

Norwegian Interests and Participation towards the creation of Marine Protected areas in the Southern Ocean

**By
Nora Apelgren
University of Colorado Boulder**

**A thesis submitted by to the University of Colorado Boulder in partial fulfilment of the
requirements to receive Honors designation in Environmental Studies
May 2020**

Thesis Advisors:

**Cassandra Brooks, CU Boulder Environmental Studies, Committee Chair
Dale Miller, CU Boulder Environmental studies
Michael Readey, CU Boulder Engineering management program**

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Abstract

Norway is an important player in Antarctic governance. As a claimant state with historic whaling interests, they have long held influence in decision-making. Today, Norway takes the largest catch in the Antarctic krill (*Euphasia superba*) fishery while also leading innovations in sustainable management. The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) - a 26-member body (including Norway) which manages the Southern Ocean - has been moving towards adopting a network of marine protected areas (MPAs). Norway has been very influential in this effort – at times supporting and at other time opposing. Here, my research seeks to understand how Norwegian interests in Antarctica - including historic, political and economic - impact the adoption of MPAs. To complete this research, I performed a content analysis of Norwegian government documents and CCAMLR meeting reports combined with interviews with key informants. Norway has shown a complex combination of support and concern, many related to economic interests, the role of science, and Norway's positions in other global realms (e.g., the Arctic). A variety of themes emerged that help describe Norwegian positions and actions in the Southern Ocean MPA process: Norway as a leader in the Antarctic, and in global ocean sustainability; the importance of science which informs utilization and protection; Norway as a mediator in international cooperation; and the importance of The Law of the Sea Convention. This research helps provide insight into Norway's positions and into understanding consensus in the CCAMLR MPA process.

Preface

I am truly thankful for Cassandra Brooks my advisor for giving me the idea and guidance for this research, as well as, teaching me the importance of international policy for conservation of important ecosystems. I am truly inspired by Cassandra, her husband and all her important work towards the protection of the Southern Ocean! I aspire to be like Cassandra one day. I also want to thank Dale Miller and Michael Readey, my two other committee members, for always being there for me, providing input and support. Furthermore, I wish to thank all the interviewees for their time and willingness, without them I would not have been able to complete my project. Gratitude and thankfulness also go out to my friends and family for supporting me and helping me through late nights and early mornings. I want to thank my Dad for encouraging to me to study abroad and showing me California and my mom for always supporting me from Norway and keeping a safe base in Lillehammer for me to come back too. I would also like to give special thanks to the Norwegian government, my parents, and the Undergraduate Research Opportunity Program (UROP) for helping me cover my travel and school expenses through student loans, gifts, and grants that all enabled me to complete my project.

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Acronyms

CAMLR Convention – Convention on the Conservation of Antarctic Marine Living Resources

CCAMLR – Commission for the Conservation of Antarctic Marine Living resources

ATS - Antarctic Treaty System

MPA(s) - Marine Protected Area(s)

WSSD – World Summit on Sustainable Development Goal(s)

UNSDG(s)- United Nations Sustainable Development Goal(s)

WSMPA – Weddell Sea MPA

EAMPA – East Antarctic MPA

APMPA - Antarctic Peninsula MPA

UNCLOS – United Nations Convention on the Law of the Sea

UN – United Nations

UNEP – United Nations Environment Program

Introduction

This study aims to understand and produce a thorough report of Norway's motivations and interests in the Antarctic region, concerning the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and the implementation of important marine protected areas (MPAs).

The Convention on the Conservation of Antarctic Marine Living Resources (CAMLR Convention) was established in 1982 as a part of the Antarctic Treaty System – the suite of international agreements which govern Antarctica (CCAMLR October 15th, 2019). The CAMLR Convention governs the marine living resources in the Southern Ocean and currently has 26 Member States. The Convention allows for commercial fishing but mandates a precautionary ecosystem-based management approach with decisions being made on the best available science (CCAMLR 1980, Article II). Currently the main commercial fisheries are for Antarctic krill (*Euphausia superba*) and Toothfishes (*Dissostichus spp.*) (See Figure1). Pertinent to MPAs, areas being closed for science or conservation purposes, is also part of the CAMLR Convention (CCAMLR 1980, Article IX). Within CCAMLR, all decisions must be made by unanimous consensus of all Member States. On their website, CCAMLR defines an MPA as a marine area that provides protection of all the natural resources it contains, and explains that to achieve this protection, certain activities are prohibited or constrained to achieve the conservation goals for the area (CCAMLR March 20, 2020).

