a planning periphery. In the national planning process, the coastal areas are highlighted as important, but municipal perspectives are not included or discussed in the plans. This differs a lot in comparison to how neighboring countries are treated. Neighboring countries

are used as sources of information on how to apply the ecosystem approach. The municipalities are discussed more in terms of how the national plans can be used in the local planning processes. The municipal plans do not inform the planning decisions made in the national process to any greater extent, and there is little learning between the two levels of planning.

Together, the scale and projection of a certain level of management steer towards a specific type of symbolization. Within the different symbolizations, the difference between the levels becomes accentuated. In the case of municipalities, planning of the coastline is symbolized through the concepts of attractivity and identity. Both of these provide a rationale for further development. As one comprehensive plan so clearly put it, "Cities compete with each other over resources for growth".[813] With such a view of municipal competition, all interests that will not provide increased resources for a municipality become peripheral. This is a type of projection that leads to symbolizations that motivate development that can give the municipality competitive advantages in relation to other, neighboring, municipalities. The attractivity and identity symbolizations are clear examples of this. They motivate why certain sectors or areas of a municipality should be further developed, as these can give the municipality advantages in the competition over resources for growth.

The national planning, on the other hand, by necessity uses a more general symbolization. This is primarily represented through the application of the ecosystem approach. If the municipal symbolization is driven by growth and competition rationales, the national symbolization is mandated by law, both EU law and national Swedish law. In addition to the overarching ecosystem approach, the national MSP process shows similarities to the municipal symbolization in that it also mentions attractivity and identity. These types of symbolizations are most clearly visible in the parts of the national plans where the different plan areas are treated. In the general sections they are less visible. The symbolization is also more inclined to focus on environmental issues and ecosystem services. This highlights the differences between scales as well: on a local scale, attractivity is far more visible and tangible than on a national scale, while the opposite can be said for the more overarching objectives, such as maintaining biodiversity.

The use of scale, projection, and symbolization highlights differences in management and planning. The concepts provide a methodological approach

[813] Piteå kommun, (2016), p 8.

to analyze choices about where to place management. These choices will dictate how the subsequent management is performed. There are various reasons why the different levels of management will not perform in a coherent manner. These relate to the area being governed, the timescale applied, as well as who is performing the governing. As discussed in sections 2.2-2.3, the ability to provide a comprehensive adaptive management regime that respects both the complexity of social-ecological systems and core legal principles, such as rule of law and predictability, is contingent on how the regulations in the structural layer of law are formulated. This relates to the choices discussed above: who performs the planning? what can be taken into account by law? and what is actually being taken into account? The following sections of the analysis borrow two concepts from Mariana Valverde, to explain and highlight the differences in how management is performed, depending on the scale and level chosen. These two concepts are *capacities* and *rationales of governance*.[814]

9.2 Capacities

Capacities can be understood as the formal jurisdictional limits of a management level, but also as the more practical, generally economic, capacities. The first object of evaluation is the formal capacities in the Swedish planning system, both MSP and municipal planning. This is followed by a discussion concerning the more practical and economic capacities.

The first half of this case study was aimed at mapping the formal legal competence of municipalities, in general and in planning. The findings showed that municipal action is governed by what is deemed to be of public interest for the members of the municipality. This was further analyzed by studying the location principle and what it means for municipal action. The second aspect of the competence was the more specified planning regulation, where the municipalities are mandated to take regional and national aspects into account in their planning, thereby widening the scope of the municipal mandate somewhat. This widened perspective is reflected in the comprehensive plans as both national and regional interests were included. However, such inclusions were mostly general in character with few concrete, tangible measures proposed. An additional aspect studied was how the municipal planning mandate was perceived by the planners. The review of

[814] Mariana Valverde, *Jurisdiction and scale: legal "technicalities" as resources for theory* 18 Social & Legal Studies 139 (2009).

the legal system showed that the location principle, as well as the planning legislation, allows for some broader considerations to be taken into account. This was not always how the mandate was understood by planners. As illustrated by this quote from one of the respondents, discussing regional cooperation:

> It is not possible to use tax money in other municipalities. That is to do wrong.[815]

Furthermore, in municipal planning, when the aspects of sustainable development and ecosystem services were discussed, this was as overarching objectives, rather than connected to specific projects. The same pattern could be found in the national plans; attractivity and identity were promoted more on a local scale, while ecosystem services were discussed in the general sections of the plans. The key difference is that the MSP system gives SwAM a clear mandate to plan larger areas. SwAM thus has the ability to operationalize the concepts of biodiversity and ecosystem services in the planning. This gives them a more powerful capacity than the municipalities in that regard.

The second part of the capacity concept is the economic, or practical, aspect. The economic capacity of municipalities was mainly covered in the interviews when it came to cross-border cooperation. Some municipalities had long-term ongoing cooperation projects for the development of the region. For others, the project funding from SwAM for cross-border cooperation had been essential to initiate such projects. However, those projects were often limited to the two-year funding awarded by SwAM. Common to all the projects was that the perspective of management grew from local to regional, thus widening the scale of planning. Nevertheless, the national scale was rarely included in these projects as they tended to highlight the region and to position it in competition with other, surrounding, regions. Through the regional projects, it was clear how the economic constraints of the municipalities shaped the way they planned. When funding was provided, regional projects were developed further, but once the funding was gone, the municipalities needed to focus more on their own areas.

Another aspect of the economic capacity is the size of the departments tasked with planning in the different municipalities. In some municipalities the comprehensive, or strategic, planning departments are integrated with the

[815] Interview 1 (2017).

department for detailed development planning and building permits, whereas in others they are organized as a separate unit working with strategic issues. It is a cumbersome process to revise a comprehensive plan, and even more so to produce an entirely new one. With limited economic capacities, the adaptive capacity of municipal planning is also limited.

Another important factor for the capacities of planning is that of the tools, information, and competence available for planning. SwAM has *inter alia* developed a tool called Symphony. Symphony calculates the cumulative effects of human impacts on the marine environment, as part of the application of an ecosystem approach in MSP.[816] The resources and competence to develop such a tool is non-existent at the municipal level. Even basic inventories of biological values call for external funding for them to be realized in smaller municipalities. Without the availability of such tools in municipal planning, there is little capacity to apply perspectives that go beyond the municipal boundaries. It is impossible to qualitatively assess the impact of development projects without comprehensive knowledge of the natural environment.

9.3 Rationales of governance

A second important factor in understanding how different levels of management act is the rationale of governance. The rationale of governance can be understood as the logic of management: why certain decisions are taken and the underlying reasoning. It is when the planning is studied through the lens of rationale that the biggest differences become visible.

By identifying the projection and symbolization, as well as understanding the scale of planning, the case study has provided the means to discuss the rationales in the different levels of management in the Swedish planning system. For municipalities, the rationale can be considered to flow from one of the cornerstones of the Swedish democratic system: municipal autonomy, through the location principle, planning legislation, all the way down to the actual planning decisions. All of these aspects of municipal decision-making are designed to develop and safeguard the interest of the municipality. This is evident in how different interests are discussed and promoted in the planning documents as well as the interviews. Perhaps this is best described by the CAB representative quoted in section 8.6, who noted that all municipal

[816] The Swedish Agency for Marine and Water Management, *Symphony — integrerat planeringsstöd för statlig havsplanering utifrån en ekosystemansats*(2018), p 7.

decisions build on whether there is economy in them or not. The municipalities need to see the gains for themselves in all decisions. The same type of rationality could be seen both in the interviews and in the planning documents. Although not as clearly expressed, the most prominent themes in terms of projection and symbolization all build on this type of rationality. Highlighting the ports is a way of motivating efforts to develop and possibly expand operations. The attractivity and identity symbolizations are both based on the idea that the coast can attract people and businesses and thus promote growth of the municipality. When natural values were discussed, in both the plans and the interviews, they tended to be connected to added value for the municipalities. Few respondents mentioned natural values as important factors in the municipal planning.

When it comes to regional cooperation, the rationale seemed to be to strengthen the competitiveness of the region, or to be able to achieve planning results that were not possible within the budgetary boundaries of a single municipality. One respondent, from a municipality on the border between two counties, claimed that one of the counties was mostly interested in development, while the other focused more on identifying ecological values, which led to different outcomes in the two projects.[817] But both projects related to the development of the region.

Both the local and the regional perspectives on planning provide distinct social rationalities, to use the term discussed by Friedmann.[818] By this it is meant that the rationality is connected to a specific community and territorially fixed. In this case it is fixed to either the municipality or the region. While these are two different communities and territories, they are both relatively localized in relation to the national planning. In addition, the regional aspects are used to strengthen the individual municipalities. This indicates that the social rationality is still connected to the municipality, rather than the region.

As for the national MSP process, there are more explicit objectives that need to be taken into account. To begin with, there is the overall objective to plan for a good marine environment and sustainable growth, which is guiding for the entire SEC.[819] The environmental objective is more explicit in the SEC than it is in the PBA, but sustainability is clearly mentioned in both the SEC

[817] Interview 11 (2017).
[818] See section 6.2.5.
[819] The Swedish Agency for Marine and Water Management, *Förslag till havsplaner för Sverige, Bottniska viken, Östersjön, Västerhavet — granskningshandling 2019-03-14* (2019), p 34.

and the PBA. SwAM notes, in the proposed plans, that there are other tools to achieve a good environmental status, mainly through the implementation of the MSFD. However, the MSP process is supposed to contribute to the achievement of good environmental status through mitigating some of the pressures.[820] The different objectives of the national plans may not always be reconcilable with each other. As pointed out in section 8.7, there are differences in how specific sectors are discussed in the plans depending on if they are treated on a local or more national scale. However, the national MSP process is meant to handle conflicts between objectives and scales. In the planning process, the objectives can be seen together and weighed against each other. That is not possible on the municipal level. The municipal rationale for management could thus be said to be more one-dimensional than the national MSP rationale.

The main point to be made concerning the different rationales is not that the local level cannot provide a sustainable management. Rather, the point is that without clear integration between levels of management, certain perspectives will be lost. The national plans, due to the scale of planning, encounter great challenges in understanding and tending to local interests. Conversely, the local plans have difficulty in grasping the bigger picture. The division of planning competence within the Swedish MSP system has created two distinct rationales of management that do not seem to be completely reconcilable with each other. Without clear integration, where the two levels of planning are forced to better inform each other, neither of them will be able to achieve their overarching objectives: planning for a sustainable use of the marine environment. The national plans are limited, since many of the pressures on the environment are located in the coastal waters; the municipal plans are limited because they are not designed to capture the larger perspectives and processes.

9.4 Conclusion – level of management

The aim of this second part of the book has been to answer the question of how the division of planning competences affects the priorities and outcomes of planning processes. As has been shown, there are clear differences between the municipal and national planning processes. By analyzing these differences through the lenses of scale, projection, and symbolization, they become

[820] Ibid, p 65.

structured and visible. The review clearly shows that both levels of management have their merits, but that they also both suffer from shortcomings. The municipal level is not able to grasp the overarching processes. Or at least, as long as these processes are not in line with the objectives of the municipalities, they are treated as peripheral. The national level, on the other hand, cannot take in the details that are needed to fully understand the intricacies of every single municipality. Conversely, the national level is well equipped to understand the larger processes that affect the environment in the Swedish marine areas. In terms of the layers of law, discussed in section 2.3, both the municipal and the national plans operate within the structural layer. They both adaptive characteristics, in that they are subject to cyclical revisions. Nevertheless, for the structural layer of law to be able to inform the operational layer and truly foster adaptive management, the different plans need to be better integrated with each other, such that they can take more of the complexity of social-ecological systems into account. In addition, the resources for revisions and evaluations of the different plans need to be available at both levels. Currently, the municipalities do not have the capacity to review and revise their plans on a regular basis. This hampers their adaptive capacity.

To fully understand this relationship and how both the structural layer of law, and the spatial aspects of the ecosystem approach can be understood, the following part of the book will provide a case study concerning the spatial, and to some extent temporal, scale of management. The case study will be followed by a concluding part, wherein the two cases are situated within a larger discussion. This discussion concerns how to understand management levels and spatial scales in natural resource management in general. Ultimately, this will generate knowledge about how the different layers of law need to be connected in order to provide a legal framework that is able to meet the needs of adaptive management.

Part III – Scaling Water

10 The Water Framework Directive

10.1 Introduction to Case II

The first case study was concerned with the implications of choices of management levels in MSP. The discussions were focused on the division of labor between the Swedish central government and local municipalities. In terms of the ecosystem approach and the Malawi principles, the study concerned the appropriate level of management. The second case study addresses another of the Malawi principles, namely that concerning the appropriate scale of ecosystem management.

In the introductory sections to Case I, there was a short discussion on how the concepts of ecosystems are used in the MSPD. It was noted that coastal waters were excluded from the scope of the directive. Through this exclusion, the ecological and scientific understanding of how the marine and terrestrial environments are connected to each other had to take a step back in favor of political considerations. The current case study, uses the WFD as object of investigation. The WFD is formulated around ecosystems, and based primarily on scientific knowledge. Of the EU directives that deal with the coastal and marine environment, the WFD has the most elaborate system for identifying the appropriate scale of ecosystem management. This makes the Directive a suitable object of analysis to accompany the investigation of management levels. Analyzing the implementation of the WFD provides the necessary knowledge to have an informed discussion about the consequences of choices of scales. The findings in the present case study support the overall argument, namely that there can never be *one* appropriate ecosystem scale or management level. Rather, all levels are intrinsically nested with each other and management systems need to recognize this. Different choices delimiting levels and scales affect subsequent management outcomes. Case II should be seen in the light of the previous parts of the book. It does not contain the same empirical material as Case I, as the question posed to the material differs and requires alternative methods. Rather, this case study serves as an additional piece of the puzzle. The research question that is answered through the case study reads as follows:

How does the legal and physical delimitation of ecosystems affect the outcomes of permit processes when it comes to freshwater management?

To answer this question, the following chapters will be structured as follows. The current chapter 10 provides a background to the WFD, with a special focus on the legal tools for defining and typing river basins and water bodies. Section 10.3.4 studies challenges that have been identified in the scientific literature. Chapter 11 provides an analysis of Swedish case law concerning water management. The review focuses on how the size, or scale, of a water body affects the outcome of individual permit processes. The concluding chapter, 12, comprises a discussion of how the scale of water management in Europe is produced through the WFD system, and the challenges of this system.

