Combating climate change

A case study of Statoil’s climate strategy

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Abstract

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Problem: The world is facing an environmental situation where we no longer can ignore problems like climate change, losses of species and an overall environmental degradation. Many actors have to take their responsibility and do as much as they can for a sustainable development. One crucial actor is the business world. Often, they both have the knowledge and financial power to make a difference. Higher environmental regulations and pressure from stakeholders, such as the Swedish government or the EU, forces companies to consider the environment while doing business. This requires a strategy.

Purpose: The purpose with the essay is to identify and study Statoil’s climate strategy. We also want to identify the most important internal and external factors that are affecting the strategy.

Method: The thesis is based on a qualitative method made up by two parts, interviews and literature studies. We made one informant interview and two respondent interviews with two environmental executives from Statoil AB.

Results: Statoil has a mainly pro-active strategy and are very ambiguous in the climate question, although their strategy is highly affected by the surrounding. Developing new technologies, cooperation and profiling are the main parts of their strategy. They are affected by the dominating discourse ecological modernization, as well as by the organizational field. They are in turn affecting the field by their offensive strategy. The customers and the legal framework are the most important external factors of impact. Whereas the corporate group StatoilHydro and financial resources are the most important internal factors.

Keywords: Climate strategy, environmental strategy, responsible company, greening, ecological modernization
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Camilla Eklöf  Josefin Jönsson
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1 Introduction

Energy constantly flows through the ecosystems, contributing to nature’s crucial processes. Energy is also the factor that has made it possible to create the human society and lifestyle that exist today. We are dependent on energy in most every process, production, heating, cooling, light and transportation.\(^1\) Wasteful use of energy in industrialized countries has led to increased levels of greenhouse gases (GHG) in the atmosphere. That has in turn led to changes in climate. The main reason for this is the use of fossil fuels. Since 1970, GHG emissions have increased by 70 % and the fossil fuels alone stands for 56.6 %, mainly used for heating and transportation.\(^2\)

The impact created by humans has long been debated. Recently, however, the International panel of climate change (IPCC) published their report where several internationally known scientists argued that climate change is caused by human activities. Many changes in the physical and biological systems have been noticed around the world, which probably are caused by the global warming, and international actions are required.\(^3\) One of the most important international commitments so far is the United Nations convention on climate change, to which the Kyoto protocol is connected.\(^4\) The Kyoto protocol was ratified in 1997\(^5\). This is the first binding convention that states that the industrialized countries are responsible for the decrease of GHG. Until 2012 the emissions shall be reduced by 5.2 % and during autumn 2009 a new agreement is going to be discussed.\(^6\)

As an international report the IPCC report has become important. Also national reports have gained attention. One of the most recently published reports is the STERN report that was brought forward by the financial department of United Kingdom. In this report, the financial costs of acting and not acting against climate change are explored. According to the report the cost of taking action now would be about 1 % of the global GDP, while not doing so would create yearly losses in GDP by 5-20 %, depending on which risks are being included in the calculation. The authors also states that climate change is the biggest market failure the world has ever seen\(^7\) which implies that perhaps also the financial market has realized something needs to be done. But who is the one to make sure that something does happen?

Even though climate change has been discussed politically for a long time, it has not gained public attention until recently. This may depend on several factors like reports published by IPCC and STERN that has put even more pressure on governments to act, but also the increased attention in media and public awareness.\(^8\) One important issue that attracted peoples and the media’s attention was a movie made by the former vice president of the United States, Al Gore. In 2005 he released the movie “An inconvenient truth” which was seen across cinemas around the world. The movie stated that the climate crisis was not only a political issue but also a moral challenge for the population of the Earth.\(^9\) The public awareness of climate change has become a trend and because of its global character it is affecting everybody, including companies. It therefore becomes interesting to see how companies handle this issue and which role they take in combating climate change.

\(^1\) [http://www.energikunskap.se/web/otherapp/ekunskap.nsf/080502](http://www.energikunskap.se/web/otherapp/ekunskap.nsf/080502)
\(^2\) [http://www.energikunskap.se/web/otherapp/ekunskap.nsf/080502](http://www.energikunskap.se/web/otherapp/ekunskap.nsf/080502)
\(^4\) [http://www.regeringen.se/sb/d/8820](http://www.regeringen.se/sb/d/8820)
\(^5\) [http://europa.eu/scadplus/glossary/kyoto_protocol_sv.htm](http://europa.eu/scadplus/glossary/kyoto_protocol_sv.htm)
\(^6\) [http://www.regeringen.se/sb/d/8820](http://www.regeringen.se/sb/d/8820)
\(^7\) [http://www.hm-treasury.gov.uk/media/9/9/CLOSED_SHORT_executive_summary.pdf](http://www.hm-treasury.gov.uk/media/9/9/CLOSED_SHORT_executive_summary.pdf)
\(^9\) [http://www.climatecrisis.net/aboutthefilm/](http://www.climatecrisis.net/aboutthefilm/)
Since fossil fuel play a significant part of the problem, both for the human society and for climate change, we have chosen to study how Statoil strategically are managing climate change.

1.1 Problem area
The world is facing an environmental situation where we no longer can ignore environmental problems such as climate change, degradation of biodiversity and an overall environmental degradation. Many actors have to take their responsibility and do as much as they can for a sustainable development. One crucial actor is the business world. They often both have the knowledge and financial power to make a difference. Out of the 100 richest institutions in the world, about 50 of them are corporations, and in fact we have faced a shift were multinational corporations have bigger powers to affect the development in countries then their own governments. Corporations clearly play a crucial role in the development and lately have been a higher pressure to act with regards to the environment has progressed.\(^\text{10}\) Almost all companies are exceeding the ecological limits of our ecosystems as a result of their activities, which sometimes lead to punishments or attention in media. This has been shown in the oil branch were NGO: s demonstrates at oil plants or by the companies’ offices in order to affect their agenda\(^\text{11}\).

Higher environmental regulations and pressure from stakeholders like the Swedish government or the EU, forces companies to do business with regards to the environment. That requires a strategy.\(^\text{12}\) For a successful environmental strategy a radical change is needed. Welford advocates that the business world is standing on the edge, he further writes that “its instincts tell it to stand fast and resist the risky path ahead” but it also knows that there is no turning back now. Instead, the corporations want to make sure that they are the ones that dictate the path and their definition of environment and the problems are applied.\(^\text{13}\) The strategy needs to be applied in a wide spectrum and areas as ethics, objectives, corporate culture and communication needs to be considered. A new approach to development and growth is needed and the trade-off between economic growth and environmental concern is important to bring forward in order to create a powerful strategy.\(^\text{14}\) Swedish Statoil AB (from now on Statoil) is an important actor in the combat against climate change. The way they chose to handle the climate question via a strategy will obviously affect not only their organization but hopefully the climate.

1.2 Purpose
The purpose with the essay is to identify and study Statoil’s climate strategy. We also want to identify the most important internal and external factors that are affecting the strategy.

1.3 Question formulation
- How has the dominating discourse, ecological modernization, affected the organizational field and Statoil?

\(^\text{10}\) Welford, R. (1997) p. 5-13  
\(^\text{11}\) http://www.greenpeace.org/sweden/press/pressmeddelanden/greenpeace-haenger-banderoll-pan 080520  
\(^\text{12}\) Ketola, T. in Welford ed. (1997) p. 100  
\(^\text{13}\) Welford, R. (1997) p. 5  
\(^\text{14}\) Ibid. p.179-180
• How are the actors within the organizational field affecting Statoil?
• What factors have affected the formation of the strategy?
• How has Statoil affected the organizational field through its work against climate change?
• What type of strategy has Statoil developed in order to manage the challenges of climate change?

1.4 Scope and delimitation
We are only going to study Energy and Retail (E&R) within Statoil. We are delimiting us from the other departments within Statoil. StatoilHydro is going to be taken into account since they are an important affecting factor. The climate strategy that we have identified is based on information from both StatoilHydro and Statoil, but the factors affecting the strategy is dominantly based on interviews performed with employees within Statoil. We are also only going to study Statoil’s strategy, that is, what they plan to do and what they say they have done. We are not going to look at the result or whether or not they are living up to their strategy. We do not have deeper technical knowledge and therefore the technical aspects of StatoilHydro’s work will not be discussed or evaluated in this thesis.

1.5 Target group
The target group for this thesis is mainly the students and teachers within the field of ecological economics on Mälardalen University. Further the involved actors within Statoil are an important target group since it is their climate strategy that is studied.

1.6 Definitions
StatoilHydro
StatoilHydro is the concern name of an oil and gas company. It is a Norwegian corporate which is one of the biggest petroleum suppliers in Sweden.

Svenska Statoil
Svenska Statoil AB (Statoil) is the Swedish subsidiary company of StatoilHydro. From now on the company will be called Statoil in the thesis.

Climate change
Climate change or global warming in the thesis is the actual heating of the earth which leads to changes in the climate.

Strategy
A strategy is about handling the development of a company in response to its dynamic environment. We define climate strategy as the way a company handle the development in response to the climate debate and the climate change.

Organizational field
An organizational field consists of the actors surrounding Statoil that are affecting or affected by them.

15 http://www.spi.se/fsg.asp?cboFromYr=2008&cboToYr=2008&cboCompany=<Alla>&cboCategory=<Alla>&gt;080511
16 Annual report Swedish Statoil 2006
17 Roome, N. (1992)
According to the Swedish government’s definition a green car is not allowed to emit emissions above a certain level. See regulation 2007:380 for further details.\textsuperscript{19}

Carbon capture and storage (CCS) carbon dioxide is removed and it is then stored in the bedrock.

Within different discourses concepts are interpreted differently. There are also different rules and norms for what is said to be reasonable and right. When one discourse becomes dominate it sets the rules and norms and actions corresponding to the ideas of the dominating discourse receive a bigger breakthrough.\textsuperscript{20}

\subsection*{1.7 Disposition}
In the first chapter we start with a discussion about energy and its role in the society followed by the problem area were the role of companies and strategies is discussed. This is followed by the study’s purpose, research questions and delimitation. The chapter ends with a presentation of the commonly used terms in the thesis and disposition.

In the second chapter we present the methodology of both the theoretical and empirical study and we describe our main sources. Further we have tried to integrate a critical discussion about literature and the methodology through the whole chapter.

In the third chapter our pre-knowledge and scientific approach is described to make the reader aware of our scientific background. This will hopefully make it easier for the reader to follow our analytical discussion, conclusions and understand our interpretations.

In the fourth chapter our analytical framework is presented. This consists of ecological modernization which we believe has had a huge impact on how Statoil and the surrounding organizations handle the climate issue. Furthermore we are presenting theories about the interrelations between the organizations within the organizational field. Finally we describe theories that will enable us to describe Statoil’s climate strategy.

In the fifth chapter the thesis first empirical part is presented, this consists of a presentation of Statoil and the organisational field surrounding them that we have tried to identify. The actors presented are believed to have a big impact on Statoil’s strategy.

In the sixth chapter we are presenting the result of our empirical study and this is Statoil’s climate strategy. The strategy is divided into thematic technology, cooperation and profile.

In the seventh chapter we are analysing our empirical study with the theory and analytical framework as a base.

\textsuperscript{19} \url{http://www.regeringen.se/sb/d/8961#item79656} 080519
\textsuperscript{20} Dovlén, S. in Asplund & Hilding-Rydevik, 2001 p. 101-110
In the *eighth chapter* we are accounting for our conclusions of the study. Moreover are we going to account for our own reflections and discuss possible further research areas connected to our study.
2 Realisation

In this chapter we will explain how we realised our research and why we performed it the way we did. A critical review of our sources and method is discussed throughout the whole chapter. We are also describing what possible sources of error that might have occurred and what we have done to avoid a negative impact on the result. Since we are trying to understand why Statoil are working with the climate question we used a qualitative research method. Our research consists of interviews, literature studies and analysis of the information.

2.1 Choice of subject

It is argued that there is not enough social science research done on environmental issues and since we study an interdisciplinary program we wanted to contribute to the field. We choose the oil industry because it is a big part of the problem while talking about climate change. They supply products that are contributing considerably to global warming when used. There is also not much written about the oil industry’s environmental strategies which we found out when we searched in papers like “Business strategies for environment” and in “Corporate social responsibility and environmental management”. A lot of the research within the area is instead focused on the energy consumers or energy production. Therefore we thought it was interesting to see how an oil company like Statoil strategically manage the climate change. The reason why we chose Statoil as study object was out of convenience. We had contacts within the company and they are one of the biggest suppliers of fuels in Sweden, which also made it interesting to study them. We thought it would be appealing to have a climate perspective since the question has received a lot of attention lately and made the public, as well as organisations aware of the problem.

2.2 Method

Our aim with the study was to try to understand why and how Statoil are working with the climate question. Because of the aim we chose to use qualitative research method since it is suitable when having an understanding aim. It is also suitable since we did not try to reach a generally applicable theory. Instead, we tried to acquire a deeper knowledge about the question. Qualitative method emphasises on soft facts and opinions rather than statistics. Therefore it was important that we both, as researchers, and the readers are aware of our pre-knowledge and scientific perspective, described in the following chapter.

A lot of the sources used in the study were from Statoil and StatoilHydro, respondents as well as documents. This made it very important for us to try to be as objective as possible and to review our material critically. This enhanced the reliability of the research. We also had to be aware of our own role as researchers since we affected the respondents and interpreted the information. To get valid information, we tried to minimize our own impact on the material. In order of guidance we have used Colin Fisher’s book “Researching and writing a dissertation – for business students”. This book describes the method and problems, step by step.

21 Mistra, Samhällsvetenskaplig miljöforskning
22 http://www.spi.se/fsg.asp?cboFromYr=2008&cboToYr=2008&cboCompany=&lt;Alla&gt;&lt;Alla&gt; 080609
24 Ibid.
25 Ibid. p. 92-95
step, when writing a thesis on academic level. Idar Holme and Berndt Solvang’s book “Forskningsmetodik – Om kvalitativa och kvantitativa metoder” was used in the specific situations of our study, for example, how interviews could be done and which type of methodology that was suitable for our type of study. The realisation of the study is divided into three parts: literature studies, interviews and analysis.

