

Towards Sustainable Seas: Lessons for Successful Stakeholder Participation in Marine Spatial Planning

A comparative analyses of two case studies of stakeholder participation as part of marine spatial planning for the integrated managements plans of the Voordelta (Netherlands) and the Barents Sea—Lofoten area (Norway)

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EXECUTIVE SUMMARY

Marine areas face several challenges: while high pressure is already imposed on marine ecosystems, traditional and new uses of seas increase continuously. Traditional, top-down, single sector approaches were often not able to find sustainable solutions able to preserve ecosystems benefits in the long-term. Marine spatial planning is a widely applied instrument for dealing with the challenges in order to lead to more sustainable development [EC 2012B]. Stakeholder participation forms a key to marine spatial planning processes and is handled as an approach to enhance sustainable development. However, there is uncertainty regarding the conditions that have to be met to realize its potential.

This research aims to fill in this knowledge gap and to do recommendations for enhancing the degree to which stakeholder participation contributes to sustainable marine spatial planning.

The research aim is approached by assessing the theoretical background of stakeholder participation in order to identify success conditions, and applying those to two case studies of applied marine spatial planning situated in Europe. The analysis focusses on fishing and nature protection interests.

The research aim leads to the following main research question:

Under which conditions can stakeholder participation contribute to a more sustainable marine spatial planning?

The theoretical framework is two-staged. First, the notion of successful outcome is defined. In this context, success refers to an outcome contributing to sustainable development by balancing environmental, economic and social interests as well as creating a feeling of ownership among the participants. Second, success conditions for stakeholder participation producing such an outcome are identified on the basis of literature. The sub-question to be answered is:

S1: Which conditions are identified in the literature that could enhance the success of stakeholder participation?

The case study approach was chosen to secure the practicability of the recommendations and to facilitate a thorough understanding of the conditions by learning from the participants. Thus, relevant authorities and stakeholders with fishing and nature protection interests were interviewed. The selection of the Norwegian (Barents Sea—Lofoten area) and Dutch (Voordelta) cases is based on the fact that they both play a pioneering role in applying marine spatial planning. The evaluation of the case studies is two-fold: first the success of the outcome is assessed; second, the success conditions are evaluated regarding their fulfilment and relevance for the outcome. Valuable recommendations are identified by refining success conditions from the literature by means of analysing them in these two cases of best practice. The following sub-questions are addressed for each of the two cases:

S2: To what degree has the outcome be successful?

S3: How is stakeholder participation implemented?

S4: Which conditions explain the degree of success of the stakeholder participation process?

In order to answer these questions, an overview of the national context and of the process towards the integrated management plans is given. Subsequently, the content of the management plan is described and the outcome for fishing and nature protection interests is analysed to assess if the

process was successful. Finally, the compliance to the success conditions that have been identified from the literature is analysed and their influence on the degree of success is explained.

As a last step, a comparison between the case studies provides further insights into the value of the success conditions:

S5: What are the differences and similarities between the two cases?

The research produced the following results.

In the Voordelta, there is a rather high degree of stakeholder participation. Major efforts were made to realize active participation. The outcome was successful to a quite high degree, in terms of sustainable development. Several trade-offs were identified which increased the benefits for fishing and nature protection interests. Still, this was not possible for all actors, and stakeholders identified shortcomings in their benefits. Furthermore, while some of the aspects crucial for the development of a feeling of ownership were present, there were drawbacks especially for the fishing sector and regarding the strict deadline.

The evaluation confirmed the importance of the success conditions. On the one hand, stakeholder participation was enhanced by the possession of successful resources, the presence of facilitation, transparency, clear objectives, face-to-face dialogue, two-way communication, and embeddedness in the formal decision-making system. On the other hand, the success of the process was negatively affected by the flawed participation of the fishing sector, as well as by the high pressure on the process, due to the interest of the port authority to begin with the construction of the Maasvlakte 2 in time. The pressure translated into lower degrees of compliance with conditions such as transparency and trust. Furthermore, there were shortcomings regarding representativeness, trust, clear expectations, influence on objectives, integration of scientific and laymen knowledge, and influence of stakeholders.

The process towards the Barents Sea—Lofoten area management plan was rather technical. It was dominated by experts and officials, and organised top-down with a limited role for stakeholders. There was a limited degree of success of the outcome. There was a fairly well-balanced compromise for the most important result: the regulation of the petroleum activities. Still, there were limitations to the benefits perceived by the stakeholders of fishing and nature protection organisations. Furthermore, there was basically no feeling of ownership among the fishing and nature protection interests.

The evaluation confirmed the importance of the success conditions. In this case, there were drawbacks for all of the success conditions. The ones still being fulfilled to a considerable degree are representativeness and the degree of present trust. This analysis showed that also a process that uses a low degree of stakeholder participation can be successful to some degree in identifying trade-offs. The noncompliance with most of the conditions contributed to the limited degree of success of the outcome. In this vein, there was a negative influence by: imbalanced resources, especially regarding the powerful petroleum sector; partly insufficient resources of the stakeholders to participate; no facilitative activities; insufficient representativeness and transparency; lacking trust among participants; no clear expectations; little influence on the objectives; little face-to-face dialogue; insufficient integration of scientific and laymen knowledge, as well as contested issues; a small degree of two-way communication; and a limited degree of influence and insufficient embeddedness into the formal decision-making system.

The recommendations are based on two strikingly different approaches to stakeholder participation in marine spatial planning. The process towards the Voordelta management plan forms an impressive first attempt at stakeholder participation as part of marine spatial planning. Based on the present shortcomings, important lessons can be drawn for improvement. In the process of the

Barents Sea—Lofoten area, there was only a small degree of stakeholder participation. With the petroleum industry moving activities north, interest conflicts will increase in the future. The necessity to involve stakeholders in marine spatial planning processes might increase as it can contribute to enhance sustainable development, and to find trade-offs which are benefiting the Norwegian society in the long-term, and not only specific economic sectors.

The following recommendations are offered. For a stakeholder participation process which contributes to a more sustainable marine spatial planning approach, the following conditions are relevant: a one-level playing field and the process being representative to all affected, if there are resource imbalances, facilitation is essential to ensure both; transparency regarding the handling of information and regarding procedures; trust; clear expectations and objectives, for which clear communication of the process leaders is relevant to not raise wrong expectations and designing a common vision prior to the process; discussion of the general objectives with the stakeholder; the deadline leaving enough scope for discussion and collaboration; a high degree of face-to-face dialogue among authorities and stakeholders; a solid knowledge base, sufficient integration of laymen knowledge and a common language among stakeholders and authorities; a high degree of two-way communication; sufficient influence and embeddedness in the formal decision-making system; and consistency of the process regarding a harmonized approach by responsible authorities, and the stakeholder participation process developing in a continuous manner.

PREFACE

This thesis results from half a year research that finalises my Master in Sustainable Development-Environmental Policy and Management from Utrecht University in Utrecht, The Netherlands. It was an extremely interesting experience to analyse the two case studies from a theoretical point of view. There are various people I would like to thank for their support.

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LIST OF ABBREVIATIONS

FPB	Fishery Production Board
IMPNS 2015	'Integrated Management Plan for the North Sea 2015' (Integraal Beheerplan Noordzee)
IMR	Institute for Marine Research
MSP	Marine Spatial Planning
Ministry LNV	Ministry of Agriculture, Nature and Food Quality
Ministry V&W	Ministry of Infrastructure and the Environment
NSPPD	National Spatial Planning Policy Document' (Nota Ruimte)
NCFU	Norwegian Coastal Fishermen's Union
NFO	Norwegian Fishermen Organisation
RWS	Rijkswaterstaat
StPa	Stakeholder participation
SdN	Stichting de Noordzee

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CHAPTER 1

INTRODUCTION

1.1 Marine spatial planning for a sustainable development of marine areas

Despite depending heavily on the Earth's oceans and seas, humankind undermines its own livelihood with the degradation of marine and coastal ecosystems [UNEP 2006]. The drivers of change putting these ecosystems under pressure are mostly of anthropogenic nature, namely population growth, overfishing and destructive fishing modes, illegal fishing, invasive species, increased food demand, pollution, eutrophication and climate change. In general, traditional marine-related activities and new ones such as wind energy installations increase in intensity, putting the ecosystems even more under stress. In this context, a comprehensive study of the marine environment declared 41% of marine ecosystems being strongly impacted by human activity, and only 4% being unaffected [Gunton & Rutherford 2010].

The capacity of traditional governance approaches formed by a single agency applying sectoral, regulatory programs to deal with issues related to sustainable development, e.g. governance of marine habitats, are limited [Varjopuro *et al.* 2008; Bruns & Gee 2008; Schaefer 2011; Blæsbjerg *et al.* 2009]. Thus, the 'patchwork of complex, uncoordinated, and often disjointed rules and regulations' which are mostly imposed top-down and with a single sector approach often lead to developments that are regulated through different policies and regimes, to a lack of coordination of authorities responsible for single aspects of the environment as a whole, to uncertainty, and a to lack of nature protection [Foley *et al.* 2010: 956; NOAA 2011; Douvere & Ehler 2007]. An alternative is needed: a more comprehensive, integrated governance approach which maintains the supply of ecosystem services for the future generations while meeting ecological, economic and social objectives [Douvere 2008].

The neutral planning instrument marine spatial planning (MSP), which is based on extensive stakeholder participation, is increasingly used to sustain marine and coastal ecosystems and the benefits they provide to humankind. Its advantages are among others facilitating sector growth, optimized use of the sea and reduced costs [Douvere & Ehler 2007].

Marine Spatial Planning¹ strives to reduce use-use and use-environment conflicts and pressures on the environment by providing a comprehensive planning framework [Douvere & Ehler 2007]. It is a neutral planning tool which shall lead to a more sustainable development and more effective planning in marine areas [EC 2010B]. Internationally, there are more and more incentives to apply MSP i.e. in the United States, Germany, the Netherlands, Norway and the UK. While it is handled as solution to marine conflicts, its real capacity is still to be confirmed: it is only recently implemented on a larger scale leading to the persistence of uncertainty regarding best practices, effective implementation and in general its ability to remain true to its objectives.

¹ The EU uses Maritime instead of Marine Spatial Planning. Content-wise they are compatible. Like Maria Damanaki, the Commissioner for Maritime Affairs and Fisheries, stated '[t]here is no difference between marine spatial planning and maritime spatial planning. In the EU Marine Strategy Framework Directive, the word 'marine' is used more in the context of the marine environment. Meanwhile, in the context of the EU Integrated Maritime Policy, the word 'maritime' refers to all maritime (human) activities, including the protection of the marine environment. When spatial planning of the sea was a new concept, it was mainly perceived in the EU as an environmental policy. However, it is now regarded as a sector-neutral approach with the objective not only to protect the marine environment but also to promote economic growth of the maritime economy' [MEAM 2011: 2].

There is broad agreement that stakeholder participation (StPa) is crucial to MSP and necessary for realizing objectives related to sustainable development over time [Bass *et al.* 1995; Meadowcroft 2004; Douvere & Ehler 2007]. However, there is no consensus regarding the preconditions to be met to deal with present use conflicts and to enhance sustainable development of oceans and seas [Bass *et al.* 1995]. Questions arise such as: how does a successful stakeholder process look like that can promote the sustainable development of marine areas?

1.2 Problem description

The knowledge gap to be addressed is twofold. On the one hand, worldwide, MSP is politically promoted as key instrument to meet the challenges of the governance of marine areas seeking 'to build consensus amongst disparate stakeholders to ensure sustainable development' [Flannery & Ó Cinnéide 2008: 980- 981]. The feasibility of this goal, which is mostly of a political nature, is uncertain as scientific proof for this approach to fulfil expectations and realize more sustainable development is lacking². Thus, there is a need for a more academic approach to MSP, especially from social sciences and of a practical nature—not removed from reality. This view is confirmed by Ritchie and Ellis: 'there appears to be a need to more firmly define how the objective of sustainable development can be effectively operationalized in the context of MSP' [2010: 718]:.

On the other hand, key to a successful MSP process with the potential to enhance sustainable development is the often neglected step of stakeholder participation [Ehler & Douvere 2009]. However, practical experience showed that stakeholder participation approaches applied did often not meet expectations which led to the development of disillusionment [Reed 2008]. Subsequently, a lot of research dedicated itself to the question of what went wrong and how to apply participatory processes in order to realize potential benefits. While much information exists, there is a gap of knowledge regarding the conditions that have to be met to realize sustainable development.

These knowledge gaps are addressed in a combined manner: conditions for enabling stakeholder participation to contribute to more sustainable MSP initiatives are analysed. Therefore, the operationalization of sustainable development as well as the potential of stakeholder participation to contribute to sustainable development is elaborated on in the context of MSP.

1.3 Research design

1.3.1 Research objective and definition of key concepts

The research addresses the uncertainties as to MSP and StPa in a combined fashion. The research aim to be addressed is:

This research aims to fill in this knowledge gap and to do recommendations for enhancing the degree to which stakeholder participation contributes to sustainable marine spatial planning.

The research aim is approached by assessing the theoretical background of stakeholder participation in order to identify success conditions, and applying those to two case studies of applied marine spatial planning situated in Europe. The analysis focusses on fishing and nature protection interests. By means of refining the theoretical insights in the case studies, recommendations for more sustainable marine spatial planning can be formulated.

² This was confirmed at a Roundtable discussion on MSP at the conference 'People and the Sea VI: Bridging Science and Policy for Sustainable Coasts and Seas' organized July 6-9 2011 by the Centre for Maritime Research.

Marine Spatial Planning 'is a key instrument to balance sectoral interests and achieve sustainable use of marine resources with the ecosystem based approach as underpinning principle. It is a process that provides a stable, reliable and oriented planning framework for public authorities and stakeholders to coordinate their action and optimize the use of marine space to benefit economic development and the marine environment' [EC 2009: 6].

Sustainable MSP refers to a MSP approach that enhances sustainable development, by successfully enhancing the feeling of ownership among stakeholders and by integrating and balancing environmental, economic and social interests [Meadowcroft 2007; Bass *et al.* 1995]. Furthermore, the use of marine areas is facilitated so that benefits for humankind are sustained (e.g. fisheries) while the marine ecosystems are protected in the long term.

In practice, all kinds of processes of involving the public can be observed and labelled differently, e.g. interactive or collaborative governance, or citizen's involvement. For Arnstein [1969], true participation is limited to cases in which the public is indeed empowered; however, others would use it for situations when stakeholder participation is restricted to being informed, e.g. in case of surveys. For the scope of this research, stakeholder participation is defined as a process where individuals, groups and organizations take an active role in making decisions that affect them [Reed 2008]. However, instead of referring to the integration of the public in general, stakeholders are defined as 'individuals, groups, or organizations that are (or will be) affected, involved or interested (positively or negatively)' in the process at hand [Ehler & Douvère 2010: 17].

1.3.2 Scientific and societal relevance of research

The research includes several aspects of scientific and societal relevance. It will contribute to the research agenda of the Copernicus Institute, which is focussed on the analysis of modes of governance which 'either do or do not result in (environmentally) sustainable outcomes' [Copernicus Institute 2009]. Being integrative and participative, MSP shall lead ocean governance to a more sustainable future. Focusing on the stakeholder participation aspects of MSP regarding the interests of fishers and nature protection, this research approaches the issue with the aim to identify success conditions for StPa. It will contribute to the operationalization of the notion of sustainable development as connected to MSP and StPa and enhance knowledge regarding the implementation of new modes of governance in Europe.

Furthermore, sea-related activities continue to increase rapidly [European Commission 2008A]—for instance there is a need to create new jobs and expand renewable energy initiatives—leading to competition between sectoral interests like environmental conservation, shipping, energy, fishing and tourism. Conflicts develop and intensify and the risk of environmental damage increases. MSP shall meet those challenges by providing more certainty, stability and transparency [European Commission 2010A]. Therefore, the tool of MSP is of crucial importance for societies, who depend on the oceans and seas, e.g. for the transport of goods, food security, recreation and energy supply.

This research will focus on the inclusion of two specific interests and provide insights to their participation in MSP processes. The identification of shortcomings in the integration of interest groups can contribute to smoother implementation processes and to the solving of conflicts. Furthermore, stakeholder participation as part of MSP has been largely neglected in research terms [Ritchie & Ellis 2010].

In sum, striving to discover and test success conditions for the new governance mode of the stakeholder participation as connected to MSP in practice, this research will contribute to securing the benefits stemming from the use of marine areas (i.e. fisheries) while preserving the marine environment (i.e. marine biodiversity) by providing insights into the inclusion of the interests of fishing and nature protection in MSP processes.

1.3.3 Research framework and questions

To realize the research aim, the main research question of this study is formulated as:

Under which conditions can stakeholder participation contribute to a more sustainable marine spatial planning?

The question is approached by the following research framework:

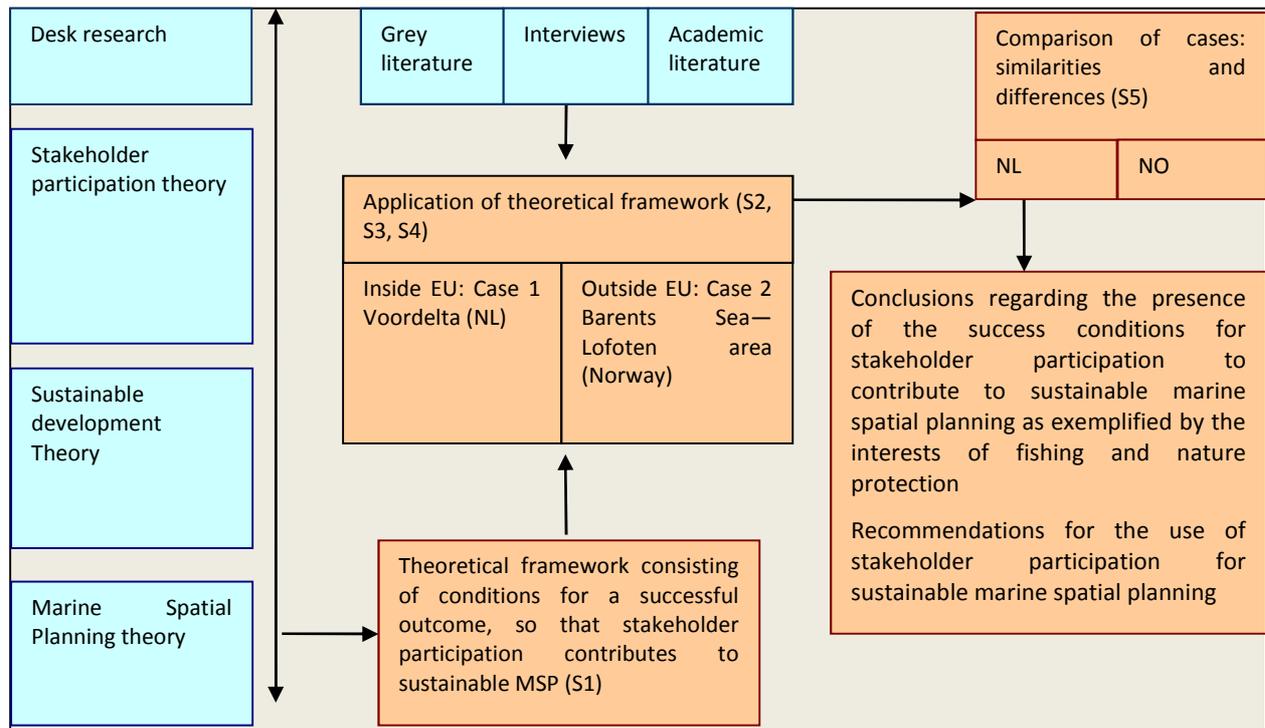


Figure 1.1: Research framework- Blue equals research material and orange answers to research questions

The focus is put on the potential of the stakeholder participation approach to realize sustainable development in the long-term. The underlying assumption is that a MSP process that applies a StPa process has the potential to be more sustainable by producing two outcomes that enhance sustainable development—a participatory process can facilitate the balancing of environmental, economic and social interests and produce a feeling of ownership among the stakeholders. The research aim to formulate recommendations for enhancing the degree to which StPa contributes to more sustainable MSP is realized by identifying conditions for successful StPa in theory and testing those in two case studies.

The theoretical approach facilitates benefiting from the extensive amount of research carried out into stakeholder participation, while the case studies allow insights into the practical implementation of such processes. The inclusion of the viewpoints of stakeholders themselves ensures gaining detailed insights into the processes—they are the experts that took part in the processes themselves.

First of all, on the basis of the body of literature analysed, a theoretical framework is constructed consisting of conditions for successful stakeholder participation. The following sub-question is answered:

S1: Which conditions are identified in the literature that could enhance the success of stakeholder participation? (Descriptive)

Subsequently, the success conditions are tested by being applied to the two cases: the integrated management plans for the Voordelta and for the Barents Sea—Lofoten area. A case study approach is chosen in order to secure the practicability of the recommendations. For facilitating deep insights into the fulfilment and relevance of the previously identified success conditions, relevant authorities and stakeholders of fishing and nature protection interests were interviewed. The selection of the respective cases is based on the fact that they both play a pioneering role in applying marine spatial planning. The following three sub-questions are assessed for the two cases:

S2: To what degree has the outcome been successful? (Evaluative)

S3: How is stakeholder participation implemented? (Descriptive)

S4: Which conditions explain the degree of success of the stakeholder participation process? (Evaluative)

Finally, conclusions are drawn on the similarities and differences of the two different stakeholder approaches as connected to the implementation of the StPa process as part of MSP. On the basis of the prior analysis, the way in which the conditions contributed to the success of the outcome is determined. The following sub-question will be approached:

S5: What are the differences and similarities between the two cases? (Evaluative)

Based on the results, recommendations for more sustainable MSP processes are formulated.

1.3.4 Research strategy and data collection

The research aim is achieved by carrying out a comparative case study using the hierarchic method. The choice of this method is due to the two-staged structure fitting the research well. Therefore, it facilitates a double learning affect by applying the theory independently to the two cases and comparing those afterwards: conclusions can be drawn from the case studies themselves as well as from the comparison. Two cases are selected and analysed separately. Subsequently, based on the results from the first part of the analysis, the cases are compared. There is one more crucial stage preceding the case studies: literature is analysed to identify success conditions for StPa leading to sustainable development. The connection of stakeholder participation and sustainable development theory connected with the analysis of stakeholder participation as part of MSP in two case studies contribute to the innovative character of this study.

In order to perform the comparative case study, the following methods of data collection are used. Next to desk research for textual material, we perform several interviews with actors from fishing and nature protection organisations. Furthermore, representatives of public authorities are interviewed to provide further insights into the processes. Interviews shall help guaranteeing the practical dimension in order to provide insights into the implementation and being able to draft valuable recommendations.

Next to literature like online journals, other sources of materials are documents like minutes of meetings and official documents. Content analysis is used as a method for accessing the research material of literature and documents.

As can be recognized in the structuring of this section, the thesis is threefold: the first part focuses on the theory, the second part on the two case studies and the third part on a comparison of the cases. In the following, the research object, types of information and sources used for answering each sub-question are elaborated on.

The first sub-question attempts to identify success conditions for stakeholder participation to enhance the success of stakeholder participation to contribute more sustainable development. To introduce the issue of stakeholder participation, benefits and risks are identified. The main research

object is theory, and the necessary information is solely literature which is accessed online. Instead of limiting required information sources to marine issues, the results are based on the body of literature of different kinds of participation approaches and participation as connected to environmental science and sustainable development. In this vein, the success conditions apply to sustainable development in general, not only to sustainable development connected to MSP. The method of content analysis is applied.

Now, the research moves from the general to the specific: the case studies (the Voordelta (The Netherlands) and Barents Sea—Lofoten area (Norway)) are analysed. The second sub-question has as research object the degree of success of the outcome of the MSP and the required StPa process in the respective region. The used research material is again literature from the internet, official policy documents and individual people, i.e. stakeholders from fishing and nature protection interests, civil servants and optionally experts. The third sub-question describes the applied stakeholder process. Here the same research material like in the second sub-question is used. The fourth sub-question moves from description to evaluation. It evaluates the degree to which the success conditions identified in the first sub-question are present in the case studies and discusses the manner in which they can explain the success of the outcome. The analysis focusses on two specific interests: fishing and nature protection. Here the research material consists of all previously used information. For accessing the source of individual people, the method of interviewing is used by means of telephone or face-to-face. Due to the distance to the Norwegian case study, written answers by emails form also an option. Only a limited degree of pre-structuring is used. Basically the same set of questions is asked to all respondents.

Finally, the last sub-question forms a general evaluation in which the former findings are integrated. The research objects are the two case studies and the previously identified success conditions. The fifth sub-question has the research objective of similarities and differences between the analysed approaches to StPa and MSP. The research material consists again of all previously used information.

1.4 The case studies

There are two case studies performed on the management plan for the Voordelta (The Netherlands) and on the Barents Sea—Lofoten area (Norway). The cases are chosen in a strategic manner, based on the assumption that most can be learned from countries that already have considerable experience with MSP. The Netherlands and Norway both apply the tool in its second or third generation [Ehler & Douvere 2010; Schaefer 2011]. The focus is put on the regional level, the MSP developments and the way in which stakeholders are included into policy making.

The management plan for the Voordelta (The Netherlands)

In the Netherlands, new and competing demands for ocean space have already been part of the political debate since the 1980s. Due to an increase in present uses and the development of new uses like wind energy, the need for more comprehensive spatial planning increased [Douvere & Ehler 2009]. The management plan for the Voordelta forms an example for a marine spatial plan developed in cooperation with stakeholders [Ministry V&W and RWS NS 2008B]. It combines nature protection under Natura 2000 with nature compensation for a land reclamation project and was finalized in 2008.

The management plan for the Barents Sea—Lofoten area (Norway)

In Norway, the facilitation of coexistence between sectors such as offshore petroleum extraction and fishing, aquaculture or nature protection, highlights the need for effective planning towards sustainable development at sea. There is a trend towards more integrative governance of seas. The research focusses on the integrated management plan of the marine environment of the Barents Sea and the sea areas off the Lofoten Islands [Barents Sea—Lofoten area]. The main reason for the

development of this plan was to facilitate the coexistence of different interests connected to the petroleum industry planning to move activities into the respective area [Ministry of Environment 2006].

Focussing on fishing and nature protection interests

The increased pressure on the marine environment has led to conflicts amongst users and between users and the environment [Douvere & Ehler 2007]. In this vein, two stakeholder groups with a particular interest in sustainable development of marine areas are within the scope of this research: fisheries and nature protection. While both have competitive claims on marine space, they are highly interdependent.

As mentioned above, marine ecosystems are under pressure. Biodiversity is essential to the ecosystem goods and services where humans are benefiting from. Approximately 90% of the total biomass lives in the seas [EC 2010C]. There is a high need to maintain and enhance ecosystems providing important services. Nature is represented by for instance environmental organisations, authorities or scientists. The way it is represented and integrated forms a key to the sustainable development of marine areas, because the protection of marine ecosystems is crucial for the long-term viability of several activities and benefits based on them.

Worldwide, three quarters of the fish stocks are fully exploited, overexploited, depleted or recovering from depletion [FAO 2007]. Fishing communities which have been affected by the depletion or overexploitation of those stocks are in danger of job loss and of losing their livelihoods if marine ecosystems degrade further and biodiversity decreases. Fisheries being a declining industry. In Europe, the contribution to the total maritime value added is with around 6.75% (approximately € 7 billion in 2010) still relevant [EC 2010D]. The importance of traditional interests like fishing industry is threatened by newcomers such as wind energy. There is also an increasing pressure for a better protection of the marine environment (e.g. NATURA 2000, Marine Strategy Framework Directive). While fishers depend on a healthy environment, the increase in marine protected areas puts more pressure on the space available. Therefore, the participation of fishers in the process of assigning uses to specific areas is of utmost importance in order to have important fishing grounds rightfully designated. In addition, their specific knowledge as users of the marine ecosystems is valuable for an effective management and protection of biodiversity.

Interests are represented by different kinds of actors. In this vein, specific stakes like nature interests can be represented by environmental organizations, authorities or scientists. In the case studies, the participation of stakeholders of the type environmental organizations is analysed as representing the interest of nature and the participation of stakeholders of the type fishing organizations is analysed as representing the interest of fishing. For each of the interests representatives of at least two organizations were interviewed, who participated in the process. This allows insights into the representation of nature and fishing interests. However, the perceptions of other actors being linked to the same interest might be different.

1.5 Outline of report

The remainder of this report is dedicated to answering each of the five sub-questions in a systematic manner before addressing the main research question. To begin with, in the forthcoming chapter S1 is answered by establishing a theoretical framework with success conditions for stakeholder participation processes in order to enhance sustainable development. Subsequently, in the following two chapters the case studies are carried out. In this context, the national and regional context is described, and the degree of success of the outcome of the stakeholder participation processes is evaluated for fishing and nature protection interests (S2). Subsequently, the implemented approach

is described (S3), which serves as a basis for approaching S4 which is answered by means of applying the success conditions to the cases. This sub-question concludes on the compliance with the conditions, and on the manner in which they are relevant to explain the degree of success of the respective stakeholder participation process. The next chapter identifies similarities and differences of the two cases (S5). Finally, conclusions are drawn related to the main research question R1.

