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The Norwegian climate act: an assessment of the policy-making process and the act's ability to avoid time-inconsistency

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Declaration

I, Ingrid Hvidsten Gabrielsen, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature.....

Date.....

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Abstract

During the past decades, science has proven the effect of human made climate emissions on climate change. Human's emissions of greenhouse gases cause a warmer and wilder climate worldwide. Thus, there is a broad, global consensus to reduce emissions to prevent further climate change. Several intergovernmental agreements have been made which aim for emission reduction, the latest is the 2015 Paris Agreement. In addition, a development of national climate acts is seen. The UK was a pioneer in this work and enacted their Climate Change Act in 2008. The Nordic countries followed suit, and Norway enacted their Climate Act in June 2017.

Both national and international policies on climate have, however, suffered from the time-inconsistency problem, where long-term policies – which are needed to solve the climate issue – are neglected in favour of short-term policies, which can be conducted and give results within a shorter time. Thus, the climate policies need measures to avoid time-inconsistency and prioritise long-term policies and measures. My motivation for this thesis has been to understand why this time-inconsistency occurs and what can be done to avoid it.

This thesis analyses the policy-making process of the Norwegian Climate Act. This includes an analysis of the actors involved and why the act was enacted at a specific time. The thesis also attempts to analyse whether the act is a good instrument for long-term planning and reduction of time-inconsistencies. The sources used are essentially official documents from the process of making the act, and interviews with persons involved in the process.

The main findings are that the policy-making process involved actors from all sectors. Most actors supported an act, while especially the economic actors were less supportive and feared an act would reduce their competitiveness. Many of the politicians, including the Government, focused on a need for cost-effective measures, while the actors who supported the act wanted it to be more stringent. They argued to include measures to prevent timeinconsistency, such as climate budgets, an advisory committee on climate change and annual reports. The only measure included in the act is annual reports, and an aim to cooperate with the EU to achieve the goals for emission reduction. Thus, this reporting, and the political opposition, ENGOs and the medias ability to give it attention and focus – in addition to a need for an establishment of a norm on emission reduction – will be crucial for the goal achievement of the act.

Norwegian and English names on actors mentioned in the thesis

Political parties

The Centre Party – Senterpartiet The Christian Democrats – Kristelig folkeparti The Conservative Party – Høyre The Green Party – Miljøpartiet De Grønne The Labour Party – Arbeiderpartiet The Liberal Party – Venstre The Progress Party – Fremskrittspartiet Socialist Left Party – Sosialistisk venstreparti

Other actors

Church of Norway National Council - Kirkerådet Cicero – Cicero Climate Realists of Norway - Klimarealistene The Confederation of Norwegian Enterprise – Næringslivets hovedorganisasjon (NHO) The Electrician and IT workers union – EL og IT-forbundet Energy Norway – Energi Norge Faculty of Law at the University of Oslo - Universitetet i Oslo, Det juridiske fakultet Federation of Norwegian Industries - Norsk Industri Federation of Norwegian Professional Associations - Akademikerne Fridtjof Nansen Institute - Fridtjof Nansens Institutt Friends of the Earth Norway – Naturvernforbundet The Future in our hands – Framtiden i våre hender Naturviterne – Naturviterne Norwegian Confederation of Trade Unions – Landsorganisasjonen i Norge (LO) Norwegian Environment Agency - Miljødirektoratet Norwegian Farmers' Union - Norges Bondelag The Norwegian Forum for Development and Environment - Forum for utvikling og miljø The Norwegian Grandparents Climate Campaign – Besteforeldrenes klimaaksjon The Norwegian Oil and Gas Association - Norsk Olje&Gass The Norwegian Public Roads Administration - Statens Vegvesen Statistics Norway - Statistisk sentralbyrå Tekna – Tekna WWF-WWF

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1. Introduction

The global climate has changed ever since the creation of earth, with cold and warm periods (Lutgens et al., 2015). Up until recently, natural conditions and cycles have driven these changes. The industrial revolution at the end of the 18th century was the beginning of decades and centuries with increasing emissions of greenhouse gases (GHG)¹ into the atmosphere. These GHGs trap the solar radiation – that would normally escape through the atmosphere after being reflected from the earth – in the atmosphere, causing a rise of the global temperatures (IPCC, 2014a). As the concentration of GHGs in the atmosphere increases, they will capture more radiation and cause increased heating. Also important, is that the GHGs lifetime in the atmosphere varies from a few months to millennia (United States Envionmental Protection Agency, 2017). Thus, due to human activity and emissions over these last few centuries, climate change has increased, and now we are at risk to make the environment unsuitable to both humans and nature. To prevent climate change from becoming irreversible, action is needed to reduce emissions.

As knowledge about climate change has emerged, there have been several attempts to make international agreements to prevent climate change from becoming irreversible. The first World Climate Conference was held by the World Meteorological Organization, WMO in 1979 (Zillman, 2009). In 1988, The Intergovernmental Panel on Climate Change (IPCC) was set up by the World Meteorological Organization (WMO) and the United Nations Environmental Program (UNEP) (IPCC, 2018), and in 1992, the UN Framework Convention on Climate Change (UNFCCC) was signed at the Rio Conference (UNFCCC, 2014). The supreme decision-making body of UNFCCC is the Conference of the Parties (COP), which holds regular meetings. In 1997, the COP3 was held in Kyoto, Japan, and agreed upon the Kyoto Protocol, an agreement on reducing emissions of greenhouse gases (GHG) (UNFCCC, 2014). This agreement committed the parties to reduce their emissions to a set goal. For Norway, the goal for the first period, 2008-2012, was to emit no more than +1% of the emissions in 1990 (Prop. 77 L (2016-2017)). For the second period, 2013-2020, the commitment is to keep the emissions at an annual level no higher than 84% of the emissions in 1990.

¹ Greenhouse gases (GHG) are gases that appear in the atmosphere, both natural and anthropogenic, and absorb and emit radiation from the surface of the earth, causing a global heating. The most important GHGs are water vapour (H₂O), carbon dioxide (CO₂), nitrous oxide (N₂O). methane (CH₄) and ozone (O₃)

In 2015, the Paris agreement was signed during the COP21, and it aims to keep the global temperature rise below 2°C (UNFCCC, 2018). The agreement "*requires all Parties to put forward their best efforts through "nationally determined contributions" (NDCs) and to strengthen these efforts in the years ahead"* (UNFCCC, 2018). Norway's contribution is to reduce their emissions by at least 40% by 2030, compared to the 1990 level, which is intended to be fulfilled in collaboration with the EU (Prop. 77 L (2016-2017)), and to be carbon neutral by 2050. These commitments are the same as agreed in the climate agreement made by the Norwegian parliament in 2012 (Innst. 390 S (2011-2012), 2012).

1.1 The problem of long-term policy

Even though several agreements have been made to preserve both climate and other aspects of the nature and environment, human emissions of GHG increased by an average of 2.2% annually from 2000 to 2010 (IPCC, 2014b). This happened in a period where the emissions were supposed to decrease, due to e.g. the Kyoto protocol.

I have often wondered how governments worldwide, repeatedly promise to take measures, and set optimistic goals for reduction of emissions, but as the date for the deadline gets closer, they extend the deadline. Former Prime Minister of Norway, Jens Stoltenberg, confirms this in his autobiography, while describing the government's discussions about their climate report to the parliament (Stoltenberg, 2016:392-393, translation by Sarah Mikhaiel);

"What happened wasn't unusual for Norwegian environmental politics (or climate change policies): we set ambitious goals to cut CO_2 emissions, which we hoped to meet at some date far into the future. When that date approaches, and we realize our emissions would become difficult to reach, we simply change the deadline, and instead create a new deadline even further out into the future."

Climate goals and policy have a long-term perspective, and often a large spatial scale perspective as well. This leads to an asymmetric conflict; the people causing a problem (here: climate change) are not the ones who will be affected of it -those people may live far away from the people causing the problem, or they may not even yet have been born (Vatn, 2015).

The long-term perspective may lead to what is known as the *time inconsistency problem*; what may be the best choice at one time is contrary to what may be best at a later point of time, which also makes it difficult to run a coherent long-term policy (Hovi et al.,

2009). This can be a reason for the government's repeated deadline extensions of the climate goals.

As mentioned, the Norwegian parliament has on two occasions agreed upon a climate agreement; in 2008 and in 2012 (Regjeringen, 2014a). These settlements contain objectives for both 2020 and 2030, but the government has been criticised for ignoring and postponing the objectives and instead conducting a policy which makes it impossible to reach the goals on time (Ottosen, 2016; Ottosen et al., 2016).

1.2 Problem statement

A possible solution for making a long-term policy is to make it as an act. The United Kingdom enacted their UK Climate Change Act in 2008 (Prop. 77 L (2016-2017)), and are now followed by several other states, e.g. the Nordic countries. Norway enacted a climate act in June 2017, and it came into force in January 2018. It is a long process to make a law – it took five years from when the climate act was first mentioned in Norway until it was enacted in parliament. Involved in this process were both politicians, business people, and civil society, such as Non-Governmental Organisations (NGOs).

In this thesis, I will study the process of making and implementing the Norwegian climate act, from the first considerations, until the act was enacted in the Parliament. By using theoretical framework, I will also make an opinion on whether it's likely that the act will achieve its purpose.

1.3 Objectives

The objectives of this study are to get a better understanding of why Norway enacted a climate act, and the process of making it, and to be able to make an opinion on whether the act may ensure that Norway reaches their climate goals as determined in the act.

1.4 Research questions

1) What was the process of making the act?

- a) Why was the climate act adopted specifically in 2017?
- b) Which actors participated in the process and what arguments were put forward for and against the act?
- 2) Is the act a good instrument for ensuring long-term reduction of climate gas emissions?

1.5 Outline of the thesis

The thesis consists of seven chapters. This introduction, which includes research questions, is followed by background for the thesis – both natural science's forecast on what the consequences of climate change will be, a look at climate acts in other European countries and Norway's situation.

In chapter three, the theories used to analyse and discuss the research questions are presented. This consists of the basic problems of environmental policy – including the time-inconsistency problem and ways to overcome these problems – theory on institutions, power and conflict of interests and the process of policy-making and implementation of the new policy.

Methodology used for writing this thesis is found in chapter four, and the analysis and discussion of research question 1 is found in chapter 5. The analysis undergoes the process step by step and discusses at the end of each sub-chapter. Chapter 6 deals with research question 2, while chapter 7 – the closing chapter – provides conclusions drawn through the research.

2. Background

2.1. Consequences of climate change

As stated in the introduction, climate change has occurred as long as the earth has existed. Yet, the changes we see nowadays are human made, and may change the climate in a way humans have never experienced before. Although there are uncertainties, calculations on the climate change indicate that in 2100 the temperature increase will be between 3.7°C and 4.8°C, compared to pre-industrial levels (IPCC, 2014b) if measures to reduce greenhouse gas (GHG) emissions are not taken. Although a rise of 4°C may not seem much, the global temperature during the last ice age – Weichel – was 2°C to 4°C less than today's average temperatures, and it's predicted that a temperature decrease at a range of 2-3°C is enough to start a new ice age in

Scandinavia (Jørgensen et al., 1997). Thus, we can see that just a small change in the global mean temperature may cause large changes to the Earth's living conditions. A reason for this is that global heating will not affect each continent in the same way – some will have a higher temperature rise than others. 2°C temperature rise globally will range from an approximate 0°C rise in some parts of the Southern Pacific Ocean, to 5°C in the northernmost parts of the Earth, close to the Arctic Pole, while 4°C heating may give as much as 11°C heating in the northern parts of the Earth (IPCC, 2014a).

The Intergovernmental Panel on Climate Change, IPCC has projected expected future radiative forcing as a result of GHG emissions and concentrations by four different Representative Concentration Pathways (RCPs). In addition to the GHG emissions, the RCPs include changes of land use and short-lived gases (IPCC, 2014a). RCP 2.6 shows emissions due to a stringent policy, while RCP 4.5 and 6.0 are intermediate scenarios, and RCP 8.5 is a high emission scenario. Figure 2.1 shows the four different RCP scenarios. Different RCPs will give a different increase in global temperature, as shown in figure 2.2. As we can see, RCP 2.6 is the only pathway which is likely to keep the global heating below 2°C. Figure 2.2 shows temperature changes compared to 1986-2005, thus, 0.6°C should be added for a comparison to pre-industrial levels (Cottis, 2015).



Figure 2.1 Radiative forcing Historical and projected radiative forcing relative to pre-industrial time due to different RCPs. From IPCC (2014a).



Figure 2.2 Global temperature changes Expected temperature changes due to the four different RCPs. From IPCC (2014a)

The temperatures have already risen by 0.85°C compared to pre-industrial levels (Cottis, 2015). These changes have started the mentioned feedback mechanisms and caused more extreme weather; more floods and storms, but also more droughts and extreme temperatures. The different types of disasters occur with varying frequencies in the different continents (World Meteorological Organization, 2014). While the number of reported floods has increased globally and are a major part of the disasters worldwide. In North-America and the South-West Pacific, storms are a the most common disaster. Figure 2.3 shows the global increase in different disasters from 1971-2010.



Number of reported disasters by decade

Figure 2.3 Number of reported disasters globally 1971-2010. Dark blue is floods, light blue mass movement wet, green storms, yellow droughts, red extreme temperatures, and orange wildfires.

From World Meteorological Organization (2014).

Climate change do not only cause these disasters; they also force wildlife to move to new areas, they cause illness to humans and animals, and they reduce the agricultural crops and food production (Cottis, 2015). The heat waves cause a stop in photosynthesis. Thus, the plants combust their own energy, and release CO₂ instead of consuming it. Figure 2.4 shows a correlation between heat waves with subsequent reduced access to food and social unrest, which The World Bank (2014) assumes could have caused the Arab Spring; most of the Middle-east and Arab areas have a high level of imported food. When the food prices rose due to reduced crops after heat waves, food became unaffordable to the population, who organised to revolt. The food crisis did not solely cause the Arab spring, but it may have been the last straw for the people.



Figure 2.4 Food prices and conflicts Link between food prices (blue dashed line) and conflicts (red dashed lines show the start of riots). Number of dead people in parenthesis. From The World Bank (2014)

If these events are the consequences of 0.85°C heating, what will the consequences of 2, 3 or 4°C heating be? We cannot really know for sure, but science has offered good projections.

Heat waves all around the world will increase in occurrence, duration, and intensity. The heat wave magnitude index HWMI ranges heat waves from 1 (normal) to 32 (ultraextreme) (Russo et al., 2014). The Russian heat wave in 2010 – the most intense heat wave measured by humans – had a HWMI index of 3.57 (Cottis, 2015; Russo et al., 2014). Figure 2.5 shows the number of heat waves with a HMWI \geq 4 between 1980 and 2012 compared to a 2°C rise, and a HWMI \geq 8.

In addition to more extreme heat, 2°C heating will cause further drought in already dry areas, and more rain and extreme rainfalls in already wet and humid areas (Cottis, 2015). The most significant changes will be in Northern Russia, with a 20-30% increase in rain and extreme rainfalls, and in the Middle East and Northern Africa, with 25% less rain. Along with increased temperatures this will lead to massive droughts. The temperatures may press the threshold of humans and nature in the tropics, and thus, make the areas uninhabitable. At a temperature rise of 1.5-2.5 °C, as much as 30% of all species of plants and animals may go extinct (IPCC, 2008).



Figure 2.5 Observed and expected heat waves

Number of extreme heat waves (HWMI \geq 4) for the period 1980-2012 (left) and with 2°C global heating (middle). To the right, we can see heat waves at HWMI \geq 8 at 2°C heating. We can see a massive increase of heat waves at both HWMI \geq 4 and HWMI \geq 8 in the tropics. In the period 1980-2012, heat waves at HWMI \geq 8 did not occur. From Russo et al. (2014)

Agriculture will also face major challenges by a 2°C heat rise – the challenges we have seen already caused by today's temperature rise will increase. Knox et al. (2012) have projected a mean decrease of 7.7% for all crops in Africa and South Asia, and as much as 15% in Central Africa, while Asseng et al. (2015) projects a decrease in wheat production ranging from 4-8% in Northern USA and Europe, to 12-20% in Ukraine and India.

The more CO_2 in the atmosphere, the more CO_2 is captured in the ocean, known as the ocean sequestration of CO_2 . But, this has negative consequences – the ocean's acidity rises with the level of CO_2 in the ocean – which is critical for species, especially at the larval stage. Also reducing calcium carbonate levels, which are necessary for many species living in the ocean. Thus, an increase of CO_2 in the ocean threatens the animals living there. Nevertheless, Cottis (2015) claims that most species will not be negatively affected by ocean acidification unless the temperature rises more than 2°C. The exception is coral reefs, which may bleach and die at a lower global temperature rise than 2°C. The ocean level will, however, rise at 2°C – a process which has already started.

Cottis (2015) describes the expected living conditions around the world with a 2°C increase in temperature; the northern parts of Europe, USA, Russia, Canada, and the southern parts of Australia, South-America, and New Zealand will experience more extreme rainfalls, storms and droughts, and there will be challenges to agriculture and mitigation to the climate,

but most people handle this. In most of the tropics it will be difficult to live, due to heatwaves, droughts, and reduced food production. The projection is that between 1 and 2 billion people will have to migrate. This may cause challenges to people living in Southern Europe and the USA, and Mexico, as the people from the tropics will most likely migrate here. These areas will also experience heatwaves and droughts, but not to the same extent as in the tropics. People living here will have to choose between mitigating climate cost or migration to either upland areas or to the first mentioned group of countries.

A temperature rise of 3 or 4°C will most likely cause many of the same challenges as the 2°C rise, but with more intensity. A central aim of the Paris agreement is to keep the global heating below 2°C compared to pre-industrial times. This limit is chosen because it is the expected threshold to avoid unstoppable positive feedback mechanisms. These mechanisms occur when a change causes an increased amount of the same change. E.g. will icecap melting, caused by global heating cause increasingly more global heating as dryland has lower albedo than the ice. Increased evapotranspiration due to heating will cause more water vapour – which is a major GHG – in the atmosphere. The large forests may die, leading to a decrease in the absorption of CO₂. Also, the tundra in Siberia, Alaska and Canada will thaw, and release methane and carbon dioxide. As mentioned, there is uncertainty about at which temperatures the feedback mechanisms will occur, but it is likely that the threshold for the cryosphere is between 2 and 4°C temperature rise (IPCC, 2014a).

Many of these processes are also irreversible; it will take a significantly longer time to recover from the perturbated state than it took to reach that state (IPCC, 2014a). The time aspect for recovery of the irreversible processes is also uncertain, but the assessments range from years or decades for e.g. droughts and monsoonal circulations, compared to centuries for forests, and the release of carbon from the permafrost could span millennia.

The risk of global heating is that we do not know when we will reach the threshold for the positive feedback mechanisms, and when we do, there is a major risk they will be unstoppable, and that they will speed up further climate change. Cottis (2015, my translation) states "*There is a significant risk that humans will not be able to stop further heating from four degrees global warming, due to the large emissions of greenhouse gases and extra heat production from the feedback mechanisms*".

2.2. Other countries' climate acts

To meet the challenges the climate change causes, several countries have enacted climate acts (Prop. 77 L (2016-2017)). I will look at the climate acts in Norway's neighbouring countries. The different acts have different focuses, but all wish to achieve a similar goal; a reduction of GHG and avoid unstoppable climate change by focusing on long-term policies instead of short-term measures.