The production of scale is just as present in the MSPD as in the WFD. However, the latter has a more elaborate and seemingly "neutral" way of identifying the appropriate scale. This makes it a powerful example of the consequences that choices of scale have for management. These choices are important as they affect the adaptive capacity of water management. While, there are adaptive properties already in place in the current legislation, the scale of management also needs to be informed by the understanding of social and natural systems as complex and connected. If not, adaptation of plans and management will be flawed and of limited use. As legislation operating in the structural layer of law, the water management regime needs to include as much of the complexity of these systems as possible, to allow for decisions in the operational layer that cater to the broad needs of social-ecological systems, rather than to that of isolated ecosystems. As demonstrated in the first case study, the WFD has implications for the municipal coastal planning as well. The two systems are, in certain respects, interlinked. This linkage is further elaborated on in the concluding chapters of the book. A final note before commencing with our review of the WFD: the following sections do not attempt to describe the WFD in its entirety. Discussions of how the ecological quality is measured, or the potential challenges one faces when identifying and classifying water body types, will not be covered here. Rather, the focus is on the geographical scales of management.

10.2 Emergence of the WFD

River basins have been used as entities for planning and management since the 1930s.[821] However, it was not until the 1990s that they became popular as a part of more holistic environmental management regimes.[822] In the EU context, there were a number of directives addressing water issues introduced between the years of 1973–1995. These were primarily focused on emission sources, the polluters, even though the concept of ecological quality standards was used.[823] When the WFD was adopted in the year 2000, it represented an important shift in environmental management regimes. The Directive applied a more holistic approach, using ecological criteria to determine the quality status of water.[824] A central feature of the novelty of the WFD, within EU law, was that it was founded on the idea of river basin management. By dividing member states' fresh and coastal waters into river basin districts, the directive seeks to achieve an integrated management that takes the entire ecosystem of a river basin into account.[825] This approach is closely related to two other approaches to water management called the "catchment-based approach", or "watershed management".[826] The common characteristic of these three concepts, apart from applying the scale of an entire catchment or river basin, is that they acknowledge the interconnectedness between land and water management. In addition, they all recognize the need to integrate economic and social aspects in environmental management.[827] With the adoption of the WFD, the aim was to replace previous management

[821] Christopher J. Barrow, *River basin development planning and management: a critical review* 26 World Development 171 (1998), p 171.
[822] François Molle, *Examining scalar assumptions: unpacking the watershed* in Emma S. Norman, Christina Cook and Alice Cohen (eds), *Negotiating water governance : why the politics of scale matter* (Farnham, Surrey : Ashgate 2014), p 17; Daniel Hering and others, *The European Water Framework Directive at the age of 10: a critical review of the achievements with recommendations for the future* 408 Science of the Total Environment 4007 (2010), p 4007.
[823] David Aubin and Frédéric Varone, *The evolution of European water policy — towards integrated resource management at EU level* in Ingrid Kissling-Näf and Stefan Kuks (eds), *The evolution of national water regimes in Europe : transitions in water rights and water policies* (Dordrecht : Kluwer Academic 2004).
[824] William Howarth, *The progression towards ecological quality standards* 18 Journal of Environmental Law 3 (2006), p 20.
[825] 2000/60/EC 2000, preamble (33).
[826] A difference between the three concepts is that a river basin concerns the runoff of water to a central river, while the catchment and watershed scales can concern smaller geographical units, such as a lake or stream.
[827] Theodoros Giakoumis and Nikolaos Voulvoulis, *The transition of EU water policy towards the Water Framework Directive's integrated river basin management paradigm* 62 Environmental Management 819 (2018), p 822.

structures. The new management was to be better adjusted to the environmental preconditions and structured around the river basin, rather than existing administrative systems.[828] Each river basin is governed by a river basin authority.[829] The goal was to create a comprehensive legal framework to replace a number of directives, to avoid legislative overlaps, and to simplify the EU's water policy.[830] The directive also represented a move from sectoral policies to a more integrated focus.[831] This development can be seen in much modern environmental legislation, such as the MSPD and the MSFD. Both of these directives strive to create more overarching management regimes.

The aim of the WFD is to ensure protection of the inland surface waters, transitional waters, coastal waters and groundwaters of the EU.[832] This is to be achieved by ensuring that all EU waters achieve a good status. The concept of "good status" is divided into ecological and chemical status.[833] To be able to assess the status, the EU's fresh and coastal waters have to be divided into manageable and measurable units. The first stage of this division, as mentioned above, is the identification of river basin districts.[834] The waters within the river basin districts are subsequently categorized as being either rivers, lakes, transitional waters or coastal waters.[835] Following this categorization, all of the categories are divided into water bodies based on a typology laid out in Annex II of the WFD. The "river basin districts" and the "water bodies" are the two main geographical and administrative units used for the implementation of the Directive.[836] To measure the success of the Directive in fulfilling its purpose, the chemical and ecological status of the water bodies is measured.[837] How the status of a water body is measured has

[828] COM(1997) 49 final, *Proposal for a COUNCIL DIRECTIVE establishing a framework for Community action in the field of water policy*, (1997), pp 6 and 15.
[829] 2000/60/EC 2000, art 3(2).
[830] See ibid, art 22; David Grimeaud, *The EC Water Framework Directive – an instrument for integrating water policy* 13 Review of European Community & International Environmental Law 27 (2004), p 29.
[831] Angelo G. Solimini, Robert Ptacnik and Ana Cristina Cardoso, *Towards holistic assessment of the functioning of ecosystems under the Water Framework Directive* 28 Trends in Analytical Chemistry 143 (2009), p 143.
[832] 2000/60/EC 2000, art 1.
[833] Ibid, arts 2, 4(1)(a)(ii), 4(1)(b)(ii).
[834] Ibid, art 3.
[835] Ibid, Annex II.
[836] Common Implementation Strategy for the Water Framework Directive (2000/60/EC) Guidance Document No 2, (2003), p 2.
[837] Ibid, p 2.

briefly been mentioned in section 7.4.2, and will not be further treated here.[838] The two main aspects of the Directive discussed here are the identification and delimitation of river basins and water bodies, and the holistic, integrated function of the Directive.

10.3 Management scales

10.3.1 River basins

The WFD takes its point of departure from aquatic ecosystems. In doing so, the Directive requires that management should be performed on a river basin scale.[839] Translated to the terminology of the ecosystem approach, the river basin scale is identified as the appropriate scale for surface and groundwater management.[840] However, the river basin scale is only one of two appropriate scales identified within the scope of the Directive. The second scale is the water body, which is the scale where the actual measuring of water quality is performed. These two ecosystem scales are discussed in the following sections. The present section lays out the basic principles of how to identify river basins and water bodies. The identification process is prescribed by the Directive and clarified through the Common Implementation Strategy (CIS) issued by the European Commission. The legal requirements will be complemented by a review of selected parts of the scientific literature concerning the design and implementation of the WFD with respect to ecosystem scale.

According to article 3 of the WFD, each member state shall identify the river basin districts within their territory. Coastal waters shall be assigned to the river basin district nearest to them or most appropriate. There is no instruction in the Directive text or the CIS as to how river basin districts are to be identified. However, they are defined in the Directive as:

> […] the area of land from which all surface run-off flows through a sequence of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta.[841]

[838] For a more in-depth review of the concept of 'good ecological status' See: Henrik Josefsson, *Good ecological status: advancing the ecology of law* (Uppsala universitet, Juridiska institutionen 2015).
[839] 2000/60/EC 2000, art 3.
[840] Ibid, preamble (33).
[841] Ibid, art 2(13).

In addition, article 3 stipulates that small river basins may be combined with larger river basins or adjacent small basins to form one large basin where appropriate. Thus, while the delimitation of a river basin may seem clear-cut, there are possibilities to adjust the scale if this is deemed more appropriate. This adds an aspect of social choice to the scientific definition of river basin definition. In this regard, it has been noted in the watershed literature that the seemingly neutral and scientific definition of a watershed can and needs to be negotiated through human intervention.[842]

Although the river basin approach to water management was a novelty within EU law, it seems to have enjoyed broad support in the deliberations leading up to the adoption of the Directive.[843] Nevertheless, the actual defining of river basins does not seem to be a clear-cut process. The Swedish water management system can serve as an example. In the Swedish process it was clear that identifying river basin districts that were manageable, entailed other considerations than simply identifying individual river basins. In the Swedish transposition of the Directive, there are five river basin districts with associated water authorities. The districts are not called river basin districts in Sweden; instead, they are called water districts.[844] There are 119 main catchment areas in Sweden. However, a division into only a limited number of districts was suggested early on in the process of implementing the Directive. The reasoning behind this was the strategic focus of the Directive, and the fact that its implementation required substantial resources.[845] The division into water districts was based on the main sea basins, and their connection to the catchment areas, rather than actual river basins.[846] As one of the sea basins was deemed too big to be manageable, it was divided into two smaller water districts.[847]

The considerations made in the Swedish process of identifying the appropriate scale of water management highlights some of the challenges of freshwater management. Even when management is aimed at following the

[842] William Blomquist and Edella Schlager, *Political pitfalls of integrated watershed management* 18 Society & Natural Resources 101 (2005), p 104; Alice Cohen, *Nature's scales? Watersheds as a link between water governance and the politics of scale* in Emma S. Norman, Christina Cook and Alice Cohen (eds), *Negotiating water governance: why the politics of scale matter* (Farnham, Surrey : Ashgate 2014).
[843] COM(1997) 49 final, (1997), p 15.
[844] SEC, ch 5 sec 13.
[845] SOU 2002:105, *Klart som vatten — utredningen svensk vattenadministrations betänkande angående införandet av EG:s ramdirektiv för vatten i Sverige*, (2002), p 108.
[846] prop. 2003/04:2, *Förvaltning av kvaliteten på vattenmiljön*, (2003), p 26.
[847] Ibid, p 26.

boundaries of ecosystems, human considerations always need to be taken into account. This entails a number of choices. It is explicitly mentioned in the preparatory works that the delimitation of water districts is not a strictly geographic issue. Rather, it is closely linked to the appointments from the governing authorities in charge of water quality management.[848] The new water authorities were not created as entirely new government bodies. New departments within five of the CABs were created and called "water authorities". The reasoning behind this administrative setup was that it was considered necessary that the management of water quality was integrated with the overall environmental management, using the same administrative framework.[849]

10.3.2 Water bodies

Within each river basin district, the waters are characterized as either river, lake, transitional water, or coastal water.[850] These sub-categories are further divided into types of water based on (for coastal waters), *inter alia*, ecoregion,[851] salinity, and mean depth. Through this process of characterization and typing, the river basin districts can be divided into smaller fragments, so-called "water bodies".

According to the Directive, the characterization and typing of water bodies should not be arbitrary. Rather, water bodies are to be "discrete and significant elements".[852] Each water body should be identified on the basis of its discreteness and significance in the context of the Directive's purposes, objectives, and provisions.[853] Water bodies are thus determined by biological factors. In addition, there are human considerations in play that affect this determination. One water body cannot be split between categories of surface water, nor can it be split into different types. In short, a water body needs to be assigned one specific water type. However, these water bodies must also be meaningful. Here anthropogenic factors, such as pressures, protected areas, or other uses, can be considered in the refinement of the water body

[848] Ibid, p 26.
[849] Ibid, p 27.
[850] This section has in parts previously been published in: Westholm (2018).
[851] Annex XI of the Directive divides the European marine areas into six ecoregions for transitional and coastal waters; the Baltic Sea, Barents Sea, the Norwegian Sea, the North Sea, the North Atlantic Ocean, and the Mediterranean Sea, see 2000/60/EC 2000.
[852] Ibid, art 2(10).
[853] Common Implementation Strategy for the Water Framework Directive (2000/60/EC) Guidance Document No 2, (2003), p 5.

identification. No minimum scale of identification is stipulated, but the CIS mentions the need to avoid unmanageable fragmentation.[854]

As this work concentrates on marine and coastal waters, in the subsequent discussion the coastal waters are used as examples of water bodies. Coastal waters are supposed to be assigned to the river basin district that is most likely to influence their quality, particularly taking into account the long-term influences of any contaminants. The boundaries between two adjacent types should be decided so as to avoid unnecessary splitting of the coastline. As the final step in defining water bodies, the CIS suggests using administrative boundaries.[855] This indicates that the ecological factors alone are not sufficient to adjust the natural environment to human management conditions. Rather, human administrative borders need to inform the delimitations of water bodies, which is a way for humans to create ecosystems through law.

The clear characterizing and typology guidelines are intended to achieve coherent implementation throughout the EU. However, studies have shown that each member state develops its own typology. There are even inconsistencies within individual member states' typologies.[856] When implementing the WFD in Sweden, for example, there were differences in interpretation between different water authorities.[857] In addition, while these typologies might be pedagogically suitable for public consumption, they still represent relatively crude delimitations of "naturally continuous gradients across a wide range of ecosystem characteristics".[858]

10.3.3 Scale of management

As the introduction to the WFD above shows, the Directive provides two main geographic scales of management: the river basin and the water body. The river basin scale is overarching and offers the possibility to understand

[854] Ibid, p 9.
[855] Common Implementation Strategy for the Water Framework Directive (2000/60/EC) Guidance Document No 5, *Transitional and coastal waters — typology, reference conditions and classification systems*, (2003), pp 23-24.
[856] Brian Moss, *The Water Framework Directive: total environment or political compromise?* 400 Science of The Total Environment 32 (2008), p 35.
[857] Gabriel Michanek, *EU:s adaptiva vattenplanering och svenska miljörättsliga traditioner* in Aslak Syse and others (eds), *Lov, liv och lavre: festskrift til Inge Lorange Backer* (Universitetsförlaget 2016), p 356.
[858] Hering and others (2010), p 4012.

the interconnectedness of land and water usage and management.[859] To ensure an overarching management on the river basin scale, member states are required to adopt a river basin management plan for each river basin district within their territory.[860] Annex VII of the Directive sets out the content of the river basin management plans, which includes a description of the different water bodies in the district, as well as *inter alia* identification of pressures, environmental objectives, and a summary of the programmes of measures adopted. A programme of measures is required for each river basin district, and it is supposed to contain the measures taken to achieve the objectives of the Directive.[861] These measures are required by a number of EU directives that are listed in article 10 and annex VI of the directive. Furthermore, the programmes shall include so-called supplementary measures, such as legislative instruments and codes of good practices.[862]

The river basin management plans, together with the programmes of measures, are considered the key tools for the implementation of the WFD.[863] Ideally, activities impacting the aquatic environment are treated in the programmes of measures, so as to locate them in places within the river basin district, where they do the least environmental harm and yet fulfill their purpose.[864] This is an expression of the systemic nature of the WFD, that all of the river basin districts need to be treated in the same plan. Nevertheless, it has proven difficult to implement such holistic management regimes.[865] One reason for this may be the wording of the Directive and the focus on article 4 and annex V in the implementation stages. Both article 4 and annex V apply to a different scale than the river basin, namely the water body. In addition, there is little guidance on how the locating of activities in the river basin district is supposed to function in practice, and how this links to planning legislation and permitting, etc. There is a report from the

[859] Giakoumis and Voulvoulis (2018), p 822.
[860] 2000/60/EC 2000, art 13.
[861] Ibid, art 11.
[862] In Annex VI of the Directive there is a non-exclusive list of supplementary measures.
[863] European Commission, *Commission staff working document, European overview (1/2) accompanying the document "Report from the Commission to the European Parliament and the Council on the implementation of the Water Framework Directive (2000/60/EC) river basin management plans". COM(2012) 670 final*, (2012), p 5.
[864] European Commission, *Report from the Commission to the European Parliament and the Council on the implementation of the Water Framework Directive (2000/60/EC) river basin management plans. COM(2012) 670 final*, (2012), p 13.
[865] Nikolaos Voulvoulis, Karl Dominic Arpon and Theodoros Giakoumis, *The EU Water Framework Directive: from great expectations to problems with implementation* 575 Science of the Total Environment 358 (2017), p 361.