SUCCESSFUL STAKEHOLDER PARTICIPATION IN THEORY

2.1 Introduction

Effective progress towards a more sustainable outcome can only be reached if manifold stakeholder interests are included to effectively deal with the policy issue relating to the sustainable development of marine areas, which are highly complex due to them being interrelated and involving diverse stakes [Milligan 2009]. Past experiences with strategies for sustainable development showed that participation increased their degree of success [Bass *et al.* 1995].

In this context it is widely acknowledged that in addition to structured science, more integrative, participatory and transparent decision-making approaches are needed to realize sustainable outcomes [Beierle & Konisky 2001; Milligan 2009; Reed 2008; Mackinson *et al.* 2011]. Stakeholder participation forms a framework for integrating social, economic and environmental objectives as required for sustainable development [Meadowcroft 2007; Bass *et al.* 1995]. If those are incompatible, trade-offs have to be identified. Inter-disciplinary approaches based on science are valuable, but stakeholder participation facilitates the integration of value judgments and can therefore greatly contribute to finding these trade-offs [Bass *et al.* 1995].

Furthermore, changes in societies are necessary which are not feasible to be reached without the support of citizens. The ' [m]anagement of the marine environment is a matter of societal choice' [Pomeroy & Douvere 2008: 816]. For an outcome of decision-making processes which is agreed upon and felt ownership for the participation of winners and losers of the process is necessary. StPa facilitates the inclusion of all affected by the outcome, including groups without a voice, i.e. future generations and nature.

Finally, local, more practical knowledge can complement scientific knowledge to improve the quality of decisions [Bass *et al.* 1995; Friend & Hickley 2004]. For instance in marine areas, the inclusion of fishers benefits the process as they have specific knowledge regarding fishing grounds and ecosystems. The integration of local, laymen and scientific knowledge has the potential to lead to a more comprehensive understanding of systems and processes [Reed 2008].

The challenge is faced to identify a theoretical framework with success conditions for stakeholder participation processes in order to enhance sustainable development. The first sub-question is approached:

S1: Which conditions are identified in the literature that could enhance the success of stakeholder participation?

First, benefits and risks of stakeholder participation processes are assessed in order to provide first insights into its potential. This section is structured into aspects relevant for information and analysis tasks, for policy formulation and planning, as well as for strategy implementation and monitoring. Subsequently, the theoretical framework is approached in a twofold manner: first, the notion of successful outcome is defined; then, explanatory success conditions for such an outcome are identified. Success refers here to contributing to sustainable development by means of realizing a mutual benefit and feeling of ownership among stakeholders. A stakeholder participation process that was applied as part of MSP and produced a successful outcome is said to have contributed to more sustainable MSP. In this context, success conditions are identified as based on the model of

Ansell and Gash, which is adjusted and complemented according to the research aim to formulate recommendations to contribute to more sustainable MSP [2008].

Instead of limiting required information sources to marine issues, the results are based on the body of literature of different kinds of participation approaches and participation as connected to environmental science and sustainable development. In this vein, the success conditions apply to sustainable development in general, and are not limited to MSP.

2.2 Stakeholder participation in marine affairs

Academic literature regarding marine issues connected to stakeholder participation is limited. The issues treated are: participatory research in marine and fisheries issues [Mackinson *et al.* 2011], application of the ecosystem-based approach to oceans [Vierros *et al.* 2006; Murwaski 2007; Curtin & Prellezo 2010; Arkema *et al.* 2006], research identifying marine resources as complex system problems [Berkes 2005], management of marine resources [Duda & Sherman 2002], ocean policy [Vince 2006] and collaborative planning processes [Rutherford *et al.* 2005].

In addition, there is an increasing body of literature covering different aspects of applying a stakeholder participation approach as part of marine spatial planning [e.g. DeSanto 2011; Pomeroy & Douvere 2008; Ritchie 2011; Flannery & Ó Cinnéide 2008; Maguire *et al.* 2012]. Environmental justice, stakeholder analysis and practical steps to apply participation are discussed. Terrestrial spatial planning literature treats the issues more intensively [e.g. Koontz 2005; Harrison *et al.* 2002]. More research has been done for stakeholder participation connected to marine protected areas, coastal zone and water management as well as fisheries management [e.g. Warner 1997; Treby & Clark 2004; Buanes *et al.* 2005; Varjopuro *et al.* 2008].

2.3 Benefits and risks of stakeholder participation

Stakeholder participation comprises both potential benefits and risks which were analysed by various experts [e.g. Bass *et al.* 1995; Beierle & Konisky 2001; Irvin *et al.* 2004; Milligan *et al.* 2009; Von Korff *et al.* 2010; Reed 2008]. For their analysis a structure based on Bass *et al.* [1995] is adopted with a division concerning relevant aspects for information and analysis tasks, for policy formulation and planning, and for strategy implementation and monitoring.

2.3.1 Benefits

Reasons for applying the stakeholder participation approach are of a normative and pragmatic nature. On the one hand, participation in environmental decision-making is increasingly perceived to be a democratic right, which is enshrined in the Aarhus Convention of 1998 [Reed 2008]. According to this stream of reasoning, it encourages the inclusion of the disadvantaged, includes variety of values, recognizes inherent complexity and uncertainty, encourages social learning, and produces more transparent processes, fair outcomes and higher levels of trust. On the other hand, there is a growing awareness that more participatory approaches to decision-making might be better equipped than traditional ways to deal with dynamic, uncertain and complex environmental issues, which are being interrelated and involve a diversity of kinds of knowledge and multitude of stakeholders with different and potentially conflicting interests.

Information and analysis tasks

Stakeholder participation has the potential to increase social capital and civic competences — it can promote learning and the development of necessary skills [Irvin & Stansbury 2004]. Moreover, there

is a better understanding of connected issues and communication with and between interest groups [Bass *et al* 1995]. Issues can be addressed that cannot be identified, defined or solved in any other way and group dynamics can be used to solve issues.

The substantial quality of decisions is improved by complementing scientific information with laymen knowledge, local opinions and process knowledge. Furthermore, knowledge of values, preferences, and opinions of participants are crucial for establishing trade-offs and social judgments [Beierle & Konisky 2001].

Policy formulation and planning

To begin with, when engaging in stakeholder participation, the practicality and feasibility of objectives and targets can increase by means of negotiating them until they are locally accepted, meaningful and practicable [Bass *et al.* 1995].

Second, the quality of decisions can be enhanced [Beierle & Konisky, 2001]: on the one hand, the inclusion of stakeholder information and ideas (local knowledge and additional scientific information) can affect the substantive quality of decisions. On the other hand, for decisions requiring judgments and trade-offs (value decisions) the consideration of stakeholders' preferences and assumptions is crucial.

Third, the efficiency of decisions might be enhanced— gridlocks may be broken by input of stakeholders facilitating compromises and the identification of new solutions.

Fourth, the relationships between stakeholders are improved by means of resolving conflicts and creating trust by means of a better understanding of the other's position. According to Beierle & Konisky [2001], a typical conflict is between those favouring economic development and those defending the need for environmental protection. The precondition for this kind of benefit is representative involvement of all stakeholder groups. By including all affected groups in such a way that decisions-makers are more responsive to their interests, more trust can be gained and legitimacy of decision-making can be improved.

Fourth, by basing decisions on citizens' preferences, the political credibility can be increased as compared to traditional processes in which bureaucrats or scientists played the largest role. The citizens are empowered because they get a chance to interact with decision-makers and other interest groups. In this context, stakeholder participation can have a positive effect on accountability, transparency and trust as well as increase equity by including previously marginalized groups. It can facilitate a more inclusive process that considers all stakeholders affected by the outcome leading to more active citizenship [Reed 2008]. The process might be useful in the absence of a satisfactory outcome, as the expression of the participants' thoughts and opinions already has a value in itself, and understanding about other viewpoints can be established [Milligan *et al* 2009].

Strategy implementation and monitoring

In a stakeholder process the implementation of decisions can be smoother; the involvement of citizens and basing the process on their preferences can enhance the feeling of ownership of the outcome. Another benefits refers to the fact that a policy which is well-grounded on stakeholder preferences appeals to different kinds of actors. In addition, better relationships are facilitated which can enhance cooperation and decrease the probability of opposition and thereby avoid litigation costs. While more time and energy needs to be invested before, they might be saved in the downstream implementation process [Ansell & Gash 2008]

In addition, more extensive networks might develop that could be used for the purpose of, for instance, monitoring [Bass *et al.* 1995]. The efficiency of managing resources and skills can also increase. Participation can be a way to develop the 'collaborative capacity and institutions' necessary to address environmental issues [Beierle & Konisky, 2001: 522].

A last benefit connected to the strategy implementation and monitoring is the increase in likelihood that a societal change of behaviour takes place, and there might be a stronger commitment to act also regarding self-mobilization for sustainable development.

By nature, stakeholder participation is not a 'good thing'. While it has the potential to realize various benefits, there are also risks involved.

2.3.2 Risks

The risks refer to negative effects associated with stakeholder participation. Often, the identified benefits can turn into risks. Those can partly be overcome by aspects such as sound design, thoughtful preparation, effective implementation and evaluation. Others are contextual, indicating that for a certain issue a stakeholder participation approach is not useful [Irwin & Stansbury 2004]. In general, ambiguous and/or contested objectives, creation of expectations that are not fulfilled, and biasing influence by more powerful participants leads to stakeholder disillusionment with participation and decrease in trust [Von Korff *et al.* 2010].

Information and analysis tasks

The increase in social capital and education that can be the result of a stakeholder participation process is often limited to the participants themselves with missing effect on the wider public. In addition, stakeholders might not have the necessary expertise to understand the highly technical and complex issues and engage in a meaningful manner [Human *et al.* 2010].

Policy formulation and planning

If not counting social capital and faster implementation due to smarter solutions, participatory processes are more time-consuming and costly than top-down approaches, e.g. it takes time to gain the trust of citizens and it is mostly necessary to educate actors to facilitate meaningful participation [Irvin & Stansbury 2004]. In absence of stakeholder's willingness to cooperate and participate in meetings, i.e. in case of complacency, the efficiency of the process is endangered.

The outcome might be negatively affected by involving stakeholders. On the one hand, if there are conflicting interests groups, the outcome might be reduced to the lowest common denominator and/or low-quality decisions. On the other hand, the loss of decision-making control by governments increases the possibility of low-quality decision.

Due to the nonpaid character of processes there might be an overrepresentation of strongly affected or wealthy participants. By such a dominance of a small elite, selective interests are overrepresented leading to biased decisions. Even presence of relevant groups is no guarantee for a representation in the process because group dynamics might prevent the input of minority groups. The failure to identify and represent all interests evenly, can lead to biased decisions, reluctance to participate and/or make decisions, and persistent conflicts. In addition, there is the danger that a stakeholder representative is representing his/her own interest more than the interest of the constituency [Milligan *et al.* 2009].

Strategy implementation and monitoring

As the process itself is more resource-intensive, there are fewer budgets for the implementation of policy [Irvin *et al.* 2004]. If the decision of the stakeholder participation process is ignored by the formal decision-making system, it was insignificant. In this case, a lack of inclusion of the outcome into decision-making might lead to resentment and dissatisfaction. As a result 'consultation fatigue' can develop, to which processes which are not well run contribute [Reed 2008].

In practice, it depends on factors such as the issue at hand and the context if and in which way stakeholder participation processes are useful. In general, the traditional elitist model decreases in relevance while the pluralist model in which stakeholders (citizens) have a voice and influence (environmental) decision making, plays a larger role [Rowe & Frewer 2004; Webler *et al.* 2001]. However, the traditional processes might continue to be relevant for certain situations, for instance when quick decisions are necessary or in case of a too high degree of conflict and/or non-negotiable and conflicting positions of stakeholders.

2.4 Success conditions for stakeholder participation

The stakeholder participation approach is put forward as a tool to realize the goal of more sustainable development. Conditions for the success of stakeholder participation processes are identified. Success refers in this context to contributing to sustainable development so that the outcome is of mutual benefit for the stakeholders and for which participants developed a feeling of ownership.

The body of literature testifies that specific conditions have to be met to realize the potential of stakeholder participation. Success conditions are identified on the basis of theory to explain the degree of success present.

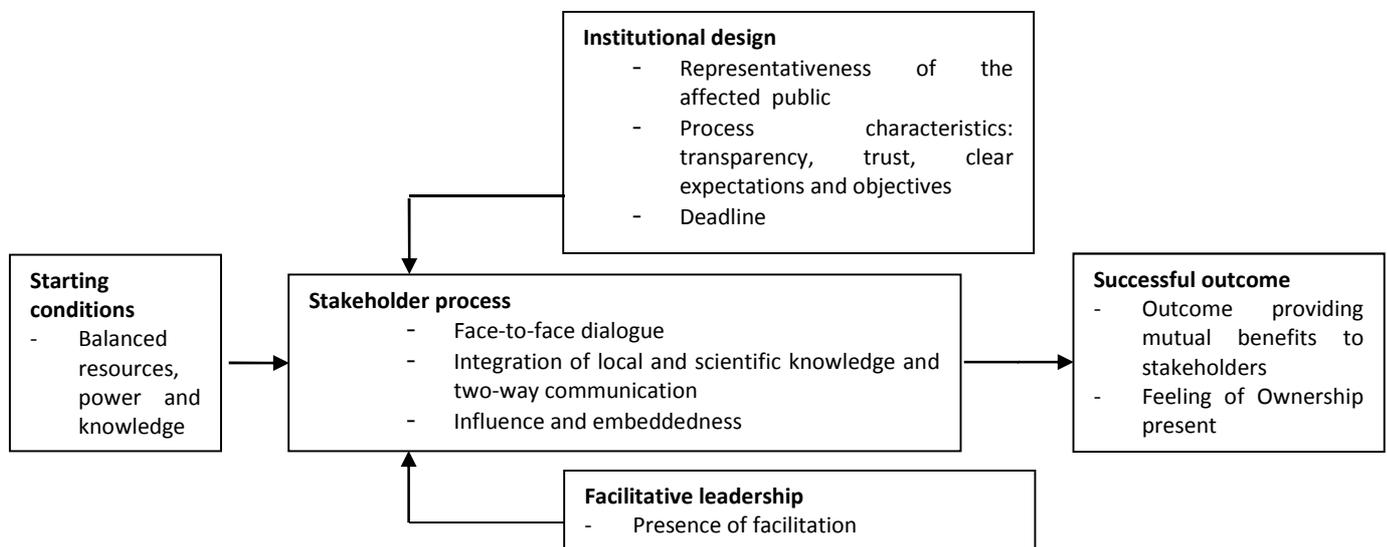


Figure 2.1: Model of stakeholder process that leads to a successful outcome

Figure 2.1 shows the model for a more successful outcome of stakeholder participation processes. The conditions are linked to starting conditions, facilitative leadership, institutional design, and stakeholder process. The successful outcome refers to mutual benefits and a feeling of ownership. In the following, the successful outcome and the conditions are elaborated on.

2.5 Successful outcome

A successful outcome refers to one that contributes to more sustainable development in a two-fold manner.

Mutual benefits

First, the process should facilitate an outcome that integrates all affected interests in order to be concordant with sustainable development, which is defined by Bass *et al* as a development that balances environmental, economic and social interests [1995]. Thus, it should have created an outcome that identifies trade-offs in order to balance affected interests in such a way that there is a mutual benefit for all stakeholders content-wise. Mutual benefits refer at least to 'a condition where all participants can live with the result' [Reed 2008: 2420]. For the identification of trade-offs, participation is necessary in such a way that value judgments are integrated.

A successful outcome regarding balancing the different interests can be supported by a stakeholder process, for instance by the identification of trade-offs in cooperation with the affected interest groups. Here, the existence of face-to-face dialogue and the integration of scientific and laymen knowledge are important [Ansell & Gash 2008].

Feeling of ownership present

Second, the feeling of ownership can enhance sustainable development by encouraging awareness about environmental issues and trigger societal change [Bass *et al* 1995]. If stakeholders own the process and outcome, they support it, including decisions that are to their disadvantage. In general, ownership refers to shared responsibility among the participants for the process and outcome, and this is critical to effective implementation. Thus, in the implementation phase of the stakeholder process, it can facilitate effective realization and reduce costs [Moore *et al.* 2001].

For a successful outcome that facilitates a feeling of ownership, several conditions are to be fulfilled by the stakeholder participation process. In general, there must be successful participation and an influence of stakeholders on the process: ownership depends on the interest groups affected to be well represented, and their views being respected and integrated into the process [Ansell & Gash 2008]. Furthermore, a sound institutional design that establishes the ground rules is crucial: representativeness and a higher degree of trust are critical to a high level of ownership [Reed 2008]. Like a fishery representative argued on the Nordzeedagen 2011 "A threatening knife on the table makes a trustful and honest debate impossible". Indicating that a participation process should be not be pressured but develop in the discussion. Here, a deadline that is too strict can also limit the scope for ownership. Face-to-face dialogue forms an additional relevant condition [Reed 2008].

2.6 Conditions for a successful outcome

While there are a large number of aspects, a selection is made on the basis of identifying the means to the end. Thus, the essence of this research is to identify how the concerned stakeholder participation processes contribute to more sustainable MSP. There are various factors influencing the degree to which successful participation is created. The theoretical model is based on and structured according to Ansell and Gash's [2008] model for successful collaboration, but was adjusted and complemented by additional conditions which are crucial for promoting sustainable development. Examples include the integration of local knowledge and stakeholder values and the representation of all affected. Ansell and Gash's variables of an incentive to participate, shared understanding, and intermediate outcomes are not discussed like in their model but adapted or integrated into other aspects.

2.6.1 Starting conditions

Prerequisites regarding power, resources and knowledge

The technical capacity to participate can be limited by the resources or manpower available or by an insufficient organizational infrastructure [Ansell & Gash 2008]. Stakeholders need to possess the sufficient resources to participate in a meaningful way [Reed 2008]. Thus, there should be enough financial and human resources available to process all relevant information and knowledge to engage on an equal footing with others. For complex issues, extensive knowledge is required for meaningful participation.

Power – resources - knowledge imbalances can endanger the degree to which stakeholders can participate on equal footings with another. Stronger actors could dominate the process so that even participation of stakeholders and the success of the process would be endangered. American environmental groups are for instance often sceptical towards a participatory process because they fear the stronger position of industry actors [Ansell & Gash 2008].

1. The possession of sufficient and balanced power, resources and knowledge increases the probability of a successful participation process.

2.6.2 Facilitative leadership

Presence of facilitation

Due to its potential role in including relevant groups and steering the process, facilitation is widely considered to be of utmost importance for the success of stakeholder participation processes. Power, resource or information differences can influence the willingness to participate. Facilitation is crucial in order to counteract the negative effects of unequal empowerment and balancing the power and resources for securing the influence of weaker groups by means of 'maintaining clear ground rules, building trust, facilitating dialogue, and exploring mutual gains' [Ansell & Gash 2008: 554]. This way a level playing field can be facilitated.

2. In the presence of power-resource-knowledge asymmetries the existence of facilitation increases the probability of a successful participation process.

2.6.3 Institutional design

The institutional design concerns the ground rules for participation which are crucial for the legitimacy of the process.

Representativeness of affected public – Participatory inclusiveness

Effective progress towards a successful outcome can only be reached if the manifold stakeholder interests are included, if social, environmental, and economic objectives are integrated, and all relevant expectations, options and conflicts are reflected. The inclusion of all affected and/or those being able to affect can contribute to create a sense of ownership for the process and outcome . Therefore, the process should be representative of the population of affected public. Pomeroy & Douvere note '[t]he way stakeholders are involved in the process must reflect, or at least address, the existing complexity of the specific context' [2008: 816]. The more are included, the more time and resource-intensive the process will become. Still, if only the most important groups are considered, the degree decreases to which outcomes are representative for all affected. In the absence of participatory inclusiveness, there might be biased decisions, conflicts and reluctance to participate.

Stakeholder should be able to participate from the beginning on and throughout the process [Friend & Hickley, 2004; Reed 2008; Pomeroy & Douvere 2008]. Instead of only being consulted on an actual plan, they should participate in developing the process and plan production process [Gilliland & Laffoley 2008]. In any case, they should be involved with the first value judgment necessary to be decided on. The organisational infrastructure can affect the possibilities to be well-represented. The more diffuse the stakeholders, the more difficult it is to represent them.

3. The process being representative of the affected public increases the probability of a successful participation process.

Process characteristics: transparency, trust, clear expectations and objectives

For active and meaningful involvement, the participation process has to have certain essential characteristics which can contribute to a high degree of trust in the process and between participants. For trust in the process to increase, it should be transparent as well as fair and participants should feel respected. Furthermore, it should be clarified what stakeholder can expect from the process and should be able to understand the reasons of involvement. This is especially important for the cooperation between stakeholders and science/authorities.

Transparent processes and decision-making are crucial to sustainable outcomes [Milligan *et al* 2009; Reed 2008]. The public should be able to see what is going on [Rowe & Frewer 2004]. There should be a high degree of process transparency, so that it is 'not about backroom private deals' [Ansell & Gash 2008: 557]. There should be clear ground rules and stakeholders should perceive to get a 'fair hearing'.

Clear expectations are another crucial factor for a successful process [Ansell & Gash 2008]. Raising the expectations unnecessarily can have a negative impact on future processes and the implementation of the outcome [Milligan *et al.* 2009].

In addition, clear objectives increase the probability of a successful outcome [Reed 2008]. Stakeholders should be able to discuss them in a deliberative way to increase their practicability and feasibility. An identification of goals in a dialogue of stakeholders can enhance their willingness to actively participate as well as their feeling of ownership.

4. A process which is transparent, trustworthy and clear regarding expectations and objectives increases the probability of a successful participation process.

Deadline

While having deadlines is important for an effective process, a strict deadline might limit the scope of discussion and collaboration and endanger a successful process [Ansell and Gash 2008].

5. The use of a strict deadline balanced with giving stakeholder enough scope for discussions and collaboration increases the probability of a successful participation process.

2.6.4 Stakeholder process

Face- to- face dialogue

Face-to-face dialogues amongst stakeholders and between stakeholders and decision-makers can do away with prejudices and facilitate the identification of mutual gains [Ansell & Gash 2008].

6. *The use of face-to-face dialogue increases the probability of a successful participation process.*

Integration of local and scientific knowledge and two-way communication

A well-founded knowledge base on marine environment is essential for sustainable development of the seas. As Johannes summarizes: '[t]he changes happening all over the world are so numerous, dynamic and multifaceted that the [...] marine ecosystems we see today are not the same as those that existed even in the recent past. If we are to stop the degradation, understand the productive capacity of these environments and begin the long, hard process of achieving recovery, we need to understand what was there in the past [...], the interactive social–ecological processes that are driving the decline [...], what is left, and how these altered ecosystems work' [2007:42].

Sufficient information needs to be present to facilitate well-informed processes and decisions [Ansell & Gash 2008; Beierle & Konsiky 2000; Reed 2008]. Stakeholder participation facilitates the inclusion of knowledge necessary to find trade-offs, i.e. local perceptions, process knowledge and values of social judgments. This is of high importance for the balancing of social, environmental and economic interests as needed for sustainable development.

While stakeholder participation is used as an alternative to top-down, science-led decision-making processes, basing processes only on local knowledge is questioned. Instead, a combination of both scientific and local knowledge in order to facilitate a more comprehensive understanding is advertised by a growing body of literature [Reed 2008]. When using these different kinds of information, difficulties might arise due to scientific knowledge being represented in a different format than stakeholder knowledge, i.e. fishers' knowledge [Varjopuro 2008]. In multi-stakeholder processes, there is for instance a difference in perception of temporal patterns of fish stocks [Verweij *et al.* 2010]. Here, awareness of the information differences and the creation and use of shared information might be of help.

The difference between scientific ecological knowledge and traditional ecological knowledge is reflected by fisheries' science and fishers' knowledge. Often these two are contrasted by describing the science as objective, neutral and systematic, and the traditional knowledge more to be subjective, value-laden and anecdotal [Stead 2006]. The usefulness of the latter is questioned. Fishers on the other hand doubt the flawlessness of scientific research. From the 1990s on, there are efforts to involve fishers in the production of knowledge for management processes. Their knowledge can be critical especially regarding dynamic processes, e.g. varying differences in behaviour, abundance and distribution of fish species, local trends and stock structures, which might not be captured by the universal, scientific techniques. Johannes *et al.* [2000] mentions several cases in which the ignorance of fishers' knowledge had drastic effects. Reducing fishers' knowledge to anecdotes ignores the potential to integrate it into systematic research. While fishers can arrive at wrong conclusions, the observations might still be very valuable [Johannes & Neis 2007]. Especially for marine habitats which are partly unstudied, extremely complex and change rapidly, the knowledge of the resource users is critical.

Two- way learning is necessary between stakeholders and governmental agencies is crucial to facilitate a collaborative process [Ansell & Gash 2008; Reed 2008].

7. *The integration of necessary scientific and laymen/local knowledge as well as two-way communication increases the probability of a successful participation process.*

Influencing process and outcome and embeddedness into the formal decision-making system

A crucial condition for a successful outcome is that stakeholders have the power to exert in fact an influence [Reed 2008]. In this vein, stakeholders should be open to explore mutual gains and have a significant influence to be able to develop a feeling of ownership for the process so that the agency is not responsible for the process and outcome anymore, but the participants are. Like this, shared responsibilities can develop. If the issue is highly complicated and technical, it might require the education of participants.

Another aspect critical for the success of an outcome is the embeddedness in the formal decision-making system in order to prevent that the outcome is considered as insignificant [Edelenbos 2005]. It contributes to enabling stakeholders to have an influence and develop a feeling of shared responsibilities. The stakeholder participation process and its outcome need to be well-integrated into the formal, institutional decision-making system, and a clear link with the decision-maker needs to be established. Moreover, the commitment of governments to the process plays a role. Without a sufficient institutional embeddedness, stakeholder participation can easily be meaningless which negatively affects the degree of trust [Milligan *et al.* 2009]. Thus, there is a need for careful organization of the institutional links with attention paid to the institutional interrelatedness, i.e. timely consultation with political officeholders. Authorities are in a dilemma as they both need and fear participation. 'They need people's agreements and support, but they fear that this wider involvement is less controllable, less precise and so likely to slow down planning processes. But if this fear permits only stage-managed forms of participation, then distrust and greater alienation are the most likely outcomes' [Bass *et al.* 1995:20].

8. Stakeholders having an influence also by means of a well-embedded process in the formal decision-making process increases the probability of a successful participation process.

2.7 Concluding remarks

After reviewing the literature, we found the following success conditions for stakeholder participation processes. First, the starting conditions include the possession of sufficient and balanced power, resources and knowledge is crucial. Second, regarding facilitative leadership, facilitation should be present. Third, institutional design includes the representativeness of the affected public, a transparent, trustworthy process with clear expectations and objectives, and a strict deadline balanced with giving stakeholder enough scope for discussions and collaboration. Fourth, the stakeholder process concerns the existence of sufficient face-to-face dialogue, integration of relevant scientific and laymen knowledge and use of two-way communication. Finally, influence and embeddedness in the formal decision-making system matter.

CASE STUDY 1-THE VOORDELTA (THE NETHERLANDS)

3.1 Introduction

The North Sea area under Dutch jurisdiction is intensely used and further growth in activities is predicted [Vrees 2009]. There are various activities that have to be combined: nature development, defence- exercise areas, cables and pipelines, recreational uses, extraction of surface materials such as sand, dumping sites for dredged material, oil and gas exploration- exploitation, fisheries, shipping, wind energy and land reclamation [Poldermann 2009]. The main motivation for engaging in marine spatial planning is the need to counteract user conflicts and to coordinate the growing number of activities which increase pressure on the marine environment, i.e. marine protected areas, offshore wind energy, mariculture and land reclamation for instance for the extension of the Maasvlakte in the Voordelta. Spatial plans shall be developed as close to the stakeholders as possible. The integrated management plan for the Voordelta applied a stakeholder approach while combining Natura 2000 measures with nature compensation for the land reclamation of the Maasvlakte 2 and forms a memorable process to learn from.

In the following chapter the case study of the integrated management plan Voordelta (NL) is assessed. To begin with, the implementation of marine spatial planning in the Netherlands in general and the Voordelta are described. Subsequently, the degree to which the outcome of the process was successful is analysed relating to mutual benefits and ownership (S2). In addition, the implementation of the stakeholder process is described (S3) and the degree to which the success conditions for stakeholder participation are complied with is analysed as concerns the interests of fishing and nature protection. Based on the result, we discuss how the conditions explain the degree of success of the process (S4).

3.2 Clarification of the context: national developments

In the Dutch spatial planning system, responsibility is divided over different levels of government. The national level is providing a draft of spatial plans which are then translated and elaborated on provincial and municipal level [Manaert 2006].

Decision-making changed recently, with the introduction of the 'Elverding-approach' for spatial issues [Bijlsma 2011]. It is based on the advice 'Faster and Better' ('Sneller en Beter') of the 'Elverding' committee which concerns spatial developments [Elverding 2008]. It recognizes negative effects like lengthy legal procedures in the absence of satisfactory participation. Instead, from the beginning on responsibilities of public and private actors should be clear and a plan for participation should be formalized allowing for substantial participation. 'All affected stakeholders should participate in the process. It is a puzzle that you have to solve together to have a shared understanding of the issue and insights in the others' viewpoints' [Abspoel 2011].