The first West-European state to enact a climate act was The United Kingdom (the UK), which enacted their Climate change act in 2008. The act is extensive, with 101 paragraphs, including goals for reduction of emissions by 2020 and 2050, carbon budgets for the period (maximal levels for GHG emissions every fifth year), annual reports from the government to the Parliament and procedures for determination of the goals. The act also establishes a Committee on Climate Change – an independent committee of experts who gives advice on the goals, and who evaluates the fulfilment of the goals (Nordrum, 2017; Prop. 77 L (2016-2017)). The act states that "*It is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 80% lower than the 1990 baseline*" (Crown, 2008:6), without any exceptions due to what is "*reasonably practical*" (Waag et al., 2015:3). To ensure to stick to the emission pathway, the act requires carbon budgets, which is said to be a success criteria (Waag et al., 2015). The carbon budgets are aligned with parliamentary elections and last for five years (Tomasko et al., 2017). Thus, the carbon budgets divide the long-term goal into shorter, more manageable goals and hold the Government responsible for achieving these.

Another important part of the UK Climate Change Act is the Committee on Climate Change, which is an independent committee of experts on climate change. The Committee gives the Government advice on climate policy and monitors whether the reductions stick to the expected pathways (Jevnaker et al., 2014). As the Committee is independent of the Government, it is free to propose measures irrespective of what the government at any given time may want. In fact, the Government must pay attention to the Committee's advice, and if they choose not to follow these, they must explain why. This ensures an active attitude to the climate policy and measures, as the Government cannot simply reject the proposals without an argument. Also, the Committee is permanent, which ensures a long-term perspective, and an opportunity for the Committee to gain respect amongst both decision-makers and the public (Waag et al., 2015).

Reporting on the carbon budgets is another measure in the UK Climate Change Act made to ensure progress to reduce emissions. The reporting is to be done at specific dates, and to be presented both to the Parliament and the public and should include both current and future GHG emissions and current and planned measures (Waag et al., 2015). A failure to achieve the carbon budgets should be explained in the report, and the deficit must be included in the next budget period (Jevnaker et al., 2014).

All these measures have strengthened the UK's contribution to reduce GHG emissions, as they force the government to stick to the long-term policies without detours such as choosing the short-term policies.

Denmark enacted their climate act in June 2014 (Prop. 77 L (2016-2017)). The purpose of the act is to "establish a strategic framework for Denmark's climate policy in order to transition to a low-emission society by 2050" (Civilstyrelsen, 2014, my translation). Like the UK, Denmark's act includes an independent climate committee, who advise the Government decision-makers, who then regularly report to the Parliament. The act is short, only five paragraphs, and does not include specific goals to reduce emissions levels. In fact, the only measures in the act are to establish a climate committee and ensure annual reports from the Minister of Energy, Utilities and Climate to the Parliament.

The next Nordic country to enact an act on climate was Finland, in January 2015. Similar to the Danish act, this one is also a framework act, which seeks to "*set the framework for Finland's climate policy*" (Justitieministeriet, 2015, my translation). With its 16 paragraphs, it is somewhat more extensive than the Danish act. Finland's act defines goals for reduction of GHG and demands an annual report on the achievement of the objectives from the Government, as well as an independent committee as in the UK and Denmark. Unlike the British act, the Finnish does not require carbon budgets, but national plans for the climate (Regjeringen, 2016a).

At the same time as Norway prepared their climate act, Sweden compiled their climate act, which was enacted in June 2017 (Sveriges Riksdag, 2017). This act states that "*The government should run a climate policy which (1) prevents dangerous disturbance of the climate system, (2) contributes to protect the ecosystems and today's and future generations against harmful effects of the climate change*" (Sveriges Riksdag, 2017, my translation). The act is with its five paragraphs short and does not contain any determined goals for emission reduction or any independent committee on climate. However, quantified goals are proposed in

a public investigation, but not included in the act (Regjeringen, 2016a). Common for all these acts, is that they do not concern the inhabitants, but the actions of governments in the different states.

2.3. Norway's situation

Before enacting a climate law, Norway already had many acts regarding climate. The act referred to as the most important in this regard, is the Planning and Building Act (Bugge, 2015). This act requires the municipalities to set a long-term plan for the use of the areas within the municipality. Also, other laws concern environment and climate, but they are fragmented into the different work areas. In addition to legislation, fees and economic incentives have been important measures in Norwegian climate policy, and they participate in the European market for emission quotas (Regjeringen, 2014c). The government finds the Norwegian legislation more comprehensive than in many other countries. However, Norway did not have an act specifying climate or measures to reduce climate change.

Transformation of power generation to low- or non-emitting resources is said to be the most important measure for reducing GHG emissions (Edenhofer et al., 2011). Also, many of these measures are cost-effective (Regjeringen, 2014c). Unlike most other countries, Norway's power generation is mostly based upon renewable energy. Nevertheless, Norway contributes to GHG emissions through their large petroleum sector, which is both the most wealth creating sector, and causes as much as 27% of Norway's total emissions in 2013. In addition, Norway's inhabitants live scattered throughout the country, which demands infrastructure, and the cold climate poses requirements for buildings and heating systems. Thus, reducing GHG emissions in Norway will demand different measures than other countries.

3. Theory

All acts are institutions which contribute to define a society, by defining rules for the people living there. Laws define rights and duties of citizens, and how the authorities should act in certain situations. Thus, a legislative amendment may contribute to a change in the interactions between citizens and authorities in a country. The Norwegian climate act represents a change in institutions and set new rules for the authorities. Also, environmental policy differs from many other policy areas because of the time aspect; a long-time horizon for the policy is needed, as the environmental changes have effects over decades, or even centuries. Climate policy often leads to a conflict of interests; which measures are necessary, and who should pay for them? Thus, in this chapter I will look at the basic problem of environmental policy and law, the problem of long-term planning, institutions, and conflict of interest.

3.1 The basic problems of environmental policy; asymmetry, fragmentation, and time-inconsistency

A basic problem in environmental policy, including climate policy, is the asymmetry as mentioned in the introduction. As I stated, this may lead to the *time inconsistency problem* (Hovi et al., 2009), which occurs when the politicians in charge are aware of the issue, and have agreed upon set goals, but find it more tempting to focus on short-term issues than implementing long-term policy. Hovi et al. (2009: 20) characterises a long-term policy problem as "*(a) lasting for at least a human generation, (b) deep uncertainty and (c) engendering substantial public good aspects*". This causes the challenges of making a long-term plan to response to the uncertainty, and to implement this plan into "*a consistent set of effective policy measures*" (Hovi et al., 2009: 20). A short-term policy can be carried out immediately, so that the effect may be noticeable, in opposition to a long-term policy, which typically gives expenses now, while the gains may not be noticeable for several years. If the effect is to prevent something from happening the gains may not noticeable at all. A democratic system, with regular elections – in Norway every fourth year – favours more popular, short-term decisions over long-term policy, as the politicians will most likely prioritise measures with rapid results, which satisfy their voters and influential stakeholders and thus, increasing the chance of being re-elected.

Another challenge related to the time-inconsistency problem is the domestic politics problem (Hovi et al., 2009), which is caused mainly of the already mentioned issue of politicians wanting to please their voters to increase their chances of being re-elected and thus, prioritise short-term policies, but also by the fact that politics is about giving and taking, meaning that the political parties sometimes may give up on one of their goals to get support for others (Hovi et al., 2009). Also, the attention to domestic issues tends to decline quite fast, which makes it more challenging to focus on these issues over time.

The asymmetry between cause and effect makes it more difficult to engage the polluters to act, as they will not receive any benefits by reducing emissions themselves. As most people prioritises the present over distant future, it is also difficult to make acts which prioritise the future – known as "democratic myopia" (Thompson, 2010). Future generations may be affected by the policies run today but have no opportunities to influence it e.g. by participating in today's elections of the decision-makers.

The asymmetry and democratic myopia applies for the government as well; spending their scarce resources on climate mitigation and emission reduction will not benefit them now but will benefit future generations. Thus, they risk losing voters by doing so. As there are few incentives to reduce emissions or capture CO_2 today, polluters will experience costs by investing in new technology. Nevertheless, Hovi et al. (2009) point out that regulating emissions may be an advantage for companies who develop, or have started to use, new technologies, as these technologies now may turn out to be cheaper than the old one, even though they were more expensive originally. Related to this, The Norwegian Ministry's consultation paper repeatedly points to development and implementation of new technology as necessary for reaching the climate goals (Regjeringen, 2016a).

One of the core problems of environmental policy and law, at least in Norway, is the fragmentation of legislation dealing with the environment (Bugge, 2015). The different acts that relates to environment and climate are focused on different sectors. Thus, it is harder to get a holistic view of which laws exist, how they affect each other and other considerations. This together with the mentioned government's prioritisation of short-term measures - may also lead to what is known as the tyranny of small decisions; when a high number of decisions, that separately are reasonable, becomes problematic in sum. The problem of fragmentation also goes for the government; the political system is divided into different segments, where the actors will have a consensus over norms and a definition of problems, and a closer contact with each other than with actors outside the segment (Klausen, 1996). This consensus may make it harder for actors outside the segment - or insiders who disagree in the specific case - to interact and influence the decision makers inside the segment. As most of the different sectors affect the environment in some way, the actors concerned with the environment - such as environmental nongovernmental organisations (ENGOs) and governmental agencies - will have to work upon all these sectors and segments, even though they are not really part of them. Nevertheless, if the environmental issue only affects one segment, the segment itself may solve the problem. Such a division can also be made for general issues, which cross multiple segments; by dividing the major issue into several more segment-specific issues, each segment may solve their minor issue. This can be perceived as a more manageable way to deal with the issues for the involved actors.

Haug et al. (2010) found in their study that monitoring data for climate measures are of low quality, and a lack of early notifications on whether the climate goals will be reached is a major issue for the policy makers. A better system for monitoring and notifications may help to reach the decided climate goals. This system could ensure that knowledge about the effects on climate of different policies was available to the decision-makers, and this knowledge should be a basis whenever enacting a policy.

3.2 Ways to overcome the time-inconsistency problem and fragmentation

It is challenging, but important, to prevent the short-term policy to be chosen, and to ensure that the decision-makers run a long-term policy. Hovi et al. (2009) describes three strategies for this. The first is to eliminate alternative options. This is a known technique in the army, where they prevent retreat by burning the bridges behind them. In climate policy, irreversible measures, e.g. incentives to install new technology, can be made. The second strategy is to ensure that the decision-makers, both present and future, abide by certain rules, and thus, "ties their hands". In Norway, this is well known in the state budget, where the Parliament has enacted a fiscal rule which tells how much of the income from the petroleum sector that can be used every year. A similar rule can be made in climate policy by e.g. emission budgets that determines how much GHG gases should be emitted each year. Hovi et al. (2009: 24) states that to ensure a long-term climate policy, "one would need an Earth Alliance that is (a) authorized to decide long-term plans, (b) equipped with the means to implement such plans, and (c) deprived of easy ways to shirk its plan over time." The third option is what Hovi et al. (2009: 24) refers to as "rational ignorance"; to not acquire information about what could be attractive as a short-term policy but is in contrast to the long-term policy. This, however, requires that the decision-maker is strongly committed to the long-term plan and do not want to choose a short-term policy. This strategy can also be performed by outsourcing the assessment of measures to a separate agency which considers the measures against certain frameworks (Lazarus, 2010), like the UK Committee on Climate Change. By doing this, the assessments will be subject to quality control and influenced less by political fluctuations. Such a committee, or an existing agency, could also be given the job of regular reporting on the emission paths and whether the goals will be achieved and thus, *"keeping [the] problem on the agenda"* (Hovi et al., 2009:29), and ensure that the decision-makers continue to work on it.

To overcome the democratic myopia, Thompson (2010) states that the future generations should have someone to represent them in the present – a "*trustees of the democratic process*" (Thompson, 2010:14), who should ensure that the democracy is run - and decision taken – to the best for future generations.

Also, an act made to eliminate, or at least reduce, short-time policy – like a climate act – must be flexible enough to handle the uncertainty associated with the issue and allow necessary changes due to new information that may occur, but also staunchly enough to ensure a stability in the policy that will last over time and be able to withstand influence from strong actors who wants to weaken it (Lazarus, 2010). A climate act could be an institution which ensures these necessary measures with emphasis on long run objectives.

3.3 Institutions

Vatn (2015:78) defines institutions as "[...] the conventions, norms and formally sanctioned rules of a society." By this definition, the climate act is an institution, and the implementation of the new act implies a change in both policies and institutions. Thus, institutional theory is at the core of my thesis. It is here important to note that this discipline defines, institutions as different from organisations. The latter are actors that influence, and are influenced by, the institutions. Institutions not only show us the expected way to behave in the society, they also provide us with stability, and make the society more predictable as it forms a key basis for human coordination (Vatn, 2015).

March and Olsen (2006) have a similar perspective while emphasising more clearly that 'organised practices' are a key element of institutions: "An institution is a relatively enduring collection of rules and organized practices, embedded in structures of meaning and resources that are relatively invariant in the face of turnover of individuals and relatively resilient to the idiosyncratic preferences and expectations of individuals and changing external circumstances." (March & Olsen, 2006:3) Furthermore, they also divide institutions into formal rules, behaviour, and actions, which is similar to Vatn's formally sanctioned rules, norms, and conventions. March and Olsen (2006) mention the complex relationship between formal and informal institutions, and that informal institutions are used to develop formal rules and policy.

As noted above, Vatn (2015) mentions three different types of institutions. The first is conventions, which are the solutions we find, or the way we react on certain situations. They are not influenced by any set of values and will be alike for most people of a society. Nevertheless, conventions will be different in different cultures, so acting on basis of one set of conventions may end up as wrong behaviour in another culture.

Norms are also a guideline for behaviour in certain situations, but unlike conventions, norms are based on a set of values (Vatn, 2015). Even though the norms are informal – there is no legal sanctions if they are violated – you may feel guilt or be sanctioned in other ways by the civil society, e.g. become an outcast if the norm is not followed (Vatn, 2005).

Formally sanctioned rules are statutory rules and legal relations (Vatn, 2015). In contrast to conventions and norms, to violate these rules is usually followed by a sanctioning governed by a third party. Laws are typical examples of this kind of institution.

Norms are evolved over a long period of time, and they are constantly changing. What is considered appropriate behaviour today may have been inappropriate just a few decades ago. March and Olsen (2006) determine that informal institutions, like norms, affect formal institutions, like laws. Thus, an informal norm may affect the policy makers and decision takers to develop a new formal rule. Nevertheless, changes may also occur the other way around; formal rules may affect norms. This is well known to the governments, who may enact laws to change people's attitudes about a specific issue (Bugge, 2015). This corresponds to the definition Voß et al. (2009:278) put forward for long-term policy design; "[...] the development and implementation of policy strategies that seek to change radically key societal structures". I cannot see that all laws are meant to necessarily cause a *radical* change in the society, but they all contribute to a change in some way. Thus, they may as well contribute to reduce the time inconsistency problem, by reducing the possibilities to choose the short-term policy instead of the long-term policy. The Norwegian climate act seeks to do this. It is designed to provide predictability about the policy to be conducted by the government, regardless of which political party is in charge. The act sets a framework and specifies goals for emission reduction at specific years. By doing this, the law tries to reduce time-inconsistency by forcing the decisionmakers to stick to the long-term policy. It may also change peoples' opinion regarding what is appropriate behaviour towards climate, and thus societal norms. This will make it even harder for the politicians to choose short-term decisions.

3.4 Power and conflict of interests

The government is set to lead the state, including the state's work on the environment. In Norway, as a democratic state, the government's legitimacy is based on political power given by parliamentary elections in a parliamentary governance system. Thus, the parliament has power over the government. The government is given the power to propose new acts, and the parliament holds the power to enact or reject these. As I find power as an important element to the politics, I will here give a description of the concept of power, and the different ways it appears.

Dahl (1957) defines power as "A has power over B to the extent that he can get B to do something that B would not otherwise do". However, his definition does not say anything about how this power is exercised between A and B. This aspect is included by Lukes (2005:27), who states that "A may exercise power over B by getting him to do what he does not want to do, but he also exercises power over B by influencing, shaping or determining his very wants". Thus, Dahl's definition emphasises only the observed actions and the simple conclusion that A gets B to do something he did not want to do, while Lukes goes deeper into the analysis, and the view of how A gets B to do this.

NOU 2003: 19 divides power into three categories; (a) *political power*, which is the formally given power in and between states, (b) *economic power*, which is linked to the access of limited resources and money, and (c) *ideological power*, which is about world views and values. This kind of power is linked to the norms in a society.

An easy way for A to exercise power over B may be by limiting the resources B needs, e.g. money (Engelstad, 1999) – what NOU 2003: 19 calls economic power. Thereby, the one who controls limited resources often has power over the one who needs these resources. In politics, the ministry of Finance, and other ministries which generates monetary income – in Norway the ministry of Petroleum and Energy – will have power over the other ministries, who need this money. Another asymmetry of power is found when "*A has more control over matters B has interest in, than B has control over matters A has interest in*" (Engelstad, 1999:23, my translation). In politics, this could be when an actor outside the parliament, e.g. an NGO or economical actor, who has interest in a matter, but the parliament holds the power to decide. The economic actor may have control over jobs the parliament wants to secure, but often, the NGOs do not hold control over other resources of interest for the parliament and decision-makers than the peoples' opinion. This makes relations and communication – to explain or

persuade the other part – important, in accordance to Lukes' definition. This is also what the government writes in their white papers², and what different actors do through consultation processes etc. Furthermore, Lukes (2005) emphasises that power is not only making another do something he or she did not originally want to do, but also about making, or *not* making, decisions. To decide and implement the decision is certainly to use power, but in the same way, to not decide, and thus oppress a discourse or a decision for an undesirable point of view, which is also a way of exercising power.

Lukes (2005) claims that your interest in a case can be defined subjectively; what is important in your life, but also objectively; which decision will benefit or harm you. For a government, the first reason may be explained in the basis of their politics, as this usually represents what is important to both the political party, the politicians, and their voters, while the latter may have a more rational explanation; will the decision benefit or harm the state and the residents? Politicians will also often consider what will gain the party and themselves; which decision will be most likely to increase their support amongst the voters? These different assessments may also cause different preferences in chosen measures. In the environmental policy, this can especially be whether to prioritise cost effectiveness or quick action, to set the goals for each sector or nationally, and for reduction of GHG emissions; whether to reduce emissions nationally or by buying quotas from other countries. An actors interests in a case may also alter over time, and the short-time interests may be different from the long-term interests, in accordance with the time-inconsistency problem.

Many actors may have interest in a case, without having this inherent power in control over resources, nor the possibility of sanctioning. Thus, their power is in the ability to influence and persuade the decision-makers to decide in accordance to their wants. The different actors' interest may be in opposition to each other; where strict regulation is in the interest of one actor, another may want a weaker regulation. Some sectors will be more affected by a decision than others, especially in the short term. It is likely that these sectors will be more negative toward a change, or the discussed policy, than sectors that will not be affected in the same way. In the discussion about a climate act, it is likely that the industry – especially oil related – will be more negative to change than ENGOs, who want to save the climate and environment. By enacting a climate act, today's decision-makers have a power over future decision-makers by adopting

 $^{^{2}}$ "White papers are drawn up when the Government wishes to present matters to the Storting that do not require a decision. White papers tend to be in the form of a report to the Storting on the work carried out in a particular field and future policy. These documents, and the subsequent discussion of them in the Storting, often form the basis of a draft resolution or a bill at a later stage" (Regjeringen, 2018)

acts that limit future options. Thus, it is important for interested actors that politicians are encouraged to cooperate towards desired goals.