2.3 Literature studies
The main part of our thesis is based on literature studies. We have studied literature about companies and possible strategies and studied relevant homepages. Therefore, it is important to show what sources we have studied to enable the reader to see if we have missed something. Also, to account for the words we used in the library and when searching for articles. We used the Mälardalen University’s database for books in order to search for suitable sources. Our search words were environmental strategies, business strategies, corporate responsibility, greening, Statoil, StatoilHydro, climate change, climate strategy and oil branch. It was easy to find books about business strategies but some of them were old and not suitable for our goal of the study. We also used the university’s database ELIN, which is a database for scientific articles. It was harder to find relevant articles, which could be caused by us as researchers or the fact, that there have not been so much written about the subject. This is unfortunate since scientific articles often are up to date. We evaluated the literature before we decided to use it by looking at its relevance, publish year, reliability. A critical review of the most important literature follows in coming subchapters, were we account for why they were used.

To take part of already done research in our study field would give us an insight in the problems and opportunities with environmental strategies. However, we had a hard time to find this. A lot of articles were found about oil companies and their activities, about implementation of business strategies and environmental tools but we hardly found anything about environmental strategies or about oil company’s environmental strategies.

2.3.1 Theory
One of the main sources of the new institutional theory was DiMaggio and Powells book “The New Institutionalism in Organizational Analysis”. This book was chosen because of the authors focus on the organisational field that surrounds actors, but also since they have had a big impact on the field of new institutional theory. “Det miljöanpassade företaget – stretegiska uppträdanden på den institutionella scenen” written by Birgitta Schwartz was used in order to describe the factors of impact on the organizational field. Further the book “Nyinstitutionalismen inom organisationsanalyser” by Roine Johansson has been used. This book has contributed us with information about the historical background of the theory but also thoughts about actor’s behaviour, what it is that affects them in the field and the importance of legitimacy. We feel the sources we have chosen are reliable and the fact that we have used several sources increases the reliability. Still, it needs to be considered that the information presented in the theory chapter is based on our interpretation.

The theories about environmental business strategies are based on two books and one article. In the article “Developing environmental management strategies”, written by Nigel Roome, a model is presented where companies can be positioned in different sectors depending on the

public and scientific pressure. We decided to use this model in our study since it suited our topic and purpose, where the climate debate has formed a public pressure and were the scientific research has increased during the past years. As a result of the positioning, the company develops strategies to handle the pressure. These strategies can be categorized into different types of strategies, which Harry Nyström and Sten Liljedahl have done. They have written a subchapter, in the book “Miljömanagement – guld och gröna skogar” edited by Peter Dobers. To gain a more practical dimension of the theory, we used five strategies that can be used by companies that are described in “Miljömanagement” by Jonas Ammerberg.

When studying business strategies, the most common way is through studying the company’s actions. When doing such an analysis, it is important to be aware of the motivation and vision in the company, as well as the individuals affecting the strategy. It is also important to know which resources that are available and in which time and place the strategy is carried out. All these factors affect the strategy and the result of the strategy. Companies are, in contradiction to the neo-classic view, not “meaningless” organizations. There is a vision and a motivation within the organization.27

In order to make a good analysis, we derived an analytical framework from the theories mentioned. This was used interpreting our material. While deriving our analytical framework, we used Fishers three steps28:

1. Clarify the concept and the terms used to describe the subject researched.
2. Provide descriptions of relationships between the concepts.
3. Use the conceptual framework to develop theories that explain the patterns and connections found in the research material. When theorising we did not try to develop new theories, instead we tried to adapt and develop existing ones to suit our purpose.

2.3.2 Empirical material

The study object in this thesis is Statoil, therefore it is natural that many of the sources we have used are either published by them or information from their homepages. Important documents have been the Sustainability reports from both StatoilHydro and Statoil. These documents have given us a picture of the environmental work that is done by the company, and also their goals and ambitions. The web pages of both Statoil and the corporate group have also been commonly used in order to receive information of different matters such as their different projects and environmental policies. We are aware of that this gives us a one-sided picture, but we also wanted to study the image that they want to mediate and therefore the sources are suitable. It has then been up to us to interpret this image and their climate work in order to identify their strategy. We have furthermore received empirical facts from our interview respondents, which will be discussed in chapter 2.4.

We also identified organisations and authorities, which we believed was affecting Statoil strategy and how they affected it. This has mainly been done through studies of the actor’s homepages and through the interviews. This leads to the same problem of a one sided picture, but this cannot be avoided without a more comprehensive study. We have also tried to find more critical sources but not much has been written about our study object.

2.4 Interviews
When working with qualitative method, deep interviews with few persons are suitable. It allows the respondents to express their own opinions and to speak freely about the subject matter, which enables us to understand the big picture.\(^{29}\) Therefore we used semi-structured interviews which means that we used a pre-coded question formula but with open-ended questions. It enabled the respondent to speak freely and us to make follow-up questions while still being in control of the interview. It was also possible for us to directly use what we learned in the interview. We made an individual formula for each respondent and it was sent to the respondents before the interviews took place. This exploratory approach is suitable since we do not know what information we might get.\(^ {30}\) We developed themes and questions in relation to these. Our themes were how the climate work was organised within Statoil, about the strategy and about which factors that did have impacts in the strategic work.

On the other hand, this open approach means that we as researchers have to interpret the received information.\(^{31}\) In order to reduce the sources of errors we taped the interviews which then were transcribed the following day, word-for-word. This increases the reliability of the facts used later in the empirical section. It also made it easier for us to get a holistic picture and to understand the issue at stake, how and why Statoil work strategic with climate questions. During the interviews, one of us was the interviewer and the other one was making notes in case of the recorder would break. The one making notes was also asking relevant questions that came up during the interview.

2.4.1 Selection of respondents and interviews
In order to get information from inside the company, we wanted to do respondent interviews\(^ {32}\). Since we did not have the knowledge about which persons that was involved in the strategic process within Statoil, the interviewees were selected through snowball sampling.\(^ {33}\) We had a contact person within Statoil and she contacted the environmental chief, Helena Winberg who was our gatekeeper. She suggested that we should talk with her, Andreas Fogelberg and Helena Fornstedt, all of them working within Statoil. Unfortunately Helena Fornstedt did not have time. See table 1 for an overview of our interviews. Helena Winberg was the one that arranged the interviews. We felt that her suggestions of interviewees corresponded well to our needs. In order to get information about the issue from outside the organization we also chose to do an informant interview\(^{34}\) with an adviser on oil and gas at the Swedish Energy Agency.

\(^{29}\) Holme, I. & Solvang, B. (1997) p. 77-87
\(^{31}\) Holme, I. & Solvang, B. (1997) p. 77-87
\(^{32}\) Ibid. p. 101-105
<table>
<thead>
<tr>
<th>Date</th>
<th>Respondent</th>
<th>Profession</th>
<th>Type of interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>080424</td>
<td>Urban Bergström</td>
<td>Senior Adviser Oil and Gas, Energy Management Department, Swedish Energy Agency</td>
<td>Telephone interview 15 min</td>
</tr>
<tr>
<td>080505</td>
<td>Helena Winberg, Stockholm</td>
<td>Environmental chief</td>
<td>Personal interview 45 min</td>
</tr>
<tr>
<td>080505</td>
<td>Andreas Fogelberg, Stockholm</td>
<td>Chef health, safety and environment in the leading board</td>
<td>Personal interview 30 min</td>
</tr>
</tbody>
</table>

Table 1 – List of performed interviews
Source: Eklöf and Jönsson

The first interview was held with Urban Bergström, who works at the Swedish energy agency. The interview was done over the phone. Even though the interview was pretty short, it gave us an insight in how the structure of the branch looks like and what factors it is that could have impacts on the strategic work of oil companies generally, especially the authorities impacts.

The fifth of May we went to the head quarters of Statoil in Stockholm to perform our second and third interview, which was made individually with each respondent. These were with Andreas Fogelberg and Helena Winberg. Since Andreas Fogelberg has a position in the company board our questions to him was focused on how the climate question is handled on the higher levels within the company and about goals and visions. Helena Winberg, which is the operating chief of environment, had a better insight in the practical dimensions and therefore, the question to her was focused within these areas. Since our ambition also was to try to understand the factors which impacts the strategy questions about internal and external impact factors was essential for both of the respondents.

2.4.2 Evaluation of the interviews

We had to be careful since qualitative method is a very flexible method. The more we learned the better questions we could ask and that could lead to better answers. That can lead to a skew picture. In order to reduce the bias we stuck to our original question in all interviews with just minor improvements. Another challenge was to work closely with the respondents. A lot of our empiric material is based on their dictums and we had to both understand it from the inside and explain it from the outside. We think that the choice of respondents in combination with our literature studies enabled us to do that.

We also had to make sure that our respondent felt comfortable and could answer the questions honestly. That is one of four crucial factors for a good result. An agreement was also made between them and us that they would get the opportunity to read through the text about Statoil

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36 Ibid. p. 92-95
37 Ibid. p. 101-107
before the study was published. This was done because business strategies can be a very sensitive question for companies. We did not want them answer in a way which they thought was the right thing to say or create an answer that sounded good. Here it was very important for us to be aware of our role and the respondents’ role. Since Statoil is a profit driven organization, the respondents might want to show a positive picture. They might also tell us what they believe is good in our opinion as environmentalists. In order to get as true picture as possible we tried to understand why they acted as they did and see if it corresponded to the answer that they gave. It is important that the respondent cannot deduce a pattern in the questions since it might have an impact on their answers[38]. It is also important to balance encouragement and let the respondents speak freely[39]. We wanted to get as much information as possible without pushing the respondent to hard. The interviews gave us information that we could not gain in any other way and meant a lot for out empirical part.

[39] Ibid.
3 Pre-knowledge and scientific approach

How we gather and interpret facts in this study is influenced by our pre-knowledge and how we conduct to science. This is highly affected by our education and earlier experiences in doing research. To make it easy for the reader to follow our discussion it is important to state our approach to science. We are also going to describe how we look on the contemporary society since it create the framework for Statoil and therefore have a great influence on their strategy.

First we will discuss the influences from the society in general, that is the dominating discourse ecological modernization and the important concept of sustainable development. Secondly we are going to discuss our scientific approach, research from an ecological economic point of view.

3.1 Sustainable development and ecological modernization

During the seventies and eighties, a lot of change was brought about in the environmental area. The environmental law was enhanced in many countries in Europe and the concept of Sustainable development became well known. The main reason for the breakthrough of the concept is that the World Commission on Environment and development brought forward the Brundtland report “Our common future” in 1987. The report described a “political will” to handle the global problems in social, economical and environmental dimensions and where the current development was seen as unsustainable. The report described sustainable development as “A development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. This report meant the definite breakthrough of the new policy approach.

The report elucidated that the global economy generated problems, as climate change and poverty, and the economical activity threatened the earth’s capacity to meet future generations’ needs. The global society had become path dependent in the way to think and handle which had to be overcome to reach a more sustainable development. The concept gained importance and a lot of scientist was convinced that the way the humans overexploited the earth’s resources would lead to irreversible changes in the environment. The concept also showed that economic wealth and ecological sustainability does not have to be antithetical. It led to the emergence of a new belief system, ecological modernization, which we will describe below.

The term sustainable development has after the report become a keyword used in policymaking and has created several discourses within the field. Many scientists argues that the term has become so commonly used and translated within governments, companies and other organizations that it can be seen as an oxymoron, but were the goal still is unclear.

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41 Spargaaren, G. (2000)
Ecological modernization can be said to have reached its momentum during the eighties as there were many initiatives and strategies for an environmental reform then. One example is the increased consumer pressure that forced companies to take action and try to become more sustainable. Since ecological modernization, or the strive towards a sustainable development, can be said to be the dominating discourse it influences all actors in the society. We are therefore going to explain what factors that are characterizing the discourse and what effect it might have had on Statoil.

Ecological modernization is challenging the conventional idea of a zero-sum trade-off between economic prosperity and environmental concern, just like the concept of sustainable development. The heart of the modernization process, that enables ecologic sustainability and economic wealth, can be described by two expressions, ecologizing the economy and economizing the ecology. That is in short to make the nature measurable and to make external costs internal in order to make the two more compatible. In order to improve the environmental situation, caused by our industrialized society it is as important do develop new technology as to work with softer tools such as consumer behaviour changes. It shall be possible to produce and consume but with less environmental impact.

In order to enable this type of consumption and production the state has to work together with other actors. The state is no longer regarded capable to handle the environmental problems by itself. It requires support from companies and citizens. On the other hand, companies should be supported by the state and encouraged to lessen the environmental impact.

Some also says the ecological modernization period transitioned to the present period of Global modernity during the nineties. The environmental debate started to be mostly about “new” environmental issues like the global warming and people started to be aware of living in a risk society.

### 3.2 Ecological economics

The main subject throughout our education has been ecological economics and thus we regard us selves as ecological economists. Therefore it has influenced our way of understanding and interpreting. Ecological economics is an area of science that has developed parallel to the term sustainable development. The basic thought is that the environment sets the limits for the economic activity. Therefore we believe that environmental concern shall override economic concerns. At the same time we are aware of that in reality it is usually the opposite. The dominating economic paradigm in society, neo-classic economy, promotes profit maximization as the most important task for a company. This is criticized within ecological economy. Instead of only evaluating monetary aspects in the economic system more non-monetary aspects should be considered such as environment, ethics and justice in decision-making and in the steering of organisations. However, opposed to ecological modernization theory ecological economists do not believe external costs shall be internalized to be taken into consideration. They should rather be considered as they are since it is important to get a holistic picture. It is also important that the growth is based on an equal ground and not on

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48 Ibid.
49 Ibid.
50 Ibid.
52 Costanza, R. (1989) p. 3pp
53 Söderbaum (2000)
behalf of poorer countries or the environment.\textsuperscript{54} Since the economical aspects do play a crucial role in the political systems, it is important to keep a long time perspective in decision making. Not only the economical and political systems need to change, the way we live and consume as individuals is also a threat towards sustainable development.\textsuperscript{55}

\section*{3.3 Interpretational approach}
An important aspect of ecological economics is the idea of holism and pluralism. By that we mean the importance of viewing problems and solutions from many different angles and take many different scholarships into consideration. It is particularly important in complex situations like environmental issues.\textsuperscript{56} In order to get a holistic picture, we have tried to use different sources to achieve an as many-sided picture as possible. It is important to keep this holistic view in our study and therefore we have tried to understand Statoil’s strategy from a company, society and scientific approach.