In the Netherlands, the 'National Spatial Planning Policy Document' (Nota Ruimte; NSPPD) of 2006 provided the overall structure for spatial planning activities on land and sea until 2011³. Its three main goals are a sustainable and efficient spatial planning of activities, the improvement of quality of life, and to enhance the spatial quality of cities and rural areas. Public participation is promoted. It establishes the overall guidelines but leaves more space for decentralist authorities, societal

³ In 2011, the National Spatial Planning Policy Document (Nota Ruimte) was replaced by the National Policy Strategy for Infrastructure and Spatial Planning (Structuurvisie Infrastructuur en Ruimte).

organisations, private actors and citizens which shall facilitate a customized approach to regional and local issues. Responsibility is divided over different levels following the guideline of 'decentral if it can, central if it must' and shall be as close as it can to citizens and stakeholders [Ministries of VROM, LNV, V & W and EZ 2006]. It is recognized, that national authorities cannot provide solutions only by themselves. Instead the interplay between authorities and other actors is necessary to solve problems effectively while national authorities shall have a supporting role by for instance providing knowledge to enable other actors to find solutions. According to the policy document, the added value of spatial policies is their potential towards integration of various stakes of sectors in order to create a stronger support for decisions and facilitate a smoother implementation process.

In order to implement this policy in the North Sea, there is the overarching spatial planning framework, the 'Integrated Management Plan for the North Sea 2015' (Integraal Beheerplan Noordzee; IMPNS 2015), which frames how this sea area shall be managed in the period 2005-2015. The spatial planning shall combine activities in a space and time dimension in order to identify the most efficient possibilities and strive towards the realization of sustainable (economic) development in balance with the marine environment. The main objective of the IMPNS is '[t]o enhance the economic importance of the North Sea and maintain and develop international ecological and landscape features by developing and harmonising sustainable spatial-economic activities in the North Sea, taking into account the ecological and landscape features present in the North Sea' [IMPNS 2005: 3-4]. The Dutch part of the North Sea is understood as territorial sea equal to the 12 mile zone and the Dutch exclusive economic zone (EEZ). The area from 1 km offshore is responsibility of the national level as it does not belong to provinces or communities. While communication with the public shall be improved in order to serve users and stakeholders the best, participation is not further mentioned. The Voordelta is identified as protected area with special ecological characteristics [IMPNS 2005].

3.3 Regional management plan: Voordelta

The Voordelta covers roughly 900 m² and is situated off the islands of South-Holland and Zeeland in the South-West of the Netherlands. Being a river delta with fresh, salt, shallow and deep waters it forms not only an important habitat for fishes, birds and seals but is also an intensely used area. In 2008, a management plan was completed regulating activities on a spatial scale. Being the first management plan for a Natura 2000 area in the Netherlands and combining nature protection under Natura 2000, the nature compensation of the Maasvlakte 2 project and existing and future user activities, it forms a memorable process. It has the goal to balance a healthy multifunctional ecosystem with existing and future user activities. Next to nature conservation interests, tourism and fishing interests are of importance.

New measures were necessary to ensure effective protection of biodiversity, to compensate for the construction of the Maasvlakte 2 and to facilitate optimal allocation of user and environmental interests. Therefore, the area specific management plan Voordelta was developed with detailed planning of activities and protection.

3.3.1 The process towards the management plan Voordelta

The process started in 2003 and was completed in 2008. After 2 years of collecting information, a first conceptual draft of measures was presented to the stakeholders. There was considerable resistance against the research results and underlying assumptions [Smit *et al.* 2008]. At this point, it was decided to combine the nature compensation for Maasvlakte 2 with Natura 2000. After, there was more cooperation with local actors to identify a consensus on the tasks and measures, so that support could be gained for the implementation. This process took two years. Subsequently, there were information and consultation meetings with municipalities and citizens. This process of

consulting stakeholders and writing the draft management plan took two years, until 2007. There was a formal consultation period of 6 weeks (1 March – 11 April 2007), during which the plan, the environmental impact assessment and the appropriate assessment were accessible at 36 different locations as well as online and were open for comments. Finally, in July 2008, the management plan was completed on basis of the three documents and the results from the consultation process [Ministry of Infrastructure and Environment 2012]. The covenant 'sustainable Voordelta' of 2008 contributed to the finishing of the management plan by addressing the controversial issue of bottom trawling.

The implementation of the plan is responsibility of the Ministry of Infrastructure and the Environment (Ministry V&W) and the Ministry of Agriculture, Nature and Food Quality⁴ (Ministry LNV) as well as the provinces of Zeeland and South-Holland in their role as jointly responsible authorities. The Rijkswaterstaat North Sea (RWS NS), a department of the Ministry of V&W, is coordinating manager for the North Sea and in charge of the development of the management plan together with the two respective provinces and in cooperation with the Project Organisation Mainport Rotterdam. The Ministry of LNV was in charge of the nature compensation for the Maasvlakte 2. It played a role due to being involved with the fishing, tourism and environmental sectors and having to agree to the management plan. Its role was to motivate stakeholders to stay involved and to strengthen relationships [Harte 2011]. The port authority of Rotterdam (Havenbedrijf Rotterdam) depended with its Maasvlakte 2 project and the necessary nature compensation on the management plan.

The combination of measures to comply with both the requirements for Natura 2000 area and nature compensation for the Maasvlakte 2 increased the degree of complexity. Furthermore, the process was pressured by the beginning of the Maasvlakte 2 constructions being planned for September 2008.

On the one hand, the Voordelta is the first Natura 2000 area in the North Sea. It forms due to its inherent characteristics of changing between sweet and salt water, and low and high tide, a living and breeding place for seals and different protected bird species. Due to its high natural value, the Voordelta is designated as 'Special Area of Conservation' under the Birds and Habitat Directives. Forming together Natura 2000, they are the centre piece of EU nature and biodiversity policy, with the goal to protect the most valuable and threatened species and habitats by constructing a network of protected areas. Based on the Nature Conservancy Act of 1998 a management plan had to be developed for the area for providing protection of typical/endangered species and habitats, e.g. the seal, black scoter and other kinds of ducks or stilts, is required [Ministry V&W and RWS NS 2008B]. Due to the tight time schedule connected to the realization of the Maasvlakte 2 project the decision determining the conservation objectives was developed simultaneously with the management plan. For the designated areas a management plan has to be completed identifying measures to realize the objectives. These conservation measures are analysed by the appropriate assessment regarding the degree they would satisfy the objectives. The objectives for designated Natura 2000 areas in the Netherlands were determined by the decision of 19 February 2008 [Ladrak&Numan 2009]. Before there was a draft decision of 27 November 2006 in which draft conservation objectives were included. On 12 June 2008, the access restrictions for the fisheries have been approved by the European Commission.

On the other hand, the completion of the management plan was pressured by the Maasvlakte 2 project, a land reclamation project extending the harbour of Rotterdam and part of the Project Mainport Rotterdam (PMR). Situated in the Voordelta, it would most probably have significant effects on the Natura 2000 sites so that compensation measures were needed. The effects include losing the area of the land reclamation itself, effects on processes such as currents and transport of

⁴ The Ministry of LNV is currently called Ministry of Economic Affairs, Agriculture and Innovation (Ministerie van Economische Zaken, Landbouw en Innovatie, EL&I).

sand or sludge, and effects of using the Maasvlakte 2 like for instance emissions and noise [Ministry V&W and RWS NS 2008B]. According to the EU legislation, any project or plan that might have a significant effect on a Natura 2000 area is required to undertake an appropriate assessment to analyse if the integrity of the area is threatened. Further, 'no new activities with significant effects are permitted in or near areas with special ecological features, unless there is no realistic alternative and there is an overriding public interest' [IMPNS 2005: 69]. If this situation is given, the environmental interest is weighted against the public interest, and the activity might be permitted if adequate compensation measures are imposed. If the policy goals are of national interest, like in case of the extension of the PMR, the national level is responsible by means of the order in council for space (AMvB Ruimte). Regarding the Voordelta, effects of the PMR on the ecology could not be excluded. It formed an issue of overriding national interest and had therefore to be compensated.

In the last phase of the process towards the management plan, the covenant 'Sustainable Voordelta' came into being in July 2008 [Covenant 2008]. The ministries of LNV and V&W, the NGOs Natuurmonumenten and Stichting de Noordzee, the Fishery Production Board (Productschap Vis, FPB) and the port authority Rotterdam participated. It is closely connected to the plan, partly the same stakeholders participated, the outcome of the covenant was adopted in the management plan, and only due to its successful finishing the management plan was completed in time. Thus, Stichting de Noordzee took legal steps because bottom trawling fisheries were fishing in their opinion without license, thus illegally. This time delay by means of a court case was avoided by the parties reaching a consensus in this covenant [van de Water 2011]. The participating actors (authorities, fishing and nature representatives) strived to cooperate and work towards agreements concerning the balancing of nature and fishing interests in the Voordelta, particularly regarding bottom trawling fishing. In this context, user activities are partly restricted including bottom trawling.

3.3.2 The content of the management plan

The management plan is based on an evaluation report regarding the future use and an environmental impact assessment and applies to a period of 6 years. With both Natura 2000 and nature compensation measures the focus is put on conservation, which results in restrictions for other user activities.

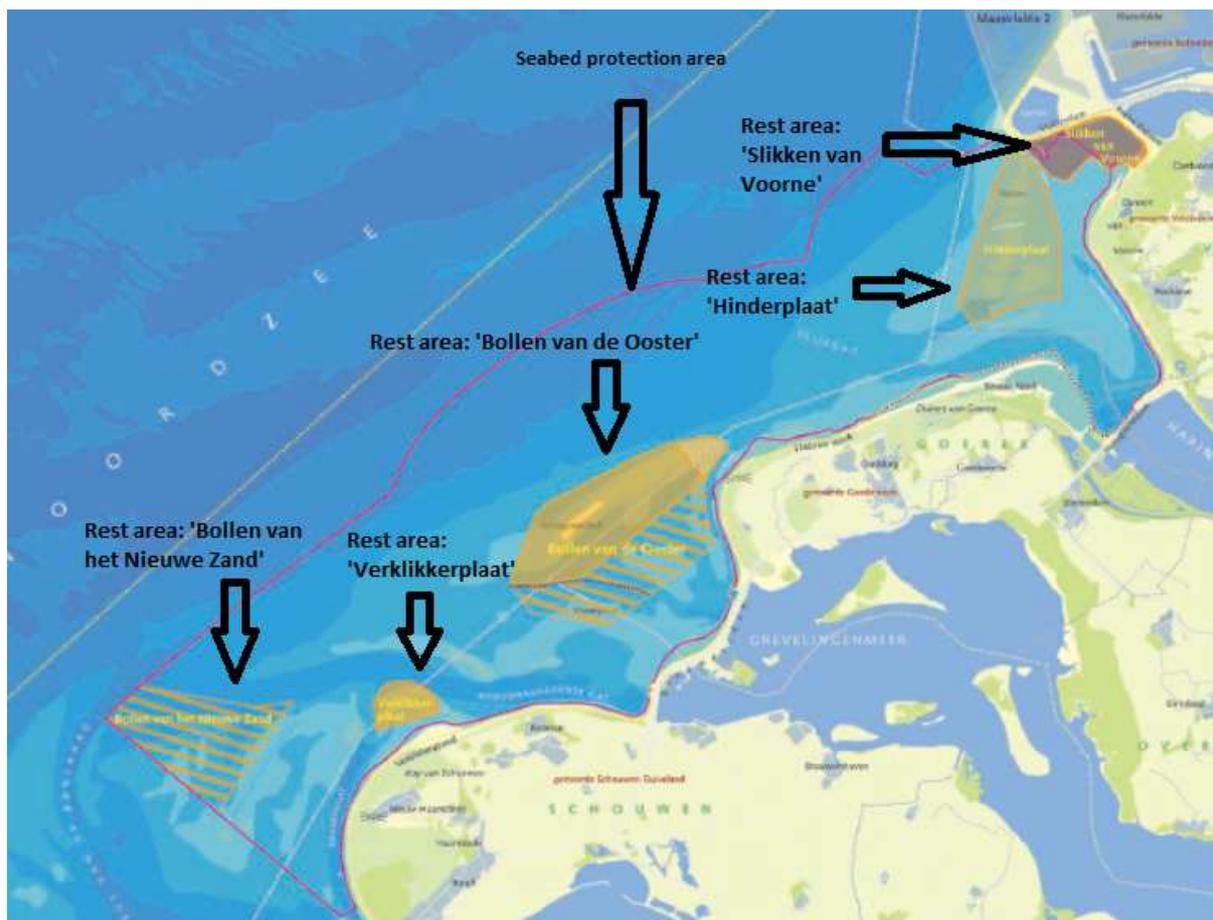


Figure 3.1: Overview of seabed protection area and rest areas in the Voordelta [based on Ministry V&W RWS NS 2008B: 15]

For the purpose of nature protection and the compensation measures for Maasvlakte 2, a seabed protection area and five rest areas for seals and birds were set up (see figure 3.1) [Ministry V&W and RWS NS 2008B]. The rest areas are nearly exclusively located in the seabed protection area. Restriction decisions were taken, e.g. for the seabed protection area activities distorting the seabed are constrained. In addition, there are limitations for recreation and fishery activities related to the disruption of seals and birds.

Conforming to the requirements of the Nature Conservation Act and the Natura 2000 legal framework to evaluate and permit any kind of activity close by or in the area, the management plan included and evaluated all user activities based on the point in time of drafting the plan. They were assigned to four different categories: exempted from permit requirement, exempted from permit requirement under conditions, not exempted (on case-to-case basis analysed) and not permitted. For already existing activities, heavy bottom trawling is prohibited. In the rest areas, there is prohibition of certain kinds of fisheries and recreation, digging, low flying over and military activities. New activities need to be looked at on a case-to-case basis.

In the management plan, it is difficult to distinguish between measures for Natura 2000 and the nature compensation for the Maasvlakte 2. While the soil protection area serves only the purpose of nature compensation, two of the five protection areas (Hinderplaat, Bollen van de Ooster, Bollen van de NieuweZand, Slikken van Voorne, and Verklikkerplaat) shall contribute to both purposes. See table 3.1 for an overview of the rest areas and the respective measures.

Area	Natura 2000 measures	Nature compensation measures	Measures
Hinderplaat	Rest area for seals/ feeding and breeding area for common eider	Rest area for sandwich tern and common tern	Area closed except for restricted types of activities (recreation, fishing).
Bollen van de Ooster	Rest area for seal	Rest area for black scoter and sandwich tern	Area closed except for restricted types of activities (passage, recreation). In summer (1 April- 1 November) the rest area is smaller than in winter.
Bollen van de Nieuwe Zand	--	Rest area for black scoter	The area is closed for all activities in the period 1 November – 1 May.
Slikken van Voorne	Rest area for stilts and ducks	--	The area is closed except for specific types of fishing.
Verklikkerplaat	Rest are for seal	--	The area is closed. In the surroundings some activities are allowed.

Table 3.1: Overview of rest areas

The measures for complying with the conservation objectives as determined in the decision of 19 February 2008 and thus with Natura 2000 requirements can be summarized as follows. Four rest areas were established. The intertidal rest areas for seals are better protected to increase their population. Furthermore, there are measures for stilts, ducks and the common eider.

The significant effects of the construction of the Maasvlakte 2 were compensated as follows [Ministry V&W 2008]. First, through the construction 2.544 hectare of the habitat 1100 ('sandbanks which are slightly covered by water all the time') is lost, which is the most common habitat type in the Voordelta. This loss is compensated by increasing the quality of areas of the same habitat type by means of the seabed protection area. In this area bottom trawling activities are restricted, which shall lead to a better food provisions and to an approximate ecological benefit of 10%. With 24.550 hectare the protection area is 10 times larger than the lost area and is therefore adequately compensated. Some types of recreation and fishing activities are still allowed. Second, the feeding grounds of the black scoter is affected which is compensated by increasing the food present and by improving conditions in the concentration areas of the black scoter (especially November until April). Finally, the feeding grounds of the sandwich tern and of the common tern are affected, which is compensated by facilitating breeding areas closer to the feeding grounds.

3.4 Outcome: degree of success

The degree of success of the outcome is rather high. However, there are shortcomings especially regarding the fishing sector. There were many efforts to identify trade-offs in cooperation with the stakeholders translating into a rather high degree of mutual benefit for all stakeholders. Furthermore, there are limits to the feeling of ownership for both, the fishing and nature protection interests.

3.4.1 Mutual benefit

There were many efforts to facilitate an agreement favourable to all stakeholders translating into some customized solutions that made the outcome more acceptable to the participants, e.g. summer-winter regimes in Bollen van de Nieuwe Zand for the Ensis fishery. Therefore, there is quite high degree of mutual benefit. Nevertheless, the fishing sector suffered economic losses through the Maasvlakte 2 and the management plan Voordelta and is generally perceived as the losing actor. It was not possible to identify trade-offs for all kinds of fishing. While there were benefits for nature, those have been partly limited.

3.4.1.1 Outcome for fishing sector

The setting up of the seabed protection area and rest areas meant inevitably that user activities had to be restricted in the Voordelta leading to economic losses. While the fishing sector lost by the restriction of fishing activities it benefited by investments in the sector. The situation differs for the different kinds of fisheries as for some customized solution were identified.

Stakeholders recognize the negative effects of the management plan on the fishing sector. For nature interests, it is clear that through the Natura 2000 and nature compensation measures the existing utilization of the area needed to be adapted [Van den Akker 2012]. Still, authorities tried to avoid any restrictions for fisheries that were not necessary and stimulated the fishing and recreation sector together with the port authority Rotterdam with 12 Million Euro. The funds were invested by the FPB in a foundation to support fishing businesses.

The fishing organisations perceive that the process facilitated an outcome which might be better than alternatives, e.g. a protection area with no user activities allowed at all. Nevertheless, entrepreneurs suffered damage through the measures and were not compensated. There are no real benefits for fishers but they suffered a loss of income [Seip 2011]. The negative effects on fishers are twofold: they lose the area of the Maasvlakte, and fishing activities are limited by means of the nature compensation and Natura 2000 designation [Oostenbrugge *et al.* 2008].

The measures relating to fishing activities included the prohibition of heavy bottom trawling. Other kinds of fishing are under condition allowed in the rest areas. All active fishing vessels are required to have monitoring equipment on board.

Bottom trawlers with ground chains and/or an engine power bigger than 260 hp (191 kW) are prohibited in the seabed protection area. Outside the area they are allowed to fish if they passed the license procedure. Trawlers with an engine power smaller than 260 hp (191 kW) are allowed to fish outside of the rest areas. In the rest area Hinderplaat there are two trawlers that allowed to fish to a limited extent. 'Bordentrawl' (bordenvisserij) is allowed in the whole of the Voordelta except the rest areas.

For shrimp fishery, it was decided that for now they do not have an effect. Further research on a Marine Stewardship Council certification is going on which is beneficial for them. If they receive the certification then no licensing is required. Shrimp fishery can take place by means of dynamic management: fishing is only allowed if there is enough food for birds. The closing rest areas such as the Bollen van de Ooster in winter are harmful for the shrimp fishery as it is a very important period for them.

The shellfish fishery is allowed outside the rest areas under the requirement that they comply to the framework of the Nature Conservancy Act of 1998. The Ensis fishery is the most significant type of shellfish fisheries in the Voordelta and forms an important food source for birds [Ministry V&W and

RWS NS 2008B]. Compensation was arranged and a compromise was identified with introducing a summer-winter regime for a protection area and Ensis fisheries. The Spisula fishery is for the duration of the management plan not allowed. For the cockle fisheries a compromise could not be identified.

3.4.1.2 Outcome for nature

Environmental interests gained through the existence of concrete measures in the Voordelta. Nevertheless, the benefits the management plan Voordelta brought to environmental interests are limited. The largest measure is the seabed protection area which compensates for the Maasvlakte 2, so that the nature protection is not enhanced with it. While there are four rest areas serving the conservation objectives of Natura 2000, two of those are at the same time compensating measures (see table 3.1) The nature in the Voordelta is not sufficiently protected yet. There are barely any areas where fishing is seriously restricted. The measures form one big compromise between nature and fishing..

3.4.2 Feeling of ownership

In general, there was a quite high degree of shared responsibilities in the sense that stakeholders were perceived as partners in the process to identify measures [Harte 2011]. Nevertheless, in the end the feeling of ownership among the fishing and nature protection interests was limited.

The perceived ownership of the fishing sector was rather low: there was no support of all of the included measures [Seip 2011; Van den Akker 2012]. For instance, the cockle fishery could not develop an ownership of the process and support for the measures as it was not successfully involved in the process [Holstein 2012]. Furthermore, fishing organisations did not understand the necessity for closing the rest areas for fishing [Ministry V&W and RWS NS 2008A]. The nature protection organisations supported the process to a higher degree but there were also limitations on their feeling of ownership [Van der Water 2011].

In sum, more could have invested in the development of public support of the process in such a way that also disadvantaged actors would be committed to the process, e.g. the support of fishers while fishing activity was restricted.

3.5 The stakeholder participation process as applied towards the management plan Voordelta

3.5.1 Description of the stakeholder process

The three main interests groups affected by the management plan Voordelta are the fishing sector, nature interests and the recreation sector. This stakeholder description as well as the whole research is limited to the first two. The authorities are not defined as stakeholders but are included in the research as directing the planning process and affecting developments in the Voordelta.

In the management process, a broad scale of stakeholders was represented, from individual entrepreneurs to national organisations.

From the authorities, RWS North Sea as the executive arm of the Ministry of V & W and the Ministry of LNV as well as the provinces of Zeeland and South-Holland played a large role. The port authority of Rotterdam was a strong economic actor influencing the process. The municipal level was also actively involved. Depending on the interests of the municipality, the responsible official would not only represent a general interest. In the case of Goedereede, with the port of Stellendam close by as

one of the largest Dutch harbours, the official represented municipalities with smaller or bigger fishing interests [Harte & Langbroek 2009; Bijlsma 2011].

The Voordelta is of a high ecological value. Therefore, it is protected in legal frameworks such as Natura 2000. Under the Bird Directive, it is designated as special protection area for 30 bird species and under the Habitat Directive for six habitat types [Planbureauvoor de Leefomgeving 2008]. For the nature interests the leading organisation was Natuurmonumenten. The organisations Zeeuwse and Zuid-Holland Milieufederatie, Stichting de Noordzee (SdN), Stadsbosbeheer and a number of local environmental protection actors took also part in the process. Natuurmonumenten played a leading role in the representation of nature in the process and in informing other environmental NGOs. It was involved in the sounding board for the management plan which existed since the beginning of the process for the purpose of giving feedback [Smeele 2011]. The different environmental organisations pursue their own strategy in the process. While all of them represent in some way the interest of nature, they are not equivalent to the interest of nature.

In the Voordelta, fishing plays especially socially an important role. Predominantly small-scale fishing takes place. Fishing in the Voordelta can be classified in three types: trawling, fishing with devices and shrimp fishing. The fishing sector was represented by a working group of local fishers led by the FPB. The fishing sector is rather fragmented. Different fishers and the different kinds of fisheries, e.g. bottom trawling, shrimp and Ensis, have different goals.

The management plan was developed after agreeing and/or consulting stakeholders, e.g. administrative bodies, authorities, users and owners and other regional stakeholders [Ministry V&W and RWS NS 2008B]. For this purpose, there were:

- Discussions between the decision-making authorities (Ministry V&W, Ministry LNV and the provinces South-Holland and Zeeland)
- Discussions between the participating municipalities and water authorities regarding the issues of provision of information, content and procedure of the protected areas and measures for recreation and fishing
- Discussions with societal organisations, recreation organisations and the fishing sector with the goal to develop measures which comply with the obligations for the nature compensation and with the balancing of economic and environmental interests; societal actors contributed their knowledge of the area to this process
- A 'sounding board' with representatives from the most relevant interest groups for the purpose of giving feedback regarding the management plan
- Information meetings for citizens

There were workshops organised on the topics of 'nature and tourism/ recreation' and 'fishing and nature'. While the former issue was dealt with jointly by environmental and recreation organisations, the latter was debated in two separate work groups—one with fishing interests discussing nature aspects and one with environmental organisations about fishing [Smit *et al.* 2008]. There were also meetings to consult directly with the stakeholders.

All results were integrated in the management plan. In the six weeks consultation period for the draft management plan stakeholder could contribute their points of views. In the end, there were 43 different reactions from 72 different actors. While the fishing and recreation sectors commented on the restrictions on user activities, especially environmental NGOs brought forward that those were not strict enough. In 2008, after the finishing of the management plan stakeholders had the possibility to object.

3.5.2 Analysis of success conditions

The success conditions are assessed by means of indicators. Each indicator is evaluated from point of view of authorities, nature sector, fishing sector as well as external sources. The results are summarized according to the following scale:

Character	Meaning
++	Present
+	To a considerable degree present
±	Undetermined
-	To a considerable degree not present
--	Not present
≠	Varied
ND	No information available

Table 3.2: Scale for evaluation of success conditions

If there is at least one ‘-’ (To a considerable degree not present) among authority, fishing or environmental sectors or external sources, then shortcomings exist concerning the respective success condition, which is then declared to be not fulfilled. The character of ‘≠’ (varied) can also indicate shortcomings as it refers to conditions for which the degree of compliance has been experienced differently by the respondents.

The abbreviations refer to: A = authorities; F = fishing interests; N = nature protection interests; E = external sources.

3.5.2.1 Starting conditions: balanced power-resource-knowledge

Success condition	Indicator	A	F	N	E
Balanced power-resource-knowledge	Possession of sufficient resources	++	++	++	ND
	Absence of clear differences in resources	+	±	-	ND

Table 3.3: Performance regarding starting conditions (see section 3.5.2 for explanation of scale and abbreviations)

In general, there were sufficient resources present to participate. Stakeholders agree that the process was open and well-balanced. Thus, according to the authorities, there were no weaker or stronger groups and all were able to participate [Harte 2011]. For both the participating nature and fishing organisations, there were apparently no restrictions on active participation due to a deficit of knowledge or resources [Seip 2011, van den Akker 2012].

However, constraining factors on participation include the weaker position of the fishing sector, uncertainty due to the novelty of the process and the imbalanced influence of the port authority. First of all, the fishing sector had in that sense a weaker position in the process as it was from the beginning on obvious that fishing activities would have to be restricted. Second, being the first process of its kind in the Netherlands, there was a general lack of knowledge regarding Natura 2000 and the use of a stakeholder participation approach. Finally, the port authority had a strong interest in the success of the stakeholder process and influenced the process disproportionately compared to other interests.

3.5.2.2 Facilitative leadership: presence of facilitation

Success condition	Indicator	A	F	N	E
Presence of facilitation	Presence of facilitation	++	+	+	ND

Table 3.4: Performance regarding facilitative leadership (see section 3.5.2 for explanation of scale and abbreviations)

There was facilitation of the process by the port authority and responsible ministries. For instance, there was financial support, educative activities and in case of conflicts with certain interest groups additional efforts were invested.

The port authority (Havenbedrijf Rotterdam) depended regarding their Maasvlakte 2 plans on the nature compensation, which relied upon the existence of the management plan. It supported the process financially regarding management and research with the goal to facilitate a true stakeholder process to increase the probability of success and timeliness. Thus, delays by means of for instance legal procedures could postpone the beginning of the construction works. In the context, broad meetings of the main societal organisations of fisheries, tourism and environmental interests were supported by an independent chairman. He facilitated the process through improving the organisation of stakeholders [Seip 2011].

According to the perception of RWS North Sea a lot of efforts were done to facilitate a situation in which everybody has the same information and understanding [Harte 2011]. They did efforts to inform every household about meetings. If conflicts arose additional efforts were invested. An example forms the dispute between the protection of black scoter and surfers in the rest area Bollen van de Ooster. Meetings were organised with the affected interests and additional bird counts took place leading to identifying the compromise of reducing the size of the rest area in summer. A representative of an environmental NGO confirms the investment of extra efforts in case of resistance by stakeholder groups. It happened in case of recreation and similarly more efforts were invested when specific fishing groups began to resist [Smeele 2011]. In the end, fishing was the largest issue and approximately 70% of attention in discussion and meetings was given to the fishing sector. Finally, there were meetings to educate interests groups. In this context, prior to the meetings for consulting with actors on the draft management plan there were information fairs, plenary presentations and questioned were answered by officials [Ministry V&W and RWS NS 2008A].

3.5.2.3 Institutional design

Success condition	Indicator	A	F	N	E
Representativeness of the affected public	Early inclusion of all affected throughout the process	+	+	+	-
Transparent, trustworthy process with clear expectations and objectives	Transparency	+	+	+	ND
	Perception of trust present	++	-	+	ND
	Clear expectations	-	--	-	-
	Clear objectives that emerged from discussions	≠	≠	≠	ND
A strict deadline is balanced with giving stakeholder	Deadline existing and balanced	+	--	-	ND

enough scope for discussions and collaboration					
--	--	--	--	--	--

Table 3.5: Performance regarding institutional design (see section 3.5.2 for explanation of scale and abbreviations)

3.5.2.3.1 Representativeness of the affected public

All stakeholders agree that the process was quite open and that all affected were rather well represented. However, a potentially open process does not guarantee that all important parties were at the table. There are some drawbacks on the degree of representativeness especially concerning fishing organisations, the beginning of the process and inadequate representation of some stakeholders.

Natuurmonumenten was the leading actor in the representation of the nature interests. It forwarded information to/from other environmental interests groups and contributed to the representativeness of the process towards environmental interests [IJlstra 2011]. The fishing sector was represented by the FPB who cooperated closely with local fishers to connect theory and practice the best way possible [Seip 2011]. Next to a representative from the board itself ‘front men’ took often part in meetings, i.e. representatives of specific fisheries like shrimp or cockle. There was also a working group of fishers that served as sounding board for feedback.