3.6 Making policy

The parliament is set to enact policies for the nation, including climate policy. The climate act will determine the climate policy's future. The climate act's purpose is to reduce emissions. This can only can be achieved by creating enacting policies with similar focus. Thus, I will mention the process of policy-making.

Turner (1997) defines six steps of the process of policy-making, showed in figure 3.1;

- *I. Issue, or problem.* To make a policy, there is a need to define the issue; what is the problem? What needs to be changed?
- *II. Policy definition.* An agreement among the politicians/policy-makers upon the purpose of the policy.
- III. Policy formulation. How to solve the problem and reach the agreed goals, including identifying possible solutions, discussions about what type of policy should be created, and who will be responsible for the implementation of the policy (Howlett, 2010; Turner, 1997). This stage may include consultation rounds, and experts may be involved to help to find the best solutions.
- IV. Policy implementation. When a policy is enacted, it must be put into action, so that the agreed goal can be achieved. How this is done is important for the policy's success or failure. As this is of great importance to my assessment of the possible effect of the climate act, I will look closer into this in chapter 3.6.
- *V. Problem superseded and redefined.* If the policy works as expected, the problem is superseded, and the goals are, or will be, achieved. If it does not work, there is a need for redefinition of the problem and the policy.
- *VI. Policy outcome or the consequences of the policy.* Are the goals achieved and the problems solved as expected? The policy may also cause an outcome for the politicians who enacted it; they may become more or less popular among the civilians, bureaucrats, and other politicians, resulting in re-election or departure from the politics.



Figure 3.1. The process of policy-making. From Turner (1997)

Although the process appears to be linear in figure 3.1, it is usually not. There may be a need for going back and forth between the different steps in the process, as new information appears, causing a need for change or redefinition in earlier steps.

3.7 Implementation

The work on the climate act, like other policies, is not over when the parliament enacts it. It must be implemented in a way that will make it work as intended. To be able to do an assessment of whether the act will do this, I will here look at theories of policy implementation.

There is no clear definition of the term implementation, nor is there any clear consensus about when in the policy process the implementation begins (Kjellberg & Reitan, 1995). Implementation studies is viewed by one school as the decision-making approach whereby implementation begins after the enactment of a policy. Another school of thought views the process-oriented approach of implementation as a network of processes. Here, I will mainly focus at the decision-making approach.

The decision-making approach distinguishes between the policy-making process and the implementation process; the latter starts when the first ends (Kjellberg & Reitan, 1995). Nevertheless, Van Meter and Van Horn (1975) state that how the policy process starts is important for the success of its implementation. Also, whether the policy demands a large or small grade of change, and the grade of agreement on the policy is of importance; a high degree of change (in both the policy itself and the organisation which is set to carry it out) combined with a small degree of agreement on the policy will make the implementation difficult, as
opposed to a low degree of change and a high degree of unity, as shown in figure 3.2. Most likely, small, and gradual changes are more easily accepted, than large, sudden changes, as people have time to get used to them. To be able to reach the goals in the enacted policy, they have to be clearly defined. Kjellberg and Reitan (1995) claim that the goals sometimes are unclear, either because the decision-makers want to blur them to avoid resistance, or because the goals are too difficult to state in a clear way or are built on contradictory assumptions. In addition, even if there is broad support for a goal, it can be challenging to get the same support when the goal is transferred into concrete measures (Hovi et al., 2009), which clearly shows what changes need to be done.



Figure 3.2 How the degree of change and unity affects implementation. After Kjellberg and Reitan (1995)

Van Meter and Van Horn (1975) point out three variables of importance for the implementation; (a) communication between the organisations which work with the implementation, which implies that "standards and objectives cannot be carried out unless they are stated with sufficient clarity so that implementors can know what is expected of them" (Van Meter & Van Horn, 1975: 466). If the goals are unclear, whether with or without purpose, the implementors are given the job to clarify them (Kjellberg & Reitan, 1995). This may both affect, and be affected by, the communication between the different agencies and organisations working on the implementation, (b) structural features of the organisations, including the connection to the decision-makers and the staff's competence and (c) economic and social conditions.

This, in combination with the willingness of action among the implementors, determinates the success or failure of the policy. The willingness of action may be

professionally justified or due to personal interests. If the implementors do not agree with the goals or measures they will deliberately or unconsciously delay the process (Kjellberg & Reitan, 1995). Contradictorily, if they do agree, their commitment may amplify the process.

Mazmanian and Sabatier (1983) also include the need for an understanding of the connection between the measures and the policy purpose, and legal incentives in the implementation process.

Hogwood and Gunn (1997) also points out several assumptions for a successful implementation. Many of these correspond to the aforementioned assumptions, but some come in addition; external circumstances, a valid theory of cause and effect with a direct relationship, and a low number of dependency relationships. They also specify the assumptions given by Van Meter and Van Horn (1975) – the communication between the actors must be perfect, all tasks must be specified, and instructions given in correct sequence, and co-workers will obey their leaders. Furthermore, the right combination of resources and time must be given to the implementation process, and the resources must be available when they are needed. This is easily summarised by Lane (1997:299):

"If implementation is impossible or difficult, it is not because we lack an adequate concept of implementation but because the relationship between policy and action is such that processes of implementation have a number of properties that are not conducive to the occurrence of successful implementation."

4. Methodology

This thesis is a study of the process of policy-making and implementation of the policy, in the case of the Norwegian climate act. Thus, it is a case study of a specific policy. A case study can be defined as "the detailed exploration of a specific case, which could be a community, organization, or person" (Bryman, 2016:40). More specifically, this is a case study of public policy, which is defined as "finding out what governments do, why they do it, and what difference it makes" (Dye, 1976:1). In this chapter, I will have look closely at methods that achieve this.

4.1. Case study of policy implementation

Kjellberg and Reitan (1995) describe two main types of studies in the field of policy; policy studies, which tends to be generalising and theoretical, and policy analysis, which is normative and applied. The first direction is known to be comparative, while the latter is used to gain indepth knowledge for the process of policy-making. These directions within the field of policy study are related, and there are many intermediates between these, as shown in figure 4.1, with a third type in the middle; the evaluation of process and results. The third direction analyses what happens *after* the policy has been implemented, also including whether the policy resolves the current issues.

studies of the s scope and in content of b policy c	comparative studies of the nteraction petween policy, content and process	studies of implementation of policy, evaluation of process and result	Analyses of policy design	Analyses as basis for policy content
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Figure 3 The main types in the study of policy. From Kjellberg and Reitan (1995)

In this thesis, the I will study the Norwegian climate act as a case and analyse the process of making it and whether the act will be able to avoid time-inconsistency. Thus, this will be close to the third type of studies; the intermediate design.

To be able to analyse whether the climate act will be an instrument for long-term planning of emission reduction, I will look at the UK Climate Change Act, the experiences with this act and compare measures in this act to the Norwegian to see if there are any similarities or differences of importance. I have chosen to use the British act as a base because this act has been operational for several years, and a case for several studies on whether it works as intended.

4.2. Data and data collection

This thesis has two research questions, which have given me need for two different approaches for data collection. As research question 1 focuses on the process of making the act, most of the data needed to answer this is from official documents; white papers, law proposals, consultation processes etc. Research question 1 could in essence be answered by studying these official documents, except sub question 1b, which needed more analysis of what happened behind the scenes.

The data used to answer research question 2 has been the act itself and the theory presented in chapter 3. This needed more analysis than research question 1, as there were no clear answers.

I have also conducted interviews with people involved in the policy-making process to gain more in-depth knowledge on the process, how they experienced this, their perception of whether the act will be able to achieve the goals, and to fill in some information gaps. These interviews were recorded. The interviewees were chosen because of their roles in the process, or specific knowledge on the act. One interview was conducted to fill in my lack of knowledge in the legal field. This was chosen as an easier way to obtain the required knowledge about this specific case, than reading more general syllabus on the topic. In addition, this informant had been active in the process by writing a consultation response and cooperating with WWF on their proposal for an act. These interviews have been important in answering both my research questions.

The interviews were conducted as semi-structured, where the interviewees were asked to speak freely, and I asked questions to ensure I got the required information, and to follow up what the interviewees said during their interviews. The interviews provided some new information about the policy-making process and the way forward, and in addition, the different actors perspectives about the process and the climate act.

4.3. Data analysis

To analyse the official papers for research question 1, I have focused on the different arguments and statements put forward; who was saying what? and who did not say anything? The response to the consultation processes was divided into groups of supporting, non-supporting and neutral as well as grouped based on what kind of actors the responses came from; economic actors/industry, NGOs, political actors, and so on. Thus, I was able to look for similarities within and between the different groups and how they influenced the process.

The interviews were analysed by coding; each category mentioned during the interviews was marked with its own colour on the printed copies of the interviews. This made it easier to find similarities and differences in the statements from the different informants; did the informants have the same perception on the process and arguments put forward? Did they agree with each other? Also, by listening to, or searching for, what the informants did *not* say, it was possible to interpret some of their opinions.

Some of the statements put forward in the interviews were also subject to triangulation – cross-checking – to ensure that my perception of the information, or the information itself, was correct. This revealed some disagreement amongst the informants.

4.4. Ethics

Research could possibly harm the participants, or the interviewees may find it an invasion of their privacy (Bryman, 2016). Thus, it is important to ensure that the interviewees are given enough information about the research to decide whether or not they want to contribute. All my interviewees were contacted via e-mail, where I told them about my thesis and why I wanted to talk to them. The informants who asked to see how their information has been used in this thesis have of course been provided this information.

Some of my informants wanted to be anonymous. Even though this makes it more difficult to verify the information presented in my thesis and the trustworthiness of my findings, I had no choice but to accept this. Their information provided me with important information which was a great help in my work and may also have influenced my perceptions.

4.5. Limitations

Although this thesis is based on governmental papers, which in Norway are available to the public, there have been some limitations to the access of the papers. Documents made for the government's internal preparation for a case is exempt from the public. This also applies to one

ministry's assessment of the affairs of another ministry, if the first mentioned ministry is affected by the matter (Regjeringen, 2016b). Unfortunately, many of the documents I wanted to read for this thesis fall under this provision, meaning I have not had access to them. This is especially true for the assessments made by the Ministry of Finance and the Ministry of Petroleum and Energy.

When conducting interviews, there is always a risk that the interviewees do not tell the truth, or hold back information (Bryman, 2016). All my interviewees were used to talking to people or assemblies and expressing their opinions. This also means they know how much they can say, and when they should hold back information. Some of the informants are still politicians who may hope for a re-election, which may be a reason for holding back information, while some of them do not hold this position, and thus, may feel like talking more freely.

I sent my questions by e-mail to one of the informants, to which he answered by e-mail. This was due to time-limitations, and my need for specific answers over broader statements. Nevertheless, if an interview had been possible, I would have chosen that, as an interview would have given me an opportunity to ask follow-up questions to his statement.

I asked the Progress Party's members in the Committee on Energy and Environment during the process of making the act for an interview, but none of them wanted to contribute. Thus, the only information I have on the Progress Party's assessments during the process, is what can be read and interpreted from official documents. Neither the Minister of Environment who first suggested the climate act – Bård Vegar Solhjell – nor the Minister who started the first consultation process – Tine Sundtoft – agreed to talk to me. Nevertheless, some of their political colleagues provided me information about the assessments made while these persons were in charge.

In addition, the climate act came into force only a few months ago and has not had enough time to significantly influence the climate policy to a significant degree. Thus, I have not been able to analyse whether the act has had any effect at this time, only to make a prediction for its future effect.

5. The process of making the act

In this chapter I will analyse how the act was made, by looking into each step of the process. Before doing so, I will look back at the Norwegian climate policy through recent times.

5.1. Previous policies

At the same time as international negotiations have been conducted, Norwegian governments and parliaments have also tried to make policies to reduce emissions caused by the Norwegian society. The first white paper about environment – "Environment and development" – was based upon the Brundtland commission's report "Our common future", and launched in 1989 (Berg, 2015). The parliament then enacted that the GHG emissions in 2020 should be kept at the same level as in 1989. In 1995, the government admitted that this goal will not be reached, due to an increase in emissions from the Norwegian petroleum industry and choose to disregard the enacted goal (St.meld. nr. 41 (1994-1995)). In 2000, the government – consisting of the parties The Christian Democrats, The Centre Party and The Liberal Party– did not want to allow gas power plants without purification of CO₂ and had to resign after losing a demanded vote of confidence. The new government, formed by politicians from The Labour Party, launched a new white paper on climate policy in 2001, focusing on cost-efficiency.

The next white paper on climate policy, "Norwegian climate policy", was enacted by the parliament in 2007 (Stortinget, 2008). This paper suggested that Norway should be carbon neutral by 2050 and reduce emissions equivalent to 30% of the level of 1990 by 2020, and it lead to the first, broadly enacted climate compromise in the parliament in 2008, which all parties, except The Progress Party agreed to (Akselsen et al., 2008). This agreement stated that the principle of "polluter pays" applies, and that reduction of emissions should be done in the most cost-effective way.

5.2. The 2012 white paper on Norwegian climate policy

In 2012, a new white paper of Norwegian climate policy was launched (Meld. St. 21 (2011-2012)). Here, the government – at this time consisting of the Labour Party, the Socialist Left Party, and the Centre Party – for the first time suggested to "examine the expediency of a climate act" (Meld. St. 21 (2011-2012), p. 15, my translation).

During the process of writing this paper, WWF Norway had discussions and meetings with the Ministry of Environment and the Ministry of Justice, where they argued for a climate act and tried to persuade the Government to start the work on an act (Holmås, pers. comm.; WWF-Norge, 2011).

The Committee of Energy and the Environment in the parliament considered the paper. All the members of the committee, except the Progress Party, aim for Norway to become a low-emitting society by 2050 through an ambitious climate policy, and in their recommendation to the parliament they asked the government to start an examination on a climate act (Innst. 390 S (2011-2012), 2012). This recommendation is known as the second climate settlement and is the first parliamentary decision of considering a climate act. Included in the climate settlement and the Committee's recommendation is a decision of a binding goal of making Norway carbon neutral no later than in 2030, and that two thirds of the cut in emissions is to be done domestically. However, the Government did not follow up this decision, and did not start any investigation on a climate act. According to Holmås (pers. comm.), this was due to a discrepancy between the Socialist Left Party, which the Minister of Environment represented, and the Labour Party, which

Box 5.1

The climate act - timeline

2007: White paper about climate policy

2008: First climate settlement in the parliament

2012: A new white paper about climate policy, with the first suggestion of a climate law. The second climate settlement enacted by the parliament

2014: First consultation round about a climate act. A motion for a climate law put forward by three members of the parliament

2015: Committee of energy and the climate recommend the parliament to promote a bill on a climate act

2016: Second consultation round about the climate act

2017: Prop. 77 L (2016-2017) was launched, with a proposal for a climate act. The act is enacted by the parliament in June

2018: The climate law came into force.

had the Prime Minister. While the Government was working on the white paper on climate policy in 2007, the three parties in the Government were discussing how emission reductions should be done; to buy emission quotas abroad, or by domestic reductions. The discussion became deadlocked, and it almost ended in a governmental crisis (Holmås, pers. comm.; Sølhusvik, 2013). However, the approaching crisis was solved the next day – everything

without any media coverage – and the white paper was completed and launched later that year. Nevertheless, because of this, the Socialist Left Party did not want to go deeper into a process on an act they knew the Prime Minister would not support than to ensure there was a decision from the Parliament on it, in case of a different political structure after the Parliamentary election in 2013.

As stated in the theory chapter, the process of policy making starts by defining the problem. The problem in this case was quite clear; the world is facing major climate change, which we need to stop. Previous attempts have failed, more or less because of a lack of will – or ability – to accomplish long-term goals. In this case, it was WWF who, in 2011, suggested for the government to work on a climate act. Obviously, WWF does not hold any formal power to force either the Parliament or the Government to do such a thing. However, as an organisation with a high public standing, they had power to influence upon the Government. Notable in this connection is the fact that the previous electoral term – 2005-2009 – was the Socialist Left Party's first term in the Government. The ENGOs had major expectations to their policy on environment and climate, which they criticised the Socialist Left Party for not fulfilling (Sølhusvik, 2013). Thus, the Socialist Left Party this period had increased their cooperation with the ENGOs and wanted to take further inputs from them (Holmås, 2018). This may have made it easier for WWF to get through with their initiative, and – as mentioned – a climate act was suggested in the 2012 white paper on climate policy.

Nevertheless, the Prime Minster, Jens Stoltenberg – while known for a genuine commitment on climate, wanted cost-effective measures to be prioritised (Alstadheim & Stoltenberg, 2010; Holmås, pers. comm.). Given this constellation the Socialist Left Party, and the Minister of Environment therefore chose not to go forward with a process of developing an act as their assessment was that a climate act made while Stoltenberg was prime minister would not be the kind of act they wanted it to be (Holmås, pers. comm.). Besides, there were less than 15 months until the next parliamentary election. The Socialist Left Party decided to focus on measures that could be implemented quickly to help reaching the goals for 2020 as defined in the climate settlement, instead of using the professionals in the ministry to prepare an act, and hoping to increase their votes and thus, their power by the next election. Perhaps they also feared that they would lack support for a climate act amongst voters and thus, feared to lose support at the next election. They simply did not hold enough power to push forward an act – even though they had the Minister of Environment.

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5.3. The first consultation process, 2014

By the parliamentary election in 2013, the parties in government lost their majority of seats in Parliament and had to resign. A new Government was chosen, consisting of The Conservative Party of Norway and the Progress Party.

Two years after the white paper and the climate settlement, in early November 2014, the new government set up a consultation process³. The aim was to hear the civil society's view on the issue, and to get some input on whether a climate act would be useful for Norwegian climate policy and how this could be formulated (Regjeringen, 2014c). According to former Minister of Climate and Environment, Vidar Helgesen, the Government prioritised to follow up the Parliament's request of investigating an act and to write a white paper on emission reduction in cooperation with the EU (Helgesen, 2018) The respondents were asked to answer three questions linked to the assessment of making an act: (i) Whether a framework act was likely to benefit Norwegian climate policy; (ii) whether there was a need for more reporting and information on climate measures and emissions in Norway; and (iii) whether a committee on climate change would be useful, and what the purpose of such a committee should be. At this time, both the UK and Denmark had enacted climate acts, and Sweden and Finland were considering it.

There were more than 200 responses to this consultation process (Regjeringen, 2016a). Most of the response came from civilians, through campaigns started by, amongst others, WWF Norway, but there were also 57 letters from different organisations from all sectors (Regjeringen, 2014b). Most of these were positive to a climate act, but some actors – mostly representatives of industry – were against it. The Confederation of Norwegian Enterprise and several of its affiliated member organisations, e.g. the Federation of Norwegian Industries and the Norwegian Oil and Gas Association, did not find a climate act beneficial to Norwegian climate policy or any use for more reporting on emissions nor a committee on climate change (NHO, 2015; Norsk Industri, 2015a; Norsk Olje&Gass, 2015). They argued that Norway's high proportion of renewable energy would make it more challenging to convert the energy sector into lower emissions and that the high level of costs of emission reduction will reduce the industry's international competitiveness. Energy Norway argued that a climate act was not

³ The administration is committed to obtain as much information as possible about a case. Thus, they use consultation processes to ensure that residents, NGOs, and business' get to say their opinions, and also give them an opportunity to control the administration and government (Regjeringen, 2015).

necessary, but their argumentation was somewhat different: They emphasised that the ordinary political processes – with climate settlements – were good enough. (Energi Norge, 2015). Although, they did find a need for more reporting, combined with carbon budgets, to make a long-term plan possible to implement and more easily followed. However, Energy Norway did not find a climate committee as a good solution but suggested to use the already existing resources in e.g. the Norwegian Environment Agency and Statistics Norway in a better way.