Marine Protected Areas: Global Trends

In 2002, South Africa brought information to CCAMLR from the World Summit on Sustainable Development (WSSD) where the United Nations General Assembly had agreed that MPAs were an important part of protecting the waters outside of national jurisdiction. At the WSSD world leaders established a goal to designate a global network of MPAs by 2012 (WSSD, 2002). As a result, the CCAMLR established a new agenda item for MPAs in 2002. The progress towards the goal set by the WSSD has however been slower than anticipated and this goal was not met in 2012 (the goal has now been updated and it is currently the hope to achieve this by 2020

instead). Today roughly 7% of the global oceans are protected through MPAs (Giakoumi et al, 2018). Well managed and designed MPAs are internationally recognized as an important way to protect oceans from overfishing, pollution and to prevent the loss of marine biodiversity (Edgar et al, 2014; Lubchenco & Grorud-Colvert, 2015). The goal of protecting global oceans continues to this day with greater pressure from the international community, for example the United Nations Sustainability Goal (UNSDG) number 14: “Life below water”, with the goal of protecting 10% of our oceans in MPAs (Gjerde et al, 2016; UNSDG, 2015). In a recent review of global MPAs, successful stakeholder engagement has been identified as one of the most important factors for their success (Giakoumi et al, 2018). It is therefore important to understand the different stakeholders and country interests in international waters so that one can overcome potential barriers or help the international community communicate and collaborate towards reaching this goal.

The Southern Ocean, CCAMLR and Marine Protected Areas

The Southern Ocean is today one of the few global marine areas which have been able to escape major anthropogenic influence and it has been regarded as one of the most successfully managed international global commons so far (Brooks et al, 2019). The area is under the protection of a series of international agreements under the name the Antarctic Treaty System (ATS) (Liu and Brooks, 2018). Antarctica and the Southern Ocean can be called a “terra nullus”, meaning that no country has any legal territorial claims on Antarctica, even though there were countries that have had historical claims in the past (see Figure 2). All historical claims have been replaced by the Antarctic Treaty under which the area is agreed to be devoted to peace and science (Antarctic Treaty, 1959). The ATS is an overarching regime comprising a combination of multi-national agreements involved in the international governing of Antarctica and the Southern Ocean. It includes the 1959 Antarctic Treaty, a 1991 Environmental Protocol, the 1972 Convention for Antarctic Seals and the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CAMLR Convention) (Liu and Brooks, 2018).

Following goals set first by the WSSD in 2002 and later included in the UNSDGs, CCAMLR started to discuss the designation of a network of MPAs in the Southern Ocean in 2002

(CCAMLR, 2002; CCAMLR, 2003). The progress towards MPAs started with an MPA workshop in 2005, then a bioregionalization process in 2007 (e-cc-xxiii-CCAMLR, 2004-CCAMLR, 2007). The first MPA was then adopted in the South Orkney Island Southern Shelf area in 2009 (CCAMLR, 2009). This first MPA was adopted swiftly, without a lot of disagreements among members (CCAMLR, 2009), but future MPA discussions have been more lengthy (CCAMLR, 2003-2009). Importantly, the South Orkney Islands MPA was adapted without a plan for management, research and monitoring and was designed to avoid interference with major fishing areas. These might be two factors that set precedent and thus made negotiations for future MPAs – some of which overlapped with commercial fishing areas - more difficult (Brooks et al, 2019). After five years of intensive negotiations, CCAMLR also adopted the world's largest MPA in the Ross Sea, Antarctica. Multiple countries have worked to develop additional MPA proposals, working towards a network of Southern Ocean MPAs, however, progress has greatly stalled (Brooks et al. 2019; CCAMLR 2002-2019). Currently, there are still proposals being discussed for the implementation of MPAs in the Weddell Sea, East Antarctic, and Antarctic Peninsula areas (CCAMLR 2019; Figure 1).