We interpret our material based on our pre-knowledge and understanding and which will affect the result of this thesis. We do not believe that it is possible to be objective throughout the whole research process, since our normative background colours the way we for example, choose sources, which questions we ask our respondents and how we interpret facts. Söderbaum argues that this affects our arguments and preconceptions and every individual can be seen as a political economic person that has different roles in different situations and where our background follows us through the process. Since we cannot liberate us from this it is important to be aware of it and at the same time have a critical approach towards it.\textsuperscript{57} By a critical approach we mean that we are questioning our assumptions and approaches during the study.\textsuperscript{58} It is especially important for us since the most of our empiric material is from Statoil and StatoilHydro. We have to be aware that the material might be slanted and that can have an effect on the result. It is also important to be aware of the affects the research process have on us. During the research we will gain knowledge about the Statoil, the branch and about environmental strategies. This will change our pre-understanding and new preconceptions will arise and our understanding for the field of study will increase.\textsuperscript{59}

\textsuperscript{54} Costanza, R. (1989) p. 3pp
\textsuperscript{55} Friman, E. in Öckerman A. and Friman E. eds (2003) p. 123
\textsuperscript{56} Söderbaum, P. (2000)
\textsuperscript{57} Ibid.
\textsuperscript{59} Holme, I. and Solvang, B. (1997) p. 95-98
4 Analytical framework

In the following chapter we will explain our analytical framework which is our tool when analysing our empirical facts. We have derived our own analytical framework from theories about ecological modernization, which we believe is the dominating discourse today, new institutional theories about the organizational field and theories about environmental strategies. We believe to be able to answer how and why Statoil is dealing with climate change with the help of these theories.

Statoil exists within an organizational field and is thereby affected by the other organizations in this field. Thus it is important to see how organizations in a field are interacting and we are going to use new institutional theories to do so. The field however also exists in a society where environmental problems are to be solved according to the dominating discourse and we are therefore going to start with an explanation of ecological modernization to see what impact the main features of it has had on the field.

Later in the chapter we are going to discuss strategies more closely. First we use Roome’s model, so that we in the analysis, can position the climate question in relation to the public perception and the scientific evidence. Furthermore we are going to discuss what strategy an organization can develop in order to affect the field or to handle the pressure from the other organizations in the field. At last we are discussing different levels of ambitions in a strategy, with help of Ammenberg’s theories.

4.1 The dominant environmental discourse

As mentioned in chapter three, ecological modernization is the dominating discourse in the developed countries today, whether we are speaking about business, industry or decision-making. Therefore we chose to have it as a base in our analytical framework since it is affecting the actors within different levels in society.

Within the discourse environmental problems, such as climate change, are promoted to be handled within existing systems but with a modernization of these and as in economical theories rationalism is seen as a keyword. To modernize the systems incentives, policies and regulations are promoted and environmental concerns are integrated in economical systems via e.g. eco-book-keeping and green gross nature product (as a complement to GDP). Also principles as polluter pay and precautionary principles have emerged from the development of the discourse. The scientific and technological development is seen as the crucial factors that will help us in to ambition towards a sustainable development. Theories, models, analysis and empirical data will be necessary to be able to institutionalize the environmental concerns through processes of modernization.60

The discourse is seen as a positive way of handling environmental problems since it became widespread, but in the environmental debate is has been criticized. One of the critical voices comes from the environmental business strategist Richard Welford. He argues that the push for eco-modernization by the business sector has two underlying reasons. Firstly the discourse enables the actors to keep the same agendas and no radical changes within the business and society are therefore needed. Secondly the lack of creativity and imagination within the business world creates narrow environmental agendas which are easier to handle within the

60 Spargaaren, G. (1996)
existing systems. It is argued that the business world has been forced to get involved in the environmental debate by pressure from stakeholders. In order to respond an environmental dimension is added on their business as usual which leads to a higher acceptance in the society.  

As the ecological modernization has become a dominating discourse in the developed countries it has led to the industry is controlling and steering the environmental debate. Here concepts like scientific and technological development are dominating in order to meet environmental challenges. A more radical environmental debate would threat the oxymon of continuous improvements and economic growth that exists today. Welford further argues that eco-modernization is conservative and there always are priorities that overcome ecological actions. Ecological action gains focus when time and resources allows it or when public pressure becomes too large.  

The concept of environmental- or eco-efficiency is central within the discourse were resources, both natural and monetary, are supposed to be used as efficient as possible. Welford sees this as the key tool for companies to express environmental concern. The efficiency concept is based on traditional economic theories for optimization, instead values as ethics, equity, equality, empowerment, education and ecology are more proper to use when handling complex environmental issues within companies.

4.2 Organizational field

In organization analyses it is important to understand the context actors are acting within and to understand the institutionalization process. That is, the process where actors adjusts and adapts to the requirements and influences in their surroundings. We have described the discourse above, which we see as the base for the influences but an organization like Statoil is also affected by the surrounding organizations and actors. One way to describe this context is through an organizational field. It visualises the environment an organisation acts within when it comes to a certain issue. It is not something fixed, instead it varies depending on the empirical study’s character and purpose. It consists of all the actors that are affected or affects the studied actor. Within the field norms and values of actions that are accepted or not develops and also what is regarded as good and bad. The rules and patterns are both formal and informal and affects how the actors act and how they tries to legitimize their actions. They are formed in a social context and can be created consciously or unconsciously, for example via public opinion or laws. The organizational field is very important in the new institutional theory. In our study we are trying to identify the actors that have big impact on Statoil’s climate strategy.

The actors within the organizational field can be said to affect each other through their actions or through their identity, as well as affect the field itself. The field is also in turn affecting the actors and their actions. The most important driving force for this interdependence is the

62 Ibid. p. 28-31
63 Ibid. p. 35
67 Ibid. p. 30-31
principle of consistency. Organisations want to be consistent with the scene in order to create legitimacy. Legitimacy is crucial for the companies’ existence and is gained from the surroundings actors of a company. In order to respond to the demands from the field and to create legitimacy, the company has two options, communication or action. It can create legitimacy through action because it is accomplishing something and when the actions correspond to the words. It is also possible to create legitimacy through communication. The decision in itself is legitimacy creating. An organization is rarely purely communicative or action oriented and in the long run it is not enough to talk, action is necessary. Depending on the surrounding it is also possible to handle things differently. Some parts of the organization can be more political and other more action oriented. Organizations that stand out in a negative way are going to have to leave the scene. In the climate issue it is therefore important to act in line with the rest of the society otherwise an organization might have to face legitimacy problems.

When analyzing the organizational field’s impact on the individual actor it also is important to evaluate the actor’s identity. The identity concept within the new institutional theory is seen as a social construction that is based on the relations to other actors. The identity of an actor is dependent, and changes by the context (organizational field) the actor is acting within. Through interaction with stakeholders and organizations an identity is build up, based on the actions, communication and the surrounding actor’s opinion about the actor in question. The organization also compares itself with other similar organizations in order to get an understanding about their identities and actions. In environmental questions this can mean that the actor is watching competitor’s way of communicating their environmental work and which image they try to show up.

The identity is the starting point for possible way of action since the actor wants to act in line with it. It also creates certain expectations on the actor within the field. Actors wants to be alike successful actors and therefore tries to imitate their identities. DiMaggio and Powell argues that this leads to homogeneity within the field but Zevón and Johansson points out that it also leads to heterogeneity since actors want to keep their uniqueness and differentiate them self from the rest of the field.

The identity creating process is constantly ongoing and is strengthen or weaken by publicity from stakeholders. The image, so to say the way it wants to be perceived, needs to be strategically planned since bad reputation can be devastating for a company. Therefore it is important to build up an identity that can lead to competitive advantages and differentiation in relation to competitors. The consultant Ola Löhman argues that communication is the key for a successful branding. He thinks that this will make it easier for the company to attract customers and employees, handle failures and criticism and entering new markets. It gives the company stability and profitability in the long run. The communication must be open and honest otherwise the stakeholders can turn away from the company if they do not think that

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73 Ibid.
75 Ibid.
76 DiMaggio and Powell
they are acting in a responsible way.\textsuperscript{79} A responsible way of acting has become more important lately and this requires a bigger focus on areas outside the core business. Today company’s identity and branding are as important as the profitability according to Löhman.\textsuperscript{80} Even though the products of a company can be seen as environmental friendly, they also have to be associated with a corporate image that takes its responsibility in environmental questions, like the climate change.\textsuperscript{81} In order to do so they have to create a suitable strategy.

4.3 Developing environmental management strategies
In order to try to understand what factors that are affecting and forming different types of environmental strategies we have used Nigel Roome’s model for strategy development. He has developed a model for identifying characteristics of strategies and what type of action these might lead to. The most important impact factors in the field that affect the strategy is scientific evidence of environmental impacts and the public perception of environmental impacts. These create trends and affect the company’s attitude against change of the business environment. The trends are recognized and analyzed by the company were it identifies “threats” towards their activities and respond to these. This requires a strategy. \textsuperscript{82}

The way a company acts follows also from their position in relation to the environmental risks that the company’s activities convey, but also the opportunities that occurs on the market from environmental protection. Roome means that a company’s stance and engagement in environmental concern is connected with the impact the business activities have on the environment, and Statoil as an oil company clearly has a big impact on the environment. The activities can be both of an internal and external dimension and were improvements can be done. The connections to environmental impacts are either confirmed by scientific evidence or by public perception. The complexity and uncertainty considering environmental issues makes it hard for companies to respond to demands and the public and legislative stakeholders play a crucial role.\textsuperscript{83} Climate change for example has gained much attention lately, and the public and media’s perception is high.

The model shows, see fig. 1 on next page, four different theoretical positions considering the impact of science and public perception.

Legislative driven
In the first cube both the public and the scientific impact is high and when these circumstances exists the legislation is constraining the possible activities of the company. Further Roome states that the company therefore has to have a reactive strategy to try to adjust to the environmental agenda of social, scientific and legislation which dictates necessary changes that is needed. How the company is responding to the pressure depends on the environmental challenges they are facing.\textsuperscript{84}

\textsuperscript{79} Welford, R. (2000) p. 126
\textsuperscript{80} Löhman, O. (2003) p. 39-42
\textsuperscript{81} Welford, R. (2000) p. 110
\textsuperscript{82} Roome, N. (1992)
\textsuperscript{83} Ibid.
\textsuperscript{84} Ibid.
**Communication driven**

Where public perception is high but the scientific evidence is low a company faces a similar situation as above. The difference for the company is though that the legislative control probably is low because of lacking scientific evidence. In this position it therefore becomes important to go through the arguments of the public stakeholders and reconsider the way the company presents information. The task here is to identify and gather information about the environmental impacts of the company’s activities to be able to handle the public pressure. Communication with stakeholders is necessary to achieve an understanding for their environmental concerns.  

**Threat driven**

The third position the model presents is where scientific evidence is high but the perception of the public remains low. In this position the company can obtain a transitional reactive or proactive stance. This means that it can react to the threat and start changing or it can continue with business as usual since the public and legislative pressure still is low. How companies choose to react depends on the individual firm. One possibility is to redirect the whole company and doing this in relation to the environmental impacts to create a more environmental friendly business.

**Management driven**

In the last theoretical position in the model both the public and scientific pressure is low which indicates that the actions taken are driven from within the firm. Roome states that there are two categories of firms in this position. The first type of firm is the one with small impact on the environment and the second type is the firm who see potential market opportunities in environmental changes. The firms within the position have an environmental strategy that is management driven since there are no public or scientific pressures. However it seems important for companies to be aware of the dynamics within the threats, therefore it becomes important to establish a need to track changes so that the firm can manage coming threats and be able to respond in a good way. Another possible character that exists in this sector is the companies with a genuine interest in environmental concerns and where the strategic work is steered by the management.

This model allows us to position the climate question and see what type of strategy that is required, in relation to one of the most important actor in the field, the public. The public can, according to us also bee seen as the customers and the media. We also want to study Statoil’s strategic behaviour in the field and in order to do so we use Schwartz steering philosophies.

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85 Roome, N. (1992)
86 Ibid.
87 Ibid.
4.4 Strategic behaviour

Schwartz developed three different steering philosophies. They are based on three factors, the scene, the actors and their actions. By scene she mean what we have done as the outermost circle in figure 3 on page 21, that is the organizations in the field, affecting institutions, the dominating discourse and other game rules that are affecting the organization. The actors are the organizations within the field and the actions are what they are doing to handle a certain issue. The first steering philosophy is called, *The scene as the determining factor*. By that she means that the actor’s action is determined by the scene. If the actor does not adapt to the game rules on the scene it has to leave the scene since a company needs legitimacy in order to stay in business. \(^{88}\) We think that this correspond well to Nyström and Liljedahl’s definition of a reactive strategy. The reactive strategy is when the company tries to acclimatise to the markets conditions to reach success. The reactive strategy could be seen as a transitional period between the two strategies. It can therefore be both constructive and destructive, depending on the companies’ reaction to new conditions. \(^{89}\) See figure 2.

The second philosophy is called, *The actor as the determining factor*. The actor is trying to influence the scene through its identity. It wants to create a scene that is suitable for its identity, in order to create consistence. If an actor however claims to follow the game rules of the scene and their actions do not correspond to the image, the organization will face a legitimacy crisis. It is therefore important that their actions correspond to the identity. \(^{90}\) This indicates that the company has an offensive strategy where they have an open and innovative business development strategy and the company strives for being the leader on the market concerning products and services. This pole position creates new opportunities on the market which can be marketed. The strategy promotes a constant development of knowledge and cooperation within and outside the business market is needed. \(^{91}\)

The third is called, *Action as determining factor*. The actor is creating legitimacy through their action and that in turn is also affecting the scene. \(^{92}\) This philosophy we also consider to be a reactive strategy. \(^{93}\)

To be able to study Statoil’s strategy more in detail we have used the researcher Jonas Ammenberg’s theories in order to determine how ambiguous Statoil’s strategy is. Ammenberg has further developed five main strategies for environmental management within companies that originally was developed by Reinhardt. The strategies differ in seriousness, ambition level and the amount of work effort that is needed from the company. The strategies are presented below \(^{94}\).

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\(^{90}\) Schwartz, B. (1997) p. 260-268


1. Managing environmental risks
The strategy is mainly about identifying and evaluating risks within the environmental area and where the environmental work then is carried out in a way which lessens and prevents these risks. This approach also works as insurance for economical risks since many environmental risks are expensive. The risks do not have to be directly connected with the company’s activities, it can also be factors like environmental taxes, fines and changes in the governmental policies and laws.

2. Cost efficiency
The company can strategically review the operative areas and see where costs can be reduced which also results in improvements of the environmental performance. Often the use of resources can be cut down by more efficient productions methods. For a successful strategy the corporate culture needs to engage the workers within the company. Depending on the timeframe improvements can be expensive in the short run but later result in higher revenues or improved image.

3. Differentiation and Profiling
Through a portfolio with services or products that keeps a higher environmental standard then the competitors the company gains advantage. This requires that there is a will among the customers, whether is companies or private, to pay a higher price for the supplied products or services and also that the company is credible in the eyes of them. To gain credibility the company needs to have good communication with its surrounding.