The respondents who were positive to a climate act came from all sectors. Many of those pointed to the British climate change act, and the measures which have proven to be important there: Long-term goals with regularly reporting, carbon budgets and an independent committee on climate change. Tekna said they did not see a climate act to be a solution in itself, but that it may be more binding for the policy-makers, as they state that *"the problem is not a lack of formal rules, but ability and will to enforcement and to follow them up"* (Tekna, 2014: my translation). Fridtjof Nansen Institute pointed to the experiences from Britain, and argued that an act that established long-term goals, could improve Norwegian climate policy in the long run (Fridtjof Nansens Institutt, 2015b). However, as the act most likely would not include any specific measures on how reductions should be done, it would take time to see the results of the act.

WWF was, in their extensive response, positive to both a climate act, reporting and a committee on climate change (WWF-Norge, 2015). They stated that "Norway has lost their credibility in climate policy, because the national emissions continue to rise even though we have adopted ambitious goals" (WWF-Norge, 2015:3, my translation) and found a climate act equivalent to the British as a good tool for steering a long-term policy. I am informed that people in the Government did argue that British and Norwegian legal tradition are too different to make a Norwegian act based upon a British. Also, WWF states that an act which binds the Government the way they suggest a climate act should do is uncommon in Norway, but they also argue that the climate issue is an untraditional issue, which requires untraditional solutions and they see this in context to the Norwegian Constitution §112; "Natural resources shall be managed on the basis of comprehensive long-term considerations which will safeguard this right for future generations as well" (Grunnloven, 1814), and say a climate act will strengthen this right for the citizens. Also, Nordrum (pers. comm.) argues that even though Norwegian and British legal traditions are different, it was possible to make a Norwegian climate act modelled from the British.

As mentioned above, many actors – e.g. Cicero and the Norwegian Grandparents Climate Campaign – argued that there was a need for an independent committee to investigate the issue, like the British committee on climate change. Cicero argued that even though Norway already had many agencies who gave advice on climate, these were a part of the Government's administration and thus, not as independent as necessary for a climate committee (Cicero, 2015a). An independent committee would have better opportunities to criticise the government's policy.

Many of the respondents did not answer questions (ii) and (iii), but amongst those who did, there was no obvious link between whether they were positive or negative to an act and the other questions. One of these was the Climate Realists of Norway, who do not believe the climate change are human made. They did not see a need for a climate act, as humans cannot influence upon climate change, but they did want a better reporting on *"so-called climate-emissions"* (Klimarealistene, 2015:1, my translation), included *"information where knowledge about natural variations is presented in the same way as, and as a likely alternative to human impact on the climate"* (Klimarealistene, 2015:1, my translation).

The Government stated in their consultation paper that the Norwegian legislation and regulations on environment and climate are good and that they could not see that it had any specific shortcomings (Regjeringen, 2014c). Some of the respondents to the consultation process, e.g. the Church of Norway National Council, pointed out that this argumentation may lead to a negative conclusion on the Government's questions in the consultation process (Kirkerådet, 2015). The Church of Norway stated that they did not agree with those arguments, and they found many reasons to support a climate act. Nevertheless, a biased language and argumentation may be a way for the Government to use their power and try to persuade respondents that otherwise would have been supportive or unsure to an act to give a negative answer, as described by Lukes (2005). Also, when claiming that it was, due to legal traditions, impossible to make a climate act similar to the British, the Ministry used their power to make respondents unsure whether an act would be useful in Norway.

By setting up the consultation process, the Government started the process of policy definition; the purpose of this consultation process was to get inputs on whether a climate act was a good solution for Norway, and in what way it could be written. In Norway, it is not usual to set up consultation processes this early in a process of formulating a policy or an act. Thus, this may indicate that the situation where one of the two parties in the government – the Progress Party – did not participate in the climate settlement and was against a climate act, made it

difficult for the Government to conclude. Hence, asking the public could be a way to get around the internal problems.

Those responding during the consultation process were largely positive to an act – although some economic actors were unsure whether it was reasonable to make an act instead of sticking to the climate settlement. The arguments presented by the organisations supporting the act were pointing towards the measures on how to overcome time-inconsistency. In addition, the process gave attention to the case, which lead to more engagement among the population, and thus, increased the democratic process in the making of the act. This may also contribute to establish a norm on reduction of emissions.

5.4. A motion for a climate act, 2014

Even though the government had set up the consultation process, the parties in government had expressed that they did not really want to create a climate act (Arnstad, pers. comm.). To avoid that the process would take too long, three members of the Norwegian parliament put forward a motion for a climate act (Representantforslag 32 S (2014-2015)). In this motion, they stated that *"the Parliament's poll in climate policy as of today are not expected to be achieved"* (Representantforslag 32 S (2014-2015):1, my translation), and that a climate act should be a framework for sectoral implementation of enacted short- and long-term goals, and to ensure predictability to the economic actors, to make them able to convert to low-emission technology. Further, they asked the government to set up a committee to investigate a climate law, and to put forward a proposal for this law within the current election period.

In December 2014, the Minister of Climate and Environment – Tine Sundtoft – wrote in a letter to the Committee on Energy and Environment in the Parliament that this kind of framework legislation was uncommon in Norway (Innst. 212 S (2014-2015)). She was uncertain whether a climate act would be a right fit for Norway and suggested that they would delay any further work on the motion until the consultation process was ended.

No committee was set up to investigate an act, but the motion was sent to the Committee on Energy and the Environment in the Parliament, which agreed that the climate issue needs to be solved through policies, as it is a political responsibility (Innst. 212 S (2014-2015)). The Committee held a small seminar on the issue, where the Norwegian Environment Agency, Fridtjof Nansen Institute, Cicero, and the Federation of Norwegian Industries participated and put forward their points of view on a climate act. Basically, they put forward the same arguments as in the consultation process: The first three were positive to an act, while the latter was negative. The Environment Agency did still not find the need for a committee on climate change but supported regularly reporting to ensure achievement of the goals (Miljødirektoratet, 2015). Fridtjof Nansen Institute pointed at the experiences from the British Climate Change Act. They concluded that statutory goals are more likely stronger than policy goals, that the Ministry of Finance in the UK had posed challenges to the implementation of the act - most likely they hold the same power in Britain as in Norway, as they control the nation's finances - and that these experiences are relevant to Norway (Fridtjof Nansens Institutt, 2015a). A powerful Ministry of Finance are able to control a major part of a state's policies, as the Ministry distribute finances for other ministries. Thus, if the Ministry of Finance do not want a climate act, it may be challenging to include necessary measures. Cicero repeated their arguments from the consultation process, focusing on how reporting and a committee on climate change could be used to reduce time-inconsistency (Cicero, 2015b). As mentioned, the Federation of Norwegian Industries seems to be the only participant at the conference who was not supportive to a climate act⁴. They too looked to Britain, but focused on the British industry's experiences (Norsk Industri, 2015b). They claimed the British act is too stringent and makes the industry less competitive and they want a cost-effective climate policy which controls the different sectors.

The Committee on Energy and the Environment also went to Britain themselves to learn from their experiences and get inputs on how a climate act can be formulated (Holmås, pers. comm.). Anyhow, I have not achieved any documents from this visit from the Parliament's archive that could shed light on what was discussed and what the committee saw as key experiences.

After this process, all members of the Committee on Energy and Environment, except the members from the Progress Party, assessed a climate act as a possible solution as a framework for the climate policy, by legislating the goals and a system for reporting on emissions (Innst. 212 S (2014-2015)). Still, most of the members of the Committee did not find a committee on climate change – as in the British model – useful in Norway, and suggested to continue with the present system, where the Norwegian Environment Agency does the professional assessments. The members from the Progress Party meant that a more effective use of the

⁴ I have received the presentations of the four mentioned organisations from the Parliament's archive. Thus, I assume no other organisations were present.

already existing framework would be better than making a climate act, and they feared that an act could limit the democratic process of political governance.

In 2015, the Committee on Energy and Environment presented their recommendation for the Parliament. The Committee was divided into two factions; a majority consisting of the members from the Conservative Party, the Labour Party, and the Liberal Party; and a minority consisting of the representatives from the Christian Democrats, the Socialist Left Party, the Centre Party, and the Green Party (Innst. 212 S (2014-2015)). The majority proposal from the Committee was divided in four parts; (I) That the Parliament asks the Government to make a climate act including the national goals for emissions in 2030 and 2050 and mechanisms for reports and controls between the Parliament and the Government. The bill should be ready within the parliamentary period, (II) The Government should consider already existing legislations on climate and merge legislations where ever useful, (III) the Government should present a climate budget showing how they will achieve the climate goals for 2020, 2030 and 2050 and how the annual fiscal budget affects the emissions, (IV) the document with the motion for an act is to be included in the protocol. The Committee's proposal (III) was not supported by the representatives from the Conservative Party of Norway, the Progress Party, and the Liberal Party of Norway, but the other members of the Committee made a majority on this proposal.

The minority faction wanted the bill to include limits for domestic emissions in 2030 and 2050 – as domestic cuts were not a part of the majority's proposal – and that the Government must present national and sectoral climate budgets (Innst. 212 S (2014-2015)). The Liberal Party of Norway launched their own proposal as an alternative to the Committee's proposal III. This did not include a climate budget, but stated that the Government, in their fiscal budgets, should report on how this affects the emissions and how the goals for 2020, 2030 and 2050 can be achieved (Stortinget, 2015a).

The Parliament discussed the Committee's recommendation in March 2015. The debate was characterised by a broad consensus among the different parties, where the Progress Party was the sole party who did not support an act (Stortinget, 2015b). They stated that "*a climate act is in itself no guarantee of achievement of the goals*" (Stortinget, 2015b:2607, my translation). The other parties did agree to this but argued that an act would be a framework that would be a useful tool and a long-term framework for the policy – a desired and necessary tool to avoid time-inconsistency. Some of the representatives also pointed out that the disagreement between the Conservative Party and the Progress Party – the two governmental parties – could be

challenging when making the act. The representative from the Socialist Left Party was disappointed that they did not seem to get the majority to vote for an act that would state a level of domestic reduction of emissions. Also, the representatives from the Christian Democrats and the Centre Party wanted the act to require carbon budgets based on the British model. The Liberal Party argued that their proposal was more "up to date" and focused on future budgets, unlike the Committee's recommendation (III), which they meant focused more on today's budget. The Conservative Party said they originally found it to be the Governments decision how they wanted to report to the Parliament but that they could accept the proposal from the Liberal Party and thus, would support it. The Minister on Climate and Environment, Tine Sundtoft, did agree in the assessment not to establish a committee on climate change and said that a requirement of reports on achievement of the goals in the act would require more accountability from the Government. This indicates that she has somehow – maybe due to the forwarded arguments – moved from her previous position, where she was more generally uncertain about a climate act, towards supporting an act.

After the discussion, the Parliament voted over the different proposals. The first proposal was the minority faction's (to include domestic cuts and national and sectoral climate budgets), which was not supported by the other parties and thus, voted down (Stortinget, 2015d). The next proposals were (I) and (II) together. As expected, the Progress Party did not support this, along with one representative from the Conservative Party. Nevertheless, the proposals got support from 84 members of the Parliament and were adopted. Thus, at this moment, Norway had decided to establish an act on reduction of climate emissions – the climate act.

Even though the next proposal – number III – came from a majority of the members of the Committee on Energy and Environment, these parties did not hold the majority of seats in the Parliament. Therefore, the proposal was voted down by a majority of one single vote (51-52) (Stortinget, 2015d). As this was an expected result, these parties had claimed during the discussion that they would vote for the Liberal Party's proposal, to reach agreement (Stortinget, 2015b). The Progress Party was therefore the only one who did not support this proposal and it was adopted. Proposal IV was unanimously adopted (Stortinget, 2015d).

At this point, the policy was defined; there was an agreement among the politicians upon the purpose of the policy, which is to ensure a reduction of GHG emissions. Thus, they could move on to the next step of policy-making and formulate the act – cf. Turner's mention of the different steps of the process. The Committee on Energy and the Environment had in their recommendation to the Parliament set the directions for the act, by saying that the act should function as a framework for the national climate policy and contain numbers for the reduction of emissions by 2030 and 2050, and that an assessment of the already existing legislatives on climate should be done (Innst. 212 S (2014-2015)). The recommendation also includes a call for climate budgets in the annual national budgets. The Parliament had now outlined a draft, where the Ministry had to fill in the details regarding the exact wording of the act. Thus, the Parliament imposed limitations and narrowed the Government's ability to create an act by their own design. This was initiated by the representatives who put forward the motion on a climate act. In this way, they got the Government to do something they most likely originally did not intend to do, so we can clearly see how they exercised power. This use of power shows how one actor can get another actor to do something s/he would not otherwise have done, as described by Dahl (1957).

The carbon budgets proposed by the Centre Party and the Christian Democrats may have been a tool for dividing the long-term policy into shorter terms and thus, overcome the timeinconsistency problem. The Liberal Party's proposal did not include this budget, which may be a reason for why also the Conservative Party supported it, as this made it less binding than a carbon budget.

5.5. The second consultation process, 2016

The results from the deliberations in Parliament confirmed that it wanted an act on reduction of emissions of climate gases and required the Government to begin designing it. Thus, the Ministry of Climate and Environment did so. Even though the motion asking for a climate act requested the Government to set up a committee to work on the bill, the Committee on Energy and Environment did not recommend this, and it was not part of the decision in the Parliament. The Ministry chose not to set up such a committee. It argued that it would entail a time-demanding process (Sundtoft, 2015). Instead, the ministry stated that it would cooperate with the other Norwegian ministries and also the UK and the other Nordic countries, which had enacted climate acts or were in the process of doing so.

Thus, the Ministry of Climate and Environment started their work on the bill. Important for this work was the white paper on commitment on emission reductions by 2030 in cooperation with the EU, which was discussed and approved by the Parliament at the same time as the motion on the climate act and made guidelines for the bill (Stortinget, 2015c). This white paper

focused on the expectations for the 2015 UN Climate Change conference (COP) in Paris, and Norway's intendent contributions to what was hoped to become a new international climate agreement (Meld. St. 13 (2014-2015)). The Government stated that they wanted to meet the goals in collaboration with the EU, essentially by using flexible mechanisms; paying for measures abroad, such as purchase of quotas, different projects, and international cooperation, to compensate for Norwegian emissions. The Socialist Left Party and the Green Party argued that there should also be included measures for domestic reductions (Innst. 211 S (2014-2015)), but was voted down in Parliament (Stortinget, 2015c).

Also important for the process were inputs from other ministries. These are not open access to the public, but I have information saying that the Ministries of Finance and of Petroleum and Energy were involved. As the Ministry of Finance have control over the state finances, and the Ministry of Petroleum and Energy has remit over the industry that generate much of the state's income, it is likely that these ministries hold power over the other ministries, including the Ministry of Climate and Environment, and thus, that the latter was responsive to the inputs from the former. The Progress Party had the minister in both the Ministry of Finance and the Ministry of Petroleum and Energy, so it is moreover likely that they were negative to a climate act with binding measures. Also, I have information that this was a more challenging issue between the two parties in Government than what the discussions in Parliament had been, which also made it challenging to the employees in the Ministry.

In 2016, the Ministry came up with a proposal for a climate act and a new consultation process was set up (Regjeringen, 2016a). The act was short, only five paragraphs. It stated that is should promote the climate goals and the conversion to a low-emission society by 2050, including public debates and information on the process. A national policy should be reasonable in a global context, and the reports to the Parliament should include development of emissions and extrapolations for the years to come, emission paths and measures necessary to meet these and the fiscal budget's impact on the climate. Besides being a low-emission society in 2050, the goal for emissions should be 40% reduction by 2030, compared to emission levels in 1990. Thus, in this proposal, the annual reports from Government to Parliament was the only measure taken to reduce time-inconsistency.

The consultation paper stated that "The climate act proposal is not aimed at moving climate policy decisions away from the political level but, on the contrary, to strengthen the policymaking processes within the overall framework of the act" (Regjeringen, 2016a:4, my translation). The ministry had considered a merger of the existing legislations, but recommended not to do this, as it may cause an increased amount of work, and difficulties to decide which laws should and should not be included (Regjeringen, 2016a). At this time, the Paris agreement was enacted, and the consultation paper referred to the agreement, and showed the similarities between the agreement and the proposed act (Regjeringen, 2016a), including the fact that the proposed legislated goal for reduction by 2030 was the same as the nationally determined contributions (NDCs) to the Paris agreement. Also, they clarified that this kind of act, which does not give rights or duties to the residents, is unusual in Norway. As the act does not give such rights or duties, there was no sanction mechanism included in the proposal (Regjeringen, 2016a).

The Ministry received inputs from 95 different actors, from all sectors (Prop. 77 L (2016-2017)). In addition, 1212 civilians replied through a campaign initiated by the ENGOs, essentially WWF. The responses varied from the campaign's standardised response letter⁵ to extensive elucidations, and from actors being positive to the act, to actors saying they would not – for different reasons – support it. Amongst the 10 actors who did not support the act, we find the Grandparents Climate Campaign, who said they were positive to a climate act, but that the proposed bill is too weak to make any difference, and thus, they cannot support it (Besteforeldrenes klimaaksjon, 2016). In the group of actors being negative to an act was also The Norwegian Oil and Gas Association and the Norwegian Farmers' Union who did not find any need for a Norwegian climate act (Norges Bondelag, 2016; Olje&Gass, 2016). The latter argued that the Constitution §112 was sufficient. They could however accept the proposed text if it took into account agricultural sectors' challenges when it comes to reducing their emissions and that these emissions were different from fossil emissions. The Climate Realists of Norway did not find a climate act useful, as they stated that human emissions do not affect the climate (Klimarealistene, 2016).

On the other hand are the 75 respondents who were positive to the act⁶. Most of these did, however, argue for some changes in the bill, especially to strengthen the act and make it more stringent. Key arguments that were included in most of the responses regarded the necessary

⁵ The amount of letters show that many civilians were engaged in the issue and wanted a climate act. I will not include a presentation of these inputs in my further analysis of the process, as they did not bring any new information or points of view.

⁶ 6 actors did not have any specific point of view on the proposal, and 4 actors did not conclude. However, the summaries of their responses tended to be positive to an act, but they wanted a more specific legislative text than proposed.

measures to avoid time-inconsistency; a need for carbon budgets, definition of what a lowemission society is and an independent committee on climate change, like in the UK.

One of the most extensive responses came from the WWF Norway. They claimed that an extensive use of flexible mechanisms instead of making incentives to domestic reduce of emissions will reduce Norway's competitive advantage over other countries (WWF-Norge, 2016). This referred to the sentence saying that the national policy must be reasonable globally. WWF argued that this would prevent Norway from having a leading position in the conversion towards a green economy. Further, they pointed out that there is a surplus of carbon quotas in the EU, which indicates that the cap and trade-system does not work as well as intended and that this surplus makes it cheap to pollute. Included in their response was a new proposal for the bill. This proposal included a new mission statement: To be a framework for restructuring the economy towards a low-emission society and contribute to keep global heating below 2°C; clear definitions of the terms used in the text; a goal for being climate neutral no later than in 2030 and a low-emission society no later than in 2050; extensive climate reports; carbon budgets for each sector; an action plan for climate – also for the municipalities – climate committee; and a revision of the action plan performed by the Office of the Auditor General. These are all measures to prevent time-inconsistency.