From the point of view of the authorities, all affected were represented in the process. The meetings were always open to all interested irrelevant of their power or size. Like Mariska Harte from the RSW North Sea summarizes: ‘in my opinion the three most relevant groups (fisheries, environment, and tourism) had a well-founded position in the process. The fishing sector got a lot of attention because the management plan would have a profound effect on it’ [2011]. The sector was well-represented in the sense that it got a lot of attention, was represented by skilful people and that there was a lot of contact with local fishers.

The nature and the fishing organisations agree that all who wanted to participate could participate and that they were in general well represented. However, while the fishing sector participated continuously and was heard [Holstein 2011], there are shortcomings regarding its representativeness. ‘The authorities involved the tourism and environmental sector sufficiently, but not the aspects related to the fishing sector’ [Smeele 2011].

First of all, the decentralised and fragmented character of the fishing sector hampered the degree of representativeness. It required time and effort to promote participation and made the representation of the whole sector more difficult as it was more cumbersome to reach the fishers [Seip 2011]. A central, leading position of one representing organisation like for the nature interests was not possible for the fishing sector, because if an agreement with the sector was necessary every fisher mattered [IJlstra 2011]. In this context, from point of view of the authorities, discussions were hampered due to missing communication between the FPB and fishers leading to agreements with the board not forming automatically agreements with the fishers. A representative from the board agrees that despite huge efforts it was difficult to reach all fishers, but that at the same time the contact to the fishers are very good in the Voordelta [Seip 2011].

Second, according to Quirin Smeele from Natuurmonumenten, the fishing sector ‘was not well represented in the structures for stakeholder consultation. Via the formal process the fishing sector was barely covered. Instead a lot was done last minute via other routes, i.e. more direct negotiations between the authorities and the sector’ [2011]. This impression might be related to the more sectoral approach of the Ministry LNV (see below section 3.5.2.4.1).

All stakeholders' representation was restricted by a false start. The stakeholders had to demand their right to participate [Smit *et al.* 2008; Seip 2011]. They began to participate when the nature compensation and Natura 2000 processes were still separate [Harte 2011]. The nature compensation part was first organized in a traditional more top-down manner with little stakeholder participation. Only after much resistance from stakeholders and pushing by the port authority, it was realized that the process had to be organized differently. When they started with a more integrative stakeholder process, it was joined with the Natura 2000 process. Furthermore, the project organisation had misjudged the public perceptions which led to further disillusion [Harte *et al.* 2008]. Therefore, in the beginning of the planning process first concepts for measures were designed and presented to societal organisations and the public, who offered resistance against these. This was a surprise to the authorities because earlier only FPB had expressed criticism. This changed attitude was most probably due to stakeholders not having had enough insights into the process before.

Finally, while in the opinion of the nature organisations, stakeholders had in general the possibility to participate from the beginning on, there were drawbacks in the representation of specific interests. In this vein, the Ensis and cockle fisheries began to participate later in the process while the shrimp and bottom trawling fisheries were since the beginning represented [van den Akker 2012]. While the process was open in the sense that cockle fishers had the possibility to participate, they entered the process after the decision to prohibit cockle fishing in the rest area Hinderplaat had been taken already. 'We could not take their requests into account' [IJlstra 2011]. Stichting de Noordzee entered the process also rather late, after Natuurmonumenten convinced them of the importance of the process. Thus, while it was quite open not all affected parties were represented throughout the process.

3.5.2.3.2 A transparent, trustworthy process with clear expectations and objectives

While there was a quite high degree of transparency, the perception of trust varies from interest group. The clarity of expectation was affected by the uncertainty and complexity involved. In addition, false expectations were raised regarding the continuation of fishing activities. The general objectives were rather clear. They were determined beforehand while their implementation and more specific aspects could be discussed and influenced by the stakeholders.

Transparency

Stakeholders agree that there was a rather high degree of transparency. All present information seemed to be handled in a transparent way. Authorities did a lot of efforts to continuously inform stakeholders. According to the authorities, there was enough room in the process to ask for more explanations and the formal rules were clear [IJlstra 2011; Harte 2011]. The process became more transparent after the port authority began to invest in the process to facilitate a better stakeholder process [Seip 2011].

The transparency was negatively affected by the novelty of the process leading to a general lack of knowledge of how to handle stakeholder participation and the complex issue of Natura 2000, e.g. how to define the expression 'significant effect'. Furthermore, the combination of Natura 2000 and the nature compensation made the process more complex and led to confusion [Harte *et al.* 2008; Van den Akker 2012]. In addition, there was some resentment regarding one of the chairmen who did not handle the process very transparent [Seip 2011]. Finally, the fishing sector was partly kept out of the process. There was no unrestricted access given to the necessary information jeopardizing the capacity to take joined decisions [Smeele 2011].

Perception of trust present

The trust perception differed by stakeholder group. Authorities believe that the process had a sufficient degree of respect and fairness because the whole plan was developed together [Harte 2011]. There was a healthy mistrust, which helped to preserve a critical attitude, and trust that the process would be successful.

However, fishing organisations felt only partly respected and treated in a fair manner. They perceive to have had no reasonable chance against stronger interests. 'Although it was never stated, it was from the beginning on clear that the fishing sector had to be sacrificed' [Seip 2011]. Furthermore, the decision was taken in the end by only a few actors with the goal to succeed and have as few conflicts as possible: 'it is preferred to be in conflict with a few fishers than with the large interest group of nature protection' [Holstein 2011]. There was a certain degree of trust in the beginning, but it decreased. Cora Seip of the FPB summarizes it as follows: 'Until summer 2008 there was trust. With the high degree of pressure and hurry present in the process it was not finished appropriately and fishers were frustrated. While in the beginning of 2008 fishers were rather sceptic but optimistic, in the end of the year they felt betrayed.' [2011]. In case of the cockle fisheries their amount of trust decreased with the degree to which their concerns were neglected [Holstein 2011].

Nature organisations acknowledge that there was adequate respect and fairness present. However, due to not all aspects put forward by SdN being considered they kept a certain degree of mistrust [Van den Akker 2012]. Furthermore, the degree of trust depended from the respective authority. Thus, a stakeholder commented 'I did not enter the process with a high degree of trust. While I trusted the part of the process that related to the port authority (Havenbedrijf Rotterdam) and gained trust in the way in which staff of Rijkswaterstaat participated I did not trust the fishing aspects' [Smeele 2011].

In this context, there is a potentially biasing role of ministries by ministries having their own interests that might influence the process. The Ministry V&W commented that although they preferred not having an exceptional position, this was impossible regarding issues like the shipping passages that had to be guaranteed [Harte 2011]. According to a nature organisation, there was a lack of communication and an insufficient integration regarding fishing aspects and the role of the Ministry LNV. This might be connected to this Ministry having a specific interest in the fishing sector.

Clear expectations

The clarity of expectations was limited due to the uncertainty surrounding Natura 2000 and the novelty of the process. It was a 'trial and error' process [Smeele 2011]. While the authorities tried to express themselves as clear as possible, it had not always been possible to give explicit answers concerning complex issues [IJlstra 2011].

The fishing organisations experienced further constraints on the clarity of expectations by means of a misrepresentation of possible outcomes for fishing activities [Seip 2011]. False expectations were raised regarding the degree to which fishing could continue despite the setting up of Natura 2000, i.e. that no licensing of already existing activities would be obligatory [Smit *et al.* 2008]. The process was not well organized but developed with time also under pressure of stakeholders [Seip 2011]. The cockle fishery had the expectation to find a solution, which did not prove possible [Holstein 2011]. These unclear expectations led to a high degree of disillusionment especially among fishers.

Clear objectives that emerged from discussions

The general objectives for the nature compensation and Natura 2000 were from the beginning on clear, and could not be directly discussed by the stakeholders. It was also known that bottom trawling had to be limited. Other more specific aspects were not decided beforehand but could be discussed. User activities were fine-tuned [IJlstra 2011]. Uncertainty and lacking knowledge on the marine environment had a negative effect on the degree that objectives emerged from discussions and the influence of stakeholders [Smeele 2011; Seip 2011].

3.5.2.3.2 A strict deadline is balanced with giving stakeholder enough scope for discussions and collaboration

The deadline was strict in the process because the construction of the Maasvlakte 2 depended on the management plan. In the final year of the process towards the management plan Voordelta the pressure increased substantially due to conflicting views on the draft management plan. The port authority had a great interest in finishing the plan in time so that the construction works for the Maasvlakte 2 could begin as planned in September 2008 [Harte *et al.* 2008]. This strict deadline and the resulting high pressure negatively influenced the quality of the stakeholder process.

In March 2007, the draft management plan was published and opened for consultation for a period of six weeks. Several organisations such as SdN, Natuurmonumenten, and the FPB communicated their views. Subsequently, it became apparent that conflicts remained that needed to be settled. An example for such a clash is that Natuurmonumenten was not satisfied with the fishing aspects. Quirin Smeele explains the situation as follows: ‘our stake was to maintain the environmental goals, especially concerning ‘sandbanks which are slightly covered by water all the time’ (Habitat 1110), that was a close call. Bottom trawling fisheries were in conflict with the environmental goals. A research done for Natura 2000 areas stated that the Habitat 1110 areas in the Voordelta were not in a good state. Nevertheless, the document of the authorities on which the management plan is based determines that the ‘sandbanks covered all the time’ are only to be maintained and not restored. In this context, in our opinion fisheries should not be allowed in the areas related to the compensation part. However, in the draft management plan fisheries were allowed in and outside the area, which led to environmental damage’ [2011]. Furthermore, SdN took legal steps as in their view the bottom trawling fishery was fishing without license and thus illegally [van de Water 2011]. Finally, fishing organisations were not satisfied with the summer-winter regimes which had been designed for tourism but did not form a good solution for fishers [Seip 2011]. Two weeks before the end of the process FPB considered taking legal steps.

In order to deal with all these issues efficiently and prevent long court sessions the covenant ‘sustainable Voordelta’ came under a high pressure into being (see above section 3.3.1). According to this agreement, some remaining issues would be solved outside of the management plan. In this context, fishing organisations developed certain expectations that some topics could still be influenced. When after the signing of the covenant nothing happened anymore, fishers were left disillusioned [Seip 2011]. In addition, some information was not openly shared and with the high time pressure it formed rather a negotiation directed towards certain goals: the interests of the port authority to build the Maasvlakte 2. ‘The covenant is more about the interest of the port than about a sustainable Voordelta. All served to prevent legal proceedings leading to a delay in the Maasvlakte 2 project’ [Van de Water 2011]. The stakeholder process seemed more to be used to inform about the measures than for stakeholder to have indeed an influence.

In sum, in his final phase, the transparency suffered, and matters were not closed to the satisfaction of all participants. In the opinion of fishing organisations, in the end everybody was nervous and under time pressure so that certain issues remained unsolved: ‘especially in the end there was the tendency to not listen or discuss anymore but just to decide’ [Seip 2011]. The environmental NGOs

confirm the high pressure existent to take decisions [van den Akker 2011; Smeele 2011]. The quality of the stakeholder approach was partly sacrificed for meeting the needs of the port authority.

3.5.2.4 Stakeholder process

Success condition	Indicator	A	F	N	E
Face-to-face dialogue	Face-to-face dialogue	+	+	+	-
Knowledge and communication	Presence and integration of laymen/local and scientific knowledge	++	-	+	-
	Two-way communication	+	+	+	ND
Influence and embeddedness	Influence of stakeholders on process and outcome (shared responsibilities)	+	-	+	ND
	Embeddedness in formal decision-making process	+	+	+	ND

Table 3.6: Performance regarding stakeholder process (see section 3.5.2 for explanation of scale and abbreviations)

3.5.2.4.1 Face-to-face dialogue

In general, there were next to the formal consultation period intense contacts with stakeholders. Various meetings between decision-makers and other actors facilitated face-to-face dialogue. Still, there are drawbacks regarding the dialogue between the interest groups themselves.

There was a close cooperation between the ministries and the provinces. The ministries went several times directly into the regions to tell about the process [IJlstra 2011]. Furthermore, they organized many meetings to explain next to the process also the content, and to discuss the relevant issues together with the three largest stakeholder groups: fisheries, nature protection and tourism. Concerning the compensation for the Maasvlakte 2, there were regular, broad meetings with societal actors to explain to the stakeholders how their input was integrated. Every two months, there were meetings with the administrative bodies, e.g. ministries, community councils, the appointed and mayors [Harte 2011]. In addition, there were workshops with stakeholders to establish shared definitions of old and new kinds of utilization of the area which had an influence on licensing [Harte *et al.* 2008].

The nature of meetings differed by responsible body. RWS tended towards organising meetings with all stakeholders, while the Ministry LNV did a lot on a one-by-one basis [Smeele 2011]. Ton IJlstra explains their approach as follows: we ‘split up the stakeholder process in order to negotiate with them on a sector by sector basis. Only if it was necessary or useful we would bring all sectors together [2011]’. While the stakeholders were still in contact, under the guidance of this Ministry there were fewer face-to-face meetings between the different interest groups. According to the authorities, provision of information by the project organisations, the newsletter and website provided together with the meetings that took place sufficient insight into the other stakeholders’ point of view [IJlstra 2011]. Especially in the end more meetings between the authorities and single interest groups, i.e. fishing organisations, occurred [Holstein 2011]. ‘As stakeholder you did not have an influence on that but were only informed. Especially the Ministry of LNV had the tendency to talk individually with the sector’ [Smeele 2011]. The consultancy Wing confirmed that there were too

many separate meetings between nature and fishing organisations [Smit *et al.* 2008]. In the issue-specific workshops in which the conflict 'fishery and nature' was discussed environmental and fishing organisations did not discuss together but separate which decreased the ability to find common solutions [Smit *et al.* 2008].

3.5.2.4.2 Knowledge and communication

Scientific knowledge was extensive and there were on-going research activities. Stakeholders participated actively and there were efforts to integrate more local/laymen knowledge into the process. However, this succeeded only to a limited degree. The incomplete integration and appreciations of fisher's knowledge together with persistent uncertainty related to the high complexity of the issue partially hindered the identification of potential trade-offs. There was a high degree of two-way communication.

Presence and integration of scientific and laymen knowledge

Knowledge from various sources was used to integrate scientific and laymen knowledge into the process. Data originated from the Dutch Centre for Field Ornithology, the monitoring programme of RWS and from measurements related to Maasvlakte 2 [Harte *et al.* 2008]. Knowledge needs were covered by additional research that was conducted for some issues like the interest conflict between black scoters and surfers. The Ministry LNV had a large budget for research so that they supplied a major share of the knowledge [IJlstra 2011]. Fishing knowledge was supplied by the scientific institutes, e.g. Imares, and by the fishers themselves.

While fishing organisations and authorities highlight the extensive information present and research done, the nature organisations are more sceptical regarding the degree of sufficient scientific knowledge present. Therefore, it is always the question to which degree there is the necessary knowledge regarding the state of the area and necessary improvements. In the Voordelta, knowledge was partly collected during the process. In general, there is not much information about the area, which complicates designing a management plan [Smeele 2011].

The management plan is firmly based on scientific knowledge. The underlying idea was to create support for the scientific knowledge by involving stakeholders early in the process and to establish knowledge that is unchallengeable. For this purpose, local actors and experts were involved in the collection of knowledge and information benefiting the quality of the plan. Nevertheless, the potential of the integration of fisher's local knowledge was not fully tapped.

On the one hand, a part of the research done by IMARES was conducted by means of 'joint fact finding' referring to cooperating with laymen [Harte *et al.* 2008]. The research question was developed together with fishing and environmental organisations, and fishers were interviewed. In addition, the authorities made an effort to integrate local fishing knowledge by accompanying fishers on fishing trips which led to a better understanding of some aspects. In general, the knowledge of fishers was integrated in a customized way [IJlstra 2011].

On the other hand, despite all these efforts, there are shortcomings regarding the handling of laymen knowledge, i.e. fisher's knowledge, endangering the capacity to take well-informed decisions and establish trade-offs. The importance of local, territorial knowledge next to scientific knowledge was recognized only during the process [Smit *et al.* 2008]. Authorities highlighted the difficulty to integrate practical knowledge of fishers into policy because it is of anecdotal character and not verified [IJlstra 2011]. Fishing organisations believe that scientific knowledge dominated the process while the local knowledge of fishers was insufficiently integrated. In this context, a representative of a nature organisation perceives scientific knowledge to be more trustworthy than subjective laymen knowledge [Smeele 2011]. Cora Seip believes that 'the integration of fishermen knowledge was cumbersome and forms a missed chance. It was a disappointment that the knowledge of fishers was

said to be anecdotal and therefore not useful' [2011]. A problem of the fishers' knowledge is the missing documentation.

In addition, the different 'language' spoken by officials, scientists or fishers hampered the process. The decision-making authorities tried to translate the scientific knowledge into practice. There was however not enough time invested in the explanations of Natura 2000 aspects to the fishers. The level of abstraction was too high. For authorities it was partly difficult to understand the fishers. The authorities consider that it worked to learn the other's language at least partly; fishers identify the insufficient fishing knowledge of the authorities as complicating factor (Harte 2011, Holstein 2011; Adri Bout in Harte *et al.* 2008; Seip 2011).

In the context of the uncertainty linked to the complex nature of marine issues the knowledge present in the process was partly contested. The cockle fishery issue forms an example. The management report argues states that this kind of fishery might have effects on birds like the common eider and the oyster catcher and that the cockles are a relevant food source for birds. Thus, the prohibition of cockle fishery in the Hinderplaat was necessary to comply with Natura 2000 obligations. According to the producer organisation and based on a research of NIOO, no significant effects of cockle fishing on the conservation objectives are to be expected [NIOO 2008, PNK n.a.]. 'The research of NIOO of 2008 showed that its effect on the environment might be irrelevant. This report was not properly integrated in the process' [Seip 2011]. Furthermore, according to Jaap Holstein, 'the decision regarding cockle fishery was not based on facts but on subjective perceptions and political wishes. A scientific report of NIOO indicating that cockle fishery is not very environmentally harmful was neglected' [2011]. Furthermore, the relevance of the Voordelta, i.e. Hinderplaat as most relevant area for cockles, for cockle fisheries is disputed. Authorities find that cockle fishery is only prohibited in that area while cockles are also found elsewhere and that the Voordelta is not essential to the cockle fishers [IJlstra 2011]. The PNK however believes that the economic importance of the Hinderplaat area for cockle fishery is relatively high and identified it as most reliable fishing area [PNK n.a.].

Two-way communication

The authorities experienced two-way-communication to have worked better and better. In the consultation period of the draft management plan, every stakeholder who commented was supposed to receive an answer explanation how the contribution was integrated [Ministry V&W and RWS NS 2008C]. Still, it did not occur always at the same speed and there was towards the end a reduced degree of communication so that environmental NGOs gave input but did not get a reaction until the measures were already imposed [Seip 2011; van den Akker 2011].

3.5.2.4.3 Influence and embeddedness

The stakeholders agree that all could exert influence. Still the degree of influence differed and was for the fishing organisations more limited. While measures were identified in cooperation, there is a slight deficiency regarding shared responsibilities between stakeholders and decision-makers. Moreover, there was for the most part adequate embeddedness into the formal decision-making process.

Influence of stakeholders

According to a representative from RWS North Sea, stakeholders had a clear influence on the management plan [Harte 2011]. The concrete goals concerning for instance Natura 2000 were determined beforehand. However, their realization was open for discussion. '10 years ago it happened often that the authorities would go to the stakeholders telling them how the plan should

look like. In case of the Voordelta, we went to the stakeholders without an idea how it should look like. We had our task assigned, and were open for the feedback of stakeholder about which concerns mattered and how they would like to participate. Without the stakeholders, we had for instance never thought of a summer-winter regime for protected areas' [Harte 2011]. Thus, for two areas customized summer and winter regimes were designed in cooperation with the stakeholders: Bollen van de Nieuwe Zand combines the protection of the black scoter in winter with user activities such as the Ensis fishery in summer; Bollen van de Ooster integrates the protection of species like seals, black scoter and sandwich tern with user activities being partially allowed in summer (1 April- 1 November) [IJlstra 2011]. The consultation period of the draft management plan served to receive input from the stakeholders which allowed adjustments to the management plan.

The nature interests had a stronger position than other stakes as based on the Nature Conservancy Act of 1998 only safety weighs more heavily. In addition, the strong interest of the port authority Rotterdam to avoid legal proceedings strengthened the position of the nature interests. 'There was strong support for environmental aspects which resulted partly from the high pressure relating to the Maasvlakte 2 project.[...]Therefore, the port authority invested in the process and there was support for getting the environmental aspects right. This was a special situation, normally not as much energy is invested. There was the philosophy 'if there is a doubt better do more than necessary'' [Smeele 2011].

Fishing organisations had a limited influence. They could affect the ways in which restrictions were implemented but it was clear from the beginning on that there would be restrictions [IJlstra 2011]. Restricting measures were identified in close cooperation with the fishing community [Harte *et al.* 2008].The predetermined prohibition of bottom trawling with an engine power larger than 260 hp (191 kW) was aligned with fishing organisations so that shrimp and shellfish fishing can take place [Harte *et al.*2008].

Fishing organisations describe the constraints on its influence as follows. They felt that some aspects had already been determined beforehand so that it was difficult to change anything and that environmental interests were more listened to. In this context, it was perceived that the protection of seals was more relevant than the fishermen whose ability to earn their living depends on the respective area [Seip 2011]. The focus was on the necessary measures and it seemed that the opinion of stakeholders only mattered when it was convenient. Customized solutions were thoroughly discussed in some cases like for the Ensis fishery but less so for shrimp or cockle fisheries [Seip 2011; Adrik Bout in Harte *et al.* 2008].

The cockle fishery was analysed and forms an example for an interest group that was not properly integrated and could not have a clear influence on the process and outcome. Cockle fishery is prohibited in the Hinderplaat, the most important fishing area for cockles, in order to comply with the Bird and Habitat Directive by securing the food source for birds. Authorities state that 'it was absolutely necessary to restrict cockle fishing on the Hinderplaat in order to safeguard the shellfish as food for the birds, e.g. the eider duck. We wanted to avoid food shortage for birds with as a possibly contributing factor the fisheries. In addition, usually there would never be so many cockles that food demand of the birds was to be exceeded' [IJlstra 2011]. Contrary to that, the secretary of the producer organisation for cockle fishery argues: 'in the management plan the interests of cockle fisheries were not taken into consideration. Such strict measures were not necessary. We were treated differently than other stakeholders who were better listened to and could have a larger influence. It seems that the decisions to not allow cockle fishery in the area (Hinderplaat) anymore was already taken before the stakeholder process had started. Our proposals were not considered, even if they concerned the slightest adaptation. All other fishing groups have gotten something out of the process' [Holstein 2011]. While some adaptations were possible for all other kind of fishing, for the cockle fishery it was not. Therefore it feels clearly as the loser of the process. Cora Seip from the FPB puts it into perspective 'there was eventually too high expectations and the bottom trawling and

shrimp fisheries suffered more damage' [2011]. A contributing factor to the difficult position of the cockle fishery might also have been the uncertain and contested knowledge base [see above section 3.5.2.4.2).

The influence of stakeholders was negatively affected by the existing uncertainty. In order to exert influence the possession of the necessary information is necessary. Due to the uncertainty connected to such a marine area it was difficult to identify the best measures to reach adequate protection of the environmental. This depends also on the trustworthiness of scientists [Smeele 2011].

Embeddedness in formal decision-making process

In general there was a good embeddedness in the formal decision-making process preventing the development of feelings of resentment and dissatisfaction. Stakeholders agree that there was a close and frequent contact with the decision-making authorities. Everybody could be reached [Smeele 2011]. There are indications that the institutional embeddedness of the process was negatively affected by an inappropriate organisational structure by the Ministry LNV. This Ministry is involved via several issues, e.g. nature management, fishery and legislation, which were not well coordinated [Smit *et al.* 2008]. In addition, the Ministry LNV was partly only represented by low-level civil servants. Fishing organisations verify that the link with the Project Mainpoint Rotterdam, with the nature compensation being the responsibility of the Ministry LNV, was less clear than the relationship to RWS [Seip 2011].

3.6 Linking the degree of success of the outcome with the conditions

In the Voordelta process, many efforts were undertaken to facilitate a meaningful stakeholder participation process. In the end, the success of the outcome was partially limited regarding both mutual benefits and ownership. In the following, the analysed conditions are summarized and linked to the degree of success of the outcome in order to shed light on preconditions for a successful stakeholder participation process which can enhance sustainable marine spatial planning.

Success condition	Indicators	Compliance
1. Balanced resources, power and knowledge	Possession of sufficient resources	✓
	Absence of clear differences in resources	X
2. Presence of facilitation	Presence of facilitation	✓
3. Representativeness of the affected public	Early inclusion of all affected throughout the process	X
4. Transparent, trustworthy process with clear expectations and objectives	Transparency	✓
	Perception of trust present	X
	Clear expectations	X
	Clear objectives that merged from discussion	X
5. A strict deadline is balanced with giving stakeholder enough scope for discussions and collaboration	Deadline existing and balanced	X
6. Face-to-face dialogue	Face-to-face dialogue	✓
7. Knowledge and communication	Presence and integration of laymen/local and scientific knowledge	X
	Two-way communication	✓
8. Influence and embeddedness	Influence of stakeholders on process and outcome	X
	Embeddedness in formal decision-making process	✓

Table 3.7: Compliance of the Voordelta process with the success conditions (✓ = complied with, X = not complied with⁵)

In the Voordelta case, the indicators show that two conditions are fully complied with, four conditions are partly complied with, and two conditions are not complied with (see table 3.7). The process was organized with the goal of facilitating meaningful stakeholder participation. Despite the remarkable efforts invested to realize this goal, there were shortcomings to some conditions which endangered the degree of success of the outcome: the condition of balanced resources, power and knowledge is not fulfilled due to differences in resources; the process was not representative to all affected; the qualities of the process were insufficient regarding trust, the clarity of expectations and the degree to which the objective could be discussed by stakeholders; the deadline was too strict limiting the scope for discussions and collaboration in the final phase of the process; there were limitations concerning knowledge, e.g. laymen knowledge was integrated to an insufficient degree; and the influence was restricted especially regarding the fishing sector.

3.6.1 Main obstacles to a higher degree of success of the outcome

There are some general aspects that affected the success of the outcome: the influence of the port authority and a change in the process in the final stage, when the final management plan was drafted.

The port authority of Rotterdam influenced the process substantially: it had both a negative and a positive influence on the producing of a successful outcome of mutual benefit and with felt ownership. On the one hand, it forms a bias to the stakeholder process. The interest of this strong economic actor to finalize the management plan in time put the process under a considerable pressure. Furthermore, due to this large economic interest involved, the management plan served to facilitate the construction of the Maasvlakte leading to nature protection or fishing interests falling partially by the wayside. On the other hand, the port authority supported the process financially so that the quality of stakeholder participation improved by means of the provided assistance. In addition, there was more support for environmental aspects through the obligation to finalize the plan in time including the compensation measures for nature being lost in the Maasvlakte 2 area.

Furthermore, the stakeholder process changed towards the end by means of a higher pressure and a larger role for sector-by-sector approaches which decreased the success of the outcome. On the one hand, pressure from the port- authority increased substantially towards the end having a negative effect on the process. First, the stakeholder process was supported, i.e. to prevent lengthy legal procedures, which was rather beneficial for the process and stakeholders. Later on, it turned out that the stakeholder approach would not be able to provide the necessary outcome in time. The pressure increased and the process changed, among others to fewer meetings with all stakeholders and less transparency. The ability of the process to identify trade-offs for all affected interest groups and the development of a feeling of ownership was affected. Thus, with increasing pressures in the final period the influence of the port and of the authority responsible for the nature compensation aspects had a negative influence contributing to an outcome that was suboptimal for both fishing and environmental interest groups and that was not supported by all stakeholders.

On the other hand, another aspect affecting the success was the shifting relevance of ministries participating. Towards the end of the process RWS kept itself more out of the process to write the management plan so that it did for instance not participate in the covenant [Harte 2011]. Instead, being responsible for the nature compensation, the Ministry LNV played a larger role. As mentioned

⁵ If there is at least one ‘-’ (To a considerable degree not present) among authority, fishing or environmental sectors or external sources, then shortcomings exist concerning the respective success condition, which is then declared to be not complied with.

before, it pursued partly a sector-by-sector approach which negatively affected the quality of the stakeholder process, e.g. transparency. Furthermore, the difference in managing the process of the different authorities and the different aspects that needed to be combined might have led to confusion and a lack of understanding by stakeholders. Both decreased the ability to identify common solutions and trade-offs towards the end, and might have had a negative effect on the trust level and the feeling of ownership for process and outcome.

3.6.2 Identifying trade-offs for an outcome with mutual benefits

In the Voordelta process, nature protection and compensation areas needed to be established leading to restrictions to user activities. Therefore, the identification of trade-offs in cooperation with stakeholders were crucial to facilitate a benefit also for the users of the area like fishers. The process succeeded partly to realize this outcome. For instance, innovative summer-and winter regimes were designed that facilitated continued fishing activities while protecting and compensating nature. Nevertheless, there are restrictions on the degree that fishing and nature protection interests perceive to have benefited from the process. In the following, we explain the conditions that affected the degree to which the outcome was of mutual benefit positively as well as negatively.