4. Steering the branch and competitors
This strategy requires that the company is ahead its competitors and authorities which “forces” them to follow their path. The company will gain advantage and at the same time competitors are constrained to make same types of investments otherwise their position on the market will be undermined. Through this strategy the company can affect the market rules in a way that suits and gains them. The strategic work can carried out either via a cooperation with other actors on the arena were a common standard is developed, or through lobbying against authorities that decides about control measures. The lobbyism against authorities can either be about regulations that raises the environmental standards or that in some other way gives the company advantages towards the competitors.

5. Redefine the market and business concept
Since the society has become more dynamic and environmentally conscious some branches business logics have changed. This gives the companies the opportunity to redefine the market for its products or even the business concept. Business that have “natural” environmental advantages can focus more on the markets with a higher consciousness while the ones without a business concept can create a distinct environmental profile and strengthen their position on the market.
4.5 Field of application

To understand an organization's action, it is crucial to understand its surrounding since it dictates the possibilities for the actors within the field. We interpret the surrounding as figure 3 where ecological modernization sets the rules about how environmental questions are to be handled. The dominance of this discourse in combination with various reports has brought the climate question forward and has had an impact on organizational field and their environmental strategies.

In order to find out what impact the dominating discourse ecological modernization has had on the organizational field, we are going to analyze the chosen actor’s behaviour and statements from without Wellford’s theories about ecological modernization. We want to analyze what impact the, according to us, most important features of ecological modernization have had on the field surrounding Statoil and of course Statoil itself.

Not only the discourse has had an impact on Statoil, also the actors in the field are affecting each other. Therefore, we are going to analyse the interaction, both how Statoil is affected by actors and how Statoil is affecting the field. In order to study the interaction, we are mainly going to use Schwartz steering philosophies and Di Maggio and Powell’s theories about legitimacy and identity. They are explaining why an organization like Statoil is depending on the rest of the field and how that has affected their strategy. We have identified two actor groups in the field to be more important and therefore we are going to look deeper into their effect on Statoil’s climate strategy. Those two groups are the media and the customers, seen as the public. Thus, we are going to study their impact closer and in relation to the scientific
evidence for the climate change since the evidence have been discussed a lot recently and since it is one of the main reasons for writing this thesis. By Rooms model we are going to position the climate question in order to study which type of strategy that usually is used.

Moreover we are going to look more closely at Statoil’s actual strategy to see how they manage the climate issue and we are going to analyse it through Ammenberg’s theories about different levels of ambitions. In this way we can see how ambiguous their strategy is.

All together we hope to get a clear picture over how Statoil handle climate change and how their strategy has been affected by its surrounding. We also want to find out if their in any way can be improved.
5 The organizational field

In this chapter we are going to describe the organizational field surrounding Statoil, which creates the market conditions, and how the organizations might affect Statoil. We are also going to describe the company Statoil and their corporate group StatoilHydro. We have chosen organisations based on what our interviewees have said and what we have identified as important organisations in our literature studies. We have organized them in an organizational field, see picture below. We will only describe the actors which we have identified as the most influential and important for Statoil’s climate strategy.

![Organizational field diagram](image)

5.1 The oil and gas market

Statoil is the second biggest petroleum company in Sweden, concerning the number of stations. OK-Q8 has 865 stations. Statoil has 758 stations whereas Preem has 479, Hydro 436 and Shell has 371. They are cooperating in many questions to improve for example quality, safety and environmental aspects. They have for example common depots.

Petrol and diesel is still counting for 94, 5 % of the fuel used for transport but it is changing which will be discussed later. Ethanol stands for 3, 5 %, rapeseed oil (RME) for 1, 3 % and gas for 0, 5 % of fuel used for transport. The biggest part of the renewable fuel sales is from the ethanol which is blended in the petrol and diesel. Only 20 % is coming from the sold E85/E92.

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95 [http://www.spi.se/fsg.asp?cboFromYr=2008&cboToYr=2008&cboCompany=&lt;Alla&gt;&cboCategory=&lt;Alla&gt;](http://www.spi.se/fsg.asp?cboFromYr=2008&cboToYr=2008&cboCompany=&lt;Alla&gt;&cboCategory=&lt;Alla&gt;) 080513
96 Interview Helena Wiberg 080505
97 Drivmedelsmarknaden i Sverige 2007 - Vad har vi i tankarna?, Statoil
5.1.1 Statoil

Statoil is the second biggest petroleum company, concerning the number of stations, 758 stations. Statoil has its main market in Sweden and has several different business areas. We are however going to focus on Energy and Retail (E&R) department which handles the fuel import, fossil fuels as well as renewable fuels, depots and the service stations. Statoil has about 21.5% of the market considering fuel. They provide essentially petrol, diesel, ethanol and bio-gas. Their service stations provides apart from fuel also food, different equipments to cars and car rental, car wash so on.

The other departments within Statoil are:

- Gas oil: The company area has 50% of the market share within this area and the customers are mainly the industry.
- Lubricants: Statoil Lubricants is an own profit unit and produces over 600 different lubricants to the industry.
- Aviation: Statoil aviation is also an own profit unit. The unit provides 30% of the aviation market with fuel and is also big within Scandinavia.

5.1.2 Statoil Hydro ASA

The corporate group StatoilHydro is one of the most important actors when it comes to actors affecting Statoil’s climate strategy. They set up environmental goals, which are then to be implemented in Statoil. The Norwegian oil and gas corporate, StatoilHydro ASA, was established in 2007. Earlier both Statoil and Hydro were two big oil and gas companies on the market. Today Statoil Hydro ASA is the main company and Statoil and Norsk Hydro Olje AB are sister companies. Together the corporate employs 31 000 people and their business is carried out in 40 countries worldwide. Daily, around 1.7 million-barrel oil is produced by the company, which makes it the third largest net producer of oil in the world. It is also one of the biggest gas delivers in the world. The two areas of gas and oil have been developed for a long time and StatoilHydro is today the biggest offshore company. The company has about thirty nine oil and gas fields in production today and the enlargement will continue and even though the company has a global market it is biggest on the Scandinavian market. StatoilHydro ASA is partly privatized (the Norwegian state, Ministry of petroleum owns 62.5 percent) and noted on Oslo and New York’s stock market. The corporate group’s total revenue 2007 was 522,797 million NOK.

5.2 International organisations and agreements

Statoil is affected by many different international organisations. We considered the United Nations, the European Union and the International Energy Agency to be the most important considering our study object.

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98 http://www.spi.se/fsg.asp?cboFromYr=2008&cboToYr=2008&cboCompany=&lt;Alla&gt; 080513
99 Svenska Statoil Annual report 2006
100 Interview Helena Winberg 080505
101 Svenska Statoil Annual report 2006
102 Ibid.
103 Interview Helena Winberg 080505
105 http://www.statoil.se/FrontServlet?ds=Statoil&state=Statoil_dynamic&viewid=1890561 080409
106 Annual report StatoilHydor 2007
5.2.1 United Nations

The United Nations Convention on Climate change was adopted by the member states in 1992 and was the biggest step so far in the combat against climate change on an international level. This initiated a process about a protocol since the convention only encouraged member states to reduce their greenhouse gases (GHG). In 1997 the Kyoto protocol was adopted and the countries that ratified the protocol were committed to cut their emissions of GHG’s. The protocol includes specific targets for the developed countries, but the average goal to cut their emissions with 5 % until 2012, compared with the emissions on 1990s levels.107 The EU was committed to cut their emissions with 8 %, which is the current level for Sweden, while Norway is allowed to increase their emissions with 1 %.108 In order to cut GHG’s in the most cost efficient way three mechanisms are presented in the protocol. These are Emission Trading, Clean Development Mechanism (CDM) and Joint implementation (JI).109 The targets defined in the Kyoto protocol are binding and therefore they have influenced the GHG targets within the European Union (EU) and led to an increased need for low-carbon fuels and other emission reduction measures.

5.2.2 The European Union and its relations to Norway

The EU has been working with issues connected to the climate change since the 1980s and has played an important role in the international discussions about the challenge. In 2000 they launched the European Climate Change Program (ECCP) with the goal to identify the most cost-efficient measured and policies to combat climate change. Emission trading is one of the results from the program. A wide approach was considered to be very important and therefore several actors, like the industry, NGO’s and national experts have been involved in the work.110 In 2005 ECCP II was launched were new working groups and important areas was brought forward, one of these areas was carbon capture and storage which was, and is an important way of handling the GHG according to the EU.111 As complements to the programs different directives have been adopted. One of these is Directive 2003/30/EC, which is about biofuels. The directive promotes a minimum percentage of biofuels sold in the member states. For 2005 biofuels should stand for 2 % of the total sold amount fuels, which only was achieved by Germany and Sweden. The target for 2010 is 5.75 %.112

In 2007 an Energy Policy was adopted by the member states of the union were new objectives was set. The policy called for the need of a low-energy and low-carbon economy. The EU set the target to reduce its GHG with 20 % by 2020. The EU calls for international agreements in the policy act and request for targets around 30 %. The EU shall increase its research funding within the energy sector, and low carbon technology is considered to be important since the fossil fuels still will play an important role in the energy mix.113

The two referendums that Norway had about entering the EU has both resulted in a “no”, but the country has a close relation to the EU. Norway, Lichtenstein, Iceland and Switzerland together form the European Economic Area (EEA) and have made an agreement with the union. This agreement obligates Norway to implement relevant legislation in order to ensure a

107 [http://unfccc.int/kyoto_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php) 080512
109 [http://unfccc.int/kyoto_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php) 080512
strong economic internal market. Norway is therefore highly integrated in the structures of the EU and participates in many EU programs and initiatives in areas of research, education and culture. They are also active in the combat against climate change. Around 250 environmental acts have been incorporated in the EEA-agreement and in February 2008 the foreign minister of Norway, Jonas Gahr Støre said that “Europe’s challenges are our challenges". Norway stands for nearly 58% of the nature gas imports to the EU, which covers all Norway’s exports. Norway has also implemented emission trading system with the same structure as the EU’s and is soon about to link up to the European system. The country is considered to be an important actor in the projects and research of carbon capture and storage and renewable energies.

5.3 Public policymakers

In Sweden, the Ministry of finance and the Ministry of enterprise, energy and communications are responsible for the petroleum industry. They are here represented as the framework they have set up.

Statoil are also restrained and encouraged by a lot of rules and laws. Therefore we are going to account for the laws considered to have the biggest impact on their climate strategy. We have used SPI, the Swedish Energy Agency and the respondents’ answers as a guide to decide which laws and rules are the most important.

5.3.1 Legal framework

The petroleum business has to adapt to a wide range of legislation. Administrative control measures is the base in Swedish environmental politic. It can be laws, regulations or preconditions. There are also economic control measures like the trade with carbon emissions, taxes or subsidies.

An important base for Swedish legislation today is EU’s directive on bio fuels, described above. In order to live up to the directive it was important to make it cheaper to use low-carbon fuels and to make it available for the customers. That is done via the tax system and the pump law described below.

Taxes

The purpose of the carbon tax is to reduce carbon emissions whereas the energy tax’s purpose is to internalise external costs from the transport sector, like environmental damage. Petrol and diesel are taxed with energy tax, carbon tax and value added tax. The energy tax is differentiated based on the petrol’s and the diesel’s environmental harm. The carbon tax has increased since 2000 whereas the energy tax has decreased. The result of that altogether is an increased tax from SEK 3 to 5/ litre fuel. Bio fuel is not taxed with neither carbon tax nor energy tax in Sweden, probably at least until 2013. That is in order to fulfil the directive on biofuel mentioned above. E 85 is a mixture of ethanol (70-86%) and oil. Thus there is no fuel

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114 http://www.eu-norway.org/eu/norway+and+the+eu.htm 080513
115 http://www.eu-norway.org/Climate+change/Barroso+in+Oslo.htm 080513
116 Ibid.
117 Energi som miljömål, Energimyndigheten (energy agency) 2007
118 Ibid.
119 Styrmedel för minskad miljöpåverkan (2007), Energimyndigheten
120 Ibid.
tax on these percent, the renewable part. The aim for the government with this law was to increase the usage of renewable energy for environmental reasons and to secure the long-term energy supply.

The pump law
Ethanol has been available on some gas stations since 1995. Every gas station selling more than 1000 m³ shall however have at least one type of renewable fuel by 2010, the pump law. That is regulated in Swedish law. This law was made in order to increase the availability of renewable fuels. Most stations have used ethanol to fulfil the requirement.

Support to stations providing bio fuels
In order to encourage companies to provide other renewable fuels than ethanol the government decided to spend SEK 50 millions in order to support gas stations supplying alternative fuels in 2006.

Encouragement of the public to increase the usage of green cars
The public is encouraged to use green cars in different ways. A green car is for example allowed to park without fee in various places and the toll is reduced in Stockholm. It is also possible to get a subsidy from the government for the purchase of a green car.

Swedish environmental law
Petroleum business is regarded as harmful to the environment according to Swedish environmental law. That means it is regulated in Swedish environmental law and the general principles apply. They basically state that the company has to prevent accidents and actions have to be made with respect to the environment. Depending on if it is a refinery, a depot or a gas station is different ways to apply for permission. To start a smaller gas station you only have to report to the supervisory authority. For refinery and bigger depots it is necessary to apply for permission. When doing so an environmental impact assessment must follow the application. Regardless of which type of environmental harm the activity has the company must have self-control in order to make sure that they are obeying the law and that they do not exceed their permission. If they do not follow the regulation or exceed their permission the company can be sentenced to pay a fee between SEK 5000 and 1000000.

On the gas stations the gas has to be recycled and gathered by the tank car in order to prevent volatile gas from leaking out. It was decided upon in an injunction from the nature conservation authorities.

122 Styrmeland for minskad miljopaverkan (2007), Energimyndigheten
124 Ibid.
125 Interview Helena Winberg 080505
126 SFS 2005:1248
128 Styrmeland for minskad miljopaverkan (2007), Energimyndigheten
129 Ibid.
130 [http://www.regeringen.se/sb/d/8827/a/79672](http://www.regeringen.se/sb/d/8827/a/79672) 080517
131 MB 1998:808 chapter 2
5.3.2 Norwegian Ministry of Petroleum

The Norwegian Ministry of petroleum and energy is responsible for the state’s direct financial interests and for the state’s shareholding in StatoilHydro. In addition, the ministry is also responsible for the Government Petroleum Insurance Fund. According to its official webpage, the overriding goal is to ensure high value creation through efficient and environmentally friendly management of the country’s energy resources. It will be achieved through effective and sustainable exploitation of the Norwegian petroleum and energy resources. We interpret that as the Norwegian states do not want to reduce their oil production but keep on producing in a more efficient way and lessen the carbon emission. The government also wants to become a world leader in developing sustainable energy. Thus is it a prioritised area for research.