Other respondents, e.g. the Faculty of Law at the University of Oslo and the Church of Norway National Council, also pointed out the prerequisite for reasonable policy in a global scale (Kirkerådet, 2016) as "an unfortunate signal of a pending and defensive attitude towards the climate task" (Universitetet i Oslo, 2016:3, my translation). The Norwegian Public Road Administration and WWF argued that the goals should be changed from "in 2030/2050" to "no later than 2030/2050", to show that the change is a long-term goal, and not to be postponed until the last year (Statens vegvesen, 2016; WWF-Norge, 2016). Most likely, this will not affect the processes, but it is a clarification of the goals.

Upon approval of the fiscal budget for 2017, an agreement was made in Parliament about the climate act (Prop. 77 L (2016-2017)). Once again, it was stated that the Parliament asked the Government to put forward a bill for a climate act, but this time a level for the emission reductions by 2050 was established. Previously it had just been mentioned as a low-emission society – and also, a mechanism equivalent to what is found in the Paris Agreement for presenting updated goals for the climate policy every fifth year. The statement also includes a report on Norway's carbon budget.

As mentioned, both the Ministry of Finance and the Ministry of Petroleum and Energy put forward arguments about the act, and they are both important for the state finances. As defined in chapter 3, one who controls limited resources that another actor need may also hold power over this actor. Does the Ministry of Climate and Environment control such resources? The environment and climate are often not seen as limited resources, and the Ministries of Finance and Petroleum and Energy do not seem to have enough interest in them so that it affects the balance of power in the government. Thus, my claim is that the Ministry of Climate and Environment has most likely paid attention to the arguments from the Ministry of Finance and the Ministry of Petroleum and Energy, as the former holds less power over the two latter than the other way around.

Anyhow, Helgesen (pers. comm.) claims that the Progress Party's scepticism in Parliament was not an issue in the Government and that the final proposal from the Government was negotiated by representatives from both the parties in Government and their supporting parties in Parliament – the Christian Democrats and the Liberal Party – before it was launched. Thus, not only the ministries headed by the Progress Party had influence on the proposed legislation, also the Christian Democrats and the Liberal Party were able to put forward their arguments before the text was launched and thus had a better opportunity to influence the act than what the other parties had.

This consultation process did not only give the different actors who may be affected by the act, or those who have interest in it, an opportunity to give their opinion about it, it also gave these actors power to influence the decision-makers and thus, make them change their minds, as described in Lukes' definition of power. As during the first consultation process, the response this time was great, and mainly positive. There were only a few actors who were totally against the proposal for an act. An explanation for this may be that the bill did not promote any measures on *how* the emissions should be reduced. Also, there has become a norm in the society to be concerned about climate and try to avoid emitting or to pollute. Thus, it may have been difficult to oppose to the act.

5.6. Enactment of the climate act

After the consultation process, in March 2017, the government launched a proposal for enactment of the bill, Prop. 77 L (2016-2017), where they summarized the inputs from the consultation process, and their own assessments.

The act was now extended to seven paragraphs and included a definition of a low-emission society and a level of reduction of emissions by 2050. Also, a more detailed list over elements for the annual reporting was included and the sentence about reasonable policy in a global context was removed and replaced by a statement of the possible cooperation with the EU. Neither a committee on climate change nor carbon budgets were proposed. In the proposition for the act, the Ministry on Climate and Environment argued that the reduction of emissions is meant to be implemented together with the EU, who defines annual emissions allocation (AEA) for each state (Prop. 77 L (2016-2017)). This will give Norway an annual emission budget for sectors not included in the quota system (transportation, agriculture, waste, and buildings). Nevertheless, this allocation applies for all the sectors combined and leaves the decisions on measures and allocation between sectors to each state and thus, it is not as good to reduce time-inconsistency as it could have been with sectoral allocations. A summary of the proposed act is found in box 5.2. The entire proposed legislative text - in Norwegian is found in appendix 1^7 .

Box 5.2

The Government's proposal for a climate act

The purpose of the act is to be a framework for Norway's change towards a low-emission society in 2050. It is not meant to prevent any cooperation with the EU (§1). The goal is 40% reduction of emissions in 2030 and 80-95% in 2050, compared to emissions in 1990 (§3-4).

The goals are to be revised and presented to the Parliament every fifth year, should be based on scientific knowledge and compatible to Norway's NDCs to the Paris Agreement (§5).

The Government is to present how the fiscal budget will affect the climate and development in emissions, also sectoral emission pathways in non-quota sector (§6).

(Prop. 77 L (2016-2017))

The Committee of Energy and the Environment considered the proposal. They held an open hearing where 16 organisations from different sectors contributed over three sessions (Stortinget, 2017a). Essentially, the organisations repeated what they already had said in the Government's consultation process. In the first session, four actors from industry⁸ and the

⁷ There is no official translation of the text. Thus, I did not want to make an unofficial translation which at a later point of time could be perceived as official.

⁸ The Confederation of Norwegian Enterprise, the Federation of Norwegian Industries, the Norwegian Oil and Gas Association and Energy Norway

Norwegian Confederation of Trade Unions participated. The actors from the industry did not find the climate act useful (Stortinget, 2017e). Nevertheless, the Confederation of Norwegian Enterprise and the Federation of Norwegian Industries could accept the Government's proposal but focused on a need for incentives to promote "the green shift". The Confederation of Norwegian Enterprise did not want carbon budgets for each sector or a committee on climate change, but rather a strengthening of the Norwegian Environment Agency. The Norwegian Oil and Gas Association did not want a defined level of emissions for a low-emission society and argued that an enactment of the climate policy was unwanted. Basically, all these organisations argued to reject any measures to "tie hands". Energy Norway focused on the need to use more renewable energy in Norway and the importance of long-term and predictable policy and argued that the most useful part of the act was the steering mechanisms. The Norwegian Confederation of Trade Unions argued that developed, rich countries had to contribute to a major part of reductions – "a just transition" – but they did not find any need for carbon budgets.

In the next session, five ENGOs and one research institute participated⁹ (Stortinget, 2017d). Their arguments were similar, so I will mention them gathered here. They argued the climate act was needed because ordinary climate policy had not been sufficient, and that the act needed to be strengthened to reach the goals and to apply for domestic cuts. Also, they said domestic cuts would be an investment in Norwegian industry, while buying quotas abroad is to invest in other countries' industry and that different sectors' interests and conflict of objectives makes it hard to prioritise climate high enough. Carbon budgets will reduce these conflicts and an independent committee on climate change will ensure a possibility to choose the preferred policy. They pointed out that the proposal from the Government lacked a mention of what opportunities mitigation to climate change gives Norway but also the society's cost caused by climate change.

The third session of the hearing consisted of different unions¹⁰, one ENGO; Spire and one NGO; The Climate Realists of Norway (Stortinget, 2017f). Spire and the unions, except the Norwegian Farmers' Union, argued for a strengthening of the proposed act and national measures towards reduction of emissions, which they meant will increase the industry's competitiveness, while the strategy of buying quotas will reduce it. They also wanted climate budgets for each sector – the Federation of Norwegian Professional Association argued that

⁹ Cicero, Friends of the Earth Norway, The Norwegian Forum for Development and Environment, WWF, The Future in our hands and the Norwegian Grandparents Climate Campaign

¹⁰ Tekna, the Federation of Norwegian Professional Associations, the Electrician and IT workers union, Naturviterne and the Norwegian Farmers' Union

without this, each sector is free to decide without taking the impact on climate into account. The Climate Realists of Norway still argued that there is no proof that climate change is going on, and that *if* they are, they are not human made. Thus, there is no need for a climate act. The Norwegian Farmers' Union agreed that climate change is real and that we need to take measures to avoid them. However, they argued that the act should focus more on GHG sequestration, especially in forests and other natural uptakes. They did not want sectoral climate budgets, but to ensure flexibility between sectors, not least because it is challenging and time-demanding to convert agriculture into low- or non-emission production. Nevertheless, there was a change in their opinion, from being negative to an act in the Ministry's last consultation process, to being conditionally supportive to the proposed act.

In their response to the proposal, the Committee on Energy and Environment stated that the act was short and a framework for the authorities' climate policy and that *"it is the totality of the climate policy which is crucial for achieving the goals, not the decisions in each single case"* (Innst. 329 L (2016-2017):2, my translation) and that there is a need for flexibility in the policy.

Nevertheless, the Committee was not unanimous. The members from the Socialist Left Party and the Green Party referred to the Committee's recommendation to the Parliament 407 S (2015-2016) about ratification of the Paris Agreement, where the Parliament decided Norway should be climate neutral by 2030 (Innst. 329 L (2016-2017)). Thus, they wanted this as the goal for 2030 in the climate act. Further, the Socialist Left Party and the Green Party accused the Government for weakening the climate policy over the last years and said that the proposed act would allow this to continue. They stated that the act did not require any domestic cuts, but that implementations of international obligations should be done together solely with the EU. They argued that this will be negative to Norwegian industry, which will not have any incentives to convert into green technology. This is also in contrast to Norway's duties due to the Paris Agreement. The representatives from the Liberal Party and the Christian Democrats supported the need to be a pioneer to a green economy and that this will most likely strengthen the industry's competitiveness. The representatives from the Socialist Left Party and the Green Party also argued that an independent committee on climate change would ensure achievement of the goals and that sectoral climate budgets would clearly place the responsibility for the policy and measures at each sector and prevent the sectors from blaming each other if the goals are not achieved. The other members of the Committee did not support the idea of an independent committee on climate change, as they feared it would move decisions and responsibilities away from the elected bodies.

The members from the Christian Democrats and the Green Party stated that "A lack of political will has been the main weakness of Norwegian climate policy. Therefore, a legislation that obliges the decision-makers to comply with climate policy decisions is required" (Innst. 329 L (2016-2017):6, my translation).

This time, the Committee on Energy and Environment had several proposals for changes to the Government's proposal, which were voted over by the Parliament. The majority of the Committee – the representatives from the Labour Party, the Conservative Party, the Progress Party, the Christian Democrats, and the Centre Party - recommended the Parliament to enact the climate act as proposed in the Ministry's bill, with a small change in §6; not only emissions should be subject to the annual reporting, but also sequestration of climate gases (Innst. 329 L (2016-2017)). The Committee – except the members from the Progress Party – also recommended the Parliament to decide to establish a committee for technical calculations, which shall ensure qualified calculations on the climate effect of different measures. There were also several proposals from different minority factions in the Committee on Energy and Environment; The Labour Party, the Centre Party, the Socialist Left Party, and the Green Party had 12 proposals for change, which would make the act more stringent. This included – among others - to set climate goals for 2020 and 2040 and to be climate neutral by 2030, to make the goals subject to review consistent to Norway's nationally determined contributions to the Paris Agreement, to establish a link between the climate act and the Constitution §112 on sustainability and to change the text "how Norway can achieve the climate goals" until "how Norway shall achieve the climate goals". The Socialist Left Party had three proposals on changing the goal from becoming a low-emission society till becoming a non-emission society. The Green Party wanted to remove the part about cooperating with the EU and that the goals for 2030 and 2050 should demand more reduction than the proposed act.

The Ministry's bill and the recommendation from the Committee on Energy and the Environment were subject to debate in Parliament June 2nd, 2017 (Stortinget, 2017b). Again, the debate was characterised by a consensus among the different parties, although the Progress Party and the Social Left Party basically did not agree to the other parties' arguments. Many representatives, from different parties, mentioned the annual reporting from the Government as an important measure in the act. This will surely help to keep the problem on the agenda, which is necessary to avoid time-inconsistency, but it is also the only specific measure in the act. Also,

the committee on technical calculations was said to be important. The Conservative Party found this to be a way to change the future debates from what the effect of different measures will be – as the committee already will have calculated this – until which measures should be preferred. This party was originally against a committee on climate change, so this new committee was a compromise which was supported by most of the parties in Parliament. The Progress Party was still against both a committee on climate change and a committee on technical calculations, and was sceptical to the act, which they argued, had given *"some ambitious goals, which no one really knows how to achieve"* (Stortinget, 2017b:3706, my translation).

The Socialist Left party was not as supportive to the act as the other parties. They claimed that the act was a cancelling of the climate goals from the climate settlements in 2007 and 2012. They also pointed out that many of the Progress Party's ministers did not believe in human made climate change and thus, insinuated they did not want this act. Further, they mentioned the success criteria for the British climate change act; a committee on climate change, legislation of goals for emission reduction early enough to work towards them and annual reports on domestic emissions, including international aviation – and they claimed that none of this was present in the Norwegian climate act. The Green Party was not as negative as the Socialist Left Party. They found the act to be a framework which would make it more challenging to continue to postpone climate policy. Nevertheless, they wanted a legislation on domestic reductions, and to include petroleum in the act.

The Minister on Climate and Environment argued that the EU will have to take the lead in international climate negotiations after USA declared they would withdraw from the Paris Agreement, and thus, cooperating with the EU may strengthen Norway's position. He also claimed that the act made a good balance between legislation and policy, and that he was positive to a committee on technical calculations and would start the work of making this immediately. Still, the Socialist Left Party and the Green Party wanted sectoral climate budgets and domestic reductions. The Minister claimed that the cooperation with the EU would increase Norway's commitments and that it would force sectoral measures.

The Parliament voted over the different proposals after the debate (Stortinget, 2017c). The minority faction's proposal came first and were all voted down. As some of the proposals were in conflict to parts of the majority faction's proposal, these were voted over separately, but the majority faction's proposal to keep these parts of the act was enacted. Then, the rest of the majority faction's proposal to keep the act as proposed from the Government, with a change in

§6 was enacted unanimous. The proposal on a committee on technical calculations was decided against the votes of the Progress Party.

The climate act came into force January 1^{st,} 2018. The final legislative text is found in appendix 2¹¹. The Ministry of Climate and Environment says in June 2018 that the Committee on Technical Calculations is to be presented in a short time (Valstad, pers. comm.).

5.7. Why 2017, not 2012?

As mentioned, a climate act was first suggested in 2012. Even though the proposal came from the Ministry of Environment, the Government as a whole did not support this, essentially because the Prime Minister and the Socialist Left Party would not be able to agree upon a policy for emission reductions. It is reasonable to assume that the Socialist Left Party chose to postpone the act rather than have it downvoted in the Parliament.

After the 2013 elections, there was a new majority in the Parliament. The Labour Party lost some of their seats, and the Green Party got their first seat in Parliament (Stortinget, 2018a). Jens Stoltenberg – the former Prime Minister and leader of the Labour Party – was in 2014 elected as secretary general of NATO, and thus resigned from Norwegian politics (Stortinget, 2014). The new leader of the Labour Party – Jonas Gahr Støre – stated that the climate was an important issue, which should be a framework for their overall policies (NTB, 2014). This made it possible for the representatives from the Labour Party who wanted a climate act to move forward with this policy. The Labour-oriented think tank Agenda supported a climate act (Rognstad et al., 2015), which also may have affected the opinion in the Labour Party.

Further, as the Labour Party was now not in Government, they would not be in charge of the act. They must also have known that the new Government most likely would not make a climate act as stringent as the Socialist Left Party would have done, which may have make it easier to support the decision of making an act.

Other changes in Parliament after the election in 2013 was – as mentioned – that the Green Party got their first representative, and the Liberal Party increased their number of seats in Parliament. Both these parties are known for their commitment to the environment. So is also the Christian Democrats, who kept the same number of seats, and the Socialist Left Party, which

¹¹ The Ministry is waiting for a translation of the act. Thus, as with the proposed text from the Government, I did not want to make an unofficial translation, and the attached act is in Norwegian.

lost some seats in the election. Nevertheless, the number of seats held by parties being committed to climate had increased from the previous electoral term.

Governing from a minority position, the Government was dependent of support from the Christian Democrats and the Liberal Party. Thus, is it likely that the Government agreed to make an act to ensure support from the Christian Democrats and the Liberals on other issues. At the same time, the Conservative Party and the Progress Party could now – as they were in Government – choose to make a less comprehensive act, which would be more acceptable also to the industry. The Christian Democrats and the Liberal Party, on the other hand, may have seen this as an opportunity to please the ENGOs by being the parties who persuaded the Government to make a climate act at all.

The three representatives who put forward the motion for a climate act may have realised that all these issues made it possible to get a breakthrough for an act. It is also likely that they knew that the situation could be different after the next parliamentary election, which may be the reason they wrote in their motion that the act should be written in time to be enacted during the ongoing parliamentary period.

6. The act as an instrument for planning of long-term policy

The three representatives in Parliament who put forward the motion for a climate act, stated that "a climate act is a binding framework for systematic, sectoral implementation of agreed goals in the short and long term" (Representantforslag 32 S (2014-2015):1, my translation), and they pointed out that one of the problems of Norwegian legislation is the lack of one single act which takes into consideration all emissions together, not only a single issue at the time. My analysis of this statement is that the representatives wanted an act with purpose to avoid further climate change by preventing time-inconsistency and fragmentation. Thus, I will in this chapter analyse whether the act is likely to do this, by comparing the different aspects and measures in the act to the ways to overcome time-inconsistency presented in the theory in chapter 3.

6.1. The structure of the act

As already mentioned, it was discussed whether to collect all the existing Norwegian acts on emissions, environment, and climate into the new climate act (Regjeringen, 2016a). These acts were both acts directly concerning climate and pollution, such as the pollution act and the climate quota act, and acts indirectly concerning climate, by regulating other objectives, i.e. the planning and building act and sector-specific legislations. The ministry recommended not to include these legislations into the new climate act, as they could not find any need to do so. They also considered the way these legislations are organised today, with each act sorted under the subject area where it belongs in practical use, as more appropriate than collecting them all into one act.

The parliament followed this recommendation, and the already existing legislations are kept outside the new climate act. The drawback of this is that it is easy to lose sight of the whole; instead of relating to one act, one will have to check out several acts, perhaps without knowing exactly which ones are relevant. There is a lack of cooperation and overall authority over the various sectoral acts, which may be challenging for those who need to find the applicable legislation (Nordrum, pers. comm.). By merging all legislations into one act, all actors would have known they had to consider this specific act. This *could* reduce the tyranny of small decisions. Nordrum (pers. comm.) recommended to include the most important acts in the climate act, to make it easier for the actors using the acts. Nevertheless, one argument against a merger of the different act could be that the climate act is made as a framework for how authorities should run their policies, which does not concern civil actors, while the other acts contain regulations regarding civil actors. On this basis, my evaluation is that it seems sensible to not include all legislations on climate and environment in the climate act.

Further, as mentioned in the theory chapter, there are several ways to avoid the timeinconsistency problem; eliminate alternative options, ensure that decision-makers abide by certain rules, and rational ignorance. Much of the feedback on the Government's two consultation processes suggested measures to ensure this; a committee on climate change, sectoral climate budgets and annual reports on emissions.

The aim of climate budgets should be to clarify how much reduction that is to be achieved in a specific period – shorter than the goals specified in the act. Using shorter periods will reduce time-inconsistency, as this reduces the steps for each assessment of the policy and makes it more difficult to postpone measures and decisions. So, these intermediate goals will

also make it easier to assess whether one is staying on the desired emission pathway. By dividing the budgets into sectors, it will also be clear where the emissions are to be reduced and who is responsible for doing this. According to Holmås (pers. comm.), Thorbjørn Berntsen – a former Minister of Environment – claimed that the lack of sectoral goals was a reason the different ministries did not make climate plans, even if they were required to do so. Also the Office of the Auditor General of Norway (OAG) states that the unclarified responsibility caused discussions between sectors and a lack of implementation of measures, as well as uncertainty amongst the sectors of what the goals actually were (Riksrevisjonen, 2010).