Commission concerning the implementation of the WFD. However, the only guidance in locating activities is by a reference to a CIS document that discusses increased policy integration in relation to hydro-morphological pressures.[866]

The programmes of measures are designed to make the environmental objectives, found in article 4 of the Directive, operational.[867] To this end, article 4 comprises the non-deterioration rule, which requires member states to "[…] implement the necessary measures to prevent deterioration of the status of all bodies of surface water, […]". Through this provision, the second ecosystem scale of the WFD, the water body, is placed in the foreground of management. To be able to assess the water quality of the river basin districts, they are divided into smaller units: water bodies. This makes the water body the operational ecosystem scale of the Directive. Each water body is classified with an ecological quality standard based on its ecological elements.[868] The ecological elements that are used to determine the ecological status of water bodies have been subject to some criticism and will not be further elaborated here.[869] What is of interest for this case study, however, is the possibility of exemptions from the non-deterioration principle. These exemptions are of interest as they determine when it is possible to deviate from the non-deterioration principle, thus taking into account factors that are not determined by the scale of the water body.

There are a few exemptions from the non-deterioration policy. The main exemptions are found in article 4(7), which stipulates when member states are not in breach of the Directive even when there is a failure to reach good status or a deterioration from good or high status in a water body. There are two situations in which the permanent deterioration is allowed. The first concerns new modifications to the physical characteristics of a water body. This refers to their hydro-morphological characteristics. Such modifications can be caused by, for example, hydropower plants, flood protection schemes, and

[866] See European Commission, *Report from the Commission to the European Parliament and the Council on the implementation of the Water Framework Directive (2000/60/EC) river basin management plans. COM(2012) 670 final* (2012), p 13; Common Implementation Strategy for the Water Framework Directive, *WFD and hydro-morphological pressures — policy paper*, (2006).
[867] 2000/60/EC 2000, art 4(1).
[868] The categorization is made on the basis of Annex V to the Directive.
[869] See e.g. Henrik Josefsson and Lasse Baaner, *The Water Framework Directive — a directive for the twenty-first century?* 23 Journal of Environmental Law 463 (2011).

future navigation projects.[870] The second situation concerns new sustainable human development activities. These activities are not specified in the Directive, and in the CIS concerning exemptions it is stated that how the exact definition will be framed in individual cases depends on the time, scale, involved stakeholders, and available information.[871] An important limitation to this exemption is that it is only applicable in situations where the deterioration that occurs changes the status of water body from "high" to "good".[872]

For both types of exemptions, there are a number of conditions that need to be met for them to be applicable. Firstly, all practicable steps need to be taken to mitigate the impacts.[873] Secondly, the reasons for the modifications or alterations need to be specified in the river basin management plan.[874] Thirdly, the reason for the modifications or alterations need to be of overriding public interest and/or the benefits of them outweigh the objectives set out in article 4(1). The last criterion only applies as long as the interests at hand concern human health, maintenance of human safety, or sustainable development.[875] Lastly, the benefits of the modifications or alterations should not be possible to achieve by any other means that would be a significantly better environmental option.[876] All of these conditions need to be met for the exemptions to be allowable under the Directive. In addition, member states shall ensure that the achievement of the objectives in other water bodies is not compromised and that the exemptions are consistent with the implementation of other EU environmental legislation.[877]

In addition to these exemptions, articles 4(4) and 4(5) contain two types of exemptions: extensions of the timeframe and less stringent objectives for heavily modified water bodies. The extended timeframes entail that, under certain circumstances, when good ecological status (GES) cannot be reached for a water body within the timeframe of 15 years since the adoption of the Directive (a point in time that was reached in 2015), the timeframe can be extended with a maximum of two further updates of the river basin

[870] Common Implementation Strategy for the Water Framework Directive (2000/60/EC) Guidance Document No 20, *Guidance document on the exemptions to the environmental objectives*, (2009), p 24.
[871] Ibid, p 24.
[872] 2000/60/EC 2000, art 4(7).
[873] Ibid, art 4(7)(a).
[874] Ibid, art 4(7)(b).
[875] Ibid, art 4(7)(c).
[876] Ibid, art 4(7)(d).
[877] Ibid, art 4(8).

management plan.[878] Article 4(6) also contains exemptions related to temporary deteriorations.

Whereas the river basin and water body are the relevant geographical scales of the WFD, the timeframes for achieving GES are the relevant temporal scales. As will be shown in one of the cases reviewed below, how these timeframes are set will affect the possible outcomes in permit application cases. Furthermore, the literature review shows that these temporal scales are not adjusted to correspond to ecological processes. Rather, they seem to be based on the revision periods for the river basin management plans.

As seen above, the directive has two geographical scales. While the river basin scale is the overarching scale that best serves the directive's purpose, the water body seems to be the operational scale. When it comes to exemptions, the CIS recognizes that assessments can and need to be carried out at different scales. However, it is important that it is justifiable on a water body scale as well.[879] Nevertheless, as the review of relevant case law below shows, the water body is by far the most important scale when it comes to implementing the WFD. It is thus crucial to understand how the delimitations of water bodies highlight some ecological/societal aspects, while remaining blind to others.

10.3.4 Previous research

As the WFD was a novelty within EU environmental law when it was adopted some 20 years ago, it has also been extensively researched, within both the social and the natural sciences.[880] While there is no ambition to comprehensively cover all of that literature here, the following section will highlight parts of the scientific debate that are relevant for the general discussion on the appropriate ecosystem scale.

One important function of the WFD, when it was adopted, was to rationalize and simplify the EU's water policy, as well as its implementation within member states.[881] Furthermore, the integrated river basin management was supposed to lead to a reorganization of administrative structures

[878] Ibid, art 4(4)(c).
[879] Common Implementation Strategy for the Water Framework Directive (2000/60/EC) Guidance Document No 20, (2009), p 10.
[880] A Scopus search (October 2019) with the search words 'Water Framework Directive' gives approximately 6500 results, of which almost 900 are within the social sciences.
[881] Grimeaud (2004), p 29.

concerning water management.[882] The following review of previous research will focus on issues concerning the formal function and delimitations of river basins and water bodies through a scale perspective.

The basic idea with river basin management is that it should follow the system of nature, rather than that of humans. However, several authors have criticized the notion that the boundaries of a river basin are as clear-cut as they are often made out to be.[883] Nevertheless, the Directive addresses this issue to some extent by allowing the merging of smaller river basin districts into a larger one for management purposes.[884] In addition, the implementation of the Directive has been criticized for focusing too much on the scale of water bodies, thereby losing the river basin perspective sought in the wording of the Directive. The water body as a scale of management has been discussed by Josefsson, who investigates the possibilities of including multiple water bodies in assessments to address large-scale environmental problems. Josefsson concludes that the Directive focuses on the ecological status of individual water bodies and is not compatible with such an approach.[885] Even though the Directive applies a river basin approach, each river basin seems to be made up of separate water bodies where the status is measured.[886] This indicates a system that works the opposite way to how it was imagined: instead of an overarching river basin approach, the Directive functions from the bottom (water body) up. The status of the river basin is determined by the sum of all water bodies. Similar criticisms have been raised by other authors as well. These authors claim that the programs of measures are based on the details of annex V of the Directive. This leads to an excessive focus being placed on the water body scale, and a failure to recognize that it is the overall ecosystem status that should be at the center of attention according to the Directive.[887] Other authors, however, have claimed that the Weser ruling (see section 7.4.2) highlights the systemic nature of the Directive and that the exemptions in article 4(7) should be interpreted in light of the overall purpose of the

[882] COM(1997) 49 final, (1997).
[883] Dave Huitema and others, *Adaptive water governance: assessing the institutional prescriptions of adaptive (co-)management from a governance perspective and defining a research agenda* 14 Ecology and Society urn:issn:1708 (2009), p 9; Cohen (2014); Blomquist and Schlager (2005), p 104.
[884] 2000/60/EC 2000, art 3(1).
[885] Henrik Josefsson, *Assessing aquatic spaces of regulation: key issues and promising solutions* 2014:3 Nordic Environmental Law Journal 23 (2014).
[886] Ibid, p 26.
[887] Voulvoulis, Arpon and Giakoumis (2017), p 361; Holt and others (2011), p 215.

Directive.[888] The ruling could thus be seen to show how the interest of flexibility, policy discretion, and subsidiarity can be tended to, while at the same time ensuring an improvement and effective protection of the aquatic environment.[889]

In relation to the water body concept, Langlet has observed that the definition and delimitation of a water body, to a large extent, is left to the discretion of member states. As such, there is "[…] a tension between the desire to capture ecologically relevant variation, and the need to keep the system practically manageable and not too costly to operate".[890] As mentioned above, this has led to differences in typology between member states even though there are quite detailed instructions to this end in annex V of the Directive.[891]

The concept of "good ecological status" has been thoroughly investigated by Josefsson in his dissertation from 2015.[892] He identifies a number of problematic aspects with the EQS. The main discussions in his book concern how EQS are defined,[893] as well as the baselines against which they are measured and the timeframes for their achievement.[894] The definition and parameters of the EQS are beyond the scope of the present work. However, the timeframe or temporal scale of management calls for some mention in this context. In the main, the discussion has concerned the reference conditions against which the ecological status is measured. The reference conditions are what imagined "undisturbed conditions" would be.[895] Howarth has discussed the implications of using such undisturbed conditions as reference, and the economic and ecological challenges posed by the concept.[896] Moss also questions the idea that it would be possible in large parts of Europe to reach a state of the environment which is only slightly different from pristine conditions.[897] Nevertheless, the reference conditions should not be understood as targets. Rather, other authors claim that they

[888] Johanna Söderasp, *Law in integrated and adaptive governance of freshwater: a study of the Swedish implementation of the EU water framework directive* (Luleå tekniska universitet, 2018), pp 65-66.
[889] van Rijswick and Backes (2015), p 374.
[890] David Langlet, *Scale, space and delimitation in marine legal governance – perspectives from the Baltic Sea* 98 Marine Policy 278 (2018), p 282.
[891] Moss (2008), p 35.
[892] Josefsson (2015).
[893] Josefsson and Baaner (2011).
[894] Henrik Josefsson, *Achieving ecological objectives* 1 Laws 39 (2012).
[895] 2000/60/EC 2000, see Annex V table 1.2.
[896] Howarth (2006), pp 21-24.
[897] Moss (2008).

should be seen as facilitators for the assessment of quality status and subsequent classification under the Directive.[898] The reference conditions generally refer to past conditions. In terms of temporal scale, this is an unspecified, retrospective scale that focuses on previous, or undisturbed, conditions.

Josefsson raises an additional issue relating to the temporal scale of the Directive, namely the timeframes for achieving "good status". These timeframes represent future-oriented temporal scales. The timeframes are set to 15 years as the main rule, with possible extensions up to 21 or 27 years.[899] According to Josefsson, such a temporal scale is a legal construct with little understanding of the ecological system it aims to govern. The appropriate ecological scale should rather be 100 years, as this is approximately how long a river basin rehabilitation would take.[900] As will be shown in the review of case law below, applying a temporal scale of 100 years would most likely lead to different outcomes in some of the cases.

In a Swedish context, Söderasp has investigated the implementation of the Directive from a governance perspective.[901] She identifies four key functions that need to be provided by formal institutions to support a transition to adaptive and integrated management regimes. These functions are: overall objective and direction; an administrative structure with clear roles, responsibilities, and mandates; adaptive capacity; and control and enforcement mechanisms.[902] Söderasp's study goes on to consider the Swedish implementation of the Directive and does not explicitly discuss the formulation of the Directive itself. However, there will be reason to return to Söderasp when discussing Swedish case law concerning WFD implementation.

The following section will shortly re-introduce parts of the methodological framework presented in chapter 3, and explain how this will be applied in the analysis of the case law concerning the WFD and water bodies.

[898] Voulvoulis, Arpon and Giakoumis (2017), p 363.
[899] 2000/60/EC 2000; ibid, art 4(1) (a)(ii), 4(4)(c).
[900] Josefsson (2012), p 54.
[901] Söderasp (2018).
[902] Ibid, p 106.

11 Practical implications of scale

11.1 Concepts and selection of cases

Since the CJEU expressed its interpretation of the non-deterioration principle of the WFD in the Weser case, there have been a number of rulings in Swedish courts where this case has been discussed. As the main point of interest for the present study is the water body scale, the cases examined all have elements in which the size of a water body has a bearing on the outcome of the case. Following a review of the material content of the cases, they will be analyzed from the methodological perspective introduced in Part I. In short, the terminology of de Sousa Santos will inform a discussion of how the choices of ecosystem scale affect the outcomes of the cases.