The main carbon reducing measure initiated by the ministry is carbon capturing. Also the UN Intergovernmental Panel on Climate Change regards carbon capture as an efficient method of reducing carbon emissions. They estimate that carbon capture can amount almost half of the emission cuts in this century. The state strongly emphasises the measure of carbon capture to reduce carbon emission. The government aims to realize carbon capture in power plants such as Mongstad. The Norwegian government proposes to allocate NOK 1 125 million to research and development of carbon capture, transport and storage in 2008. That indicates a strong commitment according to Åslaug Haga, Minister of Petroleum and Energy. The ministry also participate in international research and development programs.

Mongstad seems to be the ministry’s flagship since there is very much written about it both on the own web page and on StatoilHydro’s webpage. Mongstad shall be the world’s largest full-scale carbon capture and storage (CCS) project. It shall also combine heat and power production, which will increase the energy efficiency. The future of Mongstad is regulated in an agreement between the Norwegian government and StatoilHydro. It shall be fully operational by 2014. Prime Minister Jens Stoltenberg means that Norway is writing environmental and industrial history with this project since it shall be the world’s largest carbon capture facility in connection with combined heat and power production. At the same time, the Norwegian power production is regarded to be secured. Again, Norway is trying to maintain their oil export but with lessen impact on the environment. “The cogeneration plant at Mongstad is a project vital to our energy policy” says Odd Roger Enoksen, Minister.
of Petroleum and Energy. Also the Minister of environment is enthusiastic, “Norway can become a pioneer in developing CO$_2$ technology”. The state is going to create a new fund to strengthen the efforts in increasing production and use of renewable energy and increased energy efficiency. The government proposes to allocate NOK 20 billion, approximately 2.3 billion Euros, in this fund. Enoksen states that this will contribute substantially to the government’s overall objective of a more environmentally friendly and diversified energy supply system.

5.4 The branch organization, Swedish petroleum institute

The Swedish petroleum institute (SPI) is a branch organization founded in 1951 in order to handle the interests of the oil companies in Sweden. It has 15 members and besides Statoil it is for example AB Svenska Shell, OK-Q8 AB and Preem Petroleum AB. The members shall provide their connoisseurship in questions and SPI is also a centre for knowledge. The institute is monitoring the industry, informing the members as well as authorities and the public. They shall also spread information and create an opinion. They also represent the branch towards the authorities and try to come with creative solutions to problems. The CEO of Statoil, Håkan Kirstein, is one of seven board members.

There are ten committees in SPI where most of the work is done. One of the committees is called the HMS (health, environment and safety) committee. Here Statoil is represented with 4 delegates.

SPI’s main task is to represent the oil production in relation to other types of energy. They shall also promote the development of Sweden and increase the life quality for the people. Their work shall also, according to their webpage, be pervaded by objectivity, honesty and commitment to the environment. They have one position paper on renewable energy and one on climate change. The climate issue is regarded as the most important challenges today. Measures to reduce the amount of carbon dioxide in the atmosphere are much needed but in the same time the economic development is important. It must however be seen in a global perspective and the measures must be done where they are as cost efficient as possible. Sweden and other rich countries shall set an example since they have the possibility to do so. They also consider it to be important to introduce more control measures in order to encourage the companies to more innovative and climate friendly solutions. The trade with emission licenses is a good start. SPI is together with the members and international
organizations within the petroleum branch working to use the products as efficient as possible in order to reduce the carbon emissions.\textsuperscript{156}

In the position paper about renewable energy SPI states that they are positive to the EU’s directive of bio fuels which states that the member states shall increase the use of renewable energy. The first step should be to increase the amount of ethanol in petroleum and vegetable fat acids (FAME) in diesel. In order to increase the usage of renewable energy incentives are needed. In that way competitive and long-term solutions are developed. It is also important not to only work with one source of renewable energy or one technique.\textsuperscript{157}

A branch common lowest standard that is accepted for an oil company in Sweden has also been developed by the members of SPI. These are about how to work in a way that is good for the environment and a company will not gain acceptance if it precedes business below these standards. Helena also points out that the core group working with these kinds of questions within SPI are Norske Hydro, Shell, Preem, OKQ8 and Statoil.\textsuperscript{158}

\textsuperscript{156} http://www.spi.se/standpunkter.asp?art=2 Position Paper Klimatfrågan
\textsuperscript{157} http://www.spi.se/standpunkter.asp Position Paper Förnybara drivmedel, SPI
\textsuperscript{158} Interview Helena Winberg 080505
6 Coping with climate change

In this chapter we present the empirical material that emerged from the literature studies and the interviews. We start by describing the strategic process within Statoil and later their ambitions and goals are accounted for. After this introduction we describe the climate strategy, which is divided into development of new technologies, cooperation and profiling. Then Statoil’s impact in the organizational field and the internal and external impacts factors are described. The chapter ends with a summarizing discussion about Statoil’s climate strategy.

6.1 The strategic process within Statoil

The corporation group SH is very active in the climate issue according to both Helena Winberg and Andreas Fogelberg.\footnote{Interview Andreas Fogelberg & Helena Winberg 080505} Also according to our literature study they seem to take the matter seriously and actively work to achieve improvements. The company does a lot of research and development to come up with different solutions or improvements that will lessen their impact on the climate.\footnote{Going north – Sustainable development 2007, StatoilHydro I.A}

This will be discussed later. The management in StatoilHydro sets the goals and strategies that later are to be implemented in Statoil.\footnote{Interview Helena Winberg 080505}

Statoil is both implementing and achieving the goals of StatoilHydro and developing own ones that are adjusted to the Swedish market.\footnote{Ibid.} The management in Statoil and especially the Health, Environment and Security executive, Andreas Fogelberg, have the overall responsibility for environmental questions in Statoil. The environmental issue is regarded as important in the leading board today opposed to a couple of years ago when Fogelberg found it harder to get others to pay attention to the questions. Statoil is involved in the process when StatoilHydro are developing new proposals where they get the opportunity to comment them. The management also discuss the issue with employees on a level below in order to get their opinion on their work with these issues. Since Fogelberg is responsible for many different areas the operational responsibility is delegated to the environmental executive in Statoil, Winberg.\footnote{Interview Andreas Fogelberg 080505}

Winberg shall implement the goals in the organization. She also has to handle the parallel Swedish process were specific goals for Statoil are created. The climate issue is a management responsibility but the employees are the ones that have to execute the plans and the visions. They have the best knowledge about the everyday work. The employees also have the possibility to contribute with their opinion, especially during the evaluation of the environmental aspects every third year. Winberg believes it is important that all the employees are involved and engaged in the work, and also that it is crucial that StatoilHydro have a strong commitment in the questions.\footnote{Interview Helena Winberg 080505}

6.1.1 Visions and plans

EU has the goal to reduce carbon emissions by 20 percent by 2020 and also the Norwegian government has high ambitions in this area. The StatoilHydro’s CEO, Helge Lund, means that

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\footnote{Interview Andreas Fogelberg & Helena Winberg 080505}
\footnote{Going north – Sustainable development 2007, StatoilHydro I.A}
\footnote{Interview Helena Winberg 080505}
\footnote{Ibid.}
\footnote{Interview Andreas Fogelberg 080505}
\footnote{Interview Helena Winberg 080505}
it is important to “step up the pace of seeking solutions”. StatoilHydro acknowledge the link between human activity and global warming and that the industry has a shared responsibility for solving the climate issue. He also states he prefers the company to be a part of the solution rather than a part of the problem and there are two parallel solutions to the problem, a political and a technical.

StatoilHydro has the vision to work with sustainable development. Climate change is seen as one of the most important parts for the company since their business and products are affecting the climate substantially. The goal is to reduce StatoilHydro carbon dioxide emissions with about one third compared to 1990 levels. To realize this vision they have integrated the climate question throughout the whole business, according to Lund. Another vision for StatoilHydro is to cause zero damage on the environment which is important according to them since their activities are highly connected with risks. They also have the ambition to help their customers to reduce their impacts on the climate. StatoilHydro states that it therefore is important for them to mediate their knowledge to customers as much as possible.

In January 2008, a new climate policy was endorsed by the corporate executive committee. It takes account of:

- the need to combat global climate change proactively
- the need to increase the efforts with renewable and clean technology
- the need to strengthen the license to operate and grow
- the ambition of maintaining StatoilHydro’s position as industry leader for sustainable development

In order to reach the goals, StatoilHydro is working in seven fields; carbon capture and storage, energy efficiency, active participation in the carbon market, sharpening the climate strategy within the corporate, renewable energy and reducing greenhouse gas emissions. The work is to be described in the following subchapters.

6.2 Statoil’s climate strategy – the hunt for emission reduction

Lund is convinced of the industry’s ability to find a sustainable solution to the problem with support from the governments. They need to provide the framework that both compels and encourage companies. A way to do this is through carbon emissions trading. By putting a price tag on the emission, the desire to reduce cost will also reduce the emissions but with greater freedom. The increased public awareness is also putting an increased pressure on the companies to lessen their environmental impact. It is therefore essential for the companies to act, both to improve the global environment and for the confidence they enjoy in the community. Technical improvements and innovations are also necessary to handle the climate issue. It is important to act and not only talk. One example is that StatoilHydro has decided

080502
166 Ibid.
167 Sustainability report – Statoil Sweden 2006
168 Going north – Sustainable development 2007, StatoilHydro
080502
to buy emission credits to offset air travel by its employees. StatoilHydro also wants to be in forefront with new solutions like CCS. Through these projects Lund believes StatoilHydro have earned the company credibility.\footnote{http://www.statoilhydro.com/en/environmentsociety/environment/climate/pages/skarpklimastrate.aspx 080502}

The goals from StatoilHydro are to be implemented in Statoil. Therefore, they have the same goals, but at the same time Statoil have their own process. The climate strategy is a SH vision that has to be implemented therefore the same strategic climate goals apply in Statoil. Moreover Statoil has developed their own strategy suited for their organisation in addition.\footnote{Interview Helena Winberg 080505} They are going to provide alternative fuels, lease green cars, have climate neutral journeys and heating within the organization, their own transport shall be climate neutral, provide the service climate neutral consumption, decreased fuel usage in their own transport, provide counselling for private consumers and companies to reduce their carbon emissions and work actively within the framework of the Kyoto protocol.\footnote{Sustainability report – Statoil Sweden 2006} Quota trading is considered to be a good method to tackle the climate issue because it puts a price on emissions. StatoilHydro therefore participate actively to promote an effective carbon emissions trading market.\footnote{http://www.statoilhydro.com/en/environmentsociety/environment/climate/pages/kvotehandel.aspx 080502}

During our literature studies we did identify development of new techniques, co-operation and image as the three most important parts of their climate strategy. These themes were often mentioned in the literature and by the respondents. These parts will be described in the following subchapters.

### 6.2.1 Technology

The petroleum industry is a very technical business. The main issue is to handle the carbon emissions that are caused by usage of fossil fuels. In order to improve the situation much research and development is often needed which requires investments. Therefore it is mostly done by the corporate group SH but where Statoil then take part in projects and improves their organization.\footnote{Going north – Sustainable development 2007, StatoilHydro 080502} In order to reduce carbon emissions StatoilHydro and Statoil have taken a broad approach. They are trying to dispose emissions from the oil production and their own consumption and at the same time develop new low-carbon fuels. These are the main parts of the technological solution.\footnote{Ibid.}

The oil production, which still is StatoilHydro’s main activity, causes a lot of carbon emissions although 90 % rises from the consumers when they are using the products.\footnote{Drivmedelsmarknaden i Sverige 2007 - Vad har vi i tankarna? Statoil 080502} The company has during ten years developed techniques for capture and storage of carbon dioxide, and has become one of the leading companies within the field. Yearly about one million ton of carbon are stored in the bedrock and they consider two other locations for this type of storage. The carbon is captured during the whole process of production.\footnote{Sustainability report – Statoil Sweden 2006 080502} This way the carbon shall be kept out of the atmosphere permanently.\footnote{http://www.statoilhydro.com/en/environmentsociety/environment/climate/pages/co2-storage.aspx 080502}
Nitrogen oxides (NO$_x$), which is a GHG, are released into the atmosphere during drilling and needs to be reduced. Special turbines therefore have been developed by StatoilHydro which reduces the emissions with 85 % per year. This is about 300 tons of NO$_x$ per turbine that can be prevented. Today one fifth of StatoilHydro turbines are of this type and the progress for replacing old ones continues.\footnote{Sustainability report – Statoil Sweden 2006}

**Energy efficiency**

StatoilHydro believes the best way to reduce energy usage is to increase the energy efficiency. They contribute to better energy efficiency in two ways. They claim to run their own activities as energy efficient as possible and they also advise their customers how to use the products as efficient as possible.\footnote{http://www.statoilhydro.com/en/environmentsociety/environment/climate/pages/energieffektivitet.aspx 080502} StatoilHydro has reduced the energy consumption in their activities to levels below 50 % of the industry average and is now amongst the industry leaders for high levels of efficiency and low emissions per unit oil produced.\footnote{Going north – Sustainable development 2007, StatoilHydro 080502} To further reduce energy waste, the gas from the oil production is to be utilised and not flared. The gas is re-injected into the reservoirs in order to increase the oil production.\footnote{http://www.statoilhydro.com/en/environmentsociety/environment/climate/pages/energieffektivitet.aspx 080502} The later is something that Bergström from the Swedish Energy Agency plaudits StatoilHydro for\footnote{Interview Urban Bergström SEA 080424}. A lot of investments to make their plants more energy efficient have been made them among the best in the world on energy efficiency, according to their webpage.\footnote{http://www.statoilhydro.com/en/environmentsociety/environment/climate/pages/renewables.aspx 080502}