By splitting the reduction goals on sectors, it will be easier to control whether the different sectors achieve their part of the goals, which is likely to increase the pressure to implement necessary measures. Without these sectoral budgets, it will be more challenging to persuade the different sectors to implement measures they may not support, and which may cost money, jobs, or other goods. As stated, the Ministry chose not to propose sectoral goals, and the Committee on Energy and Environment and the Parliament agreed to this. Holmås (pers. comm.) claims that there were several decisions in the Committee on Energy and Environment – especially in conjunction with the Committee's assessments on the fiscal budgets – that climate budgets should be set up. The OAG confirms that there was made such a decision in the first climate settlement (Riksrevisjonen, 2010). Climate budgets did however not end up as part of the climate act. The core argument for not including budgets was to ensure flexibility and cost-effectiveness (Prop. 77 L (2016-2017)). As mentioned earlier, this argument was heavily emphasised by the industrial actors, who did not want a binding act.

Another argument to not split the budgets on sectors can be that because climate change is caused by and affects all sectors, it is important to keep an overall view on the emissions and that this is most easily done by not dividing the budgets into sectors. Nevertheless, my understanding is that to make this strategy work, it requires close cooperation and communication between sectors, on a level which has not been considered possible until now. This is likely more demanding than dividing the goals by sectors. Also, an argument put forward from e.g. the Government for *not* including pre-existing legislation into the new act, but keeping them on sectoral levels as before, was that this was the best solution for those who use the legislation, that this would make it easier to find the relevant legislations and would help ensure that climate is taken into consideration in all sectors (Regjeringen, 2016a). In my opinion, this reasoning could also be switched; that it would be easier for the different sectors to find their goals for emission reductions and take climate concerns into consideration if the climate budgets were divided into sectors. By now, the goal applies to the non-quota sector combined. This will most likely demand that some sectors will carry the burden for them all - or to establish the mentioned close cooperation - to be able to achieve the goals. This may work out if some sectors are willing - and able - to do this, but based on the experiences from Norwegian climate policy, where the Ministries as mentioned failed to make climate plans even though they were required to, this is not likely to happen.

A committee on climate change would help to eliminate non-preferable options, simply by not proposing these as options to more desirable measures. This can also be considered a way to practice rational ignorance. By doing this, the committee would reduce the pressure on the Government to decide more popular measures - or no measures - as it would give the Government an opportunity to "blame" the committee for not giving them such options, and thus, it would be easier to choose the effective, non-popular measures without risking losing support among the voters. In the UK, the Government must consider the recommendations from the Committee on Climate Change (The Parliament, 2018). The Government has followed most of the recommendations related to climate budgets (Jevnaker et al., 2014), but has in regard to some policy-specific advices - which are closer to specific measures - chosen not to follow the Committee's recommendations. This may be because the Government is freer to reject the Committee's recommendations on the policy-specific advices than at the recommendations related to the climate budgets. At the same time, when the Government chooses to not follow the recommendations from the Committee, the Government is required to explain why. This gives a debate on the policy and measures to be implemented, which forces the Government to work on its arguments and ensures that the policy is well thought through. These dynamics would probably also have been created in Norway, if a committee on climate change was established; the Government would have chosen to follow the committee's recommendations in some cases, and in some cases not. Thus, one cannot simply say that such a committee would hinder what - from a more scientific perspective - are considered non-preferable options¹², but it would make it harder for the Government to choose such options.

Nevertheless, the Committee on Energy and Environment chose to not recommend a committee on climate change, and the Parliament followed suit. Still, it is possible to avoid these non-preferable options, but it requires that the decision-makers – the Government and Parliament – eliminate these options themselves. By looking back on the policy run previously,

 $^{^{12}}$ By non-preferable options, I here mean options that will not reduce – or not give enough reductions of – emissions, or options that for other reasons should be rejected in favour of other solutions.

my assumption is that this will most likely not happen, as the parties and politicians are too committed keeping their positions – which has been, and is, one of the core causes of the time-inconsistency.

Instead of a committee on climate change, the Parliament decided to set up a Committee on Technical Calculations, whose purpose is to calculate the impacts of different measures considered by the decision-makers including impacts on fiscal budgets, and thus, to establish a common basis from which one can discuss measures¹³ (Innst. 329 L (2016-2017)). This Committee may give advice on which measures to prefer, but only among the measures the Government has already considered, as opposed to the British Committee on Climate Change, which first considers various measures and then presents the favoured ones to the Government. Thus, the Committee on Technical Calculations will not contribute to eliminate alternative options nor to rational ignorance.

The Progress Party did not support a Committee on Technical Calculations and argued that the Norwegian Environment Agency is already in charge of coordinating the scientific basis on climate (Innst. 329 L (2016-2017)). The Progress Party also feared that this committee would weaken the democratic discussions and processes as the assessments would be outsourced to a new committee, which the Progress Party feared would be given the opportunity to define one truth about climate policy (Stortinget, 2017b). The decision in Parliament states that the Committee on Technical Calculations will be coordinated by the Norwegian Environment Agency (Innst. 329 L (2016-2017)).

My understanding of this is anyhow that the Committee should be more independent of the sitting Government than what the Environment Agency is, as the agency is subject to the Ministry of Climate and Environment. Thus, the Committee on Technical Calculations may be less supportive to the Government's policies than the Environment Agency would be. Further, my perception of the Committee on Technical Calculations is that it is not meant to reduce the democratic processes or to define one unimpeachable truth, but that it is meant to establish a scientific basis to reduce uncertainty and thus, improve the ability to choose the best solutions for emission reductions.

¹³ None of my sources, neither written papers from the Government and Parliament nor the interviewees could give a good explanation on exactly what the Committee on Technical Calculations is meant to do. The Ministry of Climate and Environment has not responded to my e-mails regarding the Committee.

The Committee on Technical Calculations will not – and is not meant to – take the same role as the UK Committee on Climate Change. The Committee on Technical Calculations will have a more neutral role and not suggest measures or policy itself. This reduces the impact it could have had on climate policy.

Annual reporting on emissions was included in the act. Thus, this is the only way to overcome time-inconsistency suggested by Hovi et al. (2009) which is included into the act. Not only will these reports be able to give an early warning on whether the climate goals will be reached, as Haug et al. (2010) mentioned was missing. It will also help keep the issue on the agenda, by regularly giving attention to it. Nevertheless, what is crucial to the effect of this measure, is how the annual report is formulated. If the report is "hidden" as a part of the fiscal budget, it may disappear among all the other numbers and discussions and thus, lose its effect. Arnstad (pers. comm.) admits that she is a bit worried that this will happen, and that she is unsure how the presentation will be done. On the contrary, if it is lifted as a "happening" in itself, with its own discussion and attention from both the opposition at the Parliament (or the parties in Government, if they want to focus on it) the ENGOs and media/civil society, the effect may be large. This attention can be crucial to civil society's support to the Government, which may encourage the Government to implement measures they otherwise would not have chosen. Nevertheless, this requires a commitment and a will – a norm – among the civil society for reduction of emissions; the norms for doing so must be present.

As stated in the theory chapter, norms evolve over time, and can both influence upon and be influenced by formal rules – the acts, respectively the interpretation of them. The process of making the climate act was most likely affected by an increased focus on, and evolving norms for, emission reduction, exemplified by the many consultation responses from civilians. The response and the attention given to the issue made it challenging – at a point impossible – for the Government to stop the process, if they had wished to do so. Thus, there is reason to believe that a norm on emission reduction is about to become – or has already been established – among many Norwegians. However, it seems that the norm is still not strong enough to ensure a sustained attention to the issue. Thus, making the reporting interesting is necessary not only to tell Parliament the actual status on reductions and climate, but to help keep climate change and measures on the agenda and in people's attention.

The Norwegian Act does not hold a possibility for sanctioning – which seems reasonable, considering that it can hardly be broken – the only possible sanctioning is criticism of the government for not achieving the goals. This criticism can be made by civil actors or the

Parliament, which has the opportunity to declare distrust of the Government or one of the Ministers if it does not believe that they will achieve the goals. In the UK, the Government can be subject to a judicial review if they fail to meet their duty to reduce emissions, especially on the intermediate budgets (Macrory, 2012). In Norway, civilians hold an opportunity to bring in administrative decisions for the court to control whether the decision is legal. A much-discussed recent trial is the climate trial, where ENGOs brought the decision about petroleum extraction in the Barents Sea to the courts. This *may* be an option also to see whether decisions are in conflict to the goals in the Climate Act. However, the right to get decisions controlled by the courts applies in principle to a control related to the Constitution. Thus, it will be the court's decision whether to try it against the Climate Act, and thus, this should not be considered a way to sanction offence of the act.

No government would take a risk of distrust – or judicial review or criticism – lightly, but to make this a real threat, there needs to be a will for this in Parliament. This depends on the political situation and thus, it may not necessarily be something the Government fears. Currently, the most likely sanctioning is that voters decides not to re-elect the Government if they fail to reduce emissions. This requires that the norm of reducing emissions is strong enough. I do not expect that this will happen within the next few years.

6.2. The language of the act

An important element in the making of acts and other rules is the language and formulations used. This was also pointed out by many of the respondents to the consultation processes. A precise language with clear formulations reduces uncertainty and discussions about the meaning of the text. The UK Climate Change Act is a good example of this and I will therefore compare the Norwegian climate act to the British act, and through examples from both acts point out differences which may be of importance.

Regarding the purpose of the UK Climate Change Act, it states that "It is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 80% lower than the 1990 baseline" (Crown, 2008:1). Furthermore, the act does not include any qualifying terms such as "as far as reasonably" and so on (Macrory, 2012). What we see here is a clear definition of the Government's duty without any exceptions. It is easy to understand what the purpose of the act is.

The Norwegian Climate Act, on the other hand, states that "*The goal should be a reduction of emissions in 2030 by at least 40% compared to 1990*" (Prop. 77 L (2016-2017):58, my translation) and "*The goal should be that Norway becomes be a low-emission society in 2050*" (Prop. 77 L (2016-2017):58, my translation) with a definition of this as an emission reduction of 80-95% of the 1990 level. Further, it defines low-emission society as "*a society where the GHG emissions, based on the best scientific basis, global development of emissions and national circumstances, are reduced to counteract harmful effects of global heating as described in the Paris Agreement [...]" (Prop. 77 L (2016-2017):58, my translation). Prop. 77 L (2016-2017) also refers to the Climate Settlement from 2012, which states that Norway's climate policy should be reasonable compared to the development of policies and measures globally. These qualifying reservations open for discussion; what is "reasonable" and "best scientific basis"? Prop. 77 L (2016-2017) argues that by implementing too stringent measures and thus, emit more there – a carbon leakage. A consequence of this may be that it is considered not reasonable to implement measures to achieve the reduction goals.*

As mentioned in chapter 3, Kjellberg and Reitan (1995) claim that decision-makers sometimes blur the goal on purpose, to reduce conflicts and resistance toward the policy. It may seem like that has happened to the Norwegian Climate Act, as the Norwegian Climate Act is unclear and without specific measures, even though several respondents to the consultation processes focused on the need for this. This is also partially confirmed by Arnstad (pers. comm.), who states that she did not believe there would be neither a broad consensus nor a majority for clearer or stricter goals.

Even though the norm of reducing emissions can be strengthened by the act, the Norwegian Climate Act does not impose the Government a duty to reduce emissions, only a goal. This can be interpreted as they should try, but it is not really necessary to achieve the goals. This also implies that the act basically cannot be broken, unless the Government chooses to declare a goal for lower reduction of emission than that required in the act, e.g. by declaring that they aim for 30% reduction by 2030 instead of the statutory 40%. This may be an explanation for the act's lack of possible sanctions.

6.3. Implementation of the act and measures to achieve the goals

The climate act came into force on January 1st, 2018. As the act does not include any other measures than reporting to Parliament, we will not see any results of it before the fiscal budget – and the report on emissions – are presented in late autumn. Nevertheless, the Government should have started their work to meet the goals. As stated in chapter 5, the Ministry of Climate and Environment were allocated the responsibility for setting up the Committee on Technical Calculations, which will soon be presented.

Kjellberg and Reitan (1995) also mention that when the policy is unclear the job of interpreting it is left to those who will implement them. For the Norwegian Climate Act, this would have been a task for a Committee on Climate Change, but as this committee was not included in the act, this clarification must now be done by either the decision-makers or employees in the governmental agencies.

The proposition for the act also focused on cost-efficiency – which has been a recurring element in the Norwegian climate policy – and cooperation with the EU. The Government launched a white paper on climate strategy towards 2030 in June 2017, claiming that Norway will achieve the goals for 2030 - to become climate neutral – by domestic measures, basically a tax on CO₂ (Meld. St. 41 (2016-2017)). If this is not enough, flexible mechanisms should compensate for Norwegian emissions.

My assessment is that a tax on CO_2 must be very high to achieve climate neutrality. Thus, the government did not prioritise domestic cuts, neither in the act nor the new white paper, but prioritised purchasing quotas abroad. This may be an acceptable solution in the beginning, until the industry – and the rest of the society – has had time to make themselves able to readjust towards a low-emission production and society. At the same time, this may become a crutch for the domestic readjustment, as it is likely that during the first years it will be cheaper to buy quotas. However, as the number of quotas is reduced, buying these may be an expensive solution, and the Norwegian industry will lack the technology to be both cost-effective and lowemitting. This advances two other arguments; whether the number of quotas will be reduced and the ethics of buying quotas from countries with a lower cost-level.

In October 2017, five representatives from the Socialist Left Party put forward a motion on 42 measures to achieve the climate goals for 2020, as agreed in the 2012 climate settlement (Representantforslag 16 S (2017-2018)). This motion was discussed in the Parliament in May
2018, in conjunction with the Government's white paper. During the Committee on Energy and Environment's assessment of the motion and the white paper, there was presented even more proposals for measures (Innst. 253 S (2017-2018)). Thus, the Parliament had to vote over several proposals. Many of the proposed measures were decided, including to ask the Government for sectoral aspirations for emission reductions (Stortinget, 2018b). This may be a step towards implementation of measures which will help achieving the goals.

As Norway has decided to collaborate with the EU through the EU Emission Trading System (EU ETS) to reduce emissions, this system will be crucial for reductions. The EU ETS aim to reduce emissions by 40% in 2030 compared to the 1990 baseline (European Commission, 2016). This is done on the cap and trade-principle, where the industry trade quotas within a given cap. During 2013-2020, the cap will be reduced by 1.74% each year, necessitating a reduction in emissions equivalent to this. The crucial point is whether the number of quotas is reduced enough to push forward a change towards a low-emitting industry, and also, how the industry relates to the system and plans to reduce emissions. Even though the EU reduces the number of quotas annually, Buckley and Lemmens (2017) as well as the Norwegian Government (Meld. St. 41 (2016-2017)) point out that there is a surplus of quotas, which reduces the price and thereby, the incentive to reduce emissions. With an excess of quotas, one can also ask whether buying these contribute to emission reduction, or if it is merely an excuse for not reducing own emissions.

Further, according to Hovland et.al (2014) (cited in Waagard and Nordrum (2017)), companies rarely have a clear strategy on quota purchases but buy quotas whenever they find a need for it. This indicates a lack of strategy, or willingness, for conversion and reduction of emissions. Also, Crooks (2009) points out that the quota market prevents companies from investing in low-emission technology, as the volatility in the quota prices makes it challenging to calculate the revenues from such an investment. Despite this, the Norwegian Government (Meld. St. 41 (2016-2017)) claims that the EU ETS achieves its goal on reducing emissions. The UK Climate Change Act states that excess quotas in the UK may be removed and give a further reduction of the quotas in the system (Jevnaker et al., 2014). In addition, the UK established a fee on British emission quotas to ensure a minimum price level on the quotas in 2013, to strengthen the EU ETS as an instrument to reduce emissions. Norway has no own measures to increase the effect of the EU ETS.

Regarding the ethics; the system of cost-effectiveness, cap and trade and financial support of projects abroad, favours the developed and rich countries, who can pay for the quotas

or projects, while it may keep developing or poorer countries from further development and thus, trapping them in poverty. Cost-effectiveness also means that Norway will not have to reduce their oil and gas extraction, as purchasing quotas or supporting projects costs less than the revenues from petroleum production. This is also a well-known strategy from the Ministry of Finance, which does not support measures that are not cost-effective (Holmås, pers. comm). As mentioned in chapter 5, reduction of the non-quota emissions is also to be achieved in cooperation with the EU, through their annual emission allocation – the effort sharing decision. This system allows the less wealthy member states to increase their emissions up to a certain level to be able to strengthen their economies and to outweigh their lower investment capacity, while the richer countries must reduce more, to ensure a collaborative achievement of the goals (European Commission, 2018). This way, the system considers the member's different opportunities to pay for their emissions. Nevertheless, as this system also opens for trading quotas, it may make it more challenging to the less wealthy countries to reject a proposal from the richer countries to trade quotas. Thus, a system of cap and trade favours the rich countries.

Further, cost-effective measures and policies are not necessarily steering-effective. When focusing on cost-effective measures, it may take longer time – or require more measures – to achieve the goals for emission reduction than what steering-effective measures will require. My opinion is that we know we are approaching a warmer climate, which causes many challenges to society, we should focus on measures we know will work out quickly, instead of what seems to be the cheapest solution right now. To say it with the words of Holmås (2018: my translation):

"If I was sitting on the Titanic and were to choose how to fix the boat. I'd rather join the engineers who were interested in finding out how to do this, than with the economists, who were thinking on how to do this in a cost-efficient way".

7. Conclusion

In this thesis, I have analysed and discussed the process of making the climate act; why it was enacted at the specific time and the arguments for and against the act, as well as whether the act is a good instrument for long-term planning of emission reduction. I will summarise the considerations presented in chapter 5 and 6 and give a conclusion and some suggestions for further research.

7.1 The process of making the act

In the theory chapter, I introduced Turner's steps in the policy-making process; to define the problem, agree upon the purpose of the policy, formulate the policy, and implement the policy, which lead to a superseding or redefinition of the problem and a policy outcome.

The problem in this case was climate change; we know that the emissions from human activity causes a warmer and wilder climate globally. This was the basis for a broad consensus of the purpose of the policy; to make a framework to reduce emissions of climate gases. There were more debates on the policy formulation and whether to make an act.

Even though at least one of the two parties in Government, the Progress Party, did not support a climate act, the Government set up a consultation process to get inputs from the civil society on whether to make an act. Meanwhile, three representatives in Parliament feared that the Government would postpone a decision – or decide not to make an act – and put forward a motion for a climate act in Parliament. As the Parliament supported the motion, the Government had to make a proposal for an act and set up a new consultation process on this proposal.

The response to the Government's consultation processes was essentially that the (E)NGOs, most private persons and unions were supporting an act, but wanted it to be more stringent than the proposal. These actors focused on measures like a committee on climate change, regular reporting on emissions and sectoral climate budgets, and they wanted domestic emission reductions and a clearer language and statements in the act. The actors from industry did, however, argue against an act, or towards a flexible act without any specific measures. These actors did not find a need for a committee on climate change, sectoral climate budgets, nor more reporting than what already existed. Also, they argued that Norway's high level of costs of restructuring to low-emission technology would decrease their competitiveness.