The three concepts used by de Sousa Santos are *scale*, *projection*, and *symbolization*. In the context of the WFD, the main scale seems to be that of the water body. As discussed above, the river basin scale is of high relevance as well. However, both the case law and previous research indicate that the water body scale is the most prominent scale in the implementation process. The implication of using the water body as the appropriate ecosystem scale for water governance, or scale of law, is that it provides a detailed, high resolution, version of the ecosystem. It offers a version that is geographically limited and may potentially be blind to more overarching processes that could have been seen on the river basin scale. In terms of projection, the implementation of the WFD highlights processes within the water body, rendering them of great importance. In doing so, this projection excludes other processes and parameters that do not fit within the scope of the Directive. These processes are thus placed in the periphery of management. The periphery becomes obfuscated and, as a consequence, factors that are not central to the water body scale are treated as less important and, in many cases, these are ignored in favor of those that are placed at the center. As for symbolization, the EQS and quality elements are clearly emphasized. Such a symbolization promotes technical/scientific decision-making, while largely ignoring social aspects. This is also evident when studying the provisions concerning exemptions from the Directive, as these have a scientific rationale

that follows from the technical symbolization of the Directive. The directive's technical symbolization gives an impression of neutrality, or objectivity, which legitimizes both the scale and projection. As will be seen in the review of case law, this neutrality is not entirely unproblematic, and the omission of certain aspects of both ecosystem processes and social interests affects the outcomes of the cases. Keeping these basic concepts in mind can be helpful for the reader as the text moves on to a material review of some important cases concerning the Swedish implementation of the WFD following the Weser case.

The present case study concerns how the size of a water body affects permit processes. One challenge in undertaking such a study is that of identifying relevant case law. For this particular study, a search was performed in the legal database "Juno", with the search word "water body"[903] in case law from the Land and Environment Court of Appeal. As the Weser ruling, decided in 2015, has had a significant impact on the implementation of the WFD in Sweden, only cases that were decided between 2015–2019 have been considered. Using these parameters, the search generated 196 hits.[904] The WFD was not included as a search word as there are cases in which the water quality is discussed without explicit refence to the Directive. Nevertheless, all of the cases examined concerned implementation of the WFD.

The cases that included a mention of water bodies were then reviewed to determine if the water body was mentioned in the motives of the ruling, either in the Land and Environment Court or in the Land and Environment Court of Appeal. The cases where "water body" was mentioned in the motives were selected for further review. The second stage of the selection consisted of a more in-depth analysis of the motives to determine whether the size of the water body played a part in the outcome of the case. Those cases in which the size of the water body had some bearing on the outcome have been included in the review that follows in this section. In addition to these cases, one case that still has to be decided by the Land and Environment Court of Appeal is included, as it has clear relevance for the analysis. Furthermore, two decisions from the regional Environmental Permit Delegation (EPD)[905] of Västra Götaland were included. These cases were included as they were

[903] The database is in Swedish and the case law is from Swedish courts, thus, the term was 'vattenförekomst'.
[904] Juno, (2019) <https://pro-karnovgroup-se.ezproxy.ub.gu.se/b> accessed 25/11.
[905] The Environmental Permit Delegation is an independent function within the County Administrative Boards that is the first instance in many permit procedures concerning environmentally hazardous activities.

presented as important and relevant in conversation with the chief legal officer at the EPD of Västra Götaland.

Cases concerning hydropower plants were excluded from the analysis as they primarily concern other factors than the size of a water body. In the beginning of the selection process, hydropower was included. However, after further consideration they were excluded, as it was not possible to single out the aspects of water body size in the cases. Cases concerning single household sewage systems were also excluded as it was difficult to assess them individually and they were thus not appropriate as objects of investigation for the current analysis. The selection process resulted in 13 cases being chosen for a deeper analysis, all relating to the implementation of the WFD. All of these cases will be presented below, some in more detail than others.

The aim of the analysis is to understand how the size of a water body affects the legal considerations and outcomes in individual permit processes. The cases are complex, and more often than not there are other factors than the water body that determine the final outcome. In addition to being complex, the cases are technical in nature, with extensive elaborations on, *inter alia*, how many micrograms of a certain pollutant per liter a water body can bear. Inevitably, the review of cases below will entail simplifications and much information concerning the cases is omitted. As the analysis will concern the size of water bodies, the EQS and individual quality factors will not be discussed. This review highlights those parts of the motives that concern size.

The cases have been divided into different categories based on the size of the water body affected. The division into large, medium, and small water bodies is based on how the water bodies are discussed and treated in the cases. As a point of reference, it can be said that the mean size for coastal water bodies is approximately 51km², for lakes 4km², and for streams the average length is 5km.[906] What constitutes a large water body may be difficult to determine. The size classification here has been decided purely on the basis of the internal relation among the water bodies presented in the relevant cases.[907] The largest water bodies among the cases span 236–456km². These

[906] Data gathered from https://viss.lansstyrelsen.se/Exports.aspx?pluginType=0&pluginGuid=486d8d1e-77c3-491f-880f-882cd9bf824f&exportCategory=1&export=ExportPluginsExportPluginsWaterExportsWaterExport2014, (2019) accessed 9/12.
[907] The actual size of the water body rarely shows from reading the cases. However, the name of the water body is always stated. Aided by that information, the actual size has been gathered

cases will be presented in the following section, accompanied by cases where the pollution is expected to reach larger water bodies. The cases will be presented only briefly in terms of their material content. The main focus is on the discussion concerning their relation to the WFD and EQS.

11.2 Large water bodies

11.2.1 Norviks port II

This case concerned the establishment of a port in Nynäshamn.[908] The port operation would require *inter alia* dredging and dumping of up to 900,000m^3 of mud and handling of up to 8.5 million tons of goods per year. The area was considered a national interest for port facilities and the municipality of Nynäshamn had adopted a detailed development plan for the area which stipulated port operations. The port had been ruled permissible by the LECA in 2010 and the present case concerned the configuration of the permit. One aspect that was discussed in the motives of the LECA was the risk of sediments spreading due to ship traffic. This was considered a risk as there were sediments along approximately 800m of the shipping lane that were contaminated due to emissions from an oil refinery close by. The water body that was the recipient of the potential contaminants from the port is called "Mysingen" and has an area of 263km^2.

The court discussed the WFD, the non-deterioration rule, and the Weser case. One of the issues discussed was under what circumstances the status of a quality factor could be determined for a water body. An important aspect of such determination was if the non-deterioration rule also pertains to individual parts of a water body. Referring to the Weser case, the court concluded that it does not provide any guidance on this issue, other than that the deterioration should be measured against the status of the entire water body. Based on this, the court determined that the status of individual quality factors should be determined for the entire water body. As the water volume of Mysingen is big, this would require a significant impact on a quality factor for the status of the entire water body to deteriorate. The port operations would not lead to such a deterioration and the permit could be given. It should be mentioned here that there were a number of additional factors of

from Vatteninformationssystem Sverige (VISS);, *https://viss.lansstyrelsen.se/* (2019) accessed 2019-12-04.

[908] *Hov*R *M 9616-14 Norviks port II* (Land and Environment Court of Appeal).

importance for the outcome of the case. However, for the purposes of this discussion, it is the court's reasoning concerning the size of the water body that is most relevant.

11.2.2 Aquaculture in Storsjön

This case concerned the renewal and adjustment of a permit to operate an open net pen[909] aquaculture plant in Storsjön, in the municipality of Berg.[910] The Land and Environment Court (LEC) had given a permit for operations where 849 tons of fodder per year could be used. This would render emissions of 4300kg of phosphorous and 37,000kg of nitrogen per year. The recipient was the lake "Storsjön" which has an area of 456km^2, and is the fourth biggest water body in Sweden within the category "lake".[911] The applicant already had an established operation and now wanted to expand this to be able to have a more long-term perspective for the operation, and to be able to employ full-time staff all year round.

The LECA concluded that when determining how the operation would affect the current EQS, it had to be considered that the relevant water body was the entire "Storsjön", not just the southern part of it. The court continued by stating that it is the effect on the entire water body that is the basis for evaluating whether the operation runs a risk of deteriorating the status. According to the calculations that had been made, the EQS did not constitute a hindrance for the aquaculture operation as it had been allowed by the LEC. However, the LECA came to the conclusion that the open net pen system could probably not be considered the best available technology as required by other regulations in the SEC.[912] Together with uncertainties as to how much the water quality would be affected and the location of the plant, this

[909] Open net pens are the traditional method for aquaculture, where the fish is kept in cages in open water. This method leads high levels of e.g. nutrient emissions into the surrounding environment as there are no physical boundaries and the water freely flows through the cages.

[910] *Hov*R *M 8374-15 Aquaculture in Storsjön* (Land and Environment Court of Appeal).

[911] Data gathered from https://viss.lansstyrelsen.se/Exports.aspx?pluginType=0&pluginGuid=486d8d1e-77c3-491f-880f-882cd9bf824f&exportCategory=1&export=ExportPluginsExportPluginsWaterExportsWaterExport2014 2019.

[912] See SEC, ch 2 sec 3. The concept best available technology (BAT) can also be derived from the Directive 2010/75/EU of the Parliament and on the Council of 24 november 2010 on industrial emissions (integrated pollution prevention and control) 2010. However, in a Swedish context the BAT requirements are set higher than follows form EU law, see prop. 1997/98:45, (1997), part 2 p 17.

led to a lowering of the allowed amount of fodder to 550 tons per year. For procedural reasons, the permit could not be declined or lowered beyond this limit. The reasoning of the court, however, indicates that it would have been prepared to refuse the application had there been no formal obstacles.

In terms of size of the water body, this case is interesting as the court seems to be of the opinion that the status of the environmental quality could have run a risk of deteriorating, if it would have been measured only in the southern part of the lake. Yet, as the water body was defined as the entire lake, this could not be considered within the framework of the WFD. If there is a possibility to measure the quality in only one distinct part of a lake, then perhaps the lake could be divided into two separate water bodies. In this case, such a division may have led to a different reasoning by the court. This line of argument from the court also indicates that the system of division into water bodies may not be as scientifically neutral as it seems.

11.2.3 Värö bruk

In the final case in which a large water body was the recipient, the company Södra Cell AB had applied for expanded operations at a pre-existing pulp mill on the west coast of Sweden.[913] The application concerned an expansion from a yearly production of 450,000 tons of bleached sulphate pulp to 850,000 tons. One of the conditions for the permit was that they would emit as a mean value over three months 0.03kg phosphorous/ton pulp, and 0.25kg nitrogen/ton pulp into the nearest water body. The recipient was a coastal water body called "Norra Mellersta Hallands Kustvatten", which covers an area of 302km^2. The LEC approved the application but it was subsequently appealed to the LECA, *inter alia*, on the grounds that the operations would endanger the attainment of the EQS.

In their ruling, the LEC had concluded that there was a risk of the status of the water body deteriorating, but that the WFD was not implemented in Swedish law in a way that allowed an interpretation of the non-deterioration rule as it was expressed in the Weser case. However, the LECA saw it as its obligation to interpret Swedish law in a way that is consistent with EU law. Thus, the Weser case should be guiding. Nevertheless, the court concluded that the recipient water body was large in both area and volume, that it had a big water exchange, and that the emissions would not lead to a lowering of

[913] *Hov*R *M 8984-15 Värö Bruk* (Land and Environment Court of Appeal).

the EQS. At the same time, the court noted that the emissions from the pulp mill could not be considered small or immaterial. But as they would not adversely affect the quality status, the emissions could not be stopped or conditioned on the basis of the WFD. Instead, other legal provisions could be used to control and condition the emissions from the mill.

In addition to the three cases above, two of the cases concerned operations that would emit into smaller water bodies, but where the emissions would spread to larger, adjacent, water bodies and thus not affect the EQS. The first case regarded an installation for hazardous waste in Malmö, where the emissions would travel from a small (5km^2) to a large (112km^2) body of water. The LEC argued that the water bodies would not be adversely affected, except for the innermost part of the smaller body.[914] There was no discussion as to whether this could entail a declassification of the entire EQS; rather it was more passed over by the court and not at all mentioned in the LECA ruling. The second case concerned a pulp mill which could be given a permit as the emissions would, to a large extent, travel from the smaller (11km^2) water body that was the primary recipient to a relatively large (260km^2) water body. Thus, no EQS would run a risk of not reaching the stipulated goals.[915]

All of these cases illustrate how the WFD functions in a Swedish context. As long as the status of the water body does not deteriorate to a lower status for any of the quality factors, the court does not deny an application or condition the emissions on the grounds of the WFD.[916] When emissions occur in a larger water body, the bar for affecting an EQS is set relatively high. Such a system places a great deal of trust in that the delimitations of water bodies is performed in a functional manner and that there is little need to question whether they could have been delimited differently. Yet, in the aquaculture case, it seemed as if the court considered it possible to ecologically divide the lake further into a southern and a northern part, and that such a division would have affected the outcome of the case. The same can be said of the case in which a part of a small water body would be affected. While the division into such small water bodies may not be consistent with the idea of manageable units, the cases highlight that the existing division has

[914] *Hov*R *M 2788-17 SYSAV Hazardous Waste Installation* (Land and Environment Court of Appeal).
[915] *Hov*R *M 11173-15 Östrand Pulp Mill* (Land and Environment Court of Appeal), The second.
[916] Important to note here is that there is a requirement in the Directive to ensure the use of BAT, see 2000/60/EC 2000, art 10(2)(a). However, where BAT is discussed in the cases reviewed there is no references made to the WFD. Rather, the courts seem to be of the opinion that it is the quality status that is the determining factor in relation to the WFD.

its issues. They indicate that the division into water bodies is not as clear-cut and functional as can be perceived when studying the WFD. The further review of case law shows that it is not only in the large water bodies that issues can arise from how they are delimited.

11.3 Medium water bodies

Out of the examined cases, there were two in which the water bodies were of medium size (19–46km²). The first case concerned the renewal and expansion of a permit for aquaculture in a lake in the municipality of Krokom.[917] The recipient water body covers an area of 46km². The LEC discussed potential deterioration and concluded that it was difficult to say how much space for further emissions there was in the lake. These uncertainties, together with the fact that open net pens could probably not be considered the best available technology, led to the permit being limited to existing levels of production. The LECA only amended the ruling in terms of time. With a reference to best available technology, the court shortened the time of the permit to five years to give the operator the possibility of dismantling and adapting the operation to more modern technologies.

The second case concerned a cogeneration plant in Helsingborg.[918] The recipient was a water body that covers an area of 19km² of coastal water and is located between two larger water bodies without any visible boundaries between them. In the ruling, the court concluded that there was no risk of lowering the status of an EQS. However, the interesting aspect in this case was that the CAB argued to move the emission point to another location in the water body, from the western to the southern harbor, as the western harbor was highly valuable for fisheries. The LECA concluded that as the new emission point would be in the same water body, there was no reason to move it, as no EQS would be affected anyway. There will be reason to come back to this case, as it relates to the same issue as the aquaculture case in Storsjön, i.e. there seems to be reason to believe that one water body includes additional, smaller ecosystems that could have been visible to the WFD system if the water body had been defined differently.