There were several conditions that contributed to the higher degree of success. First, stakeholders had sufficient resources to participate, which forms a prerequisite for their representation and input of value judgments necessary for finding trade-offs. In this context, while there were shortcomings regarding the representativeness of the process, the process was open and many stakeholders were represented and could participate actively which made the reaching of the present compromises possible. Second, the presence of facilitation was beneficial. There was a neutral facilitator and in case of conflicts more efforts were invested to engage the concerned stakeholders and indeed arrive at a compromise. Third, the clarity of the objective and the high degree of transparency were crucial. For finding trade-offs it is beneficial that all stakeholders have the same information available. Finally, there was a high degree of two-way communication and face-to-face dialogue benefiting the process. Many meetings were organised between authorities and stakeholders and between stakeholders themselves. The amount depended on the approach of the respective Ministry with RWS facilitating more face-face-face dialogue between stakeholders than the Ministry LNV.

As discussed above the necessity to realize the nature compensation for the Maasvlakte 2 that was pushed by the strong economic interest of the port authority limited the scope for stakeholder participation and for identifying an outcome of mutual benefit. Thus, the potential benefits for nature protection and fishing interests in the Voordelta region were limited. A large part of the protected area are serving the nature compensation, nature protection and the fishing sector had to face even more serious restrictions of fishing activities. Furthermore, the strict deadline of the process that was equal to the planned start date of the constructions for Maasvlakte 2 formed a too high pressure negatively influencing the process by limiting the scope for discussion and collaboration.

Other conditions negatively affecting the realization of an outcome with mutual benefits include the following. First, the ability to identify trade-offs was limited by insufficient representation forming an obstacle to arriving at compromises. Thus, it was negatively affected by a false start and by the absence of some stakeholders from the meetings in which trade-offs affecting them were identified, e.g. the decision concerning the cockle fishery had been taken before it began to participate. Then, the fragmented and decentralized structure of the fishing sector negatively affected its representativeness in the process. Second, towards the end of the process there was less face-to-face dialogue, two-way communication and the degree of trust especially among fishers decreased substantially which might have affected the finding of trade-offs. Third, while the plan was mostly based on scientific knowledge, the importance of more practical, local knowledge was only

recognized during the process. The value of fishers' knowledge is contested and was only integrated to a limited degree which might form a missed chance for the identification of trade-offs. In addition, there were shortcomings regarding communication. More efforts would be necessary for a common 'language' regarding abstract issues like Natura 2000 and fishing issues.

3.6.3 Building ownership

Despite the efforts to facilitate an outcome that is supported by all stakeholders, the feeling of ownership among the fishing and nature protection interests was limited. There were conditions that affected the perception of ownership in a positive and negative manner.

A condition influencing the outcome in a positive way regarding ownership was the presence of facilitation activities. There were efforts to gain the support of the stakeholders for the planned measures which translated into an increased feeling of ownership. Second, the quite high degree of transparency and of clarity of objectives formed a beneficial factor by facilitating a better understanding and more meaningful participation. Third, face-to-face dialogue and two-way communication affected the feeling of ownership positively by increasing trust in the authorities.

The low degree of ownership, particularly of the fishing sector, can partly be explained by the following conditions. First, the necessity to realize the nature compensation for the Maasvlakte 2 affected also the degree of ownership especially regarding the strict deadline. Therefore, the degree of trust as well as other factors like face-to-face dialogue and transparency were much lower towards the end of the process. In this context, the high pressure at the end of the process led to a situation in which the fishing organisations felt betrayed and sacrificed.

Second, the false start endangered the degree of trust and the representativeness of the process, which decreased the potential for a feeling of ownership to develop. Thus, being well-represented in a process is a precondition for supporting the outcome, especially if it is to the disadvantage of the respective actor. In case of the fishing sector, there were groups who were only represented in the process after the decision affecting them had been taken, e.g. cockle fishery.

Third, clear expectations are essential. For the fishing sector, possible results were misrepresented leading to disillusion, decreased levels of trust and thus to a lower degree of ownership. Furthermore, the objectives could only be influenced partially.

Forth, the degree of influence matters by facilitating the inclusion of value judgments and the realization of an outcome that all stakeholders support. In the Voordelta, the limited influence of the fishing sector affected the degree of ownership negatively. There were differences in influence between the stronger positions of nature organisations as compared to the weaker position of the fishing sector that could only influence how restrictions would be implemented. Furthermore, some aspects seem already to have been decided beforehand and the cockle fishery felt disadvantaged. In the opinion of Jaap Holstein: 'other concerns than the cockle fisheries seemed to have played a role' [2011]. Furthermore, Ensis fisher Adri Bout actively participated and was deeply disappointed of the little influence especially the weaker positioned fishing organizations were able to exert. 'The fishing sector gets the short end of the stick' [Adri Bout in Harte *et al.* 2008: 42].

Finally, a hampering factor for the successful outcome was contested knowledge. Due to contested information on cockle fishing, there were different opinions on the issue leading to a decreased feeling of ownership as actors did not understand the reasons for certain measures.

3.7 Concluding remarks

In the third chapter, the process towards the management plan of the Voordelta was analysed by means of analysing the compliance with the conditions and assessing the manner in which these influenced the degree of success of the outcome regarding the interests of fishing and nature protection. With six of out of eight conditions being fully or partly complied with, there is a rather high degree of compliance. The most important conditions for the limited degree of success were the pressure resulting from the construction of the Maasvlakte 2, differing approaches of the authorities, a sector-by-sector approach being partly applied, insufficient representativeness among others by a false start, unclear and partly false expectations, insufficient discussion of the objective, and shortcomings regarding knowledge and influence aspects.

CASE STUDY 2- THE BARENTS SEA—LOFOTEN AREA (NORWAY)

4.1 Introduction

In Norway, there was a shift from single-sector rules to multi-sectoral approaches leading to the Norwegian government to strive towards the establishment of ecosystem-based, integrated management plans for all Norwegian waters. The management plan for the Barents Sea—Lofoten area forms an example. Adopted in 2006, it was the first management of its kind. Subsequently, an integrated management plan for the Norwegian Sea was finished (2009) and one for the North Sea and for Skagerrak shall be finalized until 2013.

In the following chapter, the case study of the integrated management plan Barents Sea—Lofoten is (Norway) is assessed. To begin with, the implementation of marine spatial planning in Norway and the Barents Sea—Lofoten area are explained. Subsequently, the degree to which the outcome of the process was successful is analysed relating to mutual benefits and ownership (S2). In addition, the implementation of the stakeholder process is described (S3) and the degree to which the success conditions for stakeholder participation are complied with is analysed as concerns the interests of fishing and nature protection (S3). Based on the result, we assess how the conditions explain the degree of success of the process (S4).

4.2. Clarification of the context: national developments

In 2001, the Norwegian government began with the developing integrated management plans for all sea areas on Norwegian territory. The plans strived to integrate ‘all human activities and uses of the sea areas in a sustainable way that ensures the continued well-being of the marine ecosystems’ [Olsen *et al.* 2011:259]. The White Paper Nr. 12 (2001-2002) ‘Protecting the riches of the sea’⁶ can be described as first concrete starting point towards integrated, ecosystem-based planning in Norwegian waters [Knol 2010]. It included arrangements for more comprehensive management and referred to the establishment of the plan. The Barents Sea—Lofoten area was chosen as subject of a first management plan because ‘it is a rich, clean area of sea where considerable new activity is anticipated’ [Ministry of Environment 2006: 15]. A key issue was the opening of new areas for petroleum activity. The paper highlighted the main goals of plans such as the management plan for the Barents Sea: to establish a thorough knowledge basis and contribute to consensus on the management of the marine areas, so that partially solutions could be identified for present conflicts.

It is a legal requirement to involve stakeholders who might be affected by decisions [Norsk Polarinstitut 2009]. Stakeholders increasingly participate in marine policy affairs. For fisheries, stakeholder can participate by means of regulatory meetings which are arranged on a regular basis by the Fisheries Directorate.

4.3 Regional management plan: Barents Sea—Lofoten area

The management plan was developed against the background of the conflict of undertaking petroleum activities in the Lofoten Islands area, and of a 3-year full moratorium on oil and gas activity in the Barents Sea that was decided upon by the government due to environmental risks in 2001 [Knol 2010]. Furthermore, there is a decline in oil/gas production from its peak of 3 million barrels per day in 2000, creating the need to identify and exploit new fields [Icenews 2008]. The

⁶ The White Paper Nr. 12 is also called ‘A Clean and Rich Sea’

Barents Sea area, i.e. Lofoten- Vesterålen area, is promising; however, the question of coexistence with other interests like fishing arises, underlining the need for the management plan [Olsen & Hoel n.a.]. Before the area, i.e. area off Lofoten Islands, could be opened to petroleum activities, a comprehensive impact study was needed and an integrated management plan had to be established that would also provide the rich knowledge basis necessary for managing the area. Next to the need to comply with UN agreements these were the main driving forces of the plan [Quillfeldt *et al.* 2009]

The Barents Sea and the areas off the Lofoten Islands are of a high environmental value and are characterized by rich resources. It is a nursery area for important fish stocks and provides food to important seabird colonies. Next to fishing and maritime transport taking place traditionally, there are growing economic activities in other sectors, i.e. oil and gas extraction (see figure 4.1). The management plan shall serve as a basis for a cross-sectoral management regime that provides good coordination for integrating the protection of the marine environment with user activities, as well as integrate different user activities. Facilitating long-term (economic) value creation is to be balanced with protecting the high environmental value of the area.

Responsibility for management of the Barents Sea and Lofoten Islands area is divided between various ministries and agencies. The Ministry of Environment is responsible for environmental policy and plays a key role in cross-sectoral coordination efforts [Ministry of Environment 2006]. The Ministry of Fisheries and Coastal Affairs is responsible for managing living marine resources and are in charge of research and monitoring of marine ecosystems. The Institute for Marine Research is the principal creator of knowledge. The Ministry of Petroleum and Energy manages the petroleum resources, while the Ministry of Labour and Social Inclusion has the responsibility for preventing accidents that lead to pollution. The area is governed by a variety of international and national legal documents, e.g. agreements, guidelines, plans and policy instruments such as the Law of the Sea, the Convention on Biodiversity and OSPAR.

Covering 1.4 million km², the 'Integrated Management Plan of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands' is a strategic policy document without detailed zoning. Next to the waters of the Norwegian part of the Barents Sea, it encompasses the area off Lofoten Islands and the adjacent parts of the Norwegian and Greenland Sea, as well as Svalbard [Winsnes & Skjoldal 2008]. It is quite general and includes more prepositions than legal requirements. This pioneering piece of work provides a framework for already existing and new user activities, as well as for sustainable use of natural resources. Allocating shipping, fishing, and oil- and gas industry activities are included. The plan does not mention MSP explicitly, but according to Erik Olsen from the Institute for Marine Research it corresponds to a spatial planning document [MEAM 2010]. In this context, spatial planning is practiced to identify trade-offs for the shipping lanes and petroleum exploitation.

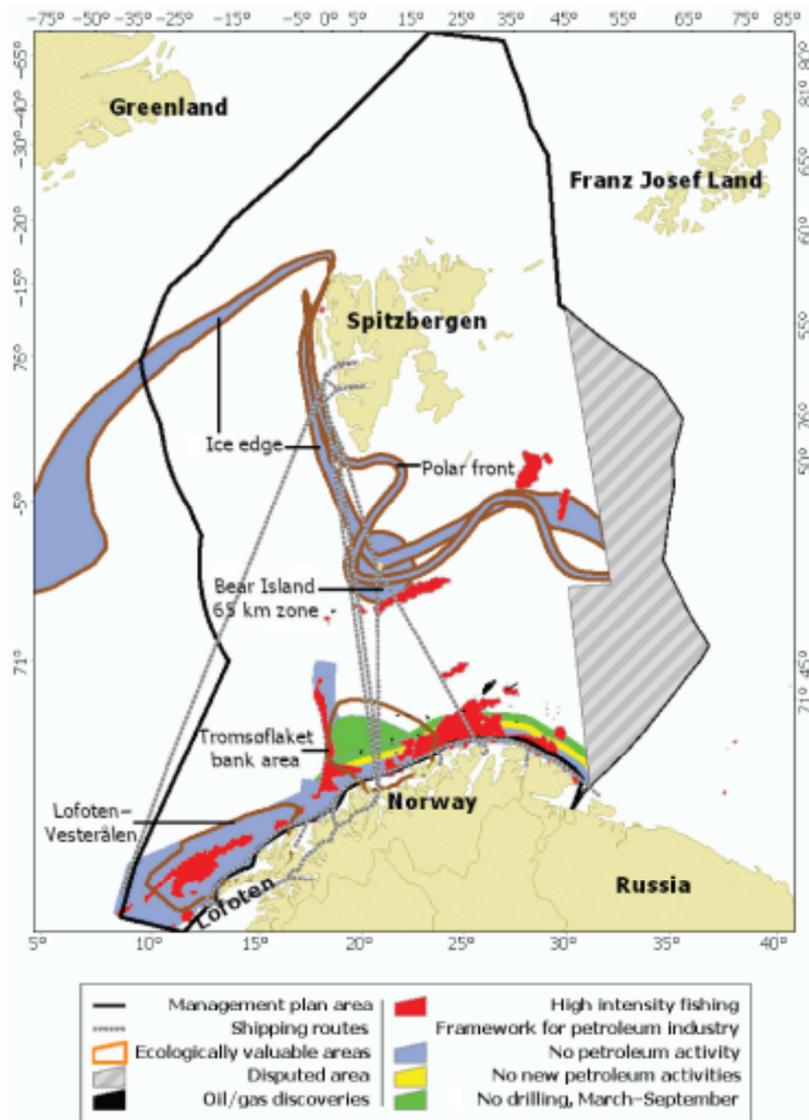


Figure 4.1: Area covered by the management plan for the Barents Sea, showing shipping routes, Ecological valuable areas, petroleum related information and the areas for high intensity of fishing (source: Olsen *et al.* 2007: 600)

One of the main purposes of the management plan and tasks of the Norwegian government has been to facilitate the coexistence of different uses, especially regarding the conflict between petroleum and fishing interests in the Lofoten area.

Conflicts exist especially in the areas closer to the coast, where there is more fishing activity. The petroleum industry is interested in increasing activities. 35% of undiscovered resources are expected to lie off the Lofoten and in the Barents Sea. While its negative effect on fish stocks and fisheries is contested, a major conflict concerns the seismic surveys. Exploration drilling and seismic surveying might affect fishing activities to a limited degree by chasing fish away and disturbing the breeding cycle [Ministry of Environment 2006]. There is a high public awareness regarding this issue.

The Southern Barents Sea was formally opened for explorative drilling in 1989 after the first comprehensive impact assessment on the continental Norwegian shelf had been carried out. Following an impact assessment, the areas already formally opened for petroleum activity were opened for year-around activity in 2003. In 2006, 41 production licenses had been granted and 64 wells had been drilled [Ministry of Environment 2006].

The issue which is debated most in Norway and forming the greatest conflict related to petroleum activities, was the opening of the area off the Lofoten Islands to oil and gas exploration/exploitation as compared to fishing, as well as environmental protection interests. It is one of the most crucial areas in terms of nature and resources, and is throughout the year highly valuable for various species: First, the area is the largest spawning area for Arctic Cod; second, it is an important breeding and nursery area for various other fish species, third it forms an important breeding, moulting and wintering area for seabirds; and finally, it hosts different marine mammals as well as sponges, anthozoans and coral reefs [Ministry of Environment 2006; Knol 2010]. Coastal communities highly depend on fishing and on the large fishing stocks, which spawn along the coast [Kristofferson n.a.]. At the same time, the region is of great interest to the petroleum industry.

4.3.1 The process towards the management plan for the Barents Sea—Lofoten area

The process towards the plan lasted from 2002-2006 and was led by an interministerial steering committee, which consisted of representatives from related ministries and was headed by the Ministry of Environment. Other ministries included the ministries of Labour and Social Inclusion, Fisheries and Coastal Affairs, Foreign Affairs and Petroleum and Energy. In the steering committee, decisions are made based on consensus procedure. If no consensus is possible, the issues are moved to the political level [RØsvik 2011]. Thus, it ‘is a very integrated process with the Ministry of Environment coordinating the process and responsible for the process, but cooperating’ with the other relevant ministries that are also involved in the decisions [Klaveness 2012].

The management plan integrates previously separate sectors and management regimes to facilitate all-embracing coordination. A positive development of all sectors shall be realized by implementing area-based management to resolve conflicts, continuing established management measures, implementing environmental quality objectives, and focus more on international cooperation [UNESCO 2010]. The plan assesses impact and pressures on the environment.

In reaction to a request by the parliament, a special working group was established analysing the coexistence between petroleum activities and fishing. It consisted of ministries, research institutes and stakeholders from the fishing and petroleum sector. Their work was coordinated with the process towards the management plan.

2002			2006
Establishment of scientific basis			Phase 4 Writing of the integrated management plan for the Barents Sea—Lofoten area
Phase 1 Status reports - Valuable areas - Environment and resources - Economic activities - Socio-Economic conditions Scoping - Delimitation of management area - Formulation of objectives	Phase 2 Strategic environmental assessments - Fisheries - Marine transport - Petroleum Activity - External Pressures	Phase 3 Aggregated assessments - Management goals - Environmental monitoring - Total human impact - Vulnerable areas and conflicts of interest - Knowledge gaps	

Figure 4.2: Simplified overview of the different phases of the process [based on Knol 2010]

The process is firmly based on a common factual basis which is worked out by different institutions, i.e. agencies and institute in phase 1-3 [Klaveness 2012]. Four phases can be identified (see figure 4.2) [Olsen *et al.* 2007; Knol 2010]:

- The first phase took place in 2002-2003. The steering committee was set up to facilitate the formulation of common objectives suiting the different sectors. The overall aim was decided upon, and the area was delimited. The objectives referred to the coexistence of sectors and economic value creation, as well as to maintaining the ecosystems. The committee collected information regarding environmental conditions, commercial activities and social conditions as common factual basis for the impact assessments. Due to present knowledge gaps, there was a rather high degree of uncertainty and a cautious approach was applied. The greatest uncertainties concerned climate change and the effects of alien species.
- In the second phase (2003-2004), there were four extensive, government-financed impact assessments on the issues of petroleum activities, fisheries, maritime transport, and external pressures [Ministry of Environment 2006]. For this purpose, mandates were sent to research institutes and governmental directorates. The impact assessment for petroleum activities got its own mandate, had started earlier than the others, and benefited from more funding. It served as a basis for the decision to allow year-around petroleum activity and was integrated in the factual basis for the plan [Klaveness 2012].
- In the third phase, an expert group was set up by the steering committee for compiling the scientific basis. It consisted of members of research institutes and public authorities. The results from the first and second phases were aggregated and analysed in detail. Precise management goals were formulated, ecological quality objectives were developed, the total human impact was assessed, and vulnerable areas as well as conflicts of interests were mapped. Status reports were drafted covering the present state of environment. In May 2005, a large open hearing conference took place during which the scientific basis was discussed with stakeholders. The conference marked the beginning of the bureaucratic/ political process [Klaveness 2012].
- The fourth phase was of a more bureaucratic/political nature. The overall scientific report was sent to the steering committee consisting of the ministries that wrote the actual plan based on the factual basis created in the previous phases [Klaveness 2012]. The Ministry of Environment had the main responsibility. The drafting of the plan meant to convert scientific work into policy measures [Knol 2010]. This last part was a rather bureaucratic process, as the plan is a compilation of knowledge and of management instruments that were implemented prior to the implementation of the plan [Knol 2012]. Some details and issues that could not be agreed upon, e.g. petroleum activity, were decided upon in a political process.

The process was presented as a white paper to the parliament. In 2006, the white paper on the Norwegian part of the Barents Sea was launched by the Norwegian government and adopted the same year by the parliament. The plan has a time horizon until 2020. There are periodic reviews of which the first took place in 2010.

4.3.2 The content of the management plan

The management plan is basically divided into three main parts [Kroepelien 2007]. Chapter 2-6 describe the ecosystem and analyse present pressures and impacts. Chapters 7-8 identify environmental goals and criteria for a good environmental status. Chapters 8-11 consist of a programme of action for knowledge, monitoring, international cooperation and assessment as well as for measures for ensuring the good environmental status.

The protection of the marine environment is at the heart of the management plan, as it forms the basis for economic uses and future value creation. The purpose of the plan 'is to provide a framework for the sustainable use of natural resources and goods derived from the Barents Sea and the sea areas off the Lofoten Islands [...] and at the same time maintain the structure, functioning

and productivity of the ecosystems of the area' [Ministry of Environment 2006:7]. There is an area-based management approach applied, referring to using resources and goods in a sustainable way and adjusted to the environmental qualities of the area with the goal of (economic) value creation.

Long-term value shall be created by existing and new activities. It is supported by living marine resources like fish and marine mammals and petroleum resources, as well as by the natural environment as such. The spin-off effects of fisheries and petroleum industries are also beneficial.

The North of Norway shall be industrially developed, which requires facilitating the co-existence of economic activities. In addition, the management plan has an instrumental purpose to create a common understanding of goals among stakeholders and authorities. The coordinated, ecosystem-based management of the respective area forms a continuous process in which the interaction of authorities, the scientific community and stakeholders is essential [Ministry of Environment 2006]. The environmental targets are due to the special character of the area rather strict, e.g. high emission standards for petroleum industry.

The management plan includes the identification of ecologically valuable and vulnerable areas, as well as of strict regulation of user activities (see figure 4.1) [UNESCO 2010]. The former describe areas that are of great importance for biodiversity and biological production, and where adverse impacts exist, i.e. environmental pressures stemming from oil pollution, fisheries, shipping or/and external sources [Ministry of Environment 2006]. The area between the Lofoten Islands and the Tromsøflaket bank, the area Eggakanten area, a zone off Finnmark country, the marginal ice zone, the polar front, and the coastal cone of Brjørnøya and the rest of Svalbard are identified as valuable and vulnerable areas.

The key feature of the plan is the balancing of petroleum and fishing interests which is implemented by restricting petroleum activities [Hoel 2010]. The area off the Lofoten Islands and others are protected via the prohibition of activities in various of the valuable and vulnerable areas (see figure 4.3): the Tromsøflaket bank area, the area off the coast of Troms and Finnmark to the Russian border; the marginal ice zone and the polar front; Bjørnøya; Nordland VI, Nordland VII and Troms II petroleum provinces; and Eggakanten (the edge of continental shelf). This moratorium is valid for four years and will be reconsidered in 2010 [Knol 2010]. Seismic surveys are allowed to assess the potential for petroleum activities. The areas around Lofoten Islands are prioritized for the period of 2006-2010. In addition, the reduction and prevention of pollution, i.e. risk of oil pollution, is addressed. There is a cautious approach to the expansion of petroleum activities and safeguarding of biodiversity forms a priority. The compromise was to allow seismic surveys but to restrict exploitation. In addition, shipping lanes are moved outside Norway's territorial waters in order to reduce the conflict between fisheries and shipping.

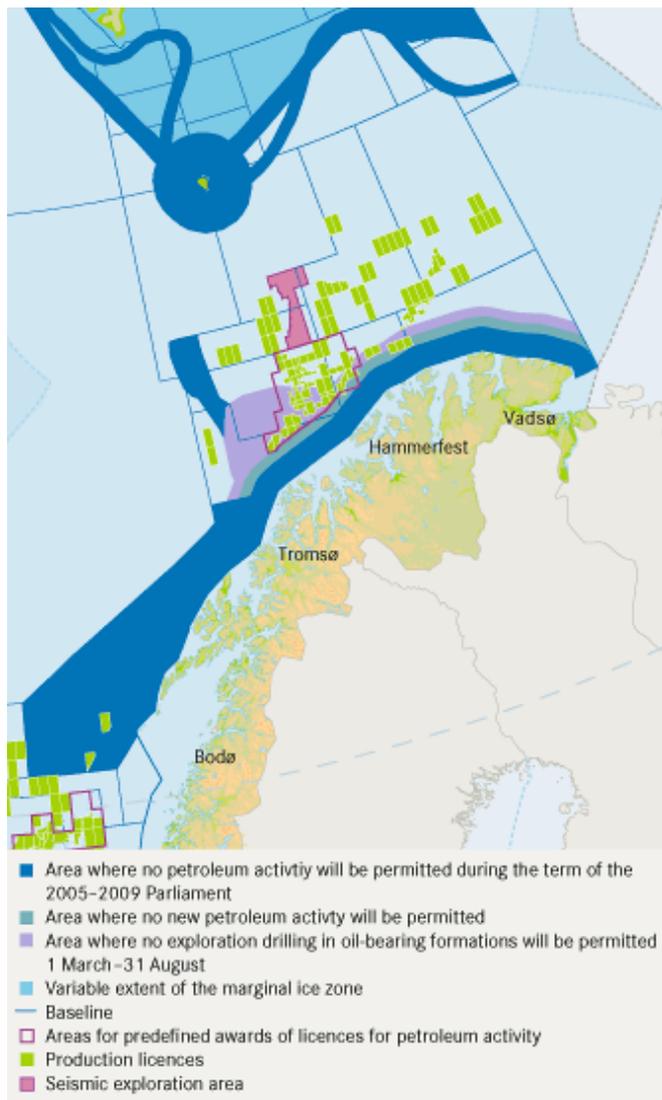


Figure 4.3 Planning of petroleum activities (Source: OSPAR 2010)

The importance of creating a sound scientific foundation is highlighted [Ministry of Environment 2006]. Impact assessments regarding the impact of user activities and external pressures were carried out. An expert group of representatives of the directorates compiled the information for each sector. A lot of knowledge was already present, but persisting gaps of knowledge shall be filled by monitoring activities. Various additional research activities were done regarding the Lofoten Islands area. Furthermore, substantial funding was allocated to two research programmes (MAREANO and SEAPOP) for expanding the knowledge base.

4.4. Outcome: degree of success

The degree of success of the outcome was very limited. A central trade-off regarding petroleum activities was identified. Still, benefits for stakeholder such as the fishing sectors were rather small. Furthermore, no feeling of ownership could develop.

4.4.1 Mutual benefit

In general, there was no mutual benefit for fishing and nature interests. According to the authorities, all stakeholders benefited to some degree from the process [Langaas 2012]. Fishing organisations

perceive their benefits to be limited, while according to WWF, the outcome formed 'a fairly well-balanced compromise between different interests' [Jensen 2012].

The most important goal was to identify measures regulating petroleum activities in such a way that coexistence with other interests could be facilitated. According to the Ministry of Environment, on the one hand, environmental and fishing interests benefited by means of areas without petroleum industry. On the other hand, the petroleum industry got big open areas in the Barents Sea available for their activities. 'That is the big compromise in the management plan. There is the best protection for the most vulnerable and valuable areas for the environment and the fish. The other areas are available for the oil industry' [Klaveness 2012].

The scope for identifying an outcome with mutual benefits for all affected was limited by the importance of the petroleum sector for the Norwegian economy, and the Norwegian and international petroleum needs. It served to solve the issue of the Lofoten area, but there was no space for additional measures for protecting the marine ecosystems and the fish stocks in the long-term. Fishing and nature protection interests lost in the sense that new areas for petroleum exploitation and exploration were opened, which forms a threat to them due to for instance the risk of oil spills.

4.4.1.1 Outcome for fishing sector

The fishing sector benefited by defining several fishing area petroleum free zones. A basis for sector coexistence was established [Sandberg 2012]. However, the benefits for the fishing sector are very limited in general [Lorentsen 2012]. There is nothing included regarding the consideration of needs of the fishing sector, if for instance petroleum plans to move activities into an area. Thus, fisheries are not sufficiently protected. In this context, there is disagreement on the effects of seismic surveys. The management plan does neither address the effects on fisheries in specific, nor possibilities to avoid them [Lorentsen 2012]. As a result, seismic surveys were allowed during a restricted period in time in large areas, also during important fishing seasons. Thus, while the management plan defined several important fishing areas as petroleum free zones, in 2008 seismic surveying took place in large part of these areas [Kristofferson n.a.]. Furthermore, a part of the Greenland halibut fishery area was closed to have seismic surveying instead. Especially the coastal fishing fleets feels threatened by petroleum activities moving further north. In sum, the short-term fishing interests benefited from the plan, but their interests are not protected sufficiently so that their benefits are highly endangered in the long-term.

4.4.1.2 Outcome for nature

Like the fishing sector, the nature protection interest benefited by means of the valuable and vulnerable areas that were declared petroleum free zones. 'At present the Barents Sea plan provides good protection for the most valuable ecosystem components and areas' [MEAM 2010]. However, the benefits were limited also for nature interests by a lack of restrictions on oil drilling in other areas, and by the nonexistence of a system of connected marine protected areas.

The environmental movement has benefited from the moving of the discussion from sector-based management efforts to a more generic view with the Barents Sea as one ecosystem [Geitz 2012]. Public awareness regarding resources increased. Bellona perceives it to be a success that the Lofoten area stayed partly closed for petroleum activity [Enge 2012].

4.4.2 Feeling of ownership

The process was rather top-down, so that there was little scope for stakeholder participation and perception of shared responsibilities among the stakeholders. Accordingly, no feeling of ownership of the process and outcome could develop.

4.5 Stakeholder participation process for the management plan Barents Sea—Lofoten area

4.5.1 Description of the stakeholder process

The main interest groups affected by the management plan for the Barents Sea—Lofoten area are the petroleum, maritime transport, fishing and nature protection. The stakeholder description as well as the research is limited to the last two.