The consultation processes partly confirmed the uncertain internal support for a climate act in the Government. Some of the respondent to the first consultation paper pointed out that the paper was biased towards a rejection of an act. Even though most of the response to this process was positive, with proposals for measures to be included in the act, the Government's first proposal for an act did not include any measures other than annual reporting on emissions to the Parliament. The motion for an act and the Government's second proposal – published after the second consultation process – for an act was discussed in Parliament. These debates were characterised by consensus among most of the parties. The Progress Party was the only party who stated that they did not support an act. The debate amongst the other parties was essentially about whether the act should be specific and stringent or flexible. The Government's second proposal was somewhat more extensive than the first and included more specific goals and reports.

After the debates on policy formulation, the Parliament took into account some of the arguments, and enacted the policy – the climate act. Thus, the next step is implementation of the act. The climate act holds no details or measures on how emissions should be reduced. Thus, the implementation is still in progress, by deciding which measures should be taken to achieve the goals. Thus, the problem is still not superseded or redefined, and we do not know the outcome of the policy.

A climate act was first mentioned by the Government in 2012, but they decided not to go forward with the process due to internal disagreements. After the parliamentary election in 2013, most of the representatives in Parliament supported an act. The leader of the Labour Party's retraction from Norwegian policy may have been of importance for this change in opinion, as well as the minority Government's agreement of collaboration with the Christian Democrats and the Liberal Party. Thus, some of the representatives in Parliament decided to use their power to instruct the Government to make an act. Most likely, these representatives wanted the bill for a climate act to be promoted during the same electoral period to ensure that there was still support for it in the Parliament – there could be a risk that support would decrease over the next parliamentary election. Thus, my conclusion on why the act was enacted precisely in 2017 is simply that the opportunity was there at that time. The first proposal for an act, in 2012, had now had enough time to ripen amongst the politicians and the civil society.

7.2 The act's ability to avoid time-inconsistency

The act does not include any measures to reduce emissions; it only states that there is a goal of reduction to a certain level, with some qualifying reservations. It does not establish a committee on climate change nor sectoral climate budgets, which would have been an advantage to overcome time-inconsistency. However, it includes annual reporting on emissions, and the

proposed collaboration with the EU requires a climate budget for all non-quota sectors combined, which is taken into the act. Thus, the reporting will be crucial for whether the act will avoid time-inconsistency. If the reporting is well performed and given enough attention, this may force the Government to take enough measures to achieve the goals. Also important is whether a norm of emission reductions is strong enough amongst the voters, so the Government at any time will fear losing voters by not reducing emissions, instead of losing support for running a too stringent climate policy.

7.3 Further research

The purpose of my research was to study the process of policy-making with its actors and arguments, and to make an assessment on whether the climate act is likely to avoid time-inconsistency. As we, because of the time-span, have not seen any effect of the act yet, my conclusion is based upon use of theory and projections of the future. Thus, a suggestion for future research on the climate act is – in some years – to study what measures have been implemented as a result of the act, and their effects. Also, a more in-depth study on how measures to overcome time-inconsistency are best implemented in climate policy could be of relevance.

References

- Akselsen, O., Ryan, I., Brekk, L. P., Solberg, E., Høybråten, D. & Sponheim, L. (2008). Avtale om klimameldingen. Available at: https://www.regjeringen.no/contentassets/fbe5a5829a5d468fab6e4eec0a39512d/avtale klimameldingen_2008_01_17.pdf.
- Alstadheim, K. B. & Stoltenberg, J. (2010). *Klimaparadokset : Jens Stoltenberg om vår tids største utfordring*. Oslo: Aschehoug.
- Arnstad, M. (2018). Interview with member of the Parliament, Marit Arnstad, The Centre Party (26.04.18).
- Asseng, S., Ewert, F., Martre, P., Rötter, R. P., Lobell, D., Cammarano, D., Kimball, B., Ottman, M., Wall, G. & White, J. W. (2015). Rising temperatures reduce global wheat production. *Nature Climate Change*, 5 (2): 143.
- Berg, L. M. N. (2015). *Norsk klimapolitikk 1987-2015*: Cicero. Available at: https://www.cicero.oslo.no/no/posts/klima/norsk-klimapolitikk-1987-2015 (accessed: 17.04.18).
- Besteforeldrenes klimaaksjon. (2016). *Høringssvar til forslag om Lov om klima, (Klimaloven)*. Available at: https://www.regjeringen.no/no/dokumenter/forslag-tilklimalov---horing/id2512623/?uid=26e1ae92-31dc-4166-914a-4e39663bb306 (accessed: 11.06.18).
- Bryman, A. (2016). Social research methods. 5th ed. ed. Oxford: Oxford University Press.
- Buckley, P. & Lemmens, P.-W. (2017). *State of the EU Emissions Trading System 2017: asking questions of the numbers: leaders and laggards*. London: Sandbag.
- Bugge, H. C. (2015). Lærebok i miljøforvaltningsrett. 4th ed. Oslo: Universitetsforlaget.
- Cicero. (2015a). Perspektiver på en klimalov : Høringsuttalelse fra CICERO Senter for klimaforskning. Available at:

https://www.regjeringen.no/contentassets/f6ebe9abd3894a0180b93590286d928a/cicer o_senter_for_klimaforskning.pdf?uid=CICERO_Senter_for_klimaforskning.pdf (accessed: 11.06.18).

- Cicero. (2015b, January 29). Perspektiver på en norsk klimalov, Oslo, Norway.
- Civilstyrelsen. (2014). Lov om Klimarådet, klimapolitisk redegjørelse og fastsættelse af nationale klimamålsætninger. Retsinformation.dk: Civilstyrelsen. Available at: https://www.retsinformation.dk/Forms/R0710.aspx?id=163875 (accessed: 04.05.18).
- Cottis, T. (2015). *En framtid du ikke vil ha : Global oppvarming : Forutsetninger, risiko og sannsynlige konsekvenser*. Rapport 9/15: En framtid du ikke vil ha, vol. 9/15. Oslo: Framtiden i våre hender.
- Crooks, E. (2009, 4th September). Tories' plan on low-carbon electricity. *Financial Times*. Available at: https://www.ft.com/content/1ca05150-c8b7-11de-8f9d-00144feabdc0 (accessed: 09.06.18).
- Crown. (2008). Climate Change Act 2008. UK: The Stationary Office Limited.
- Dahl, R. A. (1957). The concept of power. *Systems Research and Behavioral Science*, 2 (3): 201-215.
- Dye, T. R. (1976). *Policy analysis: What governments do, why they do it, and what difference it makes.* Alabama: The university of Alabama press
- Edenhofer, O., Pichs-Madruga, R., Sokona, Y., Seyboth, K., Matschoss, P., Kadner, S., Zwickel, T., Eickemeier, P., Hansen, G. & Schlömer, S. (2011). IPCC special report on renewable energy sources and climate change mitigation. *Prepared By Working Group III of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, UK*.

Energi Norge. (2015). *Offentlig høring - perspektiver på en klimalov*. Available at: https://www.regjeringen.no/contentassets/f6ebe9abd3894a0180b93590286d928a/ener gi-norge-.pdf?uid=Energi_Norge_.pdf (accessed: 11.06.18).

- Engelstad, F. (1999). Maktbegrepet etter Max Weber. In Engelstad, F. (ed.) *Om makt : Teori* og kritikk, pp. 15-42. Oslo: Ad notam Gyldendal.
- European Commission. (2016). *The EU Emissions Trading System (EU ETS)*: European Union. Available at: https://ec.europa.eu/clima/sites/clima/files/factsheet_ets_en.pdf (accessed: 09.06.18).
- European Commission. (2018). *Effort Sharing: Member State's emission targets*: European Commission. Available at: https://ec.europa.eu/clima/policies/effort_en (accessed: 09.06.18).
- Fridtjof Nansens Institutt. (2015a, January 29). *Klimalov: Britiske erfaringer og relevans for Norge*, Oslo, Norway.
- Fridtjof Nansens Institutt. (2015b). Perspektiver på en klimalov høringsinnspill fra Fridtjof Nansens Institutt. Available at: https://www.regjeringen.no/contentassets/f6ebe9abd3894a0180b93590286d928a/fridtj of-nansens-institutt.pdf?uid=Fridtjof Nansens Institutt.pdf (accessed: 11.06.18).
- Grunnloven. (1814). *The Constitution of the Kingdom of Norway*. Available at: https://lovdata.no/dokument/NLE/lov/1814-05-17#KAPITTEL_5 (accessed: 26.05.18).
- Haug, C., Rayner, T., Jordan, A., Hildingsson, R., Stripple, J., Monni, S., Huitema, D.,
 Massey, E., van Asselt, H. & Berkhout, F. (2010). Navigating the dilemmas of climate policy in Europe: evidence from policy evaluation studies. *Climatic Change*, 101 (3-4): 427-445.
- Helgesen, V. (2018). Klimaloven (E-mail to Ingrid Hvidsten Gabrielsen 03.06.2018).
- Hogwood, B. & Gunn, L. (1997). Why "perfect implementation" is unattainable. In Hill, M. (ed.) *The Policy process : a reader*. London: Prentice Hall.
- Holmås, H. (2018). Interview with former politician Heikki Holmås in The Socialist Left Party (04.04.18).
- Hovi, J., Sprinz, D. F. & Underdal, A. (2009). Implementing Long-Term Climate Policy: Time Inconsistency, Domestic Politics, International Anarchy. *Global Environmental Politics*, 9 (3): 20-39. doi: 10.1162/glep.2009.9.3.20.
- Howlett, M. (2010). *Designing public policies : principles and instruments*. New York: Routledge.
- Innst. 211 S (2014-2015). Innstilling fra energi- og miljøkomiteen om ny utslippsforpliktelse for 2030 en felles løsning med EU.
- Innst. 212 S (2014-2015). Innstilling fra energi- og miljøkomiteen om representantforslag fra stortingsrepresentantene Rasmus Hansson, Rigmor Andersen Eide og Marit Arnstad om en klimalov.
- Innst. 253 S (2017-2018). Innstilling fra energi- og miljøkomiteen om Klimastrategi 2030 norsk omstilling i europeisk samarbeid og Representantforslag 16 S (2017-2018) om å gjennomføre Stortingets mål i klimaforliket om å kutte norske klimagassutslipp fram mot 2020: Stortinget.
- Innst. 329 L (2016-2017). Innstilling fra energi- og miljøkomiteen om Lov om klimamål (klimaloven).
- Innst. 390 S (2011-2012). (2012). Innstilling til Stortinget fra energi- og miljøkomiteen om norsk klimapolitikk. Oslo: Energi- og miljøkomiteen. Available at: https://www.stortinget.no/globalassets/pdf/innstillinger/stortinget/2011-2012/inns-201112-390.pdf (accessed: 22.01.18).

- IPCC. (2008). Climate Change 2007: Synthesis Report ; An Assessment of the Intergovernmental Panel on Climate Change: Intergovernmental Panel on Climate Change.
- IPCC. (2014a). Climate Change 2013 The Physical Science Basis : Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge: Cambridge University Press.
- IPCC. (2014b). *Summary for policymakers*. Climate Change 2014: Mitigation of climate change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change: IPCC.
- IPCC. (2018). *History*: IPCC. Available at: http://www.ipcc.ch/organization/organization history.shtml (accessed: 28.02.18).
- Jevnaker, T., Inderberg, T. H. J., Waag, M. & Wettestad, J. (2014). Den britiske klimalovens første fem år: En oversikt over sentral nasjonal dynamikk og samspillet med EU: Fridtjof Nansens Institutt.
- Justitieministeriet. (2015). 609/2015 Klimatlag. Finlex: Justitieministeriet. Available at: http://www.finlex.fi/sv/laki/alkup/2015/20150609 (accessed: 04.05.18).
- Jørgensen, P., Sørensen, R. & Haldorsen, S. (1997). *Kvartærgeologi*. 2. utg. ed. Oslo: Landbruksforl.
- Kirkerådet. (2015). *Kirkerådets innspill til "Perspektiver på en klimalov"*. Available at: https://www.regjeringen.no/contentassets/f6ebe9abd3894a0180b93590286d928a/kirke radet.pdf?uid=Kirker%C3%A5det.pdf (accessed: 11.06.18).
- Kirkerådet. (2016). Høringssvar fra Kirkerådet om norsk klimalov. Available at: https://www.regjeringen.no/no/dokumenter/forslag-til-klimalov--horing/id2512623/?uid=be54a5d9-9c85-4552-ac71-4fa7653e5cb7&factbox=horingssvar&lastvisited=34197fa3-d6c0-4cc5-b184-96a42f6bfb74 (accessed: 11.06.18).
- Kjellberg, F. & Reitan, M. (1995). Studiet av offentlig politikk : en innføring. Oslo: TANO.
- Klausen, J. E. (1996). Miljøpolitikken og den segmenterte stat. In Klausen, J. E. & Rommetvedt, H. (eds) *Miljøpolitikk : organisasjonene, Stortinget og forvaltningen*, pp. 131-163. Oslo: Tano Aschehoug.
- Klimarealistene. (2015). *Høringsnotat om hvorvidt en ny rammelov for klima vil gi merverdi mm.* Available at:

https://www.regjeringen.no/contentassets/f6ebe9abd3894a0180b93590286d928a/klim arealistene.pdf?uid=Klimarealistene.pdf (accessed: 11.06.18).

Klimarealistene. (2016). *Klimalov*. Available at: https://www.regjeringen.no/no/dokumenter/forslag-til-klimalov--horing/id2512623/?uid=424f50c2-d382-426d-b227-115a573f1bb8&factbox=horingssvar&lastvisited=Norges_Bondelag (accessed: 11.06.18).

- Knox, J., Hess, T., Daccache, A. & Wheeler, T. (2012). Climate change impacts on crop productivity in Africa and South Asia. *Environmental Research Letters*, 7 (3): 034032. doi: 10.1088/1748-9326/7/3/034032.
- Lane, J.-E. (1997). Implementation, accountability and trust. In Hill, M. (ed.) *The Policy* process : a reader. London: Prentice Hall.
- Lazarus, R. J. (2010). Climate Change Law In and Over Time. San Diego Journal of Climate & Energy Law.

Lukes, S. (2005). Power : a radical view. 2nd ed. Basingstoke: Palgrave Macmillan.

Lutgens, F. K., Tarbuck, E. J. & Tasa, D. (2015). *Essentials of geology*. 12th ed., Global ed. ed. Always learning. Harlow, Essex: Pearson.

- Macrory, R. (2012). The UK Climate Change Act Towards A Brave New Legal World? In Fauchald, O. K., Backer, I. L. & Voigt, C. (eds) *Pro natura : festskrift til Hans Christian Bugge på 70-årsdagen 2. mars 2012*. Oslo: Universitetsforl.
- March, J. G. & Olsen, J. P. (2006). Elaborating the "New institutionalism". In Rhodes, R. A. W., Binder, S. A. & Rockman, B. A. (eds) *The Oxford handbooks of political institutions*, pp. 3-20. Oxford: Oxford University Press.
- Mazmanian, D. A. & Sabatier, P. A. (1983). *Implementation and public policy*. Scott, Foresman public policy analysis and management series. Glenview, Ill: Scott, Foresman.
- Meld. St. 13 (2014-2015). Ny utslippsforpliktelse for 2030 en felles løsning med EU. Klimaog miljødepartementet. Oslo: Regjeringen.
- Meld. St. 21 (2011-2012). Norsk klimapolitikk. Det kongelige miljøverndepartement.
- Meld. St. 41 (2016-2017). *Klimastrategi for 2030 norsk omstilling i europeisk samarbeid*. Klima- og miljødepartementet. Oslo: Regjeringen.
- Miljødirektoratet. (2015, January 29). Perspektiver på klimalov, Oslo, Norway.
- NHO. (2015). *Høring perspektiver på en klimalov*. Available at: https://www.regjeringen.no/contentassets/f6ebe9abd3894a0180b93590286d928a/nho. pdf?uid=NHO.pdf (accessed: 11.06.18).
- Nordrum, J. C. F. (2017). Klimalov 31 aug 2017. Unpublished manuscript.
- Nordrum, J. C. F. (2018). Interview with Assistant Professor Jon Christian F. Nordrum (10.04.18).
- Norges Bondelag. (2016). *Høringssvar klimalov*. Available at: https://www.regjeringen.no/contentassets/4f83d2e792284043b4a1b977038ee2a4/norg es-bondelag.pdf?uid=Norges_Bondelag (accessed: 11.06.18).
- Norsk Industri. (2015a). *Høring om klimarammelov*. Available at: https://www.regjeringen.no/contentassets/f6ebe9abd3894a0180b93590286d928a/nors k-industri.pdf?uid=Norsk_Industri.pdf (accessed: 11.06.18).
- Norsk Industri. (2015b, January 29). *Klimalov: Hvordan er de industrielle erfaringene fra land som har innført en klimalovgivning*, Oslo, Norway.
- Norsk Olje&Gass. (2015). Perspektiver på en nasjonal klimalov. Available at: https://www.regjeringen.no/contentassets/f6ebe9abd3894a0180b93590286d928a/nors k-olje-og-gass.pdf?uid=Norsk_Olje_og_Gass.pdf (accessed: 11.06.18).
- NOU 2003: 19. *Makt og demokrati : sluttrapport fra Makt- og demokratiutredningen*. Oslo: Statens forvaltningstjeneste, Informasjonsforvaltning.
- NTB. (2014). *Klima på topp for Støre*: Dagens Næringsliv. Available at: https://www.dn.no/nyheter/2014/06/14/klima-p-topp-for-stre (accessed: 11.06.18).

Olje&Gass, N. (2016). *Høringssvar til forslag om klimalov*. Available at: https://www.regjeringen.no/contentassets/4f83d2e792284043b4a1b977038ee2a4/nors k-olje-og-gass.pdf?uid=Norsk olje og gass (accessed: 11.06.18).

Ottosen, P. (2016). I 2008 ga politikerne sitt løfte til Stortinget, nå vil de helst ikke snakke om det. -Vi har bedratt oss selv. *Dagbladet*. Available at: https://www.dagbladet.no/nyheter/i-2008-ga-politikerne-sitt-lofte-til-stortinget-na-vil-de-helst-ikke-snakke-om-det---vi-har-bedratt-oss-selv/64047313 (accessed: 28.02.18).

Ottosen, P., Støbakk, T. & Ringheim, G. (2016). Zero: -Ikke nok for å nå 2020-målene. *Dagbladet*. Available at: https://www.dagbladet.no/nyheter/zero---ikke-nok-for-a-na-2020-malene/65393149 (accessed: 28.02.18).

Prop. 77 L (2016-2017). *Lov om klimamål (klimaloven)*. Det kongelige klima- og miljødepartement.

Regjeringen. (2014a). *Klimaforliket*: Klima- og miljødepartementet,. Available at: https://www.regjeringen.no/no/tema/klima-og-miljo/klima/innsiktsartiklerklima/klimaforliket/id2076645/ (accessed: 28.02.18).

- Regjeringen. (2014b). Offentlig høring Perspektiver på en klimalov: Regjeringen. Available at: https://www.regjeringen.no/no/dokumenter/Hoering
 - klimalov/id2351282/?factbox=horingssvar (accessed: 25.05.18).

Regjeringen. (2014c). Perspektiver på en klimalov. Klima- og miljødepartementet. Oslo.

Regjeringen. (2015). *Kva er ei høyring?*: Regjeringen. Available at: https://www.regjeringen.no/no/dokument/hoyringar/kva-er-ei-hoyring/id2459635/ (accessed: 17.04.18).