[917] *Hov*R *M 10773-16 Aquaculture in Landösjön* (Land and Environment Court of Appeal).
[918] *Hov*R *M 6882-15 Filborna Cogeneration Plant* (Land and Environment Court of Appeal).

11.4 Small water bodies

11.4.1 Smögenlax

Three of the examined cases clearly concerned smaller water bodies, where there was little discussion concerning the spreading of pollutants to larger water bodies. The first case concerns a ruling from the spring of 2019, from the LEC in Vänersborg concerning a permit application for land-based aquaculture.[919] The technology to be used in this plant is called recirculating aquaculture system (RAS). The novelty of RAS is that the water recirculates and the waste products, *inter alia*, nutrients, are captured and can be transported to water cleaning facilities for digestion.[920] This leads to substantively reduced emissions to the recipient in relation to traditional open net pens. The operations applied for in this case would have been placed on two different properties but have a common emission point. In total, the applicants wanted to use a maximum of 6,500 tons of fodder per year. The emissions would amount to 17,800kg of nitrogen and 3,400kg of phosphorous per year. This can be compared to the application for open net pens in Storsjön, where the applicant wanted to use 1,100 tons of fodder per year, which would result in emissions of 37,000kg of nitrogen and 4,300kg of phosphorous. The production in the RAS would thus have been approximately six times higher than in the open net pens, while emitting less than half of the nitrogen and just over three quarters of the phosphorous.

The water body that was the intended recipient of the Smögenlax operations is relatively small, 6km². The court concluded that the emissions of nitrogen to the water body would increase by 50 percent in comparison with the presently allowed emissions. For phosphorous, the increase would be four times the present level of emissions. The court also mentioned the Värö Bruk case[921] and stated that the biggest difference was that Värö Bruk would emit into a large water body and that although the emissions were large, they only constituted a small part of the total amount of emissions into the water body. In the Smögenlax case, the water body was relatively small and the emissions would comprise a substantial part of the total amount of emissions. The water body in the case is located in coastal waters and the main adjacent water body covers an area of 233km². However, the water

[919] *M 4421-17 Smögenlax* (Land and Environment Court in Vänersborg).
[920] Smögelax Aquaculture AB, *Samrådsunderlag, tillstånd för landbaserad fiskodling, Sotenäs kommun* (2017), p 42.
[921] HovR M 8984-15 Värö Bruk (Land and Environment Court of Appeal).

exchange between the areas does not seem to be large enough for the emissions to spread. The case has been appealed and is being decided by LECA at the time of writing.

11.4.2 Billinge Fälad Kaolin extraction

The case concerned an application to open a kaolin extraction quarry in the south of Sweden.[922] Kaolin is used, *inter alia*, in the paper industry and the Swedish state has been prospecting for kaolin since the end of the 1970s. For this particular area, the applicant had, in different organizational forms, applied for extraction permits twice before: the first time the application was denied on material terms; the second on procedural terms. The current application concerned the extraction of up to 1,000,000 tons of raw mineral per year in an area that would cover 78 hectares. The waste water from the process would end up in a stream called Rönne å. The recipient was a water body that was defined as a part of the stream, with the length of 4km. The LEC considered the operation permissible, as the dilution downstream would ensure that the water quality did not deteriorate further. However, the LECA concluded that the current status of the water body was moderate and that further inflow of phosphorous would endanger the achievement of good ecological status by 2027. The application was thus denied.

11.4.3 Henriksdal water treatment plant

Henriksdal water treatment plant is situated in Stockholm. As a part of a restructuring of the city's water treatment, another plant was being shut down and the water application concerned leading the water to Henriksdal to be treated there.[923] A new cleaning technology would be installed in the Henriksdal water treatment plant, enabling it to meet the increasing pressure from the expected population growth over the coming years. The recipient for the emissions from the plant was a water body called Strömmen that covers an area of 4km^2. In addition, there were two other relatively small water bodies that would be affected by the emissions. The LEC approved the application and did not want to impose restrictions on how much phosphorous could be emitted into the recipient as this could hamper the plans to connect other plants to Henriksdal in the future. The LECA, on the other hand, did not see this as a sufficient argument to not impose restrictions. Nor did the LECA consider 6 million SEK per year to be too large a cost to ensure that the EQS of the recipient water bodies did not deteriorate. In contrast to the previous two cases, the application was approved. Nevertheless, the motives of the LECA ruling shows that the quality of the individual water bodies carries considerable weight and that other interests, such as the possibility to connect other plants and in that way secure environmental benefits in other places, were not considered a relevant factor in relation to the EQS.

11.5 Non-classified recipients

All the cases presented above concern recipients that have been defined as water bodies as a part of the implementation of the WFD. Furthermore, they have all been assigned an EQS. The following review concerns cases in which there were more uncertainties in relation to the EQS and the water body. In two of them, the recipient was not defined as a water body, and in the third, the EQS was expected to be amended in the next revision of the programs of measures. These uncertainties all had a bearing on the outcome of the case.

The first case concerned a permit application for the expansion of Landvetter airport, close to Gothenburg.[924] One aspect that was discussed in the process was stormwater cleaning and emissions. The LEC concluded that the stormwater would be discharged from a number of emission points and that the situation was relatively complex. However, the main recipient would be a small stream, approximately 4km long, that was only preliminarily classified as a water body. The capacity of the cleaning system for stormwater was not entirely clarified and the recipient was considered to be sensitive. As there was no determined EQS for the recipient, the court did not seem to have any concrete arguments for how the permit should be conditioned, and did not refer to the Weser case. In the LECA motives, the court concluded that the applicant had presented data showing that they had previously encountered difficulties staying within the previously determined emission limits decided by the LEC. Thus, the court found it reasonable to set the limits for phosphorous and nitrogen in the stormwater emissions to higher levels than those set by LEC. Again, the court argued concerning the

[922] *Hov*R *M 10717-17 Billinge Fälad Kaolin Extraction* (Land and Environment Court of Appeal).
[923] *Hov*R *M 316-18 Henriksdal Watertreatment Plant* (Land and Environment Court of Appeal).
[924] *Hov*R *M 5962-15 Landvetter Airport* (Land and Environment Court of Appeal).

sensitivity of the recipient, but it seems as if the absence of clear EQS made it more difficult to set stricter conditions for the permit.

The second case is a decision from the EPD of Västra Götaland.[925] The application concerned a renewal of a permit for a waste water treatment plant in Skövde. The emission point was located in a recipient that was not classified as a water body; however, there were three water bodies downstream that would be affected. The EPD argued that it would have been favorable to move the emission point to a larger recipient with better ability to handle the emissions. However, the only feasible options were not suitable as the emissions would only cause more concentrated harm there, and if the applicant could ensure that no further nutrients, compared to the current situation, would be introduced, the emission point was permissible. In this case it was clear that the EPD used the surrounding water bodies for the more concrete determination of whether the application could be approved or not, with the main recipient being less of a focal point in the motives.

The third case where there were uncertainties concerning the water body or an EQS was another decision from the EPD of Västra Götaland.[926] Again, the permit application concerned a waste water treatment plant. However, this time the recipient was a stream that was classified as a water body. The stream was 12km long and the plant was already emitting into it. The application concerned a time-limited permit for expansion of the emissions from the plant, as a response to population growth. The long-term aim was to dismantle the plant and lead the water to a larger facility in nearby Gothenburg. The EPD concluded that the EQS was set to good status by 2021. However, the EPD foresaw that the EQS would not be reached and that the coming re-classification of the EQS would lead to a setting of good status by 2027, with the water treatment plant being identified as a source of pollution affecting the quality status. This would make room for the plant, as the permit that was applied for would only be valid until 2025. After this point, the plant would be dismantled, leaving room for the water body to recover until 2027. Based on this assumption, the EPD approved the application. The importance of this decision is that it shows how the time scale affects decision-making, highlighting the importance of discussing what constitutes an appropriate temporal scale in ecosystem management.

[925] *551-18986-2014 Stadskvarn Sewage Water Treatment Plant* (Environmental Permit Delegation of Västra Götaland).
[926] *551-37310-2017 Bollebygd Sewage Water Treatment Plant* (Environmental Permit Delegation of Västra Götaland).

12 Discussion – Scale of management

12.1 Theoretical reading of the cases

The following discussion will place the reviewed cases in the frame of the methodological discussion that has been a running theme throughout this book. The analysis will thus be divided into the three categories of *scale, projection,* and *symbolization.* The *scale* is that of the water body. Through the examined cases, it is possible to see what processes and emissions are seen as important or non-important on different scales, emphasizing the need to consider these aspects thoroughly in the design of the legal system. The analysis of *projection* highlights the aspects of the cases that are determined to be relevant according to the WFD logic, and how this affects the decisions in the individual cases. Finally, *symbolization* comprises an analysis of how the technical scientific language and focus of the WFD legitimizes the scale and projection while turning a blind eye to, *inter alia*, softer, social concerns.

12.2 Scale

As seen in the review of case law, the water body scale is not fixed. The geographical span in the cases above reaches from a 4km long stream to a 456km^2 large lake. The cases illustrate the production of ecosystem scale within the WFD system. Although based on scientific knowledge, the WFD system results in differences in ecosystem definitions that have unforeseen effects further down the line. In terms of temporal scale, the WFD is more stringent, with three future-oriented timeframes within which a water body needs to have reached good ecological status. However, as the first time limit, 2015, has passed, there are only two relevant timeframes remaining: 2021 and 2027.[927]

The WFD entailed a rescaling of water governance in the EU, both geographically and temporally. The introduction of the Directive meant a move from traditional management to a river basin approach. This move had

[927] 2000/60/EC 2000, arts 4(4) and 13(7).

great aspirations for freshwater management. Yet, studying the case law that followed, it seems as if the rescaling did not have the desired effects. Rather than looking at entire river basins, the implementation of the WFD has created a mosaic of smaller units in the form of water bodies. The management system currently fails to take seriously the factors that bind these units together.

The bearing that the geographical scale of a water body has in the cases reviewed above is obvious. The larger water bodies have the capacity to carry heavier loads of nutrients than the smaller ones. While this may not be a surprising result in itself, it raises questions about how a water body is defined. The definition of a surface water body found in the Directive states that it should be a "discrete and significant element of surface water".[928] Nevertheless, some of the cases pinpoint the challenges in identifying appropriately sized (or scaled) water bodies. In the aquaculture case in Storsjön,[929] the court indicated that if the water body had been defined as only the southern part of the lake, the outcome may have been different. As for the cogeneration plant in Helsingborg,[930] the CAB considered one part of the water body to be of interest for fisheries, but the court did not view this as a cause for moving the emission point as the suggested new point was in the same water body. The emissions would thus affect the water quality to the same degree. In the case concerning a hazardous waste installation in Malmö,[931] the affected water body was considered together with the adjacent body. Even though emissions would entail some adverse effects on the water quality, this was only in a small part of the smaller water body and thus no EQS would be affected.

In all of these cases, the water bodies have been defined based on the criteria set forth in the Directive. Still, there could be reason to question the delimitations, as the water quality in parts will deteriorate. Had the scale of the ecosystem been predetermined differently in these cases, the operations may not have been permissible. The same can be said for the Värö Bruk case.[932] Although the size of the water body was not questioned, it was clear that even large pollution sources were allowable. In that sense, the case makes for a good example of how scale matters.

[928] Ibid, art 2(10).
[929] HovR M 8374-15 Aquaculture in Storsjön (Land and Environment Court of Appeal).
[930] HovR M 6882-15 Filborna Cogeneration Plant (Land and Environment Court of Appeal).
[931] HovR M 2788-17 SYSAV Hazardous Waste Installation (Land and Environment Court of Appeal).
[932] HovR M 8984-15 Värö Bruk (Land and Environment Court of Appeal).

As for the smaller water bodies, both the Smögenlax case[933] and the Kaolin extraction case[934] illustrate how the smaller water body scale affects decision-making. In these cases, it was less clear that there could have been other ways of defining the water bodies. However, the size was the determining factor in the cases. Finally, by adjusting temporal scale it was possible to approve the permit for the water treatment plant in Västra Götaland even though it would adversely affect the status of the water body in a short-term perspective.

In terms of scale, the aim of the WFD is that the EQS shall be related to the entire river basin district and to the programs of measures. However, as has been previously pointed out, this does not seem to be how the Directive has been implemented in practice in most places. This is, perhaps unconsciously, noted by the LECA in a case where the derogation regime in article 4(7) of the WFD is applied in a Swedish context. The case concerned the possibility of draining additional water from a dam in response to increased water flows in a stream.[935] The operations would also include dredging in parts of a stream and a lake. The court concluded that the operations would affect the morphological status of the water body. This would adversely affect the preconditions to maintain good ecological status. Consequently, the court applied all of the criteria from article 4(7) of the WFD and deemed it possible to admit an exemption from the EQS in this case. One of the criteria to allow derogation is that the reasons for the modifications are specifically set out and explained in the river basin management plan.[936] Tthe court concluded that it was up to the water authority to explain, in the river basin management plan, why the exemptions were motivated. The management plan did not include such a motivation when the case was adjudicated; rather it had to be added to the plan post fact. For certain operations this procedure may be reasonable, as it may not be possible to foresee all necessary interventions in a river basin. However, the application in the case at hand concerned measures needed to prevent future flooding. This is a need that could well have been foreseen when the management plan was adopted. This wording by the court further strengthens the view that the WFD has been implemented with the water body as the

[933] M 4421-17 Smögenlax (Land and Environment Court in Vänersborg).
[934] HovR M 10717-17 Billinge Fälad Kaolin Extraction (Land and Environment Court of Appeal).
[935] *HovR M 5186-17 Stålloppet* (Land and Environment Court of Appeal).
[936] 2000/60/EC 2000.

central scale, with the river basin management plans being of secondary importance. A river basin management plan would be considered to operate in the structural layer of law, as it is a plan that is supposed to inform the setting of EQS and consequently also affect the outcomes of permit processes in the operational layer of law. When the provisions of the Directive are applied in the way they were in the cases presented above, it indicates a failure in the structural layer of law. Instead of providing information to the decision layer, the structural layer is informed by the permit decision, and information has to be added to the plan as a consequence of the case, rather than the other way around.