The process towards the management plan was dominated by research institutes, government agencies and management bodies [Hoel 2010]. Stakeholders did not directly take part in the official meetings, but could influence the process more indirectly and via consultation meetings and open hearings. Stakeholder participation was mostly limited to larger sector organisations.

Fishing is crucial for the Norwegian economy. There are long traditions as a fishing nation, with a large traditional coastal fleet and a smaller off-shore fleet. Welfare along the coasts, especially in the North, depends on the fishing industry [Kristofferson n.a.]. The fishing sector is represented through the Norwegian Fishermen Organisation (NFO) and the Norwegian Coastal Fishermen's Union (NCFU) [Sandberg 2012]. The NFO has 9 regional offices and about 190 local representations. For processes like the management plan Barents Sea—Lofoten area, the communications from the government are forwarded to the regional offices and the central office combines the different contributions into one letter. Coastal small-scale Fishermen are organised by the Norwegian Coastal Fishermen's Union (NCFU). Fishing interests are in the process represented by various actors: the Ministry of Fisheries and Coastal Affairs, the Institute for Marine Research (IMR), and fishing organisations. The IMR was very central in the natural science side of developing the management plan, e.g. identification of vulnerable and valuable areas. The NFO and the NCFU took part as stakeholders.

The ecosystems of the Barents Sea—Lofoten area are of a high environmental value and host rich natural resources. The environmental interests are represented in the process by means of among others the Ministry of Environment and environmental organisations.

Stakeholder participation is described to be of high priority. Broad participation was ensured by transparent procedures and involvement of different interested parties. Local authorities, Sami interest groups, research institutes, economic actors and environmental organisations participated and contributed to the scientific basis [Ministry of Environment 2006].

In the formal process, the main possibilities for stakeholders to participate were two written hearings that were organised during the process of the factual basis and the open hearing conference. Furthermore, stakeholders could always make a written contribution and there were some additional meetings, e.g. on specific themes or in specific communities.

The first possibility to participate was offered when authorities invited the stakeholder to comment on the programming for the impact assessments [Hoel 2010]. Consultation meetings in the North of Norway took place for that purpose. Thereby, stakeholders could assure that all relevant issues would be dealt with. The sectoral impact assessments were sent on a hearing and consultation rounds, and were accessible on the internet for written comments. Communications regarding hearings were sent to around 200 organizations and parties [Klaveness 2012]. Every municipality in

the area, local and regional organizations and national actors, were included. A large number of stakeholders used these possibilities to express their viewpoints. Written contributions were collected in consultation memorandums. Interest groups were also invited to participate in working groups to discuss their views and solutions [Røsvik 2011].

In May 2005, stakeholders could participate in an open hearing conference to discuss and comment on the scientific basis. There were around 200 participants from organisations and regional authorities. The oil and gas industry, the fishing sector and environmental organisations were present. Afterwards, written contributions could be made that led to a revision of the plan. The conference formed an important forum for stakeholder and society involvement. Ca. 90% of the reports had been finished up to that conference [Thorvik 2012].

Furthermore, there were meetings organised by authorities. The Ministry of Environment had some more informal meetings with stakeholders. Especially NGOs requested meetings with the Ministry to communicate their views. Furthermore, the Directorate of Fishing organized a number of open hearing meetings in cooperation with other sectors, which served to listen to the stakeholders and take their viewpoints into account [Thorvik 2012]. Regarding environmental organisations, there were groups that were open to NGO participation, for instance topical working group meetings on different aspects, e.g. fisheries and petroleum [Geitz 2012].

In the follow-up of the plan, there were arranged meetings with an open reference group, consisting of representatives of various interests: business and industry, environmental organisations and Sami interest groups [Ministry for Environment 2006].

Stakeholder participation did not take place throughout the process [see figure 4.4]. In the final political phase the stakeholders did not have a direct role in the process, but could only have an influence through written contributions or lobbying, i.e. via the politicians [Klaveness 2012].

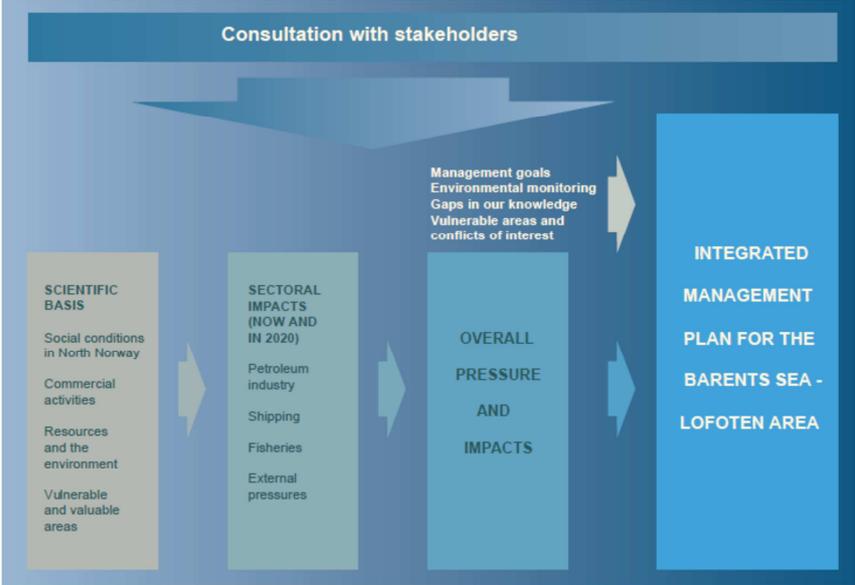


Figure 4.4: The consultation process with stakeholders

4.5.2 Analysis of success conditions

4.5.2.1 Starting conditions: balanced power-resource-knowledge

Success condition	Indicator	A	F	N	E
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Balanced power-resource-knowledge	Possession of sufficient resources	++	≠	--	ND
	Absence of clear differences in resources	--	--	--	ND

Table 4.1: Performance regarding starting conditions (see section 3.3 for explanation of scale and abbreviations)

The starting conditions were not optimal, and limited participation due to limited resources and differences in resource distribution.

While the authorities perceived participation of stakeholders not to have been limited by resources, fishing and nature organisations disagreed [Langaas 2012; Klaveness 2012]. Fishing organisations identified insufficient resources to partially have limited participation. The NFO had enough financial and information resource available to participate, but there was a lack of knowledge limiting participation [Lorentsen 2012; Sandberg 2012]. The NCFU reported the ability to take part in the process to be limited by resources, for both small scale fisheries and coastal communities [Johnsen 2012]. WWF confirmed the weak position of communities: ‘most local communities have by no means the capacity or the resources for hiring someone and coping with the amount of information and extensive documents available’ [Geitz 2012].

The nature organisations perceive the large workload of such a process to be an inherent problem. ‘It is a fairly open process in the sense that the government is inviting everybody to comment and hold open meetings in many places in Norway. But the problem is that it is such a massive amount of data, information and research [...] that you have to digest and understand in order to give a valuable input. The lack of resources limits the real opportunity for us to be deeply involved. Most NGOs would have difficulties matching the resources put in there by civil service and research organizations’ [Steel 2012]. For WWF, the actual staff time limited participation. Furthermore, ‘the local communities have by no means the capacity or the resources for hiring someone and coping with the amount of information and extensive documents available’ [Geitz 2012].

Stakeholders and authorities agreed that there was a difference in available resources with interest groups like local communities, fishing and environmental organisations on the one side, and oil and gas with almost unlimited financial resources on the other side [Klaveness 2012; Røsvik 2011; Langaas 2012]. Other stakeholders felt powerless in the face of the strong position of the petroleum industry: ‘Norway is a small country with a lot of cross-relations inside industry, bureaucracy and local actors with an unspoken loyalty to a common goal: to open access to new areas for the petroleum industry and increase production as far as politically possible’ [Enge 2012]. Due to the issue of opening the Lofoten and Barents ocean areas for petroleum activities, the petroleum industry had a vital interest in the development of the plan. Based on vast available resources and a close connection to authorities, it had a privileged position and was very influential [Sandberg 2012; Johnsen 2012; Lorentsen 2012; Enge 2012]. ‘The refusal of oil activities in the Lofoten area in 2001 was the first time in Norwegian history that they were refused with serious consequences for their exploration strategy. After that, they started to invest more and more of financial and human resources to accomplish their goal of extending oil drilling into the north and the Lofoten area in particular. It is a propaganda machinery with very strong lobby groups’ [Enge 2012].

4.5.2.2 Facilitative Leadership: Presence of facilitation

Success condition	Indicator	A	F	N	E
Presence of facilitation	Presence of facilitation	--	--	--	ND

Table 4.2: Performance regarding facilitative leadership (see section 3.3 for explanation of scale and abbreviations)

There is no indication for measures taken to ensure the participation and/or influence of stakeholders except the provision of information. Therefore, there was no one-level playing field. The ministries shared information in an open way, provided information on planned meetings as well as requests of input to hearings to concerned partners and organisations. However, it was up to the stakeholders themselves to decide upon their degree of participation [Klaveness 2012; Johnsen 2012; Lorentsen 2012; Sandberg 2012]. There was no funding of participation of civil society. ‘If the government really wanted democracy/ civil society participation they would have had to put more resources into simplifying issues and to get down to some bigger questions, making priorities and presenting that in a simpler, more approachable manner’ [Steel 2012].

4.5.2.3 Institutional design

Success condition	Indicator	A	F	N	E
Representativeness of the affected public	Early inclusion of all affected throughout the process	+	≠	≠	-
Transparent, trustworthy process with clear expectations and objectives	Transparency	≠	≠	≠	ND
	Perception of trust present	+	-	+	ND
	Clear expectations	-	-	-	ND
	Clear objectives that emerged from discussion	+	-	-	ND
A strict deadline is balanced with giving stakeholder enough scope for discussions and collaboration ⁷	Deadline existing and balanced	ND	ND	ND	ND

Table 4.3: Performance regarding institutional design (see section 3.3 for explanation of scale and abbreviations)

4.5.2.3.1 Representativeness of the affected public

The representativeness of the affected public in the process towards the management plan Barents Sea—Lofoten area was insufficient. It varied by phase of the process and respective actor.

Stakeholders participated rather evenly—they could play approximately the same role [Thorvik 2012; Langaas 2012; Klaveness 2012]. Furthermore, stakeholders could participate since the beginning of the process by influencing the scientific basis, e.g. the NFO commented on the programming of the impact assessment [Sandberg 2012; Lorentsen 2012]. NGOs had an important role to point out what civil society expects from the process [Geitz 2012].

First of all, representativeness differed on the phase of the process. In the final phase of the process, stakeholders were barely represented. Thus, there was no consultation for the final management plan, as it went directly from the government to the parliament [Røsvik 2011]. Stakeholder could only contribute indirectly, e.g. via lobbying and information campaigns. In phase 1-3, stakeholders

⁷ This success condition was assessed in the case study of the management plan Barents Sea-Lofoten area. Its importance for the Voordelta process became clear during the research activities, and therefore it has not been analysed for the Norwegian case.

were represented to a limited degree. They were not directly represented in all meetings, but could participate at different levels and stages of the process: throughout the phases they could ask for meetings, comment via writing letters and participate in public written hearings, open meetings and a broader open hearing conference in Tromsø in May 2005 [Klaveness 2012; Langaas 2012; Johnsen 2012; Lorentsen 2012; Steel 2012]. According to the Ministry of Environment, all stakeholders had the possibility to communicate their views and to be heard. Especially national bodies and NGOs were active. WWF contributed quite extensively to the process and tried to challenge the government to make the best out of the process [Geitz 2012]. Next to the possibilities mentioned above, it contributed by developing maps, media work and awareness raising activities and separate lobby/information meetings [Jensen 2012].

Second, the representativeness differed according to the actor. On the one hand, formal meetings and procedures were almost exclusively limited to scientists and officials [Thorvik 2012; Knol 2011; Enge 2012]. Meetings between stakeholders and authorities were closed to the public [Olsen 2011]. Stakeholder interests were partly integrated in an indirect way via the authorities or scientists. In case of the fishing sector, it was even mostly represented by the authority/ management level. Therefore, the NFO collaborated closely with the Ministry of Fisheries and Coastal Affairs, which contributed knowledge on fishing into the process, e.g. the NFO was asked by the Directorate of Fisheries to participate in a description of fishing activities [Sandberg 2012; Lorentsen 2012]. On the other hand, there were also differences in the fishing sector itself. The participation of the Norwegian Coastal Fishermen's Union (Norges Kystfiskarlag) was mostly related to the issue of year-around petroleum activity in the Barents Sea. However, while the NFO participated in the working group assessing the coexistence of petroleum/fishing activities, the NCFU was not represented even though the Lofoten area is a coastal area and coastal fishers were directly affected [Lorentsen 2012; Johnsen 2012]. Thus, the small scale fleet was partly missing in this working group. 'The small scale fleet is the least mobile part of the fleet, and therefore the most vulnerable part of the fleet concerning conflicts with other businesses/oil industry regarding the use of sea areas, fishing grounds and influence on the fishing stock in local areas. In general, the interests of this part of the fleet should therefore be given more consideration' [Johnsen 2012]. In addition, the participation of NFO was limited by their perception of having a restricted influence on the focus of fishing aspects, which led to only a few written contributions [Lorentsen 2012].

Finally, while they were not directly excluded from the process, local communities did neither have the resources, nor the competences to participate. They were not well represented [Steel 2012].

4.5.2.3.2 A transparent, trustworthy process with clear expectations and objectives

Transparency

There was a certain degree of transparency, but it differed from the phases of the process and actors [Jensen 2012; Lorentsen 2012; Klaveness 2012]. All interviewed stakeholders agreed that some aspects were transparent, but identified at the same time various shortcomings.

All reports and additional documents, e.g. studies regarding acute oil pollution in the Lofoten Islands area, were available on the internet [Olsen *et al.* 2007; Ministry of Environment 2006].

The transparency varied depending on the phase of the process. In the fourth phase it was lower than in the prior phases [Røsvik 2011; Sandberg 2012]. 'The process of the factual basis and the hearing conference were transparent, but the finalizing political phase was more closed' [Klaveness 2012]. Thus, there is evidence that it was partially not clear how decisions were made. 'Sometimes you wonder why there are these conclusions with the science pointing in another direction. It is not always obvious how the conclusions relate to the data' [Steel 2012].

In addition, not everyone had access to meetings. While for the participants, the insiders, of the process it was transparent, it might not have been transparent for the stakeholders or the society at large [Thorvik 2012].

Finally, it was commented on by the nature and fishing organisations that the degree of transparency of information and meetings was limited, especially regarding the petroleum sector. 'All competence is inside the 'oil community-economy'. Research, consultancy, service and sub-contractors, even universities, benefit from the generous industry. They are dependent on the industry and make it impossible to develop alternative expertise with a different focus and perspective than what benefits the petroleum industry' [Enge 2012]. The petroleum industry has a monopoly of information on actual petroleum activity, and had own data on for instance the issue of seismic surveys that was not handled in a transparent way [Sandberg 2012].

Furthermore, concerning the sector-specific meetings, the NFO did not have an insight of what was discussed in the meetings of other sectors [Lorentsen 2012]. In addition, reports of governmental institutions were not always handled in a transparent manner [Geitz 2012].

Perception of trust present

There is a certain degree of trust present. The last phase is again clearly differentiated from prior phases.

The authorities identify considerable respect for other viewpoints and good cooperation. The process was predictable and fair in the vein that it was open, and stakeholders had the same possibilities to participate [Thorvik 2012; Johnsen 2012]. Furthermore, there was trust e.g. that there would be a plan with results [Langaas 2012]. Trust increased by means of cross-sectoral cooperation, as knowledge and understanding increased [Thorvik 2012].

The political process of phase 4 can be distinguished from the prior phases, because of its political character [Røsvik 2011]. Thus, 'not all consider the result to be fair (according to their view), but the final decisions are a political question. That is especially obvious regarding the question of opening areas for oil and gas activity' [Klaveness 2012].

For the fishing sector, there was only limited trust, fairness and respect. For the NCFU, the fairness was negatively affected by the differences in resources that limited the ability to participate [Johnsen 2012]. Furthermore, the NCFU commented that the result being quite beneficial can be attributed more to the support of the public opinion than to a 'fair fight' between interest groups. In addition, the result left several possibilities for future rematches, which will most likely be to the benefit of the strongest actor involved: the oil industry. 'Money equals influence – and the Coastal Fishermen's Union has no money...'. For these reasons, the Union had a limited degree of trust [Johnsen 2012]. In case of the NFO there was not sufficient respect, because there was not enough attention regarding the conflicts and effects of petroleum activities which the fishing sector had tried to explain repeatedly [Lorentsen 2012]. In addition, the fishing organisations could not directly take part in the process, but could only contribute to the general knowledge to clarify on the effects of various industries. Sectors were not treated equally, but in the end the petroleum interests were more influential [Lorentsen 2012]. Finally, there were shortcomings regarding the issue of fisher's knowledge [Sandberg 2012].

The nature organisations stated that respect was present [Jensen 2012]. While the process itself and the science were trustworthy, the translation into policy was not [Geits 2012; Steel 2012]. In this

context, the process of the scientific basis was only intended for minor adjustments, not for large issues like the Lofoten issue [Steel 2012].

Clear expectations

Stakeholders and authorities mostly agree that the clarity of expectation was limited, because of the novelty of the process [Klaveness 2012; Thorvik 2012; Lorentsen 2012; Geitz 2012]. Fishermen did not know to which degree they could influence the process [Lorentsen 2012]. The process developed over time [Røsvik 2011]. The environmental organisation Sabima expected a more specific, hands-on plan which did not live up to expectations. ‘The plan is like a piece of clay which is moulded by the politicians in the form they like’ [Steel 2012].

Clear objectives that emerged from discussions

The objective to identify integrated management for the Barents Sea—Lofoten area, especially regarding coexistence between the petroleum industry and other interest groups, was clear [Røsvik 2011; Langaas 2012]. However, it might not have been clear from the beginning on that one of the main objectives was to solve the Lofoten islands conflict. However according to Geir Klaveness from the Ministry of Environment, stakeholders found out quickly [2012].

Some influence on the objectives was possible. However, the objectives did not emerge from a discussion. Instead, stakeholders could comment on the objectives, and authorities processed these leading to a situation in which stakeholders were partially not sure how their comments were integrated. The fishing organisations could influence the objectives partially. The NCFU was able to point out new/more problem areas that had not sufficiently been taken into consideration [Johnsen 2012]. The NFO had some influence on the goals that were defined in 2002 [Sandberg 2012]. According to the environmental organisations, the process of determining the objectives was rather open, however, they question the degree to which the objectives could in fact be influenced [Geitz 2012; Steel 2012].

4.5.2.4 Stakeholder process

Success condition	Indicator	A	F	N	E
Face-to-face dialogue	Face-to-face dialogue	-	-	≠	ND
Knowledge and communication	Presence and integration of laymen/local and scientific knowledge	≠	-	-	+
	Two-way communication	-	-	-	ND
Influence and embeddedness	Influence of stakeholders on process and outcome (shared responsibilities)	+	-	-	≠
	Embeddedness in formal decision-making process	-	-	-	ND

Table 4.4: Performance regarding stakeholder process (see section 3.3 for explanation of scale and abbreviations)

4.5.2.4.1 Face-to-face dialogue

The amount of face-to-face dialogue was poor. It appears that environmental organisations had more face-to-face possibilities with the authorities than the fishing sector, which might be partly due to many being situated in Oslo. Throughout the process there were different meetings [Steel 2012]. However, stakeholders were not presented in the official meetings, e.g. of the steering group. These were closed to the bureaucratic and scientific levels [Steel 2012].

Furthermore, while the process aimed at integrating different sectors, the three phases establishing the scientific basis were fragmented to a large extent, according to the different sectors. Thus, there was a lack of discussing interrelations between sectors, and there were few meetings with the different stakeholders together. Elling Lorentsen from the NFO confirms this: 'in the process, there were few possibilities for stakeholders to participate jointly, except when the programming was presented in the beginning and the hearing conference at the end' [Lorentsen 2012]. Thus, there were for instance no meetings between the NFO and other stakeholders like environmental NGOs [Sandberg 2012].

4.5.2.4.2 Knowledge and communication

The condition of knowledge and communication can only be observed partially. Compared to the central importance of scientific knowledge, the role of laymen knowledge was only minor. However, the integration of fisher's knowledge is accelerated by its embeddedness in the Norwegian society, as well as in the fisheries authorities. An additional issue concern contested knowledge regarding seismic surveys. The presence of two-way communication was limited.

Presence and integration of scientific and laymen knowledge

The process was mostly based on scientific knowledge [Klaveness 2012; Thorvik 2012; Langaas 2012; Johnsen 2012]. In many ways, it forms a technical plan developed by specialists [Olsen 2012].

The scientific basis of the management plan seems solid [Steel 2012]. There are long research traditions in Norway regarding the marine environment, fisheries and fish stocks with measurements of the Institute for Marine Research dating 110 years back [Klaveness 2012]. Still, the management plan indicates that there are serious knowledge gaps regarding the seabed. They resulted in the creation of the cross-disciplinary MAREANO programme in 2005, which strives to develop a marine areal database [Ministry of Environment 2006]. Furthermore, some stakeholders indicated missing information, for instance regarding the issue of climate change [Johnsen 2012; Sandberg 2012]

Compared to scientific knowledge, laymen knowledge played a limited role [Steel 2012]. It entered the process via the directorates, agencies and institutions, and also via stakeholders in written hearings, town-hall meetings and the conference [Geitz 2012; Sandberg 2012]. Due to Norway being a small country, there are close connections between fishermen and scientists. The inclusion of their knowledge is self-evident, while scientists treat it with due scepticism. Verification is necessary, as anecdotal observations cannot be generalized [Olsen 2012]. Furthermore, fishery authorities cover the integration of knowledge regarding fisheries management in close cooperation with the sector. During the process of allocating quotas, there are national meetings with the stakeholders of the fishing sector. In addition, knowledge is supplied by the fisheries management and by researchers, e.g. Institute for Marine Research. According to Inger Oline Røsvik from the Ministry of Fisheries and Coastal Affairs, most laymen knowledge was integrated [2011]. 'To some extent consultations took place with fishermen and fishermen associations to draw on their practical knowledge. In that sense the input from lay persons and organisations were taken into considerations' [Thorvik 2012]. In this sense, fishermen knowledge was used for the identification of coral reefs and was integrated in a

process that described fishing activities [Sandberg 2012]. The map showing deep-water coral reefs was actively used in the development of the management plan [Olsen 2011]. The fishing organisations also played a large role: 'the practical knowledge of fishermen was represented through the fishermen organisations. They are well organised' [Geitz 2012]. However, fishing organisations doubt the sufficient integration of the knowledge of fishers. In their opinion, it was basically limited to the description of fisheries and fishing activity [Lorentsen 2012].

The different kinds of knowledge were difficult to deal with. For the Directorate of Fisheries it is easier to deal with fishermen knowledge because there are former fishermen working, and they have good contacts with the sector [Klaveness 2012]. For the integration of different kinds of knowledge there were joined research activities to get a common knowledge basis [Sandberg 2012]. Furthermore, there were stakeholder meetings during which scientists from the IMR explained scientific aspects to the stakeholders, and listened to their input as indication for which issues further research was necessary [Olsen 2012].

The Barents Sea—Lofoten area management plan is mostly an oceanic plan and not focused on coastal areas [Olsen 2011]. Nevertheless, coastal areas do play a large role in issues such as the Lofoten conflict. There is not much detailed geographic information regarding the coastal areas, so that sometimes knowledge/mapping from fishermen and fishermen organisations are used [Thorvik 2012]. Members of the NCFU were asked to draw fishing grounds on maps. They used a lot of time and effort in registering the fishing grounds mainly regarding the Tromsø area. In the end, they were not digitalized by the Directorate of Fisheries as planned, and not used in the process, which led to disillusion among coastal fishermen [Olsen 2011; Johnsen 2012].

Finally, the knowledge related to seismic surveys and their effects on fish stocks and the fishing sector, was contested. According to the NFO, there are significant negative effects on the fish population, e.g. by affecting breeding areas [Sandberg 2012]. The management plan declares the effect to be limited.

Two-way communication

Two-way communication amongst stakeholders and between stakeholders and plan developers was limited. Stakeholders could communicate with the plan developers via the procedure of written hearing, the conference and letters [Klaveness 2012]. The results were compiled and partly answered. According to a spokesperson of the Ministry of Fisheries and Coastal Affairs all comments of stakeholder were considered, but there was no answer explaining how [Røsvik 2011]. Direct interaction with the decision-maker seemed to be limited to the hearing conference. An aspect benefiting two-way communication is the size of the Norwegian society: in a small society like Norway, there are also informal processes such as personal conversations with authorities [Geitz 2012].

A fishing organisation had the impression that the degree of two-way communication depended on the respective authority. The Ministry of Fisheries and Coastal Affairs answered back [Sandberg 2012]. Furthermore, there was a lack of dialogue explaining how fishermen could influence the process [Lorentsen 2012].

Nature organisations doubt the existence of two-way communication: the process was not designed to facilitate it [Steel 2012]. If stakeholder comments were considered, there would be a new version with inherent answers with unclear reasons why certain aspects were changed. There were no direct answers [Geitz 2012].

4.5.2.4.3 Influence and embeddedness

The influence of fisheries and environmental organisations on the process was rather poor. The embeddedness into the formal decision-making system was insufficient.

Influence of stakeholders

The influence differs from the phase of the process. While stakeholder had a certain influence on the first three phases establishing the basis for the management plan, there was basically no direct influence on decisions and on the political process in the end.

The influence stakeholders could exert was restricted to the formal participation via hearing procedures, letters and the conference, as well as through the public debate [Klaveness 2012]. Comments and opinions relevant to the plan were considered by means of revising the reports partially [Thorvik 2012]. There are several limitations. First, the influence of stakeholders was limited to contribute to the material that was the basis of the white paper, and to influencing the political level by means of other strategies like information campaigns and lobbying [Thorvik 2012; Steel 2012]. They could not directly influence the last phase during which the white paper was written: based on the provided information, the politicians decided on issues such as the Lofoten conflict [Røsvik 2012; Sandberg 2012]. Second, some decisions had already been taken beforehand. In this vein, 'the decision to open up for year around activity in the Barents Sea was taken in 2004, before the management plan, based on the petroleum sector process' [Klaveness 2012;].

Stakeholders, authorities and scientists disagree on the degree of influence. According to authorities, stakeholders had a certain influence on all phases of the process except phase 4 [Langaas 2012; Thorvik 2012]. While the Ministry of Fishing and Coastal Affairs had the impression that the fishing sector could influence the outcome, the NFO stated that it was not able to influence anything [Røsvik 2011; Lorentsen 2012]. Opinions on the influence of environmental organisations vary. While expectations were not met, the most important aspects WWF commented on were included in the final plan, and there is the impression that the environmental organisations community had a clear influence [Jensen 2012; Geitz 2012]. Nevertheless, the limits to WWF's influence were demonstrated by the lack of restrictions on oil drilling and non-existence of a system of connected marine protected areas [Geitz 2012]. Environmental organisations feel disadvantaged compared to the petroleum industry. 'Even though there have been efforts to make an economic argument for protection and more restrictive zoning, this is not seen as equal to the benefits also known as 'cash at the bank' argument from the oil industry' [Geitz 2012]. Finally, in the opinion of Olsen *et al.*, comments of the stakeholders often resulted in modifications of the documents [2007]. However, according to Knoll, the stakeholder process served more to legitimize the management plan than to integrate the stakeholder viewpoints [2011].

Embeddedness in formal decision-making process

The link to decision-making authorities was quite weak. The government did not participate actively in the preparation process, but took a decision based on all provided information [Røsvik 2011]. Thus, before the official hearing conference, the NFO had no direct contact with the government [Lorentsen 2012]. There were some meetings with higher rank politicians in the Lofoten Islands area, but at most of the meetings there were only low-level politicians and scientists present [Steel 2012]. The actual decisions were made in the political process, which is more removed and can be influenced more via media campaigns [Geitz 2012].

There was a more direct link to the higher bureaucratic level responsible for writing the plan. The ministries which played a large role in the final process of writing the white paper participated in the

open hearing conference and to some limited extent in the open meetings before. However, not all involved ministries participated in all meetings [Thorvik 2012]. The NCFU could communicate with the authorities involved, also on a political level, but did not feel a clear link with them [Johnsen 2012]. Furthermore, in case of a solution preferred by a ministry or in case it is relevant, it can be that the degree of stakeholders support for certain options is communicated to the political sphere [Klaveness 2012].

In addition, there were more contacts with the directorates, which produced a part of the material of the management plan in cooperation with stakeholders. In this vein, the NFO had contact with the Directorate of Fishery, and the Directorate of Nature participated directly in hearings to explain the process to communities [Langaas 2012; Lorentsen 2012].

The embeddedness in the formal decision-making system is enhanced by Norway being a small society—there is a long tradition of various organisations to participation and voice their opinion [Thorvik 2012]. There is a rather open access to the political arena [Steel 2012].

4.6 Linking the degree of success of the outcome with the conditions

In the Barents Sea—Lofoten area process, there were barely any efforts to facilitate a meaningful stakeholder participation process. The outcome was of limited success regarding mutual benefits, and was generally unsuccessful in the building of ownership. In the following, the analysed conditions are summarized and linked to the degree of success of the outcome in order to shed light on preconditions for a successful stakeholder participation process, which can enhance sustainable marine spatial planning.