- Regjeringen. (2016a). Forslag til lov om klimamål (Klimaloven). Klima- og miljødepartementet.
- Regjeringen. (2016b). *Utredningsinstruksen*: Regjeringen. Available at: https://www.regjeringen.no/no/dokumenter/instruks-om-utredning-av-statlige-tiltakutredningsinstruksen/id2476518/ (accessed: 11.06.18).
- Regjeringen. (2018). *White papers*. Available at: https://www.regjeringen.no/en/find-document/white-papers-/id1754/ (accessed: 01.03.18).
- Representantforslag 16 S (2017-2018). Representantforslag fra stortingsrepresentantene Audun Lysbakken, Lars Haltbrekken, Kari Elisabeth Kaski, Arne Nævra og Torgeir Knag Fylkesnes om å gjennomføre Stortingets mål i klimaforliket om å kutte norske klimagassutslipp fram mot 2020: Stortinget.

Representantforslag 32 S (2014-2015). *Representantforslag fra stortingsrepresentantene Rasmus Hansson, Rigmor Andersen Eide og Marit Arnstad om en klimalov*: Stortinget.

- Riksrevisjonen. (2010). *Riksrevisjonens undersøkelse av måloppnåelse i klimapolitikken*: Riksrevisjonen.
- Rognstad, H., Gitmark, H. & Steinhovden, T. (2015). *Policynotat : Trenger Norge en klimalov?*: Tankesmien Agenda. Available at: https://tankesmienagenda.no/wp-content/uploads/Agenda-Policynotat-Trenger-vi-en-klimalov1.pdf (accessed: 11.06.18).
- Russo, S., Dosio, A., Graversen, R., Sillmann, J., Carrao, H., Dunbar, M. B., Singleton, A. B., Montagna, P., Barbosa, P. & Vogt, J. V. (2014). Magnitude of extreme heat waves in present climate and their projection in a warming world. 119 (22). doi: 10.1002/2014JD022098.
- St.meld. nr. 41 (1994-1995). Om norsk politikk mot klimaendringer og utslipp av nitrogenoksider (NOx): Miljøverndepartementet.
- Statens vegvesen. (2016). Forslag til Klimalov høring. Available at: https://www.regjeringen.no/contentassets/4f83d2e792284043b4a1b977038ee2a4/state ns-vegvesen.pdf?uid=Statens_vegvesen (accessed: 11.06.18).

Stoltenberg, J. (2016). Min historie. Oslo: Gyldendal.

Stortinget. (2008). *Stortinget - Møte tirsdag den 4. mars 2008 kl 10*: Stortinget. Available at: https://www.stortinget.no/no/Saker-og-

publikasjoner/Publikasjoner/Referater/Stortinget/2007-2008/080304/1 (accessed: 14.02.18).

- Stortinget. (2014). Meddelelse fra Arbeiderpartiets stortingsgruppe om at representanten Jens Stoltenberg fra 16. juni 2014 trer ut av Stortinget for å forberede oppdraget som generalsekretær i NATO: Stortinget Available at: https://www.stortinget.no/no/Sakerog-publikasjoner/Saker/Sak/?p=60345 (accessed: 11.06.18).
- Stortinget. (2015a). *Løseforslag: Forslag nr 2 fra Ola Elvestuen på vegne av Venstre:* Stortinget Available at: https://www.stortinget.no/no/Saker-og-

publikasjoner/Saker/Sak/Voteringsoversikt/?p=61243&dnid=1#id=5729&view=vote-text (accessed: 23.05.18).

- Stortinget. (2015b). Stortinget møte tirsdag den 24.mars 2015 kl 10. Sak nr 12: Stortinget. Available at: https://www.stortinget.no/no/Saker-ogpublikasjoner/Publikasjoner/Referater/Stortinget/2014-2015/150324/12 (accessed: 23.03.18).
- Stortinget. (2015c). Voteringsoversikt for sak: Ny utslippsforpliktelse for 2030 en felles løsning med EU: Stortinget. Available at: https://www.stortinget.no/no/Saker-ogpublikasjoner/Saker/Sak/Voteringsoversikt/?p=61807&dnid=1 (accessed: 27.05.18).
- Stortinget. (2015d). *Voteringsoversikt for sak: Representantforslag om en klimalov*. Stortinget.no. Available at: https://www.stortinget.no/no/Saker-ogpublikasjoner/Saker/Sak/Voteringsoversikt/?p=61243&dnid=1 (accessed: 31.01.18).
- Stortinget. (2017a). Program for Åpen høring i Stortingets energi- og miljøkomité torsdag 4.mai 2017: Stortinget. Available at: https://www.stortinget.no/no/Hva-skjer-pa-Stortinget/Horing/Horingsprogram/?dateid=10004065 (accessed: 02.06.18).
- Stortinget. (2017b). *Stortinget Møte fredag den 2.juni 2017, sak nr 4*: Stortinget. Available at: https://www.stortinget.no/no/Saker-og-publikasjoner/Publikasjoner/Referater/Stortinget/2016-2017/refs-201617-06-02?m=4
 - (accessed: 30.05.18).

Stortinget. (2017c). Voteringsoversikt for sak: Lov om klimamål (klimaloven): Stortinget. Available at: https://www.stortinget.no/no/Saker-og-

- publikasjoner/Saker/Sak/Voteringsoversikt/?p=67735&dnid=1 (accessed: 30.05.18). Stortinget. (2017d). Åpen høring i Stortingets energi- og miljøkomité torsdag 4. mai 2017 kl
- Stortinget. (2017d). Apen horing i Stortingets energi- og miljøkomite forsaag 4. mai 2017 ki 10.15: Stortinget. Available at: https://www.stortinget.no/no/Hva-skjer-pa-Stortinget/Videoarkiv/Arkiv-TV-sendinger/?mbid=/2017/H264full/Hoeringssal2/05/04/Hoeringssal2-20170504-
 - 101019.mp4&msid=281&dateid=10004065 (accessed: 02.06.18).
- Stortinget. (2017e). Åpen høring i Stortingets energi- og miljøkomité torsdag 4.mai 2017: Stortinget. Available at: https://www.stortinget.no/no/Hva-skjer-pa-Stortinget/Videoarkiv/Arkiv-TV-sendinger/?mbid=/2017/H264full/Hoeringssal2/05/04/Hoeringssal2-20170504-
 - 101019.mp4&msid=281&dateid=10004065 (accessed: 22.01.18).
- Stortinget. (2017f). Åpen høring i Stortingets energi og miljøkomité torsdag 4. mai 2017 kl 11.10: Stortinget. Available at: https://www.stortinget.no/no/Hva-skjer-pa-Stortinget/Videoarkiv/Arkiv-TV-sendinger/?mbid=/2017/H264full/Hoeringssal2/05/04/Hoeringssal2-20170504-112135.mp4&msid=0&dateid=10004065 (accessed: 02.06.18).
- Stortinget. (2018a). *Partioversikt*: Stortinget. Available at: https://www.stortinget.no/no/Representanter-og-
- komiteer/Partiene/Partioversikt/?pid=2013-2017#primaryfilter (accessed: 11.06.18). Stortinget. (2018b). *Representantforslag om å gjennomføre Stortingets mål i klimaforliket om å kutte norske klimagassutslipp fram mot 2020*: Stortinget. Available at: https://www.stortinget.po/po/Sakar.og.publikasioper/Vedtak/Vedtak/Sak/2p=60815
 - https://www.stortinget.no/no/Saker-og-publikasjoner/Vedtak/Vedtak/Sak/?p=69815 (accessed: 13.06.18).
- Sundtoft, T. (2015). Spørsmål nr. 1287 til skriftlig besvarelse fra stortingsrepresentant Rasmus Hansson. Unpublished manuscript.
- Sveriges Riksdag. (2017). Klimatlag (2017:720): Sveriges Riksdag. Available at: https://www.riksdagen.se/sv/dokument-lagar/dokument/svenskforfattningssamling/klimatlag-2017720_sfs-2017-720 (accessed: 04.05.18).
 Solbugvik L. (2012). Kristin Halvarian : giannamalag. Oslo: Compelen Demm
- Sølhusvik, L. (2013). Kristin Halvorsen : gjennomslag. Oslo: Cappelen Damm.

- Tekna. (2014). *Høringssvar perspektiver på en klimalov*. Available at: https://www.regjeringen.no/contentassets/f6ebe9abd3894a0180b93590286d928a/tekn a.pdf?uid=TEKNA.pdf (accessed: 11.06.18).
- The Parliament. (2018). *UK Fifth Carbon Budget*: The Parliament. Available at: http://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-7555 (accessed: 05.06.18).
- The World Bank. (2014). *Turn Down the Heat: Confronting the New Climate Normal*. Turn Down the Heat. Washington D.C: The World Bank.
- Thompson, D. F. (2010). Representing Future Generations: Political Presentism and Democratic Trusteeship. 13 (1). doi: 10.1080/13698230903326232.
- Tomasko, M. L., McNeish, J. A. & Inderberg, T. H. J. (2017). Norwegian carbon budget : an evaluation of the United Kingdom Climate Change Act's carbon budget and Norwegian climate policies: Norwegian University of Life Sciences, Ås. Available at: https://brage.bibsys.no/xmlui/handle/11250/2450734 (accessed: 16.05.2018).
- Turner, J. (1997). The policy process. In Axford, B., Browning, G. K., Huggins, R. & Rosamond, B. (eds) *Politics : an introduction*. London: Routledge.
- UNFCCC. (2014). *Background on the UNFCCC: The international response to climate change*: UNFCCC. Available at:
 - http://unfccc.int/essential_background/items/6031.php (accessed: 28.02.18).
- UNFCCC. (2018). *Summary of the Paris Agreement*: UNFCCC. Available at: http://bigpicture.unfccc.int/#content-the-paris-agreemen (accessed: 28.02.18).
- United States Environmental Protection Agency. (2017). *Climate Change Indicators: Greenhouse Gases*: United States Environmental Protection Agency. Available at: https://www.epa.gov/climate-indicators/greenhouse-gases (accessed: 17.04.18).
- Universitetet i Oslo. (2016). Uttalelse om Regjeringens forslag til klimalov fra Forskningsgruppen for naturressursrett, Det juridiske fakultet, Universitetet i Oslo. Available at: https://www.regjeringen.no/no/dokumenter/forslag-til-klimalov--horing/id2512623/?uid=34197fa3-d6c0-4cc5-b184-96a42f6bfb74&factbox=horingssvar&lastvisited=acd54635-f074-4fa8-9d1cc6d1c48ea0f6 (accessed: 11.06.18).
- Valstad, R. (2018). 18/1144 Spørsmål fra masterstudent om status på teknisk beregningsutvalg på klima (E-mail to Ingrid Hvidsten Gabrielsen 12.06.18).
- Van Meter, D. S. & Van Horn, C. E. (1975). The policy implementation process: A conceptual framework. *Administration & Society*, 6 (4): 445-488.
- Vatn, A. (2005). Institutions and the environment. Cheltenham: Edward Elgar.
- Vatn, A. (2015). *Environmental governance : institutions, policies and actions*. Cheltenham: Edward Elgar.
- Voß, J.-P., Smith, A. & Grin, J. (2009). Designing long-term policy: rethinking transition management. *Policy Sciences*, 42 (4): 275-302. doi: 10.1007/s11077-009-9103-5.
- Waag, M., Olufsen, M. & Vatn, A. (2015). *Høringsuttalelse vedr. 'Perspektiver på en klimalov'.*
- Waagard, R. E. & Nordrum, J. C. F. (2017, 31.08.17). *Debattmøte om klimaloven*. Debattmøte om klimaloven, Oslo, Norway.
- World Meteorological Organization. (2014). Atlas of mortality and economic losses from weather, climate and water extremes (1970-2012). Geneva: World Meteorological Organization.
- WWF-Norge. (2011). Samtale om klimalov: Kan vi benytte jus for å nå klimamålene?
- WWF-Norge. (2015). *Høringssvar fra WWF Perspektiver på en klimalov*. Available at: https://www.regjeringen.no/contentassets/f6ebe9abd3894a0180b93590286d928a/wwfnorge.pdf?uid=WWF_Norge.pdf (accessed: 11.06.18).

- WWF-Norge. (2016). *WWF høringssvar til Lov om klimamål (klimaloven)*. Available at: https://www.regjeringen.no/no/dokumenter/forslag-til-klimalov--horing/id2512623/?uid=acd54635-f074-4fa8-9d1cc6d1c48ea0f6&factbox=horingssvar&lastvisited=424f50c2-d382-426d-b227-115a573f1bb8 (accessed: 11.06.18).
- Zillman, J. W. (2009). *A history of climate activities*: World Meteorological Organization. Available at: https://public.wmo.int/en/bulletin/history-climate-activities (accessed: 28.02.18).

Appendix 1

Forslag til lov om klimamål (klimaloven)

§ 1 *Formål* Loven skal fremme gjennomføring av Norges klimamål som ledd i omstilling til et lavutslippssamfunn i Norge i 2050.

Loven skal fremme åpenhet og offentlig debatt om status, retning og framdrift i dette arbeidet.

Loven skal ikke være til hinder for at klimamål fastsatt i eller i medhold av denne lov kan gjennomføres felles med EU.

§ 2 Utslipp og opptak av klimagasser som loven gjelder for

Loven gjelder for de utslipp og opptak av klimagasser som omfattes av Norges første nasjonalt fastsatte bidrag under Parisavtalen 12. desember 2015.

Kongen i statsråd kan i forskrift bestemme at loven også skal gjelde for andre utslipp og opptak av klimagasser enn de som er omfattet av første ledd.

§ 3 Klimamål for 2030

Målet skal være at utslipp av klimagasser i 2030 reduseres med minst 40 prosent fra referanseåret 1990.

§ 4 Klimamål for 2050

Målet skal være at Norge skal bli et lavutslippssamfunn i 2050. Med lavutslippssamfunn menes et samfunn hvor klimagassutslippene, ut fra beste vitenskapelige grunnlag, utslippsutviklingen globalt og nasjonale omstendigheter, er redusert for å motvirke skadelige virkninger av global oppvarming som beskrevet i Parisavtalen 12. desember 2015 artikkel 2 nr. 1 bokstav a.

Målet skal være at klimagassutslippene i 2050 reduseres i størrelsesorden 80 til 95 prosent fra utslippsnivået i referanseåret 1990. Ved vurdering av måloppnåelse skal det tas hensyn til effekten av norsk deltakelse i det europeiske klimakvotesystemet for virksomheter.

§ 5 Gjennomgang av klimamål hvert femte år

For å fremme omstilling til et lavutslippssamfunn, jf. § 4, skal regjeringen i 2020 og deretter hvert femte år legge fram for Stortinget oppdaterte klimamål. Disse skal a) legge til grunn beste vitenskapelige grunnlag b) så langt som mulig være tallfestede og målbare

Klimamål etter paragrafen her skal utgjøre en progresjon fra forrige mål og fremme gradvis omstilling fram mot 2050.

Klimamål skal være forenlig med Norges nasjonalt fastsatte bidrag under Parisavtalen 12. desember 2015 og eventuell felles gjennomføring med EU.

Loven skal ikke være til hinder for at det, som et supplement til klimamål etter første til tredje ledd, fastsettes andre typer mål for å fremme omstilling til et lavutslippssamfunn.

§ 6 Årlig redegjørelse for Stortinget

I budsjettproposisjonen for neste års statsbudsjett skal regjeringen redegjøre for a) hvordan Norge kan nå klimamål som nevnt i §§ 3 til 5

b) klimaeffekten av fremlagt budsjett

Regjeringen skal, basert på et faglig grunnlag, hvert år overfor Stortinget på egnet vis redegjøre for

a) utviklingen i klimagassutslippene, utslippsframskrivninger og gjennomføringen av klimamål som nevnt i §§ 3 til 5
b) hvordan Norge forberedes på og tilpasses klimaendringene

c) en oversikt som synliggjør sektorvise utslippsbaner innenfor ikke-kvotepliktig sektor og hvilke typer tiltak som vil være nødvendig for å realisere disse

d) status for Norges karbonbudsjett, også innenfor et eventuelt klimasamarbeid med EU om felles oppfyllelse av klimamål

§ 7 Ikrafttredelse

Loven gjelder fra den tid Kongen bestemmer.

Appendix 2

Lov om klimamål (klimaloven)

§ 1 Formål

Loven skal fremme gjennomføring av Norges klimamål som ledd i omstilling til et lavutslippssamfunn i Norge i 2050.

Loven skal fremme åpenhet og offentlig debatt om status, retning og framdrift i dette arbeidet.

Loven skal ikke være til hinder for at klimamål fastsatt i eller i medhold av denne lov kan gjennomføres felles med EU.

§ 2 Utslipp og opptak av klimagasser som loven gjelder for

Loven gjelder for de utslipp og opptak av klimagasser som omfattes av Norges første nasjonalt fastsatte bidrag under Parisavtalen 12. desember 2015.

Kongen i statsråd kan i forskrift bestemme at loven også skal gjelde for andre utslipp og opptak av klimagasser enn de som er omfattet av første ledd.

§ 3 Klimamål for 2030

Målet skal være at utslipp av klimagasser i 2030 reduseres med minst 40 prosent fra referanseåret 1990.

§ 4 Klimamål for 2050

Målet skal være at Norge skal bli et lavutslippssamfunn i 2050. Med lavutslippssamfunn menes et samfunn hvor klimagassutslippene, ut fra beste vitenskapelige grunnlag, utslippsutviklingen globalt og nasjonale omstendigheter, er redusert for å motvirke skadelige virkninger av global oppvarming som beskrevet i Parisavtalen 12. desember 2015 artikkel 2 nr. 1 bokstav a.

Målet skal være at klimagassutslippene i 2050 reduseres i størrelsesorden 80 til 95 prosent fra utslippsnivået i referanseåret 1990. Ved vurdering av måloppnåelse skal det tas hensyn til effekten av norsk deltakelse i det europeiske klimakvotesystemet for virksomheter. § 5 *Gjennomgang av klimamål hvert femte år* For å fremme omstilling til et lavutslippssamfunn, jf. § 4, skal regjeringen i 2020 og deretter hvert femte år legge fram for Stortinget oppdaterte klimamål. Disse skal a) legge til grunn beste vitenskapelige grunnlag b) så langt som mulig være tallfestede og målbare

Klimamål etter paragrafen her skal utgjøre en progresjon fra forrige mål og fremme gradvis omstilling fram mot 2050.

Klimamål skal være forenlig med Norges nasjonalt fastsatte bidrag under Parisavtalen 12. desember 2015 og eventuell felles gjennomføring med EU.

Loven skal ikke være til hinder for at det, som et supplement til klimamål etter første til tredje ledd, fastsettes andre typer mål for å fremme omstilling til et lavutslippssamfunn.

§ 6 Årlig redegjørelse for Stortinget I budsjettproposisjonen for neste års statsbudsjett skal regjeringen redegjøre for a) hvordan Norge kan nå klimamål som nevnt i §§ 3 til 5

b) klimaeffekten av fremlagt budsjett

Regjeringen skal, basert på et faglig grunnlag, hvert år overfor Stortinget på egnet vis redegjøre for

a) utviklingen i utslipp og opptak av klimagasser, framskrivinger av utslipp og opptak og gjennomføring av klimamål som nevnt i §§ 3-5

b) hvordan Norge forberedes på og tilpasses klimaendringene

c) en oversikt som synliggjør sektorvise utslippsbaner innenfor ikke-kvotepliktig sektor og hvilke typer tiltak som vil være nødvendig for å realisere disse
d) status for Norges karbonbudsjett, også innenfor et eventuelt klimasamarbeid med EU om felles oppfyllelse av klimamål

§ 7 Ikrafttredelse

Loven gjelder fra den tid Kongen bestemmer.



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