12.3 Projection

In the first case study, the municipal planning of coastal waters showed clear trends of emphasizing local interests, while national objectives were included to a lesser extent. In terms of projection, municipal interests were placed at the center, while regional and national interests were more peripheral. When it comes to the projection in water management, the aim of the WFD is that management should depart from river basins. However, in the individual cases it is the recipient water body and the EQS that are highlighted. In a few of the cases, the adjacent water bodies were considered relevant too. This could be compared to the regional projection that was sometimes visible in the municipal planning. Such a projection widens the center so that it encompasses more than just the local, but it still fails to include processes that are only visible on the river basin, or national, scale.

In addition to the treatment of adjacent water bodies, there are other interests, of a less geographical character, that are affected by the projection. The WFD gives the water quality such a central role in the system that societal interests can only be taken into account in certain specified cases, laid out in article 4(7) of the Directive. There are two criteria for such interests to be taken into account. They need to be of overriding public interest, and/or they should outweigh the objectives of the WFD. The second criterion only applies as long as the interests at hand concern human health, maintenance of human safety, or sustainable development.[937] Sustainable development, or human health and safety issues, could be considered relatively broad and generous grounds for exemption. Nevertheless, the application by the ECJ

[937] Ibid, art 4(7)(c).

indicates that for such exemptions to be applicable, a thorough examination of the benefits in relation to the negative effects needs to be performed.[938]

In the Smögenlax case,[939] the application concerned a type of aquaculture that was more or less revolutionary for the industry in Sweden. The production possibilities greatly exceeded the open net pens system that had been traditionally used (and which the LECA in a number of cases has considered to probably not constitute the best available technology). It could be argued that authorizing the RAS plant could potentially relieve pressure from other areas. The plant could produce much more fish with fewer emissions, and possibly make even semi-closed pens considered to not constitute the best available technology. In the long run, this could benefit sustainable development. However, such an argument has at best a peripheral standing in relation to the WFD, as it has little to do with the affected water body. This was also shown in the motives of the Smögenlax case, where the exemptions were not mentioned as a possibility.

As for the kaolin extraction,[940] the applicant argued that kaolin was an important raw material for the pulp industry in Sweden. The country had been dependent on the import of kaolin for many years. For this reason, the government had initiated prospecting for kaolin already in the 1970s. There were thus strong arguments for allowing the extraction, including making Sweden less dependent on imports. This would have been positive from an economic perspective as well as likely having positive environmental effects in the long run. Nevertheless, these are not aspects that can be included in the considerations concerning water quality under the WFD. Thus, the application was declined.

In the cases concerning aquaculture in open net pens, it was clear that the operations would contribute with substantial amounts of nutrients in the recipient water bodies.[941] Yet, within the WFD system, there were no possibilities for the courts to refuse the applications. The emissions would occur in such large water bodies that the EQS would not be affected. In these cases, the court found ways of conditioning the applications quite heavily, but this was on the basis of other legislation, not the main piece of legislation governing water quality in the EU, the WFD. The reasons for conditioning

[938] See *Case C-346/14, Comission v Republic of Austria* (Schwarze Sulm).
[939] M 4421-17 Smögenlax (Land and Environment Court in Vänersborg).
[940] HovR M 10717-17 Billinge Fälad Kaolin Extraction (Land and Environment Court of Appeal).
[941] HovR M 8374-15 Aquaculture in Storsjön (Land and Environment Court of Appeal), HovR M 10773-16 Aquaculture in Landösjön (Land and Environment Court of Appeal).

the permits were that open net pens could not be considered the best available technology, and that the location of the plant was questionable. These reasons were considered to follow not from the implementation of the WFD, but rather from other provisions in the SEC. Thus, the projection of the WFD, with a focus on water bodies, clearly pushes some issues to the periphery. Such issues, from a more integrated perspective, could just as well have been considered central for the cases from a WFD point of view.

12.4 Symbolization

Symbolization can take many shapes and forms. In the planning of coastal areas, the symbolization could be seen in the way municipalities motivated decisions concerning the development, or conservation, of the coastal zone. Within the WFD system, symbolization is seen most clearly in the motives of the court decisions in permit processes. As with the scale, there are different types of symbolization within the WFD: the overarching, river basin symbolization, and the more local, water body symbolization. De Sousa Santos claims that symbolization is conditioned by the scale and projection.[942] This becomes obvious in the case law presented above. As the main scale when assessing an operation is that of the water body, the symbolization is also highly local, focusing mainly on EQS. The language is technical and scientific, giving it a neutral and objective frame. The EQS are the main symbols, and as long as they do not deteriorate, any operation is permissible. This results in cases where, when it comes to water quality, almost the entire focus is on nutrient loads, and to some extent hydro-morphological flows. Of course, these aspects of water quality are important. But as shown above, the water body scale and the projection are also consequences of social choices. The water quality assessment is contingent on these choices. Such choices could have been different; the scale and the projection could have been different. This in turn would have led to other interests being deemed relevant. The technical symbolization of the Directive legitimizes the scale and the projection by placing them in a seemingly neutral, natural science discourse. This is a language and logic that has been transformed into law through the legislative process. Through the use of these scientific concepts, the objectivity of the Directive is difficult to challenge. Of course, this is a

[942] De Sousa Santos (1987), p 295.

reciprocal system where the scale and projection inform the symbolization. It is the interplay between these three functions that creates the system.

The EQS, the main aspect of the scientific symbolization, is however based on human choices. It is society that decides what constitutes a desirable state of an ecosystem.[943] Within the WFD system, the desirable state is comprised of the reference conditions where there is minimal human impact on the water body. This can be referred to as an "undisturbed state", which is a criterion for high ecological status.[944] The reference conditions must be carefully established, as they become the "anchor for classification systems".[945] These reference conditions have been criticized in the literature from a number of perspectives. One such criticism is that historical data tends to be poor and that reference conditions can be influenced by current legal, scientific, and social conceptions.[946] Furthermore, voices have been raised claiming that the reference conditions and good ecological status are soft tools that can be adjusted to fit certain purposes.[947] Perhaps the most prominent criticism, however, is that there can be no *single* natural, undisturbed state. Ecosystems constantly change, and anthropogenic factors have been affecting aquatic ecosystems for such a long time that it is impossible to distinguish a natural change from a human-induced change.[948] This criticism has been met by claims that the reference conditions should not be understood as templates. Rather, they function as facilitators for the assessment of water quality.[949] Nevertheless, the point to be made here is that the reference conditions, on which the EQS are based, are not as clear-cut and scientifically stable as it may seem at first sight. By using a technical and scientific symbolization, other interests are easily excluded,[950] and can only be

[943] See Patrick Steyaert and Guillaume Ollivier, *The European Water Framework Directive: how ecological assumptions frame technical and social change* 12 Ecology and Society (2007).
[944] 2000/60/EC 2000, Annex V.
[945] Common Implementation Strategy for the Water Framework Directive (2000/60/EC) Guidance Document No 5, (2003), p 27.
[946] Langlet (2018), p 282.
[947] Kungliga Skogs- och Lantbruksakademien (KSLA), *Water Framework Directive — WFD Implementation in a European perspective* 145 Kungl Skogs- och Lantbruksakademiens Tidskrift (2006), p 40.
[948] Josefsson (2012), p 45; Gabrielle Bouleau and Didier Pont, *Did you say reference conditions? Ecological and socio-economic perspectives on the European Water Framework Directive* 47 Environmental Science and Policy 32 (2015), p 38; Simon Dufour and Hervé Piégay, *From the myth of a lost paradise to targeted river restoration: forget natural references and focus on human benefits* 25 River Research and Applications 568 (2009) p 569.
[949] Voulvoulis, Arpon and Giakoumis (2017), p 363.
[950] This is an issue that has been more widely discussed in fisheries research, that focus on scientifically determined catch limits often tends to ignore the important social aspects of

regarded under the specific derogation regime set out in article 4(7) of the Directive.

Finally, the river basin approach seems to be lost in this type of symbolization. Instead, individual EQS become the essential criterion for evaluating the impact of specific activities. Through a more integrated and holistic river basin approach, the symbolization could have been different. Such a symbolization would need to include more social aspects and perhaps unpack the formalistic, scientific language and understanding of nature that is currently prevalent. Applying such an approach would also be more consistent with the spirit of the directive. This does not seem to be a possibility in the eyes of the Swedish courts, as the WFD is applied at present. In the concluding Part IV, I will elaborate the discussion on how the overarching holistic management ideals could be included in water management.

12.5 Conclusions – Scale of management

The review of the implementation of the WFD has shown how the scale of the water body highlights certain ecological elements, while at the same time ignoring other ecological and social elements alike. The WFD has often been described as a revolutionary and innovative piece of legislation, based on natural rather than human conditions. In certain respects, it is. Few pieces of environmental law have had such a major impact on permit processes. Since the Weser case, the courts, at least in the Swedish system, have been forced to take the EQS seriously and ensure that there is no deterioration from the set norms. This is a type of environmental legislation that is needed, where nature is placed at the center of attention, and where the natural conditions are the deciding factors for human activities. Nevertheless, there is a need to also evaluate apparently functioning pieces of environmental legislation. As discussed in the introductory chapters, today's environmental research is focused around the idea of adaptivity, that management needs to be conscious of the ever-changing conditions in nature, and prepared to adapt to the specific conditions of different places.[951] The adaptivity of the WFD is

fisheries. See Robert L. Stephenson and others, *Evaluating and implementing social–ecological systems: a comprehensive approach to sustainable fisheries* 19 Fish and Fisheries 853 (2018), p 869.

[951] See section 2.2, and *inter alia*: Froukje Maria Platjouw and Niko Soininen, *Special section: reconciling the rule of law with adaptive regulation of marine ecosystems (guest editors: Froukje Maria Platjouw & Niko Soininen)* 110 Marine Policy (2019)

formulated *inter alia* through the revision periods for the river basin management plans stipulated in the Directive.[952] Yet, it is questionable if it could be said to constitute an adaptive management regime. The time in-between the revisions is characterized by strict EQS that can only be subject to derogation under specific conditions that are rarely met. When the system functions in this way, it is of great importance that the EQS include as many aspects of the social-ecological system as possible.[953]

The aim of this part of the book has been to show how the focus on water bodies affect management. In the concluding chapter, these discussions will be further connected to the discussion of how the legal system needs to be amended to better fit an adaptive management regime. Primarily, this relates to the different layers of law, presented in section 2.3. The conclusions of this case study are focused on answering the second research question, namely how the physical delimitation of water bodies, and setting of EQS, affect outcomes in permit processes.

The typology of the WFD has been questioned by, *inter alia*, Josefsson and Baaner, who claim that the typology is too crude and that it is not able to take in differences between seemingly similar water bodies.[954] This criticism is closely related to that presented above. If the typology is flawed, there is all the more reason to shift the focus from the EQS of individual water bodies to a more integrated approach. Granted, this was the purpose of the Directive: to begin at the river basin scale and move down to the water bodies. Nevertheless, as it has developed over time, the water body scale has become the ruling scale of the Directive. This hampers the adaptive aspirations of the WFD. In addition, it is not in line with modern conceptions of how environmental law should function. As pointed out in section 12.2, too much focus on the water body scale inevitably leads to the structural layer having to adapt post fact to rulings in the operational layer, rather than the other way around. For adaptive law to be functional, the structural layer, through *inter alia* river basin management plans, needs to inform all decisions in the operational layer; that is the best way to ensure both adaptivity and predictability.

[952] 2000/60/EC 2000, art 13(7).

[953] The importance of quality standards within environmental law, and how they are formulated in terms of obligations and when they should be applicable has been pointed out also by van Rijswick and Backes (2015), p 377.

[954] Josefsson and Baaner (2011), p 469.

The aim has not been to criticize the WFD in its entirety. It is an impressive directive in that it has imposed strict limitations on activities affecting the status of water bodies. Nevertheless, the scientific symbolization, paired with the scale and projection of the Directive fails to acknowledge aspects that may be of importance for a more general sustainable natural resource management practice.

In land use planning and marine planning, social knowledge and stakeholder involvement are central.[955] These are features that resonate well with river basin management, as the aim is to adopt an integrated and overarching approach in resource management. There are provisions in the WFD that pertain to consultation,[956] but the type of knowledge used in the formulation of EQS is strictly scientific. To widen the scope of the Directive, the concept of EQS could be broadened to also include social aspects, a type of social EQS. This would be well in line with both the ecosystem approach and resilience theory.[957] Through such an approach, the application of the Directive would lead to a less fragmented mosaic of water bodies and move towards the integrated approach. This is also in line with the spirit of the Directive. The innovation, with a rescaling of governance to the river basin scale, needs to be complemented by modern understandings of how social and ecological systems are interlinked and connected.[958]

A development of the EQS, to include social aspects as well, would allow for the legal regime of water management to adapt to more of the complexities of the human-nature interplay than is currently possible. The example of the application for a RAS aquaculture plant on the west coast of Sweden highlights the limitations of the current system. From the current point of view of the Directive, where the EQS of the individual water body is the ruling factor, the outcome of the case is natural. However, the plant that was applied for was a novelty in aquaculture and held a promise to push the entire sector towards more sustainable production methods. The current methods of production lead to high emissions for limited output. Fish stocks

[955] See chapter 5.
[956] 2000/60/EC 2000, art
[957] See Michael Gilek, Fred Saunders and Ignė Stalmokaitė, *The ecosystem approach and sustainable development in Baltic Sea marine spatial planning: the social pillar, a "slow train coming"* in David Langlet and Rosemary Rayfuse (eds), *The ecosystem approach in ocean planning and governance: perspectives from Europe and beyond* (Brill | Nijhoff 2018), p 189, on inclusion of social aspects in MSP and the application of a 'Socio-cultural Approach' to address issues of participation and knowledge pluralism.
[958] See chapter 2.

around the world are being depleted, but demand for fish is consistently high. There is a need to be able to meet this demand without impacting too heavily on already sensitive ecosystems. A truly adaptive system would be able to include such factors among its considerations, broadening the scope of the EQS. Through such an approach, the complexities and interconnectedness of the human and natural systems would be accounted for in a more comprehensive manner in the WFD.