Success condition	Indicator	Compliance
Balanced power-resource-knowledge	Possession of sufficient resources	X
	Absence of clear differences in resources	X
Presence of facilitation	Presence of facilitation	X
Representativeness of the affected public	Early inclusion of all affected throughout the process	X
Transparent, trustworthy process with clear expectations and objectives	Transparency	X
	Perception of trust present	X
	Clear expectations	X
	Clear objectives that emerged from discussion	X
A strict deadline is balanced with giving stakeholder enough scope for discussions and collaboration	Deadline existing and balanced	ND
Face-to-face dialogue	Face-to-face dialogue	X
Knowledge and communication	Presence and integration of laymen/local and scientific knowledge	X
	Two-way communication	X
Felt ownership of the process	Influence of stakeholders on process and outcome	X
	Embeddedness in formal decision-making process	X

Table 4.5: Compliance of the Barents Sea—Lofoten area process with the success conditions (✓ = complied with, X = not complied with⁸, ND = no information available)

⁸ If there is at least one ‘-’ (To a considerable degree not present) among authority, fishing or environmental sectors or external sources, then shortcomings exist concerning the respective success condition, which is then declared to be not complied with.

The analysis of indicators for the success conditions showed that there is no condition which has been complied with (see table 4.5). There was no meaningful stakeholder process, but the process was applied in a top-down, technical manner. Some exceptions include the organisation of an open stakeholders' conference and some degree of representation of stakeholders, trust, transparency and clarity of objectives.

4.6.1 Identifying trade-offs for an outcome with mutual benefits

There were benefits for both fishing and nature interests, but they were rather limited. A trade-off was established by means of a restriction of petroleum activities in the vulnerable and valuable areas, while opening other parts of the Barents Sea for exploration and exploitation. Furthermore, it is unclear to which degree areas such as the Lofoten area will be protected in future. With petroleum resources declining and the need for oil increasing on a global scale, stakeholders with fishing and nature protection interests fear that it is only a matter of time until also the most vulnerable areas are opened for petroleum exploitation. Therefore, while this management plan provides a first step in balancing economic, environmental and social objectives towards more sustainable development for the short-term, a framework is missing to balance the different interests in the long-term and issues such as the seismic surveys remained unresolved.

In the case of the management plan for the Barents Sea—Lofoten area, the more traditional, top-down approach was capable to solve the main conflict existing to the satisfaction of the main interests involved. Still, the limited scope for stakeholder participation and unfulfilling the conditions resulted in limiting the capacity to identify additional trade-offs.

First, there were resource imbalances, insufficient resources to participate, and the process was not representative to all affected, contributing to a result that was not beneficial to all. Thus, formal meetings were predominated by scientists and officials, and meetings between stakeholders and authorities were closed to the public. For instance, the NFO was better represented than the NFCU, which was excluded from the working group assessing the coexistence of fishing/petroleum activities while it was greatly affected.

Second, there was little face-to-face dialogue, two-way communication and laymen knowledge present, limiting the degree that trade-offs could be identified in cooperation with stakeholders. The small size of the Norwegian society positively affected the integration of fishers' knowledge and two-way communication. Moreover, stakeholders could mostly influence the process establishing the factual basis, not the process of drafting the plan and taking decision. The degree that they could input their value judgments, which is necessary for identifying trade-offs, was limited.

4.6.2 Building ownership

There was no direct commitment to apply a stakeholder participation approach. Instead, the process was rather top-down with some mostly indirect participation. The small degree of shared responsibilities and ownership might have negative effects on the implementation of the plan and of the development of awareness and societal change towards more sustainable development. Many of the conditions contributed to limiting the building of ownership.

First, there were insufficient resources for some stakeholders to participate, and also differences in resources. Linked to the absence of facilitative activities, not all affected were represented in the process and there was manipulation by the strong economic power of the petroleum industry. Thus, this sector occupied a privileged position, due to having compared to other interest groups enormous resources available. As a result, the process was fraught with the danger of manipulation and decreased trust and commitment levels, with negative effects on the level of ownership.

Second, there are shortcomings regarding the degree of a transparent process with clear expectations and objectives. The process was rather non-transparent to outsiders, and actors did not share all information openly. Furthermore, the objectives could only be influenced to a limited degree, which has a negative effect on development of shared responsibilities. Next to the differences in resources and the translation into policy in the last phase, the low degree of transparency and the limited discussion of the objectives had a negative effect on the level of trust and ownership.

Third, there was little face-to-face dialogue and two-way communication present, which limited both the developing of a feeling of shared responsibility among stakeholders and the increase of trust towards authorities, which in turn affected ownership negatively.

Fourth, while fisher's knowledge was to some degree integrated, there was a case in which the NCFU drew maps of fishing grounds that were in the end not used in the process. This led to disillusion and decreased levels of support for the plan and its implementation.

Finally, the influence of stakeholders on the process and outcome was limited. Some decisions, for instance the opening of the Barents Sea for year around petroleum activity, were already taken beforehand. Fishing organisations cast doubt upon their influence. Environmental organisations felt disadvantaged compared to the petroleum sector, but were able to influence it to some degree. The embeddedness in the formal decision-making process was poor. The government did not participate actively, but took a decision based on the provided information, while there was a more direct link to the directorates and to the higher bureaucratic level of the ministries responsible for writing the plan. This limited influence led also to a limited perception of shared responsibilities and ownership.

4.7 Conclusions

In the fourth chapter, the process towards the management plan of the Barents Sea—Lofoten area was analysed by means of analysing the compliance with the conditions and assessing the manner in which these influenced the degree of success of the outcome regarding the interests of fishing and nature protection. None of the condition was fully complied with, indicating the little degree of stakeholder participation present. The most important conditions for the limited degree of success were: the pressure resulting from the petroleum industry to open areas for petroleum exploration and exploitation; insufficient resources to participate and insufficient representativeness; little face-to-face dialogue and two-way communication; unclear expectations and no possibilities to discuss the objectives; restricted transparency and levels of trust; shortcomings regarding aspects of knowledge, and influence and embeddedness in the formal decision-making system.

COMPARISON OF THE DUTCH AND NORWEGIAN CASTE STUDIES

5.1 Introduction

In the previous two chapters, the degree was analysed to which the two case studies of the management plan of the Voordelta (The Netherlands) and the Barents Sea—Lofoten area (Norway) complied with the conditions for more successful stakeholder participation, and the manner in which that explains the degree of success of the outcome. In this chapter, the results are compared regarding the similarities and differences of the case studies in order to deepen the understanding of the approaches (S5).

5.2 Similarities and differences

The process towards the management plan Barents Sea-Lofoten area provided the factual basis for decision-making—at the end, authorities took the decisions to facilitate coexistence of the petroleum, fishing and other interests, predominantly for the area off the Lofoten islands. Science was at the centre of the process. Stakeholders could only contribute to the factual basis, but did not participate further in either the identification of measures or trade-offs, or in the taking of decisions. In the Voordelta planning process, the goal was to comply to the Natura 2000 requirements, to facilitate a construction of the Maasvlakte 2 by providing nature compensations and balance these two issues with existing and future user activities. There was general recognition of the need for stakeholder participation. The plan was drafted on the basis of science in cooperation with interest groups. Stakeholders had indeed an influence on the precise measures to be implemented, and they identified trade-offs in cooperation with authorities and scientists.

The stakeholder participation approach as applied in the planning process towards the management plan Voordelta complied fully or partly with approximately six of the eight conditions and showed a rather high degree of success of the outcome. The nature of the process is more bottom-up, with the stakeholders having a strong position. Based on the ‘Elverding’ approach, there is strong public support for participation. Furthermore, stakeholders had the possibility to take legal measures. The limitations on the degree of success can be explained by some of the shortcoming in compliance with the success conditions. The process towards the management plan of the Barents Sea—Lofoten area was generally more scientific, and top-down structured. Being led by managers and scientists, stakeholders could only participate in and have influence on the process to a limited degree. There is a lower degree of success that can partly be explained by all of the success conditions being partly or fully not complied with.

The management plans of the Voordelta and Barents Sea-Lofoten area differ fundamentally. The management plan of the Voordelta is of a practical nature, and plans all activities into detail. Contrary to that, the Norwegian plan is kept more general and consists mostly of the scientific basis. Only the last chapters describe the programme of actions by the government.

Both processes succeeded to solve some of the existing conflicts: a compromise was established for the extension of petroleum activities in the Barents Sea—Lofoten area; and some trade-off could be identified under consideration of local knowledge and value for the restriction of user activities due to nature compensation and protection in the Voordelta.

5.2.1 Outcome: degree of success

The degree of success of the outcome was higher in the Voordelta than in the Barents Sea—Lofoten area case.

In the two cases the mutual benefit was limited to a different degree. In the Dutch case, more trade-offs were identified in cooperation with stakeholders. The fishing sector is perceived as the losing actor, while the nature organisations partly benefited through the existence of concrete measures. Still, in their opinion the nature is not sufficiently protected yet. It seems that a better compromise for fishing and nature protection interests was partly sacrificed for pushing through other interest, i.e. construction of Maasvlakte 2. In the Norwegian case, the compromise was formed by a restriction of petroleum activities in the Lofoten area, while large areas in the Barents Sea are open to these. The fishing and nature sector recognized to have benefited in some way, but also pointed to fundamental shortcomings.

While the Voordelta management plan integrates all present interests and plans user activities and nature protection into detail, basically the only issue relating to the balancing of different interests being decided upon in the scope of the Barents Sea—Lofoten area management plan, was the restriction of petroleum activities in certain areas.

In the Voordelta, the degree of ownership was more present than in the Barents Sea—Lofoten area. In the Dutch case, there was a quite high degree of shared responsibilities, in the sense that stakeholders were perceived as partners in the process towards the integrated management plan. Still, the feeling of ownership among the fishing and nature protection interests was to some degree limited. In the Norwegian case, there was little perception of shared responsibilities among stakeholders, and no feeling of ownership of the process and outcome could develop.

5.2.2 Process: analysis of success conditions

5.2.2.1 Starting conditions

5.2.2.1.1 Compliance with success conditions

Success condition	Indicator	Voordelta				Barents Sea-Lofoten area			
		A	F	N	E	A	F	N	E
Balanced power-resource-knowledge	Possession of sufficient resources	++	++	++	ND	++	≠	--	ND
	Absence of clear differences in resources	+	±	-	ND	--	--	--	ND

Table 5.1: Starting conditions compared for the two case studies- Voordelta and Barents Sea—Lofoten area (see section 3.5.2 for explanation of scale and abbreviations)

As can be concluded from table 5.1, the process in the Voordelta complied with the success condition to a greater degree than the process in the Barents Sea Barents Sea—Lofoten area. In the former there were enough resources, while there were shortcomings with this indicator in the latter. In both cases there were differences in resources, but in the Norwegian case those were by far more pronounced.

Strong actors affecting the stakeholder participation processes

The two management plans were profoundly influenced by strong economic interests: the port authority of Rotterdam (Voordelta) and the petroleum interests (Barents Sea—Lofoten area). The processes were of paramount importance to both interests, because their future economic development possibilities depended on the successful development of the management plans.

The interplay with the other actors and consequences on the process differed. The inequitable distribution of resources of the port authority and the petroleum industry as compared to other stakeholders, resulted only in case of the Barents Sea—Lofoten area into demoralizing the participation of other interests. During most of the Voordelta process, the port authority pursued its goals by helping facilitating the stakeholder process—the large resources available supported the process more than they manipulated it. Only in the last year the strong interest of the port authority began to greatly affect the process in an adverse manner by exerting tremendous pressure.

These differences are related to the pre-eminent position of the petroleum industry in the Norwegian society. Most of its economic rent goes to the state. A large portion of oil fortune has served to maintain the Norwegian welfare system, and it provides many employment possibilities [Ryggvik 2010]. Being essential to maintaining the present standard of living, keeping income from the petroleum industry stable, e.g. by opening new areas for petroleum activities, is not only in the interest of the industry, but also of the society as a whole.

In addition, the variations might be caused by different objectives of the processes, differences in the processes, and the degree of resource differences when compared to other stakeholders. First, the management plan of the Barents Sea-Lofoten area was designed to settle the issue of extending petroleum activities northwards, while the management plan of the Voordelta combined the nature compensation with nature protection under Natura 2000. This difference might have contributed to giving the petroleum sector a more central position. Second, in the Voordelta great importance was assigned to participation, so that a well-functioning stakeholder process was necessary for the accomplishment of the management plan. Furthermore, dissatisfaction of an interest group could easily lead to a court case delaying the process and possibly the construction of the Maasvlakte 2. Supporting the process financially was in this regard a practical method to work towards the port authority's goal: to be able to begin with construction work in time. In the Barents Sea—Lofoten area process, the participation of stakeholders was limited to a formal role. Discontent of actors could hardly affect the finalization of the plan by for instance delaying it. In sum, stakeholders in the Voordelta process were more powerful than in the Barents Sea Barents Sea—Lofoten area process, leading to the necessity to take them into account. Third, in the Dutch case, participation was mostly not restricted by limited resources, while in the Norwegian case this was the case for various stakeholders. According to Ansell and Gash, manipulation of stronger actors takes place especially if there are actors not being able to participate on an equal footing as based on limited resources or organisational infrastructure [2007]. In case of the Barents Sea—Lofoten area, the biasing influence of the petroleum industry was probably more due to the large differences in resources. In the Voordelta, process was less prone to manipulation due to resources being more evenly distributed.

Differences regarding the fishing sector and local communities

Another difference influencing both processes is the position of the fishing sector and of the local communities. While fishery activities are economically of minor importance to the Netherlands, in Norway it forms the second most important sector on which many coastal communities depend. On Dutch seas, due to the smaller space available and many competing interests, the fishing sector feels marginalized and pushed out of important fishing areas. Its survival is at stake leading to fierce resistance. On Norwegian seas, petroleum activities pose a threat by means of pollution or seismic

surveys, but for most of the sector the continuation of different fishing activities was not in danger. An exception is made with the coastal, small-scale fisheries that are less mobile than larger scale fleets. In this context, in the Voordelta the fishing and nature organisations are competitors for space, while in the Barents Sea—Lofoten area they are rather allies against the stronger petroleum sector.

The role of local communities differed substantially in both processes. As opposed to Norway, in the Netherlands they were of particular importance to the representation of interests. This might be due to different possession of resources, as well as to the Barents Sea—Lofoten area management plan being more applicable to marine areas off the coast than to coastal areas. However, coastal waters do play a role. For instance in the Lofoten Islands area the livelihoods of coastal communities partly depend on coastal fisheries, which were affected by the plan.

5.2.2.1.2 Relevance for success of outcome

To begin with, the strong economic powers port authority of Rotterdam and petroleum industry biased the processes in some way, and led to a lower degree of mutual benefit and ownership. In the Voordelta, the pressure that was put on the process via the determination to begin with the construction of the Maasvlakte 2, increased substantially in time towards the end of the process. Translating into a significant decrease in conditions such as trust, transparency, face-to-face dialogue and influence, there was a negative effect on the degree of success. Thus, the scope for identifying trade-offs in cooperation with participants was more limited so that some issues were finalized with a lack of understanding and support by the stakeholders. The decisions in the last phase are of smaller benefit to the stakeholders and the pressure led to a smaller degree of ownership for the whole process and outcome. In the Barents Sea—Lofoten area, the large resource imbalances between the petroleum industry and other stakeholders led in the absence of facilitation to fishing and nature protection interests being at a disadvantage. Thus, conditions such as the levels of trust were not complied with, affecting the degree of ownership.

In addition, the influence of these strong economic actors led in the two cases to a limitation of benefits for the other interests. In the Voordelta, the benefits of both nature protection and fishing interests were restricted by the nature compensation necessary for the Maasvlakte 2. In the Barents Sea—Lofoten area, areas being opened further North for petroleum activities form a threat to marine ecosystem and fish stocks. The Barents Sea—Lofoten area management plan contributes to facilitate coexistence of the different sectors, but does not protect the interests of nature protection and fishing yet to their satisfaction.

The possession of sufficient resources to participate forms a prerequisite for being well-represented, as well as to participate in a meaningful way. Therefore, it contributes to the identification of trade-offs and an outcome of mutual benefit. Insufficient resources formed an obstacle to more active participation in the Barents Sea—Lofoten area, which might have had a negative influence on the capacity to reach compromises with a mutual benefit for fishing and nature protection interests. Furthermore, the limited resources of some stakeholder connected with the strong economic position of the petroleum industry led to the process being in danger of manipulation and to decreased trust and commitment levels, with negative effects on the level of ownership.

5.2.2.2 Facilitative Leadership: Presence of facilitation

5.2.2.2.1 Compliance with success conditions

Success condition	Indicator	Voordelta				Barents Sea-Lofoten area			
		A	F	N	E	A	F	N	E
Presence of facilitation	Presence of facilitation	++	+	+	ND	--	--	--	ND

Table 5.2: Facilitative leadership compared for the two case studies- Voordelta and Barents Sea—Lofoten area (see section 3.5.2 for explanation of scale and abbreviations)

This success condition is complied with in case of the Voordelta but not in case of the Norwegian process (see table 5.2). Facilitation is at the heart of a stakeholder participation process. The differences in facilitation represent the different character of the processes. In the Voordelta, facilitation took place from the port authority by investing in research and management, as well as from responsible ministries by investing efforts to solve interest conflicts and provide extensive information. In case stakeholders offered resistance, more efforts were invested to identify a solution. In the Barents Sea—Lofoten area, there was basically no facilitation present except that authorities provided information on the process and meetings to a large number of stakeholders.

5.2.2.2.2 Relevance for success of outcome

In the Voordelta, the presence of a neutral facilitator and the investments of additional efforts in case of conflicts, led to a larger capacity to identify trade-offs in cooperation with stakeholders. In addition, it contributed to a higher degree of ownership by means of searching solutions that met the approval of the affected parties. In the Barents Sea—Lofoten area, the presence of facilitative activities might have increased the degree of success of the outcome.

5.2.2.3 Institutional design

5.2.2.3.1 Compliance with success conditions

Success condition	Indicator	Voordelta				Barents Sea-Lofoten area			
		A	F	N	E	A	F	N	E
Representativeness of the affected public	Early inclusion of all affected throughout the process	+	+	+	-	+	≠	≠	-
Transparent, trustworthy process with clear expectations and objectives	Transparency	+	+	+	ND	≠	≠	≠	ND
	Perception of trust present	++	-	+	ND	+	-	+	ND
	Clear expectations	-	-	-	-	-	-	-	ND
	Clear objectives that emerged from discussion	≠	≠	≠	ND	+	-	-	ND
A strict deadline is balanced with giving stakeholder enough scope for discussions and collaboration	Deadline existing and balanced	+	--	-	ND	ND	ND	ND	ND

Table 5.3: Institutional design compared for the two case studies- Voordelta and Barents Sea—Lofoten area (see section 3.5.2 for explanation of scale and abbreviations)

Contrary to the process in the Barents Sea—Lofoten area, the institutional design of the Voordelta process partly complied with the condition of representativeness of the affected public, and was described as mostly transparent with clear objectives (see table 5.3). However, in both processes there was only limited possibility to discuss the objectives. Furthermore, in both cases there was insufficient trust from the fishing sector, and there were no clear expectations. Finally, the success condition of the deadline was only analysed in the Voordelta due to its importance having emerged only during the research process. It affected the process negatively.

Representativeness of the affected public: mixed results

The process of the Voordelta was in general more open than the process of the Barents Sea—Lofoten area. The former facilitated better representation as stakeholders could participate more directly, while the latter was mostly limited to managers and scientists with representation of stakeholders being provided indirectly via authorities or mostly written contributions.

While in the Voordelta some affected were not represented from the beginning on, they did have the chance to be present throughout the process. In the Barents Sea—Lofoten area representation was truly limited, especially in the last phase in which decisions were taken. In addition, in the Dutch case there was a false start with the stakeholder process. Afterwards, the process improved in a learning-by-doing manner. In the Norwegian case however, stakeholders could participate rather early but representation was generally restricted with no relevant progress. Even though to a different degree, in both cases there were some actors that were not optimally represented leading to subsequent disillusion. In contrast to the Norwegian case, in the Dutch case there is evidence for difficulties of representing the fishing sector, due to its diffuse organisation. The difficulty might also be related to the need to identify binding agreements with the fishing sector in the Voordelta.

Trust

In both cases there was some degree of trust, which differed according to the actor. Furthermore, the plans are similar in the regard that there was a smaller degree of trust in the last phase of the process, as well as of the fishing sector compared to other stakeholder. In contrast to the Voordelta plan, in the Barents Sea—Lofoten area the perceived fairness was partly low, due to limited resources to participate. In both cases, trust of fishing organisations was lower than of environmental organisations and of authorities.

A transparent, trustworthy process with clear expectations and objectives

The degree of transparency was higher in the Voordelta than in the Barents Sea—Lofoten area. Transparency in the Netherlands was only restricted by the complex and novelty character of the process and a partly sectoral approach towards the fishing sector. In Norway, the former factors are also valid. In addition, the last phase was highly non-transparent, there was a difference with actor and not all information of sectors were openly shared.

Expectations were unclear because of the novelty of the processes for the Voordelta and Barents Sea—Lofoten area. In the Netherlands there was also a misrepresentation of possible outcomes for the fishing sector.

The general objectives were clear in both cases from the beginning on, and stakeholders could comment on them. The degree to which they could be discussed was limited however. In the Barents Sea—Lofoten area, stakeholders could mostly comment to point out not properly addressed issues, and were uncertain of their influence. In the Voordelta, the realization of the general objective could

be clearly influenced but not the objective itself. In sum, in both processes the general objectives could not be discussed but were clear from the outset.

A strict deadline pressuring the Voordelta process towards its end

In the Voordelta, the deadline was strict in the process because the construction of the Maasvlakte 2 depended on the management plan. In this vein, the high pressure at the end of the process negatively affected the stakeholder process. The success of the process was partly sacrificed for meeting the needs of the port authority.

This success condition was added during the research activities because of its key role in the Voordelta process as being communicated by interviewees. In the Barents Sea—Lofoten area, there was no indication as to its relevancy.

5.2.2.3.2 Relevance for success of outcome

Mutual benefit

Regarding an outcome of mutual benefit, representativeness of the affected public is crucial [Bass *et al.* 1995]. In the Voordelta, the identification of trade-offs was hampered by shortcomings concerning the representativeness of the process to all affected. There was a false start, affected actors were partially absent, and the structure of the fishing sector was diffuse. There were also fundamental shortcomings in the representativeness of the Barents Sea—Lofoten area process, which might have affected the potential of an outcome that was of more benefit to the stakeholders and balanced economic, environmental and social objectives better.

In the Dutch case, a positive factor for the success in outcome was transparency. In the Barents Sea—Lofoten area process, the environmental organisations in the Norway stated that there is restricted access to the information regarding petroleum activities, as much of it is produced and owned by the industry itself. In such a scientifically based process, this contributed to a stronger influence by the petroleum industry which endangered the benefits of other interest groups.

The strict deadline restricted collaboration and discussions, which therefore had a negative influence on the success. Thus, towards the end of the process, the process decreased in quality also regarding lower levels of trust and transparency.

The clarity of objectives and expectations plays a role as well. In the Voordelta process, there were unclear expectations regarding the possible effects on the stakeholders. By affecting the perception of potential benefits, there might have been a negative effect on the identification of trade-offs and mutual benefits: the fishing sector did not have sufficient understanding of the restrictions to fishing activities that had to be realized, but approached the process thinking that more benefits would be possible. Trust can also affect the identification of trade-offs, e.g. by influencing the stakeholders' willingness to compromise.

Ownership

In both cases the degree of transparency had an influence on the degree of ownership. Therefore, transparency is a prerequisite for meaningful participation and for the exertion of an influence [Reed 2008]. Dealing with the information in a non-transparent way can decrease the ability of stakeholders with less information to influence the process. The last, political phase of the processes was both less transparent than the prior phases, affecting the perception of shared responsibility and the support of stakeholders.

In the Voordelta, the false start affected representation which is, together with sufficient trust, crucial to a high level of ownership [Reed 2008]. Trust can be affected by transparency and by the clarity of expectations. Thus, if the process is not transparent and expectations are unclear, disillusion might develop among participants which contributes to distrust and a lower degree of ownership. In the Voordelta process, there was a misrepresentation of possible outcomes for the fishing sector, which affected their levels of trust.

Furthermore, the strict deadline influenced the degree of ownership by means of decreasing the degrees of trust, as well as other factors like face-to-face dialogue in final phase of the process.

Finally, the small degree to which the general objectives could be discussed by stakeholders, is negatively related to the degree of ownership [Reed 2008].

5.2.2.4 Stakeholder process

5.2.2.4.1 Compliance with success conditions

Success condition	Indicator	Voordelta				Barents Sea-Lofoten area			
		A	F	N	E	A	F	N	E
Face-to-face dialogue	Face-to-face dialogue	+	+	+	-	-	-	≠	ND
Knowledge and communication	Presence and integration of laymen/local and scientific knowledge	++	-	+	-	+	-	-	+
	Two-way communication	+	+	+	ND	-	-	-	ND
Influence and embeddedness	Influence of stakeholders on process and outcome	+	-	+	ND	+	-	-	≠
	Embeddedness in formal decision-making process	+	+	+	ND	-	-	-	ND

Table 5.4: Stakeholder process compared between the two case studies- Voordelta and Barents Sea—Lofoten area (see section 3.5.2 for explanation of scale and abbreviations)

In the stakeholder process, the Voordelta process performed better than the Barents Sea—Lofoten area process regarding all of the success conditions (see table 5.4).

Face-to-face dialogue: the ability to identify solutions together

In opposition to the Barents Sea—Lofoten area process, there was a high degree of face-to-face dialogue with and between stakeholders in the Voordelta process. In the Barents Sea—Lofoten area there were fewer meetings between stakeholders and a limited number of meetings with authorities, resulting in a very low ability to identify common solutions. In the Dutch case, the ability was slightly reduced by taking a sector-sector-approach in some aspects of the process.

Knowledge and communication: a scientific basis

In the Norwegian and Dutch case, scientific knowledge played a leading role and local laymen knowledge was integrated to a more limited degree. Both cases are firmly based on a rich scientific

knowledge base, which was extended by means of on-going research activities. However, in Norway there were still large uncertainties regarding the seabed. Furthermore, the two expressed difficulties with dealing with the complex marine ecosystems, as well as with uncertain issues such as climate change.

For two of the most controversial issues in both cases, the cockle fisheries in the Netherlands and seismic surveys in Norway, the effect on marine ecosystems is contested. This could confirm the importance of a well-established knowledge basis for reaching outcomes that are supported by all stakeholders, so that they feel ownership for it. If possible, identifying unchallengeable knowledge by involving stakeholders early and throughout the process might be useful, like it was tried in the Voordelta process. Furthermore, these are examples for decreased trust.

In addition, in the Dutch case, there were efforts to integrate laymen knowledge which only succeeded to some degree. Fishers' knowledge was supplied by research institutes and fishers, and applied in a customized way. Its importance was only recognized during the process. In the Norwegian case, laymen knowledge was mostly supplied indirectly via authorities, or directly via written contributions. There were fewer meetings between the authorities and fishers. Fishers' knowledge was only used in a part of the process. Still, it is embedded in the Norwegian society due to the society's small size and the importance of the fishing sector, and it was supplied via the quota cycle.

Finally, in the Voordelta, it appeared that the different kind of language used by stakeholders formed an obstacle to a successful process. An example is formed by the high level of abstraction applied by officials. In the Barents Sea—Lofoten area process there were fewer problems.

Unlike the Barents Sea—Lofoten area case, in the Voordelta there was a rather high degree of two-way-communication which, to some extent, decreased towards the end of the process. For instance, stakeholders who had commented on the draft management plan got answers explaining the follow-up. In the Barents Sea—Lofoten area, there was limited two-way communication with few interactions with the plan developers and decision-makers. There is evidence that the degree to which authorities can be reached, is positively enhanced by the small size of the Norwegian society.

Influencing and embeddedness

The influence of the stakeholders in the Dutch case was exercised regarding the realization of the general goals determined beforehand. A number of customized solutions were identified in cooperation with affected interest groups. Present shortcomings in the Voordelta refer for instance to the influence of the fishing organisations. In the Norwegian case, there was only a limited degree of influence on the first three phases, for the most part without direct cooperation between stakeholders, authorities and scientists.

A weakness of both cases was that some decisions had already been taken in other venues, without the stakeholder being able to influence them in these respective processes. Furthermore, in both processes there was a strong economic influence partly overshadowing the process, which limited the influence other stakeholders could exert.

The degree of embeddedness in the formal decision-making process is strikingly different. In the Voordelta, the link to the plan-developers and governments was more direct, and the stakeholders' positions were carefully considered. In the Barents Sea—Lofoten area, the process was barely embedded. Decisions were taken in a remote political process, with the link to decision-makers being weak. While the connections to other bureaucratic levels were better, stakeholders could only influence decisions indirectly, via the scientific basis and lobbying. The small size of the Norwegian

society however had a positive impact, as the connection to officials seems to be more direct than in the Netherlands. An aspect that might have had a negative effect on the embeddedness in the Voordelta is that the two ministries were responsible for different parts of the process, which increased confusion among stakeholders and the complexity of the process, especially as both approached the process in a different manner.