**Renewable energy**

Another important field of research and development is alternative fuel. One goal for StatoilHydro is to develop a profitable business that leads to sustainable energy production and increased use of clean energy carriers. In order to fulfil the goal StatoilHydro is developing new energy and new energy carriers in addition to their production of oil and gas.\footnote{http://www.statoilhydro.com/en/environmentsociety/environment/climate/pages/renewables.aspx 080502} They are trying to develop different kinds of renewable energy, biofuels, wave energy, wind energy, tidal power and hydrogen power.\footnote{http://www.statoilhydro.com/en/TechnologyInnovation/NewEnergyAndRenewables/Pages/default.aspx 080515} Studies of other forms of renewable energy are done parallel.\footnote{http://www.statoilhydro.com/en/environmentsociety/environment/climate/pages/renewables.aspx 080502} The Kyoto protocol putted additional pressure on the world to use more renewable energy. Therefore it is important for StatoilHydro to be able to supply this type of energy to a reasonable price. It is important that the government provides a framework that enables companies to develop. Statoil believes in alternative energy sources for the future although they do not believe there is going to one renewable fuel as dominant as petrol and diesel. The solution is more likely to be a mixture of different kind, not only the ethanol and gas.\footnote{http://www.statoil.se/FrontServlet?s=sdh&state=sdh_dynamic&viewid=212798&showMenu=0_2_0 080514}

Fuels shall be analysed through its whole lifecycle since it has an environmental impact in the production, transportation and the usage of it. Petrol causes the most damage to the environment when used.\footnote{Drivmedelsmarknaden i Sverige 2007 - Vad har vi i tankarna?, Statoil 080502} Ethanol on the other hand has a lot of environmental impact when...
it is produced and sometimes transported. How much depends on where, and how, it is produced. Statoil states that they try to look into the production to make sure it is produced in an acceptable way. The demand for renewable fuels has increased in 2007 and at the same time the demand for petrol has decreased. The main reason for this scenario is that new cars are more efficient and more people drive green cars because of various governmental encouragements, as described earlier. \(^{191}\)

Ethanol is increasingly popular in Sweden and an important part of Statoil’s product portfolio in the long-run according to the information director Helena Fornstedt. \(^{192}\) The sale has increased from 63 000 m\(^3\) in 2006 to 112 000 m\(^3\) in 2007, in Sweden. \(^{193}\) Statoil’s sale increased with 79% from 2006 to march 2007. One reason for the increased popularity is, according to Fornstedt, that Statoil decided to decrease the price. They are market-leading on ethanol in Sweden. They have ethanol pumps on 287 stations and also 5% of the 95 octane petrol is ethanol. This blending is the most effective way to reduce carbon emissions from the transports according to Statoil and therefore they want to increase the amount of ethanol to 10% in 95 octane petrol. \(^{194}\) On average, by driving on ethanol the carbon reduction is 65% according to Statoil’s report and by using petrol mixed with 5% ethanol in the 95 octane petrol the carbon reduction is 4% compared to pure petrol.

Another fuel that Statoil believes will help to reduce carbon emissions is Europe diesel. It is a sulphur free diesel that has less carbon emission than the Swedish MK1 during production and enables a bigger amount of FAME. Today rapeseed oil, RME, as renewable complement is dominating in Sweden, which leads to less emission. The europe diesel is higher taxed in Sweden today but Statoil is actively trying to convince the government to reduce the taxes. A tax reduction would make it possible for Statoil to have the fuel in their portfolio. More people are driving diesel cars since they are more energy efficient and therefore the gain would be even bigger if the Europe diesel mixed with rape oil was an alternative on the Swedish market. Statoil has also developed a diesel in cooperation with Lantmännen which contains 15% renewable fuel. Today, it is not classified as green fuel which leads to higher taxation than the Swedish diesel that is classified as green fuel. Driving with 100% RME in the tank leads to a carbon emission reduction by 50% compared to diesel. \(^{195}\)

\subsection*{6.2.2 Cooperation and investments}

StatoilHydro sees cooperation as an important factor achieving better presumptions in their ambition to reduce emissions. Both StatoilHydro and Statoil are cooperating with other companies within the branch, other branches and with international institutions like the European Union. The CEO of StatoilHydro states that “*More cooperation and better understanding leads to a better environment*” which shows that co-operation is something that is well rooted strategic part of the corporate. \(^{196}\) Interaction with owners, authorities and civil society helps them to meet future challenges and expectations. \(^{197}\)

\footnotesize
\begin{itemize}
\item \(^{191}\) Drivmedelsmarknaden i Sverige 2007 - Vad har vi i tankarna?, Statoil
\item \(^{192}\) Article: Nyberg, M., (2007) *Billigare drivmedel*, Dagens miljö. \url{http://dagensmiljo.idg.se/2.1845/1.112479}
\item \(^{193}\) Drivmedelsmarknaden i Sverige 2007 - Vad har vi i tankarna?, Statoil
\item \(^{194}\) Article: Nyberg, M., (2007) *Billigare drivmedel*, Dagens miljö. \url{http://dagensmiljo.idg.se/2.1845/1.112479}
\item \(^{195}\) Drivmedelsmarknaden i Sverige 2007 - Vad har vi i tankarna?, Statoil
\item \(^{196}\) Sustainability report – Statoil Sweden 2006
\item \(^{197}\) Ibid.
\end{itemize}

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The branch organization SPI is seen as an important co-operation forum for the oil companies in Sweden. Experiences and knowledge is exchanged and Statoil has been involved in development processes of common criteria’s and standards within different areas. A policy document has recently been developed with criteria’s with the aim to ensure that bio fuel production is made under acceptable conditions. Both social and environmental criteria’s were set up i.e. to prevent child labour and prevention of illegal logging in the rain forests in favour of plants used in bio fuels. Fogelberg states that it is often Statoil, together with OKQ8, who are steering these questions discussed in SPI because of their commitment to questions about climate change. Also Winberg points out Statoil’s strong position within SPI. They often contribute with competence since Statoil really is taking the climate change seriously and invests in the area.

In SPI there are certain groups that discuss different type of questions, which is important for bench-marketing. Especially the group “Sustainable development”, which focuses on sustainability questions and the HMS group, are important when discussing climate change. In these groups knowledge is exchanged but as Winberg mentions there are areas and questions that are very sensitive within the branch. The competition can sometimes be restraining according to Winberg. In questions about safety and environment it is important to exchange experience and knowledge and to develop safe systems that are good for the environment.

Cooperation is often necessary when new type of technology and products are to be developed because of high costs. StatoilHydro has for example cooperated with Vattenfall, Shell, Dong Energy and Gassanova developing the carbon capture methods used in the test Centre Mongstads. Also the Norwegian state contributes to the project. In developing new fuels Statoil has cooperated with Lantmännen, which was described in chapter 6.2.1.

As StatoilHydro is developing its business, they are cooperating with other branches connected to their products. In 2005 they started the company Power Cell AB together with Volvo. The company develops techniques concerning hydrogen and fuel cells. Their first developed product was a generator, which can be used in trucks. The generator makes it possible to produce energy for the driver’s cockpit without having the trucks engine on. This generator makes it possible to reduce the emissions by 30 ton a year per truck. The hydrogen technique that StatoilHydro is possessing made it possible for to be involved in the opening of Norway’s first hydrogen fuel station. Statoil has also cooperated with Trygg-Hansa and UVS education and developed SPARK. This is a program created to teach drivers how to drive heavy vehicles in a more environmentally better way.

Statoil has been a member of Business Leaders Initiative on Climate Change (BLICC) since 2006 and was the first oil company to become a member of the climate network. Their membership in BLICC obligates them to systematically try to reduce their impact on the climate. All emissions shall be accounted for, in public and all investments shall be analysed with respect to the climate. Through the membership they also hope to be able to learn from

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198 Interview Andreas Fogelberg, 080505
199 Interview Helena Winberg 080505
200 Ibid.
201 http://www.regjeringen.no/en/dep/oed/Subject/Carbon-capture-and-storage/mongstad-ccs-project.html?id=502210 080504
202 Sustainability report – Statoil Sweden 2006
204 Ibid.
the other members, says Fornstedt.205 The strategic move to become a member is also a way to reach customers on a different level and try to make them to understand Statoil from their perspective. In this way, they can inform them about the services that they provide, like climate neutrality, to reduce the impact on the environment. It is a way of engaging the customer. Both Winberg and Fogelberg considers BLICC to be an important cooperation, where climate change is taken seriously.206

At the moment StatoilHydro plays a key role in the EU initiative Zero Emission Power. The project has the goal that energy plants within EU shall have zero emissions of CO₂ in year 2020.207

StatoilHydro has invested in a bio fuel facility in Estonia were biofuels are produced in cooperation with farmers in the country. The facility has the capacity to produce 50% of the demanded biodiesel in Sweden. The advantages with the facility are that they can stay close to their main market and at the same time be a part of the whole process of production.208 StatoilHydro considers the mechanism of the Kyoto protocol to be a good way to reduce emissions. StatoilHydro has therefore invested, via World Bank’s Community Development Fund and their Prototype Carbon fund, 12, 5 million dollar in CDM-project (Clean Development Fund) and JI-project (Joint Implementation).209

6.2.3 Statoil’s profile - The responsible oil and gas company

When studying the homepages and sustainability reports, Statoil and StatoilHydro wants to be recognized as a corporate that takes its responsibilities. This is shown by the quota “An oil company which aims to compete successfully over tomorrows resources must take sustainability seriously.”210 We believe that this also is about gaining legitimacy for their activities which often is connected with environmental interference. They also refer to them self as world leading company in technologies like CCS, deep water techniques and that they are an important actor on the international energy arena. As a result of StatoilHydro strategic environmental work the company has been appointed as the world’s best company within the oil and gas sector by the American stock exchange Dow Jones. They present a “Sustainability index” each year of the best energy companies and were StatoilHydro was highest ranked from 2003 to 2006.211

In order to gain respect and set a good example Fogelberg states that a pro-active environmental work is necessary. Statoil wants to profile themselves as a company that is steering the development and issues connected to climate change, and argue that this is the case. “We are trying to be the energy company that is best on environmental and sustainability questions” Fogelberg says.212 The average carbon emissions per produced cubic meter oil is 130 kg, and were SH’s emissions is 40 kg. In the sustainability report SH highlights that they are under the permitted values for emissions during the different steps of

205 Bengtsson, V. (2006) Svenska Statoil lovar syna alla utsläpp, Miljöaktuellt
206 Interview Helena Winberg and Andreas Fogelberg, 080505
207 Sustainability report – Statoil Sweden 2006,
208 Ibid.
210 Sustainability report ”Going North” 2007
212 Interview Andreas Fogelberg, 080505
production. In their strategic work they are trying to set higher standards than the rest of the branch. This is possible because of the clear ambitions and activities performed by the corporate in order to combat the climate change, according to Winberg.

To set a good example, the company has chosen to compensate for their carbon emissions and also to offer their customers this service in order to profile them as responsible. Statoil was the first oil company in Sweden providing climate neutral consumption. This service started in the beginning of 2007 and is seen as an important piece in their climate work. The service has been well met by authorities in an evaluation because of the clear description of the service. Winberg points out that it is important to be clear that climate compensation is only a complement to other actions, not a way for the customers to buy them self free from their responsibilities. The main purpose for climate compensating is to increase the knowledge about Statoil’s efforts for the climate and to give people and firms a possibility to contribute and take their responsibility.

The importance of a good reputation has many reasons according to Fogelberg. First of all it is important that the employees feel that they are working in a company that takes the climate questions seriously. But it is also a competitive advantage when the company wants to establish business in other countries. Authorities, NGO’s and other pressure groups must see Statoil as a serious company that is working actively and pro-active to prevent accidents or reduce emissions, Fogelberg describes it by “It shall help us to win contracts”.

To work with climate change on a strategic level is a presumption to be able to stay on the market in the future, according to Winberg. The society would not accept Statoil otherwise and in these questions it is important to sense trends. It is important to communicate their environmental work in order to create a positive image. Through the perception of the daily 360 000 customers that visits the fuels stations the brand is created to a great extent which in turn communicates it to their surroundings. Their comprehension about Statoil is realising their profile. It is therefore very important that Statoil represents them self on stations, conferences and marketing in a way so environmental efforts and ambitions of Statoil are communicated. This is a challenge for Statoil. A bad reputation or negative media attention caused by accidents, environmental damage or double standards would damage their profile. Even though the profile is very important for the company Fogelberg points out that the reason that they are selling oil is because the society is build up around it and transports. This is something that Statoil cannot affect. Based on this presumption they have to work in the best possible way in order to combat the climate change.

6.2.4 Communication of the strategy

Communication is crucial for Statoil since their legitimacy is depending on the image the customers and the public have of them. They have to mediate their goals and ambitions in

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213 Sustainability report – Statoil Sweden 2006, p. 6
214 Interview Helena Winberg, 080505
216 Interview Helena Winberg, 080505
218 Interview Andreas Fogelberg, 080505
219 Interview Helena Winberg, 080505
220 Interview Andreas Fogelberg, 080505
221 Interview Helena Winberg, 080505
222 Ibid.
order to create a positive image. When looking through their press releases, as a method to see what they are focusing on in their communication, it is clear what picture they want to mediate. During the years 2006 – 2008 about 70 percent of the press releases were related to the climate issue. The importance of the climate question also becomes evident when reading the company presentation that ends all articles. This presentation starts with Statoil is one of Sweden’s leading energy firms with a focus on the climate question.  

Most of the articles related to the climate are about ethanol which clearly is important to Statoil. They are for example about the opening of new ethanol pumps as well as the benefits of using ethanol. Many articles are about the increased sale of ethanol. Other renewable fuels are however also important but also they end with a description of the current ethanol situation in Statoil, how much Statoil are selling and how many pumps they have. Statoil believes in other types of renewable energy like hydrogen power. They think it is an important complement to their product portfolio in the future. Moreover the possibility to neutralize carbon emissions and Statoil’s own neutralizing program are promoted. Beside their activities they also want to communicate their awards for the activities. One is the award from ClimateChangeCorp rating the climate work of companies in different branches. SH was in the top of the list in the oil and gas branch and regarded as role models. The ranking in Dow Jones sustainability index are also presented.

6.3 Statoil’s impact on the organizational field

To influence decision-makers to change the legal framework, lobbying is carried out by Statoil on both a national and an international level. This is mainly done by inviting influential politicians on lunch-seminars were the company presents their view of a certain matter, presents statics, research and reports in order to enhance their arguments. This has been the case with the sulphur free Europe diesel which is lower taxed in other European countries, than in Sweden. Statoil argues that this type of diesel is better for the environment than normal diesel. The same problem have occurred with the diesel developed by Statoil and Lantmännen mentioned above.

By offering services which lessens their customers emissions Statoil can affect, or help customers to change their behaviour. Winberg point out that it is an important part of their work, to educate their customers. Climate neutrality and heavy eco-driving education are examples of this.

Statoil also affects their competitors on the Swedish market by setting higher standards and goals in which are better for the environment. As Winberg mentions they have met authorities and discussed their standards and solutions and where the authority later has adapted the restraints which Statoil argued for. This leads to that the competitors needs to adjust to the requirements which Statoil already done. Statoil will then have an advantage in the process.