While these propositions to develop a social EQS are meant to hold a promise for a more sustainable use of complex systems, there is a need to raise some concerns as well. Few pieces of environmental legislation have had the same level of impact as the WFD in Europe. Although the exemptions are being applied as much as possible in Sweden, the EQS are being applied as well. This limits operations that may endanger the attainment of good ecological status in individual water bodies. These limitations can be attributed to the fact that the exemptions to the Directive are highly limited and that there are few possibilities to weigh human interests in the considerations. An issue with many environmental regulations is that there are wide margins for consideration, where the idea of sustainable development encompasses both economic growth and ecological values. To introduce such considerations into the WFD would risk undermining the strict application that is now the principal reason for the relative success of the Directive.[959] In the concluding chapter, these challenges and some ideas as to potential solutions are discussed in the wider frame of this book.

[959] See Kees Bastmeijer, in *The Ecosystem Approach for the Marine Environment and the Position of Humans: Lessons from the EU Natura 2000 Regime* (Brill | Nijhoff 2018) for a discussion on challenges with including economic interests in environmental legislation, specifically the EU Nature directives.

Part IV – Conclusions and Future Inquiries

13 Main findings

13.1 Designing the structural layer of law

This book took as its point of departure the challenges in designing comprehensive systems for the management of marine and water resources. Two central concepts here are the ecosystem approach and adaptive management. As discussed in section 2.4, the ecosystem approach is a complex concept and this book has not engaged with every aspect of it. Some of the main points of the book have been related to appropriate level and scale of ecosystem management, as well as to the recognition that change is inevitable in ecosystems. The introduction of the concept of social EQS also recognizes the social aspects of the ecosystem approach, and connects this work to resilience theory and earth system governance. In the opening chapters of the book, a new way of understanding the adaptive capacities of legal systems was introduced. The main point here is that law needs to be seen as a layered system, where *inter alia* planning legislation is part of a structural layer, which can inform decisions in a more concrete, operational layer. The legal acts of the structural layer need to be informed by an understanding of the world as complex and interconnected. The plans that result from the legal processes need to be subjected to cyclical reviews in order to adapt to changing conditions. The operational layer needs to cater to foundational legal principles, such as the rule of law and predictability. This book has studied two different natural resource management systems in the structural layer of law: marine and coastal planning, and freshwater management. In the following sections, these systems will be discussed in the light of how their design allows, or does not allow, for the complexity of nature to be taken into account. Finally, the two systems are discussed in terms of their shortcomings, and how they could be amended to better create possibilities for a functional adaptive management regime.

The difficulties of subsuming complex natural systems in human administrative institutions are well-known.[960] The notion that global problems cannot find their solutions on a single scale or level has been discussed in the scientific literature for many years.[961] This book shows that when designing systems that aim to govern complex ecosystems, the choices in spatial and temporal scale, as well as level of management, need to be explicit. Every spatial or temporal scale will inevitably entail certain perspectives of management. In these perspectives, some interests and processes become central, while others become peripheral. The same holds true for administrative levels of management. These perspectives need to be studied and understood in order to understand how the regulatory system will perform in terms of outcomes. Which challenges/processes will become visible and which will be neglected? By applying the framework of de Sousa Santos in the analysis, the perspectives within the current Swedish marine and coastal planning and water management systems have become visible. The findings clearly demonstrate the problems with the notion that the management of ecosystems can be functionally divided between levels of management or between ecosystems themselves. As much of the literature on scale shows, there are a number of scales operating simultaneously within any given area.[962] In a municipality, the scales of resource management are highly detailed and localized. But to understand the processes and how these local ecosystems function, they need to be placed in a broader context. In this sense, local scale ecosystem management can never be functionally separated from the national or even global scales. Every attempt to divide scales into separate entities entails simplifications of this complex system, and as such, they lead to sacrifices. While human administrative systems, by necessity, have to simplify nature, management systems still need to be designed in a way that acknowledges and comprehends this complexity.

The following section of the conclusions will discuss the main findings of the first case study, which concerned the Swedish MSP system, and how the planning of the marine environment is divided between municipalities and the central government. This will be followed by a section focusing on the second case study, concerning water management and ecosystem scales. In

[960] See Oran R. Young and others, *Solving the crisis in ocean governance: place-based management of marine ecosystems* 49 Environment: Science and Policy for Sustainable Development 20 (2007); Maltby (2000); Szaro, Sexton and Malone (1998).
[961] See Dietz, Ostrom and Stern (2003).
[962] See section 3.2.

two concluding sections, general conclusions are drawn from the two case studies. These conclusions provide the foundation for future inquiries into how these complex issues can be tackled from a legal perspective.

13.2 Marine and coastal planning – level

The first case study comprised an analysis of the legal framework governing municipal planning, paired with planning material and interviews with planners. The study showed that the municipal level of planning entails a number of specific, often local, perspectives, where local interests are promoted in favor of other, overarching, objectives. To understand the dominant perspectives of municipal planning, it is important to have an understanding of the legal framework governing municipal decision-making. The study shows that one central principle for municipalities to relate to in all decision-making is the location principle. The location principle stipulates that a municipality shall decide on matters of public interest that have a connection to the area of the municipality, the region, or the members of these areas. This indicates a highly localized form of decision-making, where few external interests can be accounted for. Nevertheless, the planning legislation widens the scope of municipal decision-making. The PBA opens up for matters that concern sustainable land use, and this includes taking future generations into account. Such matters can go beyond the interests of the members of individual municipalities, as sustainability must be seen in a wider context. The part of the case study that consists of a doctrinal study shows that decisions shall be based on local interests. Yet, there are both mandatory requirements and voluntary possibilities to also include broader interests in the planning process.

The study of planning documents, and the interview study, showed that strengthening the attractivity was a main concern in most of the municipalities. National interests and the overarching sustainability ideals were mentioned, but focus was generally on how to develop the municipality. The interviews also indicated that the interpretation of the legal mandate for municipal planning and action, among the planners, was more constrained to local issues than the legal review gave at hand. This was most explicitly expressed by one of the respondents who claimed that it was not possible for a municipality to spend tax money in another municipality.[963] Such an

[963] Interview 1 (2017).

interpretation is contrary to the case law, where it has been deemed in accordance with the location principle to invest in operations in other municipalities.[964] The statement from the respondent illustrates a localized focus, common in both the plans and the interviews. A focus that was sometimes broadened to also include regional aspects. The national marine planning was absent in most of the municipal plans, and the respondents mainly noted that the municipalities had few interests in the area where the national and municipal plans overlapped. Thus, the national planning did not generate that much attention on the municipal level. Finally, the ecosystem approach, one of the guiding principles of the national MSP process, was hardly mentioned by any of the respondents or in any of the comprehensive plans. This finding is hardly surprising since there are no legal requirements for municipalities to apply an ecosystem approach in planning.

The reasons for municipalities to prioritize local perspectives are many: legal obligations (actual as well as perceived); political strategies; economic constraints; or formal competence, to name a few. The case study clearly shows that choosing the municipal level as the level of planning for coastal waters leads to the overarching sustainability perspectives becoming more peripheral. The national marine plans, as well as the MSPD, have the objective to create a planning based on a holistic approach to the management of the marine environment. In this system, all sectors are treated within the same framework, and guided by the ecosystem approach. However, the MSP system is hampered and will have difficulties reaching its full potential, as the coastal waters, where much of the pressures on the marine environment are located, are excluded from the planning. The municipal level is an important part of a sustainable use of the marine environment, as the knowledge of the coastal areas is most detailed here. This local level must be further integrated with the national MSP process to better take the overarching perspectives into account. As a part of the structural layer of law, the municipal planning informs decisions in permit processes, and in doing so, the plans need to be informed by a more complex understanding of the world than can be given with a strictly local or regional focus. It is beyond the scope of this book to develop a complete framework for how such integration might be achieved. But a first step could have been to let the national marine plans cover also the coastal waters. This would have ensured an increased interest from the municipalities, as it is the areas in which most of their interests are located.

[964] See section 7.2.5.

Both the MSPD and the Swedish MSP legislation proposed such integration in early drafts, but it proved politically impossible in both instances.[965] This shows that even though there is recognition of how ecosystems are interconnected and that management needs to take this into account, other factors affect the level of management chosen – factors that have little to do with either the natural environment or the ecosystem approach. Projects such as this can assist in informing decision-makers on the actual implications for management, and how choices of management level affect the rationale of ecosystem governance.

13.3 Water management – scale

The second case study concerned the Swedish fresh and coastal waters management regime. This part of the book focused on the spatial and, to some extent, temporal scales of ecosystem management. The general scientific understanding of ecosystems is that they are complex and intertwined. Still, there is a need for human administrative systems to identify and delimit specific ecosystems for management purposes. This is a way to make ecosystems legible in the eyes of the law. Increasingly, management systems are being designed to take the complexity of ecosystems into account. But it is difficult to completely move away from the identification of individual ecosystems. The WFD provides a good example of such a management regime. All European fresh waters are divided into river basin districts, which are to be managed in their entirety, through river basin management plans. To make such large districts manageable, they are further divided into water bodies. These water bodies become the functional scale of water management in the EU; this is the scale at which the quality of water is measured. Consequently, how these water bodies are delimited, and what is included in the concept of water quality, is essential for the outcome management.

The size of water bodies in Sweden varies greatly, spanning from approximately 0.003km^3 to 3,086km^3. The study showed that the definition or delimitation of individual water bodies is not necessarily a clear-cut process that can only have one outcome. In two of the cases from the LECA, the motives of the court indicate that the water bodies could have been defined differently, and that this would have led to other outcomes. The legal

[965] See sections 5.4 and 5.5.

framework has adopted a scientific language concerning water bodies and EQS. Such language conveys an image of a neutral process where the water bodies can be authoritatively defined through law, using scientific methods. The water bodies that are identified through the implementation of the WFD undoubtedly exhibit properties that make them manageable. Nevertheless, in many cases they could have been defined differently, which would have led to different considerations. Furthermore, the size of the water body matters greatly when it comes to how the emissions from an individual operation are measured. If the water body is small, small emissions can contribute to the deterioration of the quality, making the operation non-permissible. In larger water bodies, on the other hand, quite large emissions can be allowed without risking the quality status of the water body. In the Storsjön aquaculture case, it was clear that there would be quite significant effects in a part of the lake. But this did not merit any action based on the WFD legislation, since the emissions would not affect the water quality of the entire water body.[966]

The process for determining the boundaries of a water body will always suffer from flaws that relate to the fact that ecosystems are not easily divisible. By studying case law concerning these water bodies, it is possible to understand which factors are included in these processes and which are excluded from them. In this regard, the most important finding of the case study is that the technical focus on EQS causes the Directive to be blind to factors that could be just as important as the ecological quality of individual water bodies. If ecosystem and societal processes were understood on more scales than that of the water body, or river basin district for that matter, this could have great importance for the environmental considerations. The most obvious example from the case law is the Smögenlax case. In this case, the establishment of an RAS aquaculture plant could not be allowed, even though the emissions would be lower than from plants using traditional methods. Conversely, in two cases, the LECA could not deny permits on the basis of the WFD. Both concerned aquaculture plants that were using technologies that led to larger emissions and lower production output than those of a RAS plant. These permits were limited, or denied, on the basis of other legislation. This is not to say that the effects on the water body in the Smögenlax case would not have been significant. The argument only concerns what can and cannot be included in the considerations based on the WFD. The cases show how the considerations that can be made within the frame of the WFD are

[966] HovR M 8374-15 Aquaculture in Storsjön (Land and Environment Court of Appeal).

too limited. The Directive turns a blind eye to factors that are not based on scientific criteria. Below, I will return to possible ways of including broader criteria in the WFD. Through applying different scales, projections, and symbolizations, the Directive could be adjusted to better accommodate the complexity of nature. Just like municipal comprehensive plans, the river basin management plans could, and indeed should, function as sources of information in permit processes. If informed by a more complex understanding of the connection between social and ecological systems, the river basin management plans could facilitate an adaptive management: a management system in which it is not only the water quality of individual water bodies that is the decisive factor in the operational layer of law.

13.4 Conclusions – Level and scale

The two case studies were designed to answer the first and second research questions posed at the outset of the book. These questions focused on the administrative level and geography of natural resource management. The third question builds on the two first question and addresses the challenges of understanding the spatial aspects of natural resource management, and how this relates to adaptive management and the layers of law. The focus on management level and scale relates to the ecosystem approach and the Malawi principles. Each of the Malawi principles are based on a rationale, defined in the same COP decision wherein the Malawi principles are found. The principle concerning lowest appropriate level of management is based on the rationale that decentralization "may lead to greater efficiency, effectiveness and equity".[967] Such decentralization is also expected to better involve stakeholders and enhance the sense of ownership. The principle concerning appropriate scale builds on the rationale that the scales of management should be defined according to the objectives of management. When defining these objectives, managers, users, scientists, indigenous and local peoples shall be involved, and connectivity shall be promoted where necessary.[968]

While the principle concerning scale acknowledges the interactions and hierarchical nature of ecosystems, the principle concerning level seems to be based on the notion that there can be *one* level of management that is appropriate. The text contains no references to linkages between levels. There is a mention in the decision that some problems and issues may require action

[967] UNEP/CBD/COP/5/23, (2000), p 105.
[968] Ibid, p 106.

at higher levels, but this is not included in the rationale for the principle.[969] Both principles, in their wording, give the impression that there is such a thing as an appropriate level and scale of management. This book shows with clarity that an essential part of all divisions of ecosystems is integration, in terms of both level and scale. Integration, in this case, entails that the different levels and scales of management need to communicate and share information with each other. Through such communication, decisions can include processes and interests that might not be visible on certain scales or levels, but crucial in others. This relates to the concept of panarchy, which was discussed in chapter 2.