5.2.2.4.2 Relevance for success of outcome

Mutual benefit

In both cases, face-to-face dialogue and two-way communication influenced the degrees that trade-offs could be identified and an outcome of mutual benefit could be produced. There was a high degree of two-way communication and face-to-face dialogue in the Voordelta process, benefiting the outcome. In the Barents Sea—Lofoten area process there was little of these two, having a negative effect. Thus, face-to-face dialogue can enhance the capacity to identify trade-offs by means of facilitating direct discussions among the stakeholders and authorities.

Furthermore, in both processes, the integration of scientific and laymen knowledge mattered. Laymen knowledge played a limited role, which might form a missed chance for the identification of trade-offs in cooperation with stakeholders. Here, the small size of the Norwegian society, as well as the importance of the fishing sector, benefited the integration of fishers' knowledge and two-way communication. The influence of stakeholders here was limited to establishing the factual basis (phases 1-3 of process), so that their value judgments could not directly influence the decisions made.

In addition, the existence of a common language is crucial to understand other viewpoints, which is necessary for identifying trade-offs. Therefore, in the Voordelta there were shortcomings in the communication, e.g. between officials and fishers, due to the different languages used which hindered the process. Species might be called differently by different interest groups, and the profession related expressions of officials or fishers can be difficult to understand for others.

Finally, the embeddedness in the formal decision-making system matters, also regarding clear allocation of responsibilities among authorities and a consistent approach to the process.

Ownership

Like in case of the outcome with mutual benefits, face-to-face dialogue and two-way communication affected the building of ownership in both cases: in the Voordelta in a positive, and in the Barents Sea—Lofoten area in a negative way. Therefore if present, there is evidence that they can increase the levels of trust in the authorities and the feeling of shared responsibility among the stakeholders.

In both cases, a limitation to supporting the outcome was contested knowledge, in the Voordelta on Cockle fishing and in the Barents Sea—Lofoten area on seismic surveys. Due to the contested information there were different opinions on the issue, leading to a decreased feeling of ownership as actors did not understand the reasons for certain measures. This aspect highlights the importance of unchallengeable knowledge, because knowledge that can be challenged leads to a situation with actors having a different opinion on underlying issues. Furthermore, for the Barents Sea—Lofoten area process there was a case in which the NCFU drew maps of fishing grounds, which in the end were not used at all during the process. This led to disillusion and decreased levels of support for the plan and its implementation. In addition, the existence of a common language matters to avoid misunderstandings and develop a sufficient degree of support.

Finally, one of the most relevant issues contributing to a feeling of ownership is the influence stakeholders could exert. Having an influence matters by facilitating the realization of an outcome that all stakeholders support. In the Voordelta, the limited influence of the fishing sector affected the degree of ownership negatively. In the Barents Sea—Lofoten area, the influence of stakeholders on the process and outcome was limited, which was also due to an insufficient embeddedness in the formal decision-making system. The embeddedness can increase the motivation of interest groups to participate if the outcome of the process has indeed an influence on the formal decision-making sphere. If the process and the formal system are not well-connected, final decisions might be removed from the outcome of the process, which would limit the feeling of ownership.

5.3 Discussion

The question arises as to why there is such a substantial difference between these two cases. Based on past failures and delays in planning processes, there is the recognition in the Netherlands that stakeholder participation is beneficial. In Norway, the usefulness of such an innovative, participatory approach is apparently not realized yet.

First, the different scale of both processes matters. The Barents Sea concerns an area of 1.400.000 km² and the Voordelta only approximately 900 km². The larger area increases the complexity and uncertainty of developing a management plan with stakeholder participation. However, also in smaller-scale conflicts such as opening the Lofoten area for petroleum activities, stakeholder participation was low. For instance, in the working group approaching the issue, the NCFU was not represented although coastal fisheries were directly affected by the outcome.

Second, part of the reasoning might be that in Norway there was no possibility for stakeholders to take legal steps. In the Netherlands, a rather high degree of stakeholder participation was used among others to counteract lengthy legal procedures. This reason was non-existent in Norway, as there was no evidence for legal steps available to stakeholders.

Third, recapitulating the reasons for adopting a more innovative stakeholder participation approach might provide further insights into the explanation. One of the main issues leading to a change in governance approach towards more participation is the incapacity of traditional approaches to deal with complex, dynamic environmental issues that involve diverse stakes [Foley *et al.* 2010]. Stakeholder participation approach is a way to integrate stakes, develop ownership of interest groups and identify trade-off decisions by integrating value judgments by all affected. Furthermore, it is a way to integrate local knowledge, e.g. fishers' knowledge. Applying a more traditional approach to the management plan Barents Sea—Lofoten area might be due to the more traditional, top-down approach having been rather successful in the past. In this context, petroleum interests could coexist rather successfully with other interests until recently. There seem to have been fewer specific interest conflicts on the larger territory available and it was less problematic to balance environmental, economic and social objectives. In this vein, the marine ecosystems are in good state and the fish stocks are healthy [Ministry of Environment 2006]. The situation changed with the petroleum industry planning to extend activities threatening other interests: the Lofoten issue formed a first serious conflict between different user interests and between user interests and the environment, endangering their successful coexistence. A reasonable compromise for all interests could be identified.

In the future, as the degree of conflict between the petroleum industry and environmental, social and other economic interests increases, the importance and potential benefits of engaging in stakeholder participation might be realized for Norwegian planning processes as well.

In the Barents Sea—Lofoten area process, a factor benefiting the integration of stakeholder perspectives even without active participation, is the strong tradition of various organisations to participate and voice their opinion. With stakeholder perceptions being generally known, it is possible to integrate those partly without active participation of stakeholders themselves [Thorvik 2012]. In addition, considerable fishers' knowledge is already represented by authorities. Thus, it is brought into the process via a high degree of knowledge in the authorities, based on the central role of the fishing sector in the Norwegian society. In the Netherlands, the fishing sector is rather marginalized and there is a lack of knowledge on fishing issues among authorities [Seip 2011].

5.4 Concluding remarks

In sum, the two processes differ fundamentally. The Norwegian process was more hierarchical and based on science, and the Dutch process more bottom-up with stakeholders having played an important role.

In the Voordelta the success of the outcome was higher, both in terms of mutual benefits and in terms of ownership. Still, in both cases trade-offs were identified that were in some, if also limited, degree beneficial to the different interests concerned. The degree of ownership in the Voordelta process was clearly larger than in the Barents Sea—Lofoten area process.

Conditions were analysed to explain the degree of success of the outcome. In sum, the following factors affected the identification of trade-offs such as to produce an outcome with mutual benefits: possession of sufficient resources as well as absence of too large resource difference in the absence of facilitation, representativeness, transparency, strict deadline with enough scope for collaboration and discussion, trust, face-to-face dialogue, two-way communication, and the integration of scientific and laymen knowledge. Regarding the production of ownership, the following conditions mattered: possession of sufficient resources as well as absence of too large resource difference in the absence of facilitation, transparency, representativeness, trust, clear expectations, strict deadline with enough scope for collaboration and discussion, face-to-face dialogue, two-way communication, the absence of contested knowledge, exerting influence, and embeddedness in the formal decision-making system.

6.1 Introduction

The final chapter of this thesis summarizes the results obtained from the five sub-questions, leading to a discussion of the main research question. The theoretical framework is outlined, followed by a synthesis of the results for the two case studies. The degree of success of the outcome is discussed, as well as the compliance of the two case studies with the conditions, concluding in their relevance for the success of the outcome. In addition, there is an explanation of limitations to the research. Finally, recommendations are offered for the implementation of the stakeholder participation as contributing to more sustainable MSP as well as for future research to follow up.

6.2 Successful stakeholder participation to contribute to sustainable Marine Spatial Planning

The first step of the research was the design of a theoretical framework with conditions. Based on scientific literature, a distinction was made between:

- Starting condition (Possession of balanced power, resources and knowledge)
- Facilitative leadership (Presence of facilitation)
- Institutional design (Representativeness of the affected public; a transparent, trustworthy process with clear expectations and objectives, which emerge from discussion; a strict deadline is balanced with giving stakeholder enough scope for discussions and collaboration)
- Stakeholder process (face-to-face dialogue; knowledge and communication, influence and embeddedness)

The aim of formulating lessons for stakeholder participation to contribute to sustainable marine spatial planning was approached by assessing the degree of success of the outcome. The definition of success is directed towards the goal of more sustainable development and is twofold: on the one hand, it refers here to an enhancement of sustainable development by means of being of mutual benefit for the stakeholder, such as to identify trade-offs and facilitate the balancing of economic, environmental and social objectives; on the other hand, success concerns the degree of ownership among stakeholders, that is essential to an effective implementation as well as to a higher environmental awareness necessary for societal change towards more sustainability.

Applying the conditions to the two case studies and discussing their link with the degree of success of the outcome would facilitate the provision of lessons for a stakeholder participation approach that could enhance sustainable marine spatial planning. The aim was to answer the following research question:

Under which conditions can stakeholder participation contribute to more sustainable marine spatial planning?

The question was approached by analysing two case studies in Europe: the planning of integrated management plans in the Voordelta (The Netherlands) and in the Barents Sea—Lofoten area (Norway). While both countries already have considerable experience with marine spatial planning, the analysed processes form novel approaches.

Linking conditions and the success of the outcome

In the Voordelta, there is a rather high degree of stakeholder participation. Major efforts were made to realize active participation. Innovative practices include the identification of customized trade-offs in cooperation with stakeholders, educative activities, and officials accompanying fishermen on their fishing trips. The success of the outcome is quite high: while there is no mutual benefit for all stakeholders, various trade-offs were identified in cooperation with interests groups and there was a, if partly limited, degree of ownership.

The process towards the Barents Sea—Lofoten area management plan is rather technical, and was dominated by experts and officials, and organised top-down with a limited role for stakeholders. The degree of success of the outcome was limited. There was some degree of mutual benefit in form of a compromise that was identified but there was no feeling of ownership. While there were some present, generally fishing and environmental interests identify shortcomings in their benefits. The environmental organisations perceive to have been benefited, while the fishing organisations identified losses, e.g. regarding the seismic surveys. A clear distinction is necessary between the first three phases of the process in which the common factual basis was designed and some stakeholder participation took place, and the fourth, that was of a more bureaucratic/political character and did not include any kind of stakeholder participation. Thus, the latter was seriously limited regarding aspects such as representativeness, transparency, trust and influence of stakeholders.

All of the conditions have the potential to contribute to sustainable marine spatial planning by some means or other: all can be linked to the success of the outcome, to either or both of the provision of mutual benefits, and the building of ownership among stakeholders.

The two processes were highly influenced by a strong economic actor, they both had a specific interest in the management plans to be designed: the port authority of Rotterdam in the Voordelta and the petroleum industry in the Barents Sea—Lofoten area. The port authority affected the process both positively and negatively by supporting it financially, while exerting a high pressure in the end. The petroleum industry has enormous resources, and formed a strong economic actor manipulating the process. Both led to a lower compliance with conditions such as trust, transparency, and influence by other stakeholders. In the end, the construction of the Maasvlakte 2 could begin in time. The petroleum industry in Norway was not allowed in the Lofoten area, but was assigned areas in the Barents Sea as well as limited permission for exploration by seismic surveys. In this context, both of the strong economic actors benefited by safeguarding their interests, while other interests perceived to have been partly neglected, i.e. fishing sector in both cases and a number of local communities in the Barents Sea—Lofoten area. The two strong economic powers had some kind of negative effect on the success of the outcome. In both cases, their influence led to a bias of the participation processes resulting in a lower degree of compliance with conditions like trust, transparency and influence by other stakeholders, and in a lower degree of success regarding mutual benefit and the feeling of ownership.

In the Dutch case, all affected were able to participate, while in the Norwegian case there were not enough resources present to facilitate meaningful participation. Insufficient resources of some stakeholders led to less participation in the Barents Sea—Lofoten area process, hindering the input of all affected into the identification of trade-offs as essential for an outcome with mutual benefits.

In the Voordelta, there was a significant degree of facilitation. In case of conflict between interest groups, additional efforts were invested to solve these and there was a neutral facilitator engaged to mediate between stakeholders which contributed significantly to the identification of trade-offs and also to shared responsibility among stakeholders. In the Barents Sea—Lofoten area process, there was no noteworthy facilitation, which might have been beneficial to prevent issues such as

manipulation by stronger actors and decreased levels of support and ownership by stakeholders. Thus, there is evidence that facilitation can enhance the outcome regarding its benefits and ownership.

In both cases there were some shortcomings regarding the representativeness of the process to all affected. In the Voordelta, there was open participation and all affected interests were rather well-represented; still, representation at the start was suboptimal. In the Barents Sea—Lofoten area, representativeness was limited, as participation was restricted to some meetings and written comments. As exemplified by the absence of the cockle fishers in the Voordelta and the coastal fishers in the Barents Sea—Lofoten area from processes in which decisions were designed that affected them, unrepresentativeness can contribute to outcomes that are not to the benefit of all affected and are not supported by all stakeholders. Thus, the representation of actors who are affected by the outcome is a vital prerequisite for the development of ownership, and can enhance the degree of benefit.

Transparency can affect conditions such as the degree of trust and influence, and thereby affect the building of ownership. Furthermore, in a non-transparent process it is more difficult to identify beneficial trade-offs. For instance, if the fishers would not have been open regarding the importance of the fishing grounds and periods, the trade-off of summer-winter regimes could probably not have been established in the Voordelta. In the Barents Sea—Lofoten area process, the environmental organisations in the Norway stated that there is restricted access to the information regarding petroleum activities, since much of it is produced and owned by the industry itself. In such a scientifically based process, this contributed to a stronger influence by the petroleum industry and endangered the benefits of other interest groups.

Trust is crucial to facilitating shared responsibility among stakeholders and to build ownership. In both processes, trust by the fishing sector was partly limited, contributing to a low degree of support of the outcome. Furthermore, the levels of trust might affect the identification of trade-offs by means of influencing the willingness to compromise.

Clear expectations are contributing to the success of the outcome. In their absence, disillusion might develop among the stakeholders due to the process and/or the outcome falling short of their expectations. Disillusion can translate in lower levels of trust, which affects the degree of ownership. Furthermore, only with clear expectations can the stakeholders accurately estimate the possible outcomes and know which benefits might be realized for them, which benefits the identification of practical trade-offs between the difference interests. There were unclear expectations in both processes, which translated into disillusion of different actors, e.g. environmental organisations in the Barents Sea—Lofoten area process. In case of the Voordelta, there was a misrepresentation of possible outcomes for the fishing sector, which affected the trust of stakeholders and the degree of ownership and their perception of benefits.

Clear objectives are crucial for facilitating clear expectations and prevent disillusion. In both processes the general objectives were rather clear to the stakeholders. Still, in the Voordelta there were uncertainties regarding the effect they would have on the interests and on the scope that was left for trade-offs. Thus, the fishing sector had no clear understanding of the degree of restriction on fishing activities. In addition, the degree to which the general objectives could be discussed by stakeholders is related to the degree of ownership. In both processes, the general objectives were clear from the outset without the stakeholders being able to discuss them, which might have had a negative effect on the support for the process and outcome.

The Voordelta process showed that if a deadline is too strict, it can increase the pressure to such a degree that it restricts collaboration and discussions and negatively affects the success of the outcome, especially regarding the building of ownership among stakeholders.

Face-to-face dialogue influenced the degree of success of the outcome in both cases. In the Voordelta process, there was a high degree of face-to-face dialogue benefiting the outcome, while in the Barents Sea—Lofoten area process there was only little, having a negative effect. Present face-to-face dialogue can increase the levels of trust in the authorities, and it is essential to a feeling of shared responsibility among stakeholders. Furthermore, by giving the stakeholders possibilities to discuss directly, the identification of trade-offs is promoted. In this vein, in the Voordelta, there were some compromises reached in direct cooperation with the stakeholders, which increased their benefits and their support for the outcome. In the Barents Sea—Lofoten area, there was little face-to-face dialogue, which might have contributed to the lower degree of ownership.

Knowledge is crucial for facilitating a successful outcome. To begin with, sufficient and unchallenged knowledge needs to be present to facilitate well-informed decisions. In the absence of thorough knowledge, the finding of trade-offs that are supported by the stakeholders is hampered. In the two case studies, there were issues of controversial knowledge which translated into conflicts and limited feeling of ownership of the affected. Furthermore, the integration of laymen knowledge was limited. If sufficiently present, it can provide the opportunity to find alternative trade-offs like possible in the Voordelta. If stakeholders are asked to contribute to the knowledge base, it is crucial to use their produced contributions to prevent declining levels of trust and support. Thus, in the Barents Sea—Lofoten area, the NCFU drew maps of fishing grounds that were in the end not used in the process. This led to disillusion and decreased levels of support for the plan and its implementation. In addition, in order to understand other necessary viewpoints for identifying trade-offs and develop a feeling of shared responsibility, the existence of a 'common language' is crucial. In the Voordelta there were shortcomings in the communication between officials and fishers due to the different 'languages' used, which resulted in disillusion.

Two-way communication affected the degree of existing ownership in both cases. In the Voordelta, there was a high degree by means of authorities replying to the comments of the participants which might have translated in a higher degree of support for the measures. In the Barents Sea—Lofoten area, stakeholders were not sure of their influence, as there was no communication of how their input would be considered. The stakeholders perceiving their input to be valued and seriously considered can enhance their support for the outcome.

Sufficient influence and embeddedness in the formal decision-making system is crucial to a successful outcome. The influence that is exerted by stakeholders has a profound effect on ownership and mutual benefits. In this vein, having an influence matters by facilitating the realization of an outcome that all stakeholders support. In the Voordelta, the limited influence of the fishing sector affected the degree of ownership negatively. In the Barents Sea—Lofoten area, the influence of stakeholders on the process and outcome was limited contributing to a low degree of ownership. Furthermore, the embeddedness in the formal decision-making system matters for the success of the outcome. The motivation of stakeholders to participate depends partly on the outcome of the process having indeed an influence on the formal decision-making sphere. Furthermore, if the process and the formal system are not well-connected, final decisions might be removed from the outcome of the process, which would limit the feeling of ownership.

Finally, an additional condition that seems decisive for the success of the stakeholder participation process, is the consistency of the approach. In the Voordelta process, the responsibility was split between two ministries, which increased the complexity of the process and the confusion among stakeholders. Furthermore, there were several parts of one ministry with different interests involved,

adding to degree of complexity. In addition, the degree to which the process complied with the success conditions decreased in the end, which led to disillusion. Having a continuous degree of involvement seems essential.

6.3 Limitations of research

Limitations to the research include that due to the Voordelta management plan being finished already in 2008, and the Barents Sea—Lofoten area management even in 2006, in both cases it was partly difficult to identify stakeholders who participated in the process. In addition, the research was limited to the understanding of some of the participating stakeholders, officials and scientists, and also to literature. The existence of other opinions and perceptions deviating from those included in this research cannot be excluded. The condition of deadline was only analysed for the Voordelta case. Furthermore, there were several limitations for the Norwegian case study. First, there were fewer insights due to poor knowledge of the Norwegian language. While in the Netherlands interviews were conducted in Dutch, benefiting the stakeholders who could talk in their own language, carrying out the interviews in a foreign language might have limited the informative value communicated by the Norwegian interviewees. Second, due to uncertainty concerning the English language and due to a lack of time, some stakeholders were only willing to answer the questions in written form. Fewer face-to-face interviews were possible for the Norwegian case study, because of the geographical distance. A visit to Oslo facilitated some, but most were carried out by phone or in written form.

The external validity of this research is partly limited. Thus, the choice of cases is not done randomly but in a strategic way. They were chosen, because the respective countries have already considerable experience with marine spatial planning, which facilitates learning from their best practice. In addition, the research is limited to two case studies and bound to a certain issue (stakeholder participation in marine spatial planning regarding interests of fishing and nature protection): the outcome of this research goes more into depth than into breadth. It provides profound insights into the potential of stakeholder participation to contribute to more sustainable MSP. The theoretical part might contribute to the broadening of knowledge, while lessons learned in the two case studies might be applicable to other areas in the world. Due to both cases being situated in wealthy, rather homogenous countries with well-founded research institutes that have the capacity to carry out extensive research, the degree to which the results are valid for other processes is limited.

6.4 Recommendations

6.4.1 Lessons for stakeholder participation contributing to sustainable marine spatial planning

Based on the analysis of two novel processes of marine spatial planning, several specific recommendations can be provided for stakeholder participation processes that enhance sustainable marine spatial planning.

The recommendations are based on two strikingly different approaches to stakeholder participation in marine spatial planning. In the process towards the management plan Voordelta, many efforts were taken to embrace full participation, but in the end various stakeholders were still dissatisfied with the results. Important lessons can be drawn for improvement, based on this impressive first attempt of stakeholder participation as part of marine spatial planning.

In the process of the Barents Sea—Lofoten area, there was only a small degree of stakeholder participation. With the petroleum industry activities moving north, interest conflicts will increase in the future. The necessity to involve stakeholders in marine spatial planning processes might increase

as it can contribute to enhance sustainable development, and to find trade-offs which are benefiting the Norwegian society in the long-term, and not only specific economic sectors.

1. There are two issues regarding resources. On the one hand, stakeholders need to have sufficient resources to participate meaningfully. On the other hand, if there are imbalanced resources, the process should be protected from the biasing influence of single actors to prevent a situation in which the economically strong actors benefit the most. Measures to make a one-level playing field possible include facilitation, e.g. presence of a neutral facilitator, and the strengthening of more disadvantaged groups. Authorities should make arrangements for the limited resources of stakeholders. For instance, if stakeholders indicate problems with dealing with the large amount of available information, resources should be invested to simplify issues and to present the topics in a more accessible manner. If conflicts arise, additional efforts should be invested to identify a solution which meets the approval of the stakeholders.

2. Stakeholders who are affected by the outcome should be directly or indirectly represented in the process leading to it. Authorities should pay careful attention to their representation. Clear communication is necessary to guarantee that stakeholders understand the importance of the process and the effects it might have on them. They should be represented throughout the process, and right from the beginning on—at least with the first value judgment. If possible, the presence of a central, leading organisation for specific interests might contribute to the efficiency of the process.

3. There needs to be a high degree of transparency regarding the handling of information and regarding procedures. All present information needs to be accessible to all stakeholders. If necessary, there should be adequate explanations of the procedures. The transparency of the decision-making process is also essential; stakeholders should be able to comprehend the decisions.

4. There needs to be a high degree of trust. The degree of trust of the stakeholders will decrease if they perceive that their concerns were neglected. Essential issues for its development include even representation, transparency, clear expectations and objectives, face-to-face dialogue, clear communication and having a comparable influence.

5. Expectations and objectives must be clear. Process leaders should be extremely careful in their communication with stakeholders to not raise wrong expectations. In this context, it might be useful to design a common vision for an area before the start of the process. In case of the Voordelta this could have been 'Let's balance Natura 2000 and the Maasvlakte 2 project with local user activities: conservation, compensation and cultivation'. Furthermore, it is beneficial to discuss the general objectives with the stakeholders in order to obtain their support.

6. The deadline should not be too strict, but leave enough scope for discussion and collaboration. Issues should be settled satisfactorily for the affected actors. If the deadline is too strict for the stakeholder participation process to be finalized adequately it would be better to extend it.

7. There should be a high degree of face-to-face dialogue among authorities and stakeholders. It is crucial that there are sufficient meetings between all stakeholders, not only between authorities and specific interest groups.

8. Especially for complex issues such as the governance of marine habitats the presence and integration of scientific and laymen knowledge is essential: there must be a solid scientific knowledge base, which is complemented by laymen knowledge. If possible, it can be beneficial to produce unchallengeable knowledge in cooperation with stakeholders. In addition, a common language among stakeholders and authorities matters to prevent misunderstandings.

9. There should be a high degree of two-way communication. For instance, stakeholders should know how their contributions are integrated.

10. Sufficient influence and embeddedness in the formal decision-making system is critical. Stakeholders should be able to influence the aspects that could affect them, to understand the reasons for not taking their contributions into consideration. The embeddedness can motivate stakeholders to participate by being able to exert an influence through the process. There should be a clear link with the decision-maker: if possible, there should be a direct contact with the stakeholders. In addition, the outcome of the stakeholder participation process should be well-integrated in the formal decision-making procedure.

11. The consistency of the process is crucial. If there are several different authorities, or various sub-departments of one authority responsible for the process, they should strive towards an integrated, harmonized approach: it can be beneficial to have a central coordination point. Furthermore, stakeholder participation itself should be applied in a continuous manner, avoiding a situation in which there is a high degree of involvement in the beginning and a lower degree in the end.

6.4.2 Future research to follow up

There is a trend towards more stakeholder participation approaches in order to solve environmental problems and strive towards more sustainable development. There are great needs for additional research.

The link between stakeholder participation and sustainable development needs to be analysed in depth in order to establish more certainty regarding in which situations which kind of participation can be beneficial. Also the conditions for realizing the potential benefits should be assessed in a consistent way for different contexts, e.g. marine areas. In addition, the best way to implement the recommendations put forward in this thesis requires additional attention.

The issue of knowledge should also be addressed further. There is uncertainty regarding issues such as which kinds of knowledge is needed, what is unchallengeable knowledge and how can it be established, how to deal with situations in which establishment of unchallengeable knowledge is not possible, and the issue of using laymen knowledge. Thus, aspects such as its missing documentation and subjectivity, contribute to underestimating its value and not exploiting its full potential.

The connection between stakeholder participation and the influence of media should also be explored further. In this context, another aspect that mattered in the representation in the Barents Sea—Lofoten area, is the public debate in the media especially regarding the conflict of petroleum activities in the Lofoten Islands area.

Another issue that deserves further discovery is the use of stakeholder participation as part of marine spatial planning. The two analysed cases illustrate two distinctively different manners to apply a participatory process. With those processes being resource and time intensive, the rule of 'the more participation the better' is not applicable. Instead, the challenge is to identify a customized strategy to specific cases. More research efforts are necessary to identify criteria for applying stakeholder participation approaches that match marine spatial planning well. Based on our assessment, especially conflicts, in which trade-offs between different objectives need to be identified, require the inclusion of stakeholders, e.g. their value judgments.

Furthermore, the integration of laymen knowledge is another issue requiring further research efforts. There is evidence that especially for unstudied, complex and dynamic issues like the

governance of marine habitats, the integration of knowledge of resource users is critical. Due to its anecdotal character and missing documentation, there is uncertainty regarding its validity.

The potentially biasing role of the authorities on the stakeholder participation process forms another interesting issue for further research. The influence of the own interests of the authorities on the process might form an obstacle to a successful process, for instance by paying more attention to stakeholders corresponding to the own interest.

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APPENDIX 1

Case study 1: management plan for the Voordelta

Type	Interviewee	Position	Involvement in case study	Kind of interview
Authority	Ton IJlstra	Ministry of Agriculture, Nature and Food Quality	Chairmen responsible for nature compensation for Maasvlakte 2	Face-to-face
	Mariska Harte	Rijkswaterstaat, North Sea	Official from the authority responsible for Natura 2000 objectives and the writing of management plan	Face-to-face
	Lodewijk Abspoel	Ministry of Infrastructure and the Environment	Not directly involved	Face-to-face
	Niels Bijlsma	Centrum Publiekparticipatie	Specialist stakeholder participation, indirectly involved	Face-to-face
Fishing organisations	Cora Seip	Fisheries Production Board	Stakeholder representing fishing interests	Face-to-face
	Jaap Holstein	Producer Organisation cockle Fisheries (Secretaris)	Stakeholder representing cockle fishery interests	Telephone
	Pim Visser	VisNed	Not directly involved	Face-to-face
Nature organisations	Monique van de Water	Stichting de Noordzee	Stakeholder, representative for nature protection of North Sea, only involved in covenant	Face-to-face
	Sytske van den Akker	Stichting de Noordzee	Stakeholder, representative for nature protection of North Sea	Face-to-face
	Quirin Smeele	Natuurmonumenten	Stakeholder, representative for nature protection	Telephone

Case study 2: integrated management plan for the Barents Sea—Lofoten area

Type	Interviewee	Organisation and position	Involvement in case study	Kind of interview
Authority	Geir Klaveness	Ministry of Environment	Official of authority leading the process	Face-to-face
	Inger Oline Røsvik	Ministry of Fisheries and Coastal Affairs	Official of authority participating in process	Face-to-face
	Anne Langaas	Directorate of Nature	Official of authority participating in process	In writing
	Thorbjorn Thorvik	Directorate of Fisheries	Official of authority participating in process	Telephone
Fishing organisations	Jan Sandberg	Norwegian Fishermen Organisation	Not directly involved	Face-to-face
	Elling Lorentsen	Norwegian Fishermen Organisation	Stakeholder representing fishing interests in process	Telephone
	Hilde Rødås Johnsen	Norwegian Coastal Fishermen's Union	Stakeholder representing coastal	In writing

			fishing interests	
Nature organisations	Mirjam Geitz	WWF	Not directly involved	Face-to-face
	Nina Jensen	WWF	Stakeholder, representative for nature protection in process	In writing
	Sigurd Enge	Bellona	Not directly involved	Face-to-face
	Christian Steel	Sabima	Stakeholder, representative for nature protection in process	Face-to-face
Research	Erik Olsen	Institute for Marine Research	Participated in process as expert supplying scientific knowledge	Telephone and writing
	Maaike Knol	University Tromsø (Researcher)	Expert for Barents Sea—Lofoten area management plan, not directly involved	Telephone and writing