223 http://www.statoil.se/FrontServlet?ds=Statoil&state=Statoil_dynamic&viewid=1887078&showMenu=3
080522
224 Ibid.
225 Ibid.
226 Interview Helena Winberg, 080505
227 Drivmedelsmarkanden i Sverige 2007 – vad har vi i tankarna?, Statoil
228 Interview Helena Winberg, 080505
6.4 Summarizing discussion about Statoil’s climate strategy

StatoilHydro, the corporate group has acknowledged the link between human activity and climate change. They will rather be a part of the solution than a part of the problem and therefore they are investing a lot in their work towards a sustainable development and especially in their climate strategy since it is regarded as the most important part of sustainable development. Their climate strategy takes account of:

- the need to combat global climate change proactively
- the need to increase the efforts with renewable and clean technology
- the need to strengthen the license to operate and grow
- the ambition of maintaining StatoilHydro’s position as industry leader for sustainable development

In order to achieve this they are working within seven fields: carbon capture and storage, energy efficiency, active participation in the carbon market, sharpening the climate strategy, renewable energy and reducing greenhouse gas emissions.

These goals and ambitions are then passed on to Statoil which then have to implement them. Statoil also develop its own goals. Since StatoilHydro are active in the question it is easy to work with the issue also in Statoil where it also is considered important. We are trying to be the energy company that is best on environmental and sustainability questions, says Fogelberg. We have divided their strategy into three parts.

Technology is the first part where they are active. They of course benefit from the research and development done by SH and it also results in that the oil bought by Statoil is produced in a better way because of the various improvements done in StatoilHydro. Statoil are also working with energy efficiency and foremost with renewable energy. They are developing their infrastructure for ethanol and at the same time trying to develop other renewable fuels.

The second part is cooperation which is important for Statoil. They are active in SPI where a lot of standards and common criteria are worked out. Cooperation is also important developing new technology or developing something requiring new infrastructure, like ethanol. Another important cooperation is in BLICC where they are trying to decrease their own carbon emissions.

The third part of their climate strategy is profile. The image is important to attract customers and stay on the market. They want to mediate themselves as the responsible oil and gas company and as one of Sweden’s leading energy firms with a focus on the climate question. The main focus in their communication is, apart from above quotas, the ethanol supply where they are the market leaders.

6.5 Internal impact factors

The most important internal affecting organization is StatoilHydro. Their management is taking the question very seriously and are very active. The biggest shareholder in StatoilHydro is the Norwegian state and thus they have a lot of influence on StatoilHydro. For them sustainable development is a prioritised field and that of course is reflected in

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229 Interview Helen Winberg 080505
230 Ibid.
StatoilHydro. A lot of money is invested in research and development on cleaner technologies. The big shareholders also participate in consultation meetings and the other shareholders are participating in enquiries to state their opinion. In the meetings with the shareholders a lot of the politic in the corporation group is worked out. The shareholders are important actors.

The engagement in the management of StatoilHydro is of course affecting Statoil. If StatoilHydro had not been so active it would have been harder for Statoil to work with these issues. They however also take the matter seriously and put these questions high on the agenda. No one opposes dealing with these issues.

The employees also have an important role. Although most of them are not involved in the strategic planning, they are the ones that have to make sure that the strategy is implemented. The climate strategy is to be implemented in the entire organization. They also have the opportunity to be a part of the evaluation of the environmental work within Statoil.

The budget is a determining impact factor. A lot of environment improving measures are also saving money, win-win solutions. Before you kept control on the fuel usage in order to save money. Today you do the same thing but instead of only measuring the benefits in money reduction in carbon emissions are also measured, say Helena Winberg. It is in some cases mostly about change in focus. On the other hand sometimes environmental improvements cost money. When an investment has to “Pay-back” in a couple of years environmental friendlier but more expensive solutions might have to stand back. In the case of Mongstadt however it is considered to be important and it is allowed to cost.

6.6 External impact factors
There are several external factors that have impact on Statoil’s strategic work against climate change. The legal framework, formed by authorities, governments and EU affects the possibilities for action in a direct way. Winberg points out that the legal framework in Sweden generally is very good when it comes to environmental questions but that it sometimes forces the development in a certain direction and where then backslashes occurs. Companies do not have the possibility to develop secure and good systems. This has been the case considering E85. Statoil had start selling renewable fuels in a limited amount of time which “forced” them to go for E85 since biogas is so expensive to establish because the lack of infrastructure. Fogelberg also sees a problem with E85, he says “E85 has, so to speak, gone from heaven to hell”. It is not only the legal framework that has had impact on this issue, the increased demand, and the media and public discussion have been a part of this development. First the E85 was praised by the society because of the reduction of greenhouse gases but the bad production methods have made it less popular. Winberg further argues that it is important to ask oneself if we are to reduce the impact on the climate at any price, like with the example

232 Interview Helena Winberg 080505
233 Ibid.
234 Interview Andreas Fogelberg 080505
235 Interview Helena Winberg 080505
236 Ibid.
237 Ibid.
238 Interview Andreas Fogelberg, 080505
239 Ibid.
of ethanol production? The taxes and subventions on certain fuels also affect the strategic work, and most of all which fuels to have in their portfolio. For example have the subventions on ethanol made the fast development of the fuel possible. The taxes and subventions have both a positive and a negative impact on the environment, and Statoil according to her.²⁴⁰

The customers is the factor which makes Statoil’s business possible, therefore their demands are important for the company and the strategic management. The private and company customers are affecting Statoil differently. The company customers have higher environmental demands, and can be more specific about.²⁴¹ Winberg also describes that they are cooperating more with company customers which make both parts better on the handling the challenges of the climate change. The customer’s often expects that Statoil shall have the solutions to problems.²⁴² On the other hand the private customers are, as mentioned before, the “face outside” and they are the ones who are demanding different kinds of products and solutions that affect the strategic work in Statoil. The two types of customers are just as important and Fogelberg thinks they should not be compared. Just as customer trends in the society the medial pressure affects Statoil.²⁴³ Winberg argues that the media is the society’s voice in the debates and they are choosing which focus that gets attention, like the climate change discussions.²⁴⁴ Negative media attention is hurting the brand value and shall therefore be avoided. Statoil has not had a major media scandal but Fogelberg means that it would affect them, for example does he mention how Greenpeace made OKQ8 to draw back their promotion of a fuel were a part was palm oil, because of this reason. So in a way every organization can affect Statoil a lot, but that is why they work pro-actively according to Fogelberg.²⁴⁵ All these factors described in the text are creating “the rules of the game” that they have to adjust to. The connection between the legal framework and the public’s demand has a huge impact on how Statoil strategically are handling the challenges of the climate change.²⁴⁶
7 Analysis

In the following chapter we are analyzing the empirical material, which emerged from our literature studies and interviews, with help of our analytical framework. We are going to do the analysis step by step. First we have interpreted the impact of ecological modernization within the organizational field and Statoil, since this is shaping the norms and values within the field. This is followed by an analysis of the organizational field’s impact on Statoil’s climate strategy where also identity and legitimacy is discussed.

After that we are going to position climate change in the society in order to understand what external factors affecting their strategic work. This is done by the use of Roome’s model were high or low scientific evidence and public perception indicates on different driving factors. Finally Statoil’s strategic behavior is analyzed, from without Schwartz steering philosophies and Ammenberg’s theories, in order to see which type of strategy Statoil is using to handle the climate question and how ambiguous their strategy is.

7.1 Ecological modernization tendencies within the organizational field

Since ecological modernization is the dominating discourse in society it is affecting the organizational field. It is affecting the norms and values developed and how the actors choose to handle the climate change. We believe that the discourse has become so dominating because it does not imply that any radical changes are needed, instead the existing ones can be modernized. As Welford states, business can continue as usual only more efficient. This is exemplified with the trading of carbon emissions, where emissions are handled according to economic rationality. Emission trading, that was brought forward on an international level is something that EU, the Norwegian government, the Swedish government, branch organizations and Statoil consider to be a good method because it allows them to reduce emissions were it is most cost efficient and create a win-win solution. This is also shown in for example the EU’s program ECCP where they have the aim to identify the most cost efficient measures and policies in order to reduce the GHG, and the branch organization SPI argues that reduction of emissions must be seen in a global perspective and the measures must be made were it is most cost-efficient. The efficiency concept is also commonly referred to in the terms of energy-efficiency in all the studied organizations. The Norwegian government for example states that the energy resources of the country shall be efficiently managed and SPI is working together with other organizations in order to make sure that the products shall be used as efficient as possible. We believe that it is important to speak in terms of efficiency so that the resources is used in best way, but there seems to be a lack of focus on the individuals and their behavior, which is as important as the cost and energy efficiency. The focus on efficiency takes away the attention from other solutions and as Welford argues the climate work solutions are often narrow minded and not as radical and innovative as might be necessary.

Technical development is seen as a solution too many of the environmental problems within ecological modernization, so is also the case in the organizational field. All the actors promote CCS as one of the most efficient ways to reduce carbon emissions and that technical solutions and innovations are needed. Within the field the renewable fuels are important but the push for ethanol is a way to handle the problems in existing systems. The fuel is argued to be more environmental friendly but it can still be used within existing systems. We believe technical solutions shall be seen as a part of the solution, not the entire solution. Even though CCS has potential and reduces the GHG to a big extent it is a way to push the problems forward so that
future generations has to deal with the problems and where we can continue to use fossil fuels.

For technical development and research incentives control measures are necessary according to the EU, Norwegian state and SPI. We believe that the legal framework is a way to institutionalize the thoughts of ecological modernization. Economical incentives and control measures, as taxes, are designed in a way that shall steer the oil branch and consumers in more sustainable way, according to ecological modernization values. The EU directive on Biofuels is an example were the oil companies are forced to invest in renewable fuels, like ethanol were at the same time the consumers are encouraged to buy renewable energy and it becomes profitable. The consumer is to some extent brought forward in the legal framework in Sweden. Here the government has chosen for example to subsidies them who buys and drives a green car. The legal framework plays an important role as it shall encourage creativeness and radical changes according to us, and the public policy makers have to think in a wide perspective. There is also the danger, as Winberg mentioned that the development the policy makers push for goes to fast and whereas the control mechanisms do not follow the pace. This can lead to problems as when rain forest is plundered in favor of ethanol production.

We think that it is clear that Statoil is affected by the discourses values. Statoil believes that technical improvements and innovations are necessary to reduce GHG and development of technological solutions is a big part of their climate strategy. Another big part of their strategy is energy efficiency, and they claim to be one of the world leaders on this. Welford argues, other priorities often overcome ecological action and that is sometimes also the case in Statoil. Winberg points out that the payback time on investments sometimes is too short to be able to invest in technology or products of a higher environmental standard. Further we believe that the increased pressure in the society, much because of the various reports presented in the beginning of the thesis has made the climate change to a big part of the corporate business development. This can be exemplified by Fogelberg’s statement that it was hard to gain attention for environmental questions when he started in the company in 2001, but that this has changed during the last years.

7.2 The organizational field’s impact on Statoil’s climate strategy
In order to analyse how the other actors affect Statoil’s climate strategy we have studied the organizational field’s impact. The norms and values that exist within the organizational field is created by the discourse and formed by the interaction between the different actors. The organizational field is the context where Statoil act and they have to adapt and adjust to the patterns, rules, norms and values that are dominating. In our study we have identified these as the main features of ecological modernization and climate change. There is although a possibility for Statoil to affect the scene, which will be described later. The strategic actions that Statoil possible can make have to be legitimized, and therefore they have to act in line with the norms and values that exist. The legitimization is gained via communication and action.

The Kyoto protocol is a good example of the thoughts of ecological modernization, developed by the UN and the EU. The mechanism to reduce emissions described in the protocol is developed so that we can use our existing systems. Statoil believes that these are good and is investing in CDM and JI. They are also active in the carbon emissions trading and sees is as a good way to cost efficiently reduce emissions. The protocol has also put pressure on
companies to develop renewable fuels, which is something that Statoil does. They are market leading on ethanol fuel on the Scandinavian market and is developing methods to blend in renewable fuels in diesel or petrol. The strategic reason for Statoil to work with these different areas is because the discourse is influencing the organizational field and in order to gain legitimacy they need adapt to this.

7.3 Identity and legitimacy as affecting factors
Through the interaction with other actors within the field Statoil’s identity is built up. This is the starting point for the possible strategic decisions that they can make, and Statoil has to act in line with its identity. The identity is based on actions, communication and the public opinion about the company and through this, certain expectation on Statoil is build up. Statoil’s identity is bound with legitimacy, which they need to gain within the field. StatoilHydro declare that they consider legitimacy to be an important part of their climate strategy.

Statoil wants to be identified as a responsible oil company that actively is combating climate change. This requires action and communication which makes them trustworthy and thus creates legitimacy. In order to do so they have developed a climate strategy that we have described in chapter six. Statoil have decided to set a good example and climate compensate for their business, to buy emission credits, work actively with renewable fuels and within the frame of the Kyoto protocol. The high ambitions create pressure on Statoil to act in line with what is communicated by them. The ranking in the Dow Jones Sustainability index is an example were the wished identity becomes strengthen, the expectations rises and Statoil has to act in line with this image. The strategic move to become the first oil company member in BLICC is another example on this. The created identity also affects competitors on the market, since Statoil is promoting them self as actively combating climate change, the competitors have to adjust in order not to appear as a less sustainable company. Otherwise it will just increase the credibility of Statoil.

As the described norms and values above there are certain actors in the organization field surrounding Statoil which have bigger impact on them than others. The branch organization SPI plays an important role in the organizational field. We believe that norms and values are being institutionalized in SPI were common standard are being brought forward by the members. Statoil then has to adapt to these to get acceptance and legitimacy. As the branch organization is affecting the field, also Statoil affects the decisions and can thereby steer the direction. They argue that they have a strong position and play an important role in questions about climate change and environmental concern.

The customers seem to be the actor which it is most important to gain legitimacy from. Their demands are not fixed and vary with the trends in the society and can be described as norms and values. As the climate change has become more public, the demand on renewable fuels on the stations has increased. To meet this demand, and to increase the brand value Statoil reduced the price on ethanol. The question is if the demand is big enough. The sales of ethanol are for example only 5% of Statoil’s total sale today and other fuels and solutions should be demanded as bio gas. The customers also have expectations on Statoil. For example do company customers turn to Statoil for advices in environmental matters, since they believe that Statoil possess the knowledge about this type of questions because of their identity.
The legal framework, which also is affected by influences in the society, Statoil have to follow otherwise they will be fined. It is set criteria which they have to adjust to. Often the laws are created because of international directives, as in EU or the Kyoto protocol. The directive on Bio fuels by the EU has for example made the authorities in Sweden to come up with the pump law. We are going to look further into how public pressure is affecting Statoil’s strategy in relation to scientific evidence.