Clearly, ecosystems need to be delimited in relation to management. The complexity of nature needs to be made legible for human administrative systems. Nevertheless, the case studies show that too much focus on one scale or level leads to a neglect of processes that are not visible on that specific scale or level. As has been pointed out before, these findings are in line with much of the scientific literature on natural resource management.[970] Yet, management systems are still developed with a neglect for the interconnectedness of ecosystems. The MSPD is a clear example of this. Political considerations led to the exclusion of coastal waters from the scope of the Directive. In the process leading up to the adoption of a legislation for MSP in Sweden, it was pointed out in a government commission report that excluding the coastal waters from the scope of the law was not based on a concern for ecosystems.[971] The report further noted that administrative boundaries rarely coincide with those of ecosystems and can often be a hindrance for ecosystem management.[972] These statements highlight the need to further understand how management systems can be better designed to take the complexity of ecosystems into account. The central argument of this work is not that the exclusion of the coastal waters in the MSP system was contrary to the ecosystem approach, or that municipalities should have no part in planning. Rather, the findings herein point to both problematic and positive aspects of municipal coastal management. It is the lack of integration between the levels of management/planning that is the problem. These issues were not adequately addressed in the process of creating a system for MSP in Sweden. With regard to the WFD, the integration of ecosystem scales is a

[969] Ibid, pp 108-109.
[970] See chapter 7.
[971] SOU 2010:91, (2010), p 270.
[972] Ibid, p 275.

central aspect of the Directive. To this end, the water authorities have been created. Nevertheless, the implementation shows that focus is generally placed on the water body scale, due to the strict framework for achieving good ecological status. Through this focus, the overarching river basin perspective is lost. If the Directive is to reach its full potential, more focus needs to be placed on the planning aspects, the structural layer. At present, the plans are under-utilized. But this does not warrant a complete make-over of the system. The social aspects of water management are still underexplored in the Directive, and if these were developed and included in the river basin management plans, the EQS could be given a more complex structure. It has been pointed out earlier that there are environmental risks associated with broadening the scope of EQS with a social aspect. However, as the standards are formulated today, they represent a limited understanding of the interrelations between social and ecological systems.

This book has been preoccupied with studying aquatic natural resources in a Swedish context. But the arguments are valid in a broader context as well. In terms of the level of management, the MSP system in the Baltic Sea provides an interesting example. The states around the Baltic Sea have implemented the MSPD in different ways:[973] in Lithuania, the central government is charged with planning the entire land and water area;[974] in Finland, MSP is a local and regional responsibility;[975] and in Germany the regional states (Länder) plan the coastal waters and territorial sea, while the federal state plans the EEZ.[976] The findings show that local authorities tend to be guided by a social rationality connected to their territorial boundaries, as well as community of inhabitants. The Swedish context, with municipalities that enjoy a high level of autonomy, is different from the constitutional context in most Baltic Sea states. Nevertheless, the basic idea of a social, localized, rationality carries an explanatory value also in these states. As shown in chapters 7 and 8, the limits of the legal mandate were not the determining factor of how municipalities planned land use in their areas. Rather, it was the localized interests that governed decision-making. Such

[973] For further elaboration on this topic See Westholm (2018).
[974] European MSP Platform, *Maritime Spatial Planning Information, Lithuania* (2016) <www.msp-platform.eu/countries/lithuania> accessed 2017-03-22.
[975] European MSP Platform, *Maritime Spatial Planning Information, Finland,* (2016) <www.msp-platform.eu/countries/finland> accessed 2017-03-22.
[976] European MSP Platform, *Maritime Spatial Planning Information, Germany* (2016) <www.msp-platform.eu/countries/germany> accessed 2017-03-22.

interests can be found in any type of natural resource management regime when management is placed on the local level.

Returning to Friedmann once more, he discusses a type of rationality that he calls "material rationality".[977] The idea of material rationality builds on ideological underpinnings, and the rationality is related to explicit purposes of the planning activities. In this sense, the MSPD does not build on one specific material rationality, since it aims to ensure both sustainable use of ecosystems, but also to promote blue growth.[978] This is reflected in the transposition of the Directive in the Baltic Sea states, where half of the states have placed MSP under an environmentally focused ministry, and half under a more economically focused ministry.[979] As other researchers have observed, placing management under ministries or agencies tasked with different areas of responsibility will lead to different outcomes or objectives.[980] Or, in Friedmann's terms, they deploy different material rationalities.

In terms of the scale of management, the WFD applies in all of the EU. The book has not engaged with how the Directive has been implemented in other states. Nevertheless, the Weser case indicates a relatively strict interpretation of the Directive on the part of the ECJ. It also indicates a management where the scales of water bodies are a static and highly important aspect. The issue of scale of management, and how static management measures can be problematic, has more generally been discussed in a number of papers, concerning marine protected areas (MPAs).[981] Although relating to a different resource, and a different type of management, the findings are relevant to the WFD as well. Maxwell and others find that traditional, static MPAs do not capture how ecosystems function. While such areas are crucial, there is a need to design protective systems that take into account the mobile nature of many species. This is another way of

[977] See section 6.2.5.

[978] Here, it should be clarified that I do not believe that these two objectives are compatible. Continued growth in the marine sectors can only be discussed, and perhaps achieved, if it is clearly subordinated an overriding objective of ensuring the long-term functioning of marine ecosystems.

[979] Westholm (2018).

[980] Elizabeth M. De Santo, *Environmental justice implications of maritime spatial planning in the European Union* 35 Marine Policy 34 (2011); Björn Hassler and others, *Collective action and agency in Baltic Sea marine spatial planning: transnational policy coordination in the promotion of regional coherence* 92 Marine Policy 138 (2018), p 143.

[981] See Sara M. Maxwell and others, *Mobile protected areas for biodiversity on the high seas* 367 Science 252 (2020); Sara M. Maxwell and others, *Dynamic ocean management: defining and conceptualizing real-time management of the ocean* 58 Marine Policy 42 (2015); Autumn-Lynn Harrison and others, *The political biogeography of migratory marine predators* 2 Nature Ecology & Evolution 1571 (2018).

understanding the dynamic scale of ecosystems, where the scale needs to be mobile, in both size and location. In discussing mobile MPAs, Maxwell and others also touch on the temporal scale of management. Traditional MPA management builds on the idea of a static timescale, which is common in much nature protection. But the paper shows how changes of time scale alter the need for protection and open up the possibility for areas to be closed seasonally, rather than there being a complete ban on all activities in the area. This highlights the importance of understanding and accounting for as many aspects of scale as possible when designing natural resource management systems. In the following section, I elaborate on the idea of social EQS that was introduced in chapter 12. The concept seeks to encapsulate more scales in the management of aquatic ecosystems than is possible in the current legislation.

13.5 Towards further integration

So far, the two case studies, and assessed regimes for water management, have been discussed separately. An important finding in both of the studies is that management needs to be more integrated, both in terms of ecosystem scales and in terms of administrative levels. Both of the studies had internal perspectives, where the systems of management were studied internally in relation to themselves. However, natural resource management needs to be understood in a wider context as well. The idea with MSP is to include all sectors operating at sea or affecting the marine environment, to be able to apply a more holistic management. The same needs to be done on land, and over the land-sea divide. Water management cannot be seen in isolation, but needs to be understood in relation to agriculture, forestry, industries, and all other sectors of society. It also needs to be placed in relation to other environmental issues, such as over-fishing, climate change, and biodiversity. This has been discussed by Oran R. Young, who argues that systems need to be able to tackle additional issues that are not the primary focus of that specific governance regime. Even highly localized ecosystem processes are affected by global processes.[982]

A first step in creating such a broader understanding and placing both MSP and water management in a wider context is to better integrate the two management systems. The CABs could play an important role in the Swedish

[982] Oran R. Young, *The institutional dimensions of environmental change : fit, interplay, and scale* (Cambridge, Mass., Cambridge, Mass. : MIT Press 2002), p 64.

system. Currently, there are three administrative levels involved in the MSP and water management regimes in Sweden: national (SwAM/the central government); regional (CABs); and local (municipalities). In addition, the regional level actually consists of different levels, where there are five water authorities, three coordinating CABs for the MSP process, and 14 CABs involved in municipal coastal planning. At the time of writing, there is a proposal pending, to dismantle the five water authorities and give the responsibility for water management over to SwAM.[983] This proposal also includes giving the CABs a stronger position in relation to producing data concerning EQS. However, the social aspects are still not as prevalent as suggested in this book, with the social EQS concept. In addition, the proposal is still in the early processes of decision-making.

In terms of the different levels of planning, the national MSP level is better suited than municipal planning to understand and help inform water management on a river basin scale. This relates to the possibility of seeing and integrating overarching issues in planning. The municipalities are guided by their own social rationality, which leads to objectives that do not necessarily match the MSP or the WFD objectives. This has been called "the persistence of mismatches", insofar as institutions (public agencies) are stuck in patterns that are difficult to break.[984] This book demonstrates how this is also the case for municipalities. There are a number of reasons for municipalities to maintain a certain type of management: growth ideals, economic prosperity, attracting new inhabitants, etc. But this also highlights the need to integrate the different levels of management further, as a way of understanding and breaking path dependency.

If the national marine plans were to encompass also the coastal waters, this would open up the way for more integration, both between planning levels within the MSP system, and between freshwater and marine planning. Such integration could be relatively easy to attain, as CABs have a central role in both of these systems. All three coordinating CABs in the MSP system are water authorities in the WFD system. Such integration would also resonate well with the logic behind MSP. The basic idea with MSP is to create a system for including different regimes within one system to be able to tackle complexities.[985]

[983] SOU 2019:66, *En utvecklad vattenförvaltning*, (2019), p 581.
[984] Young (2002), pp 77-79.
[985] See chapter 5.

The case of the WFD shows that there are possibilities and clear scientific rationales for dividing the rivers into water bodies. Nevertheless, it is important to understand what is omitted from these considerations and how they lead to certain ecosystem processes being foregrounded at the expense of others. One way of addressing the complexity of these issues is to further integrate the legal systems aimed at governing natural resources.

The two cases used here provide clear examples of systems that should be interconnected. An important feature of MSP is to take land-sea interactions into account. Still, the coastal areas are excluded from the scope of the Directive, leaving the national marine plans dependent on the municipal planning to take land-based activities into account. Meanwhile, the WFD has the capacity to address operations affecting the quality of water. Water that eventually ends up in the marine environment. If the WFD was more clearly connected to, and integrated in, the MSP process, this could have positive effects for the overall management of these complex resources. A tighter connection between the two systems would also strengthen the possibility of introducing the concept of social EQS.

Connecting the two systems further would require a deepened knowledge of both marine and water planning on the municipal level. The issue of knowledge and education was raised during one of the interviews with a CAB representative. The respondent claimed that marine planning was not at all part of the curriculum in the current higher education of planners in Sweden.[986] In the government commission report on a developed water management, the same issue was raised, but in relation to water planning, namely that planners had little knowledge with regard to water issues.[987] Education is a key factor for any of the management programs to be successful. This is particularly the case if complex relations between social and ecological systems are to be accounted for in management. All of these issues need to be integrated in education from early on, so as to ensure that municipal and national planning is not contingent on the knowledge of specific individuals.

The idea behind the concept of social EQS is to carefully consider the interrelations between humans and nature. In the concluding section of Part III, the social EQS were introduced as an idea. The example raised was how the benefits of developing an RAS aquaculture plant may outweigh the

[986] Interview 17 (2019).
[987] SOU 2019:66, (2019), p 331.

benefits of achieving good ecological status in a small body of water. In times when over-fishing is threatening fish stocks around the globe, while there are no indications that the demand for fish products is likely to decline, there is a need to develop new, more sustainable ways of producing fish. These ideas are closely related to the theories on earth system governance discussed in section 2.1. Such considerations are not possible within the framework of the WFD as it exists today. The Directive fails to acknowledge the interconnectedness of natural and human systems outside the realm of water management. The issue of fish stocks could be seen as an environmental issue, rather than a social one. However, it is equally a question of human food consumption patterns that need to be understood. Similarly, the transformation of aquaculture is as much a social as an environmental issue. Broadening the concept in the direction of a social EQS would enable such considerations as well. An additional aspect of the ecosystem approach is the inclusion of stakeholders. While the WFD has some mechanisms to that end in its present system, the focus on the natural sciences makes it difficult to incorporate social concerns to any larger extent. The concept of social EQS could make the WFD more consistent with the ecosystem approach and in line with environmental research of our time.

The biggest concern in relation to the social EQS idea is that the inclusion of human considerations in the WFD would open up the way for a more lenient application of the directive, with deteriorating water quality as a result. This is an important concern. However, this book has clearly shown that it is not possible to consider environmental effects on one scale alone, or from a single perspective. Such an approach is too limited in relation to the complexity of human-nature interactions. The local scale of a water body needs to be understood in the context of being nested with every other imaginable scale of ecosystems. While the quality of water in itself is an important goal, it carries little importance if it is not understood in relation to healthy marine ecosystems, healthy fish stocks, or sustainable land use. With a comprehensive planning of both the marine and coastal waters, where the ecological quality is integrated in the planning, these issues may be easier to resolve. As things stand now, the setup of the two water management regimes is flawed, meaning that they cannot reach their full potential. This shows that the spatial aspects of ecosystem management do not benefit from being discussed in terms of appropriate scale and level, which gives the impression that there can be such a thing. Rather, the ecosystem approach should be applied, and expressed, in terms of integration and nestedness. This would

better reflect a modern understanding of ecosystems and the concept of scales.

In contrast to many of the concerns raised in earth system governance, resilience theory, and adaptive law, I do not believe that the legal system is in need of great structural changes in order to be able to cater to the complexity of social and ecological systems. On the contrary, the system in place today can be adjusted to serve all of these purposes. This book has shed light on flaws in both the marine and coastal planning and water management regimes in Sweden, and to a certain extent the rest of Europe too. But it has also pointed towards a way forward, towards a new understanding of law, which facilitates adaptive management. When law is understood as layered, it is easier to see how adaptivity and legal certainty can be ensured simultaneously. But it also sets high demands for both legislators and civil servants.

MSP, municipal planning, and water management are all areas of law that operate in the structural layer of law. For these systems to be able to inform the operational layer in a way that ensures a sustainable use of resources, they need to build on the understanding of nature and society as interconnected and complex. All of these planning systems need to expand their scope and include factors that are currently seen as peripheral or outside of their jurisdiction. This needs to be undertaken at all levels, and the cyclical reviews of plans that ensure adaptive management also need to be informed by processes and interests at other levels and scales. It is natural that every administrative level is bounded by their own material as well as social rationality. To break away from these rationalities, reforms need to be made in education as well as in law. Planners need to be given the tools from early on to think about human and natural systems as interconnected. In addition, the legal system needs to force the different management levels to cooperate and share knowledge with each other, both between countries and within countries, at sea, on land, and over the land-sea divide. Of course, any outcomes of management will be contingent on the overall objectives or preferences of those deciding on which measures to take. Nevertheless, if the complexity of natural and social systems is not understood, the choice of objectives will not matter, since the outcomes will still suffer from shortcomings. To return to de Sousa Santos' map metaphor: it is not a question of which map to use, but rather how to use different maps together. The different scales, projections, and symbolizations need to be understood as interconnected. Only then can the complexity of natural and social systems become visible in management.

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