7.4 Positioning the climate question
To be able to position climate change, and thereby what factors that are affecting Statoil’s strategy we are going to use Roomes’s model. He argues that the most important impact factors on a company’s strategy are scientific evidence and public perception, which creates certain levels of pressure on Statoil to act. Since we have chosen to study the climate strategy, the climate change is the factor that is in focus. We also have in our study identified the public pressure as an important impacts factor. Statoil’s environmental impacts also affect their strategic behavior, since these are confirmed by, either scientific evidence or the public’s awareness and require action.

When analyzing Statoil’s climate strategy we recognize tendencies in three of the different positions, but under a certain time period. We think that the public perception about climate change has increased during the five last years and therefore the pressure from the society has become bigger. We also think that the scientific evidence has been debated before. It was not until 2005 that the IPCC report lay down the evidence that the human activities was responsible for the climate change and therefore the legal frameworks have not been so specific. However we believe that Statoil’s strategic work dominantly is legislative driven, but the development has gone from management driven, to threat driven to end up in legislative driven.

We think that the early stages of Statoil’s strategic work have been a combination of management and threat driven. The scientific evidence about the environmental impacts in the oil branch has been quite known for a long time. The threat driven strategy can both be reactive or proactive. The company’s business must be redirected in line with the environmental impacts in order to create a more environmental friendly profile. We interpret that Statoil has done this with the initiated project CCS (which has been running for ten years) and the investments of ethanol. It is also likely that Statoil has recognized the coming debate and seen potential in the market opportunities which indicates on a management driven strategy. The actions have been driven from the firm. Roome states that a genuine interest can be a reason for companies to withdraw action. We interpret, based on out study, that the management within Statoil to some extent has a genuine interest and that the corporate group believes that they can make a difference. This could be argued against by the argument that the firms has to work actively to stay on the market, and to make this trustworthy the honestly of the work is important. We do not think that the strategy ever has been communication driven since the public perception about climate change has been so low. Earlier other environmental problems have been more in focus.

As mentioned above we interpret that the strategy today, mainly is legislative driven. More and more laws has been implemented which dictates the possibilities for action and necessary changes. One example is the pump law which put pressure on Statoil to put renewable fuels on their stations. This was something they were working with before the law came in force, but now they have to do it because of legal pressure. The emission trading has also forced
Statoil to continue working with methods that reduces the emissions, but also the environmental agenda of the society is affecting Statoil’s strategy. Statoil has to adjust to their demands in order to be attractive on the fuel market.

7.5 Statoil’s strategic behaviour

The scene in our study is influenced by ecological modernization which then is the base for rules and norms. Within the organizational field the rules and norms are implemented. The organizations in the field are the actors. Statoil is affecting the scene through its identity and it actions as well as is affected by the field.

Statoil is affected by the scene, as described earlier, through the societies increased concern about the climate. It is not possible to ignore it and the dominant solution to the problem today is seen to be through new technology and increased efficiency. Statoil is therefore focusing on these two methods. It has also become increasingly important to show the public that the company is taking measures against climate change. They are to follow the rules otherwise they have to leave the scene. That is something Winberg agrees with. She states that to handle the climate issue is crucial in order to stay on the market. This indicates that their strategy is a reactive, both according to figure 1 and 2, since they are reacting on the demands from the public and other organizations.

The scene is however also altered by Statoil. They are contributing to the scene via their actions and their image. They are promoting their climate strategy, the importance of it and they are also actively lobbying to affects other actors. The cooperation in SPI is also very important since a lot of ground rules are established there. Statoil is very active in the climate work in SPI and elsewhere and therefore they have impact on the scene, a scene they still have to follow the rules on in order to not lose their legitimacy. Here they have a more offensive strategy. An offensive strategy indicates on an innovative business that likes to be in the lead. We think that correspond to the image we have of Statoil. A company thus can have both a reactive and an offensive strategy. It is an interaction between the scene and Statoil, an institutionalization process.

Furthermore we have analysed how ambiguous their strategy is. We have identified Statoil’s strategy to include the four first steps on the scale developed by Ammenberg, making them a rather ambiguous company.

To manage environmental risks and to prevent them from happening is crucial to a company dealing with environmentally dangerous products. Statoil are first of all obligated to do so according to Swedish environmental legislation. If they do not, they might be forced to pay high fines and compensation for the damage done. Secondly an accident could lead to great damages which can be expensive to repair but it can also lead to a legitimacy crisis. If the media makes it public the customers and the public might turn against Statoil.

Cost efficiency is also crucial to Statoil. In order to be a successful company the costs must be kept down. In many cases environmental improvements also leads to a reduction in costs. For example when reducing fuel usage through eco-driving not only the costs are reduced but also the carbon emissions are reduced. Efficient usage of energy is an important part of Statoil’s strategy and it creates win-win situations. There is also, as Ammenberg states, a third benefit from these win-win situations. They can lead to an improved image. Statoil is using their actions, like education in eco-driving, to promote a positive image of the company. He
also states that it is important to include all the workers to have a successful strategy. In Statoil they are trying to include all employees and believe it is very important since the employees are responsible for the execution. For example if they do not practice eco-driving the ambition from the management is not going to make any difference. The employees are also the communicators in many cases, since they are the ones responsible for the transmission of the information, to the customers.

As discussed above the image is important. A company tries to create a profile and to differentiate itself from the rest of the organizational field. It can be done more than through increased cost efficiency. If the company is creditable and have products that keep a higher environmental standard they can stand out and gain an advantage. It also requires that there are customers willing to pay a higher price for these products. In Statoil’s case they supply renewable products but no different than the competitors and they have until now not been any more expensive than normal petrol either. The big difference from the other oil companies lies within the production of oil, or the aim of the production. Today far from all oil production is done in combination with CCS but the aim is to extend it. Since a lot of environmental improvements are branch initiatives, like the ethanol part in petrol, it is harder for companies to differentiate themselves with new products. Statoil has although chosen to reduce the price on ethanol. It is also very expensive research that lies behind, making it important to cooperate.

**Statoil also claim to steer the branch and the competitors** to some extent. Winberg means that they are a head of the competitors in many cases concerning the environment. They are pushing for an improvement in the petroleum branch, and more needs to be done for the climate. The strategic work can be carried out either via cooperation with other actors on the arena where a common standard is developed or lobbying against the authorities that decides about the control measures. Statoil is working both ways. They are very active in SPI developing standards for the branch and they are also lobbying against authorities. They are for example trying to influence the authorities to allow the sulphate free Europe diesel that they believe is a better alternative for the atmosphere. The authorities sometimes agree with Statoil and the competitors then have to improve their strategy. Statoil are then, as Ammenberg writes about, affecting the market rules in a way that suits them. For Statoil it is important to be in a pole position, always a step ahead.

We also believe that Statoil is trying to redefines the market and the business concept to some extent. They are trying to be an energy company more than an oil company. At least that is a vision. Still renewable energy only stands for a very small part of their sales but they have the intention to increase the part. Since their main product is environmental harmful the option is, according to Ammenberg, to create a distinct environmental profile which we have seen as an important part of Statoil’s strategy.
8 Conclusions and suggestions to further research

The purpose with this thesis was to identify and study the climate strategy of Statoil and to identify important internal and external factors of impact.

We have concluded that Statoil takes the climate change seriously and is trying to handle its challenges with a pro-active strategy. The strategy is formed in a way that ensures that they continue to have legitimacy for their activities and their position as industry leaders for sustainable development. A part of their strategy is to develop new and clean technology in order to reduce carbon emissions. This is often done in cooperation with StatoilHydro and other organizations. Cooperation is also a way to share knowledge and experiences to improve the branch environmental standard. They carry out strategically planned activities in order to gain legitimacy and to improve their image. Communication is therefore crucial to mediate their actions. The strategy is very ambiguous according to Ammenberg’s criteria’s. Apart from managing environmental risks and working cost efficient they also try to steer the branch and develop new products to adjust the scene to their own organization and to gain an advantage. We also have identified their strategy as both reactive and offensive since they have to adapt to the given conditions in the society and to the other actors but they are also trying to be ahead of the competition. One example is the rapid increase in ethanol taps. They had to develop an infrastructure to be able to live up to the directive on biofuels but they decided to increase the amount of stations even faster than necessary.

The scientific evidence and public perception about climate change is high and has increased the pressure on Statoil to take their responsibility. These presumptions indicate on that Statoil’s strategy is mainly legislation driven. This is also something that requires Statoil’s strategy to be reactive. They are affected by legal framework on both national and international level. We think that it is positive that the climate debate has increased which in a way forced Statoil to work more actively with these types of questions.

The climate strategy is affected by actors on the organizational field, but also by internal conditions. The consumers are most important since they enable the business, but also because they create the brand. It is important to take their demands into consideration. Media is seen as the public’s voice in society and negative publicity can be very harmful for their image and business. We sense that there is a fear of this and therefore it is important for Statoil to work pro-actively. The internal conditions determine the possibilities to handle climate change. StatoilHydro is pointing out the direction in which Statoil shall head. Their engagement facilitates Statoil’s strategic ambitions. The financial development within Statoil is important which has impact on the strategy. It can be both encouraging and restraining depending on if the activity creates a win-win situation or if it is a financial burden.

Our study of Statoil’s climate strategy has resulted in a positive picture of the company’s ambitions and strategic behaviour. It is surprising to us that an oil company actively is working with the challenges of climate change considering that their business originally is based on fossil products. This indicates on a genuine will to make a difference and that Statoil is trying to take their responsibility. It is though crucial for Statoil to try to gain legitimacy so they can continue with their core business, to deliver fuel. The ambition, in a long perspective, is to have more and more renewable fuels, but where the oil will play an important role for a long time. We believe that Statoil needs to work more actively in their communication of their work in the combat against climate change to the customers and further increase the amount of renewable energy.
Since ecological modernization is the dominating discourse in the developed countries the strategy is well suited to the norms and values. Statoil’s identity is strengthening by the technologies developed by StatoilHydro and their work may have big impact in the reduction of emissions. Down to the point is that the demand for energy, and fuels, is based on the individual’s activities, but this is rarely mentioned by actors, policies and documents or Statoil. Instead the efficiency concept is dominating and more corrective factors are neglected.

The time frame for this thesis has been too short to investigate Statoil’s climate strategy in deep. We would consider it to be very interesting to study how Statoil lives up to their strategic ambitions and which differences it has led to. It would also be interesting to compare Statoil with other oil companies in order to be able to see the differences and similarities. It would also give us the possibility to see if they are the one of the leading companies concerning climate work in the branch.
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**Interviews**

**Bergström**, Urban, Senior Adviser Oil and Gas, Energy Management Department, Swedish Energy Agency, 080424

**Fogelberg**, Andreas, HMS (health, environment and security) executive Statoil AB, 080505

**Winberg**, Helena, Environmental executive Statoil AB, 080505
Appendix 1 – Interview guide Urban Bergström, Swedish Energy Agency 080424

Profession:

How is the Energy Agency affecting the oil business?
- What methods and possibilities do you have?

Also the ministry of finance and the ministry of industry, employment and communications regulate the oil business. How much influence do you have compared to them?

Is there any legislation that promotes the oil companies work to reduce their impact on the climate?

What other organizations are affecting Statoil? Whose opinions are most important?

How do oil companies work with the climate issue? Is it possible to see general tendencies and has it changed over time?
- Are they just dealing with the risks or are they doing more than required?

Do you have any suggestion on persons, organizations or information that we should contact or look further into?
Appendix 2 – Interview guide Andreas Fogelberg, Statoil 080505

Profession:
Work tasks:

Environmental work within Statoil
1. How has the debate about the climate change affected the strategic work within Statoil?
2. How does StatoilHydro impact on Statoil’s strategic work with climate questions? What is controlled by them?
3. How has the environmental work been received within the organization and leading board?
4. Which priority does the environmental questions have in:
   - The board of directors
   - Share holders
   - Leading board
   - The operative business

Strategy
5. How is the strategy implemented in the business development?
6. What are the strengths of Statoil’s strategic work with the challenges of the climate change?
7. Is there something that you would like to change with your strategic work?
8. How do you look at the future? Which threats and possibilities have you identified in relation to Statoil’s business?

Impact factors
9. Which internal factors are affecting your strategic work and how are they affecting it?
   - Board of directors
   - Shareholders
   - Leading board
   - Employees
   - Budget
   - Remaining factors
10. Which external factors are affecting your strategic work and how are they affecting it?
    - Subventions and taxes
    - Legal framework
    - Competitors advantages
    - Customers demand (private and business)
    - Trends within the branch
    - Research
    - Remaining factors
11. Which stakeholders would you say are the most important for Statoil? Are they demanding high environmental standards?
12. What happens if you do not live up to their demands?
13. How important is it to cooperate within the branch concerning environmental questions? How are these co-operations affecting the strategic work?
14. Which organizations have big impact on your company?
15. How do Statoil affect other companies within the branch according to you?
16. How do you want to profile Statoil toward you stakeholders?
Appendix 3 – Interview guide Helena Winberg, Statoil 080505
Profession:
Work tasks:

Environmental work within Statoil

1. How is the environmental work organized in Statoil?
2. Which different tools are you using and why? TA BORT?
3. How has the environmental work been received within the organization and leading board?
4. How does the process look like when plans and visions formulated about the challenges of the climate change?

Strategy

5. How free are you to act in relation to StatoilHydro? What is controlled by them?
6. Do you have a long term strategy for your environmental work?
7. How long have you worked strategically with environmental questions?
8. How has the debate about climate change affected your strategic work with environmental questions? Would you say that your focus area has changed by this?
9. How is the strategy implemented in the business development?
10. How do you follow up your strategic work in these questions?
11. What are the strengths of Statoil’s strategic work with the challenges of the climate change?
12. Is there something that you would like to change with your strategic work?
13. How do you look at the future? Which threats and possibilities have you identified in relation to Statoil’s business?

Impact factors

14. Which internal factors are affecting your strategic work and how are they affecting it?
   - Board of directors
   - Shareholders
   - Leading board
   - Employees
   - Budget
   - Remaining factors
15. Which external factors are affecting your strategic work and how are they affecting it?
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   - Legal framework
   - Competitors advantages
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