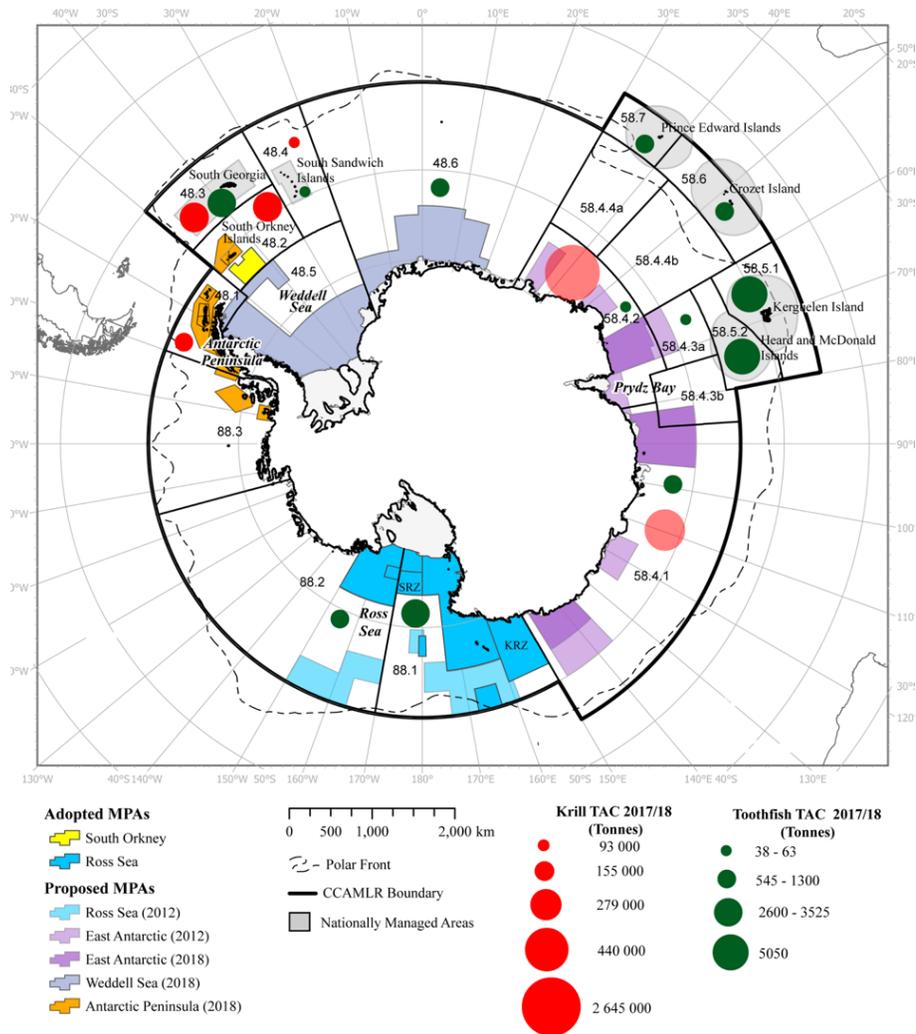


Figure 1: CCAMLR area boundary indicated by thick black line; thin black line represents management area delineations labeled numerically. CCAMLR’s adopted MPAs and MPA proposals from 2012 to 2018, including the South Orkney Islands Southern Shelf MPA (yellow), Ross Sea MPA (blue), East Antarctic (violet), Weddell Sea (purple) and the western Antarctic Peninsula (orange). Total Allowable Catch (TAC) for toothfish (blue) and krill (red) in the CCAMLR management area; circles proportional to respective TAC (tons in 2017/18), transparency indicates underutilization. Shaded circles around subantarctic islands reflect delineated exclusive economic zone boundaries generated prior to the signing of the CAMLR Convention. Shaded squares indicate toothfish management area around South Georgia and South Sandwich Islands, managed by the United Kingdom. Figure does not include subantarctic MPAs which fall outside of CCAMLR’s jurisdiction. CCAMLR boundaries, management areas, adopted MPAs, and TAC amounts and locations based on data provided via www.ccamlr.org; Ross Sea proposed MPA boundaries based on <https://www.mfat.govt.nz/en/environment/antarctica/ross-sea-mpa-documents/>; East Antarctic proposed MPA boundaries based on <http://www.antarctica.gov.au/law-and-treaty/ccamlr/marine-protected-areas/>; Weddell Sea and Antarctic Peninsula proposed MPA boundaries from proponent states (based on CCAMLR-XXXVII/29 and CCAMLR-XXXVII/31, with permission). (Figure from Brooks et al. 2019)

Norway as a Key Player in Antarctica

With proximity to the Arctic, Norway has a long history as a polar nation. During the “Heroic Age” the Norwegian explorer Roald Amundsen was the first to reach the South Pole in 1911 and in 1935, the first female to ever step foot in Antarctica was the Norwegian Caroline Mikkelsen (Birgit Njaastad, 2019). Norway has a history in Antarctica dating back to the early 1900s, when Norwegians first arrived in pursuit of whales. Whaling was the main foundation for the territorial claims for Bouvetøya (made in 1929), Peter I Øy (made in 1931), and Dronning Maud Land (made in 1939) (Government of Norway, 2014-2015). As of today, Norway continues to be a key player in the area and is currently the largest fishery nation in Antarctica in terms of tonnage with the largest annual harvest of Antarctic Krill (Nils Hoem, 2019; Kristoffer Bjørklund, 2019). The Norwegian claims on mainland Antarctica (Dronning Maud Land) were first made in 1939 as a response to potential German activity in the area – The Norwegian expeditioner Adolf Hoel had heard rumors that a German expedition was headed to the same area of the Antarctic that Norway had been considering to claim for some time (Meld 32. , 2014-2015). The territorial claim included the land starting from the Falkland dependencies in the West (20°W) to 45° East (Birgit Njaastad, 2019; Figure 2). Interestingly the Norwegian claim, when announced, was not described as a sector like the other historical claims in Antarctica, and the wording was intently chosen so that it would not be (Meld. 32, 2014-2015). The original claim, just claimed the Norwegian rights to territory that did not have any claims attached to them yet, claiming the shoreline from the Falkland dependencies in the west to the Australian territories in the east, with the mainland and ocean close to it (Meld. 32 , 2014-2015). Later in the Whitepaper (Meld 32) from 2015 however Norway states that they are not opposing the idea of the sector principle similar to that of other claimant countries and with this does not reject that the claim includes the territory from the coast and ocean close to the shoreline, all the way to the South Pole -which, in total, would involve a territory seven times larger than the Norwegian mainland (Meld. 32, 2014-2015; Rapp, 2015). The Norwegian historically claimed area has been named Dronning Maud land after the Norwegian Queen of Norway from 1905-1938 (Meld 32., 2014-2015). Other historically claimed areas were made by the original claimant countries Chile, United Kingdom, France, Argentina, Chile, New Zealand, and Australia (see Figure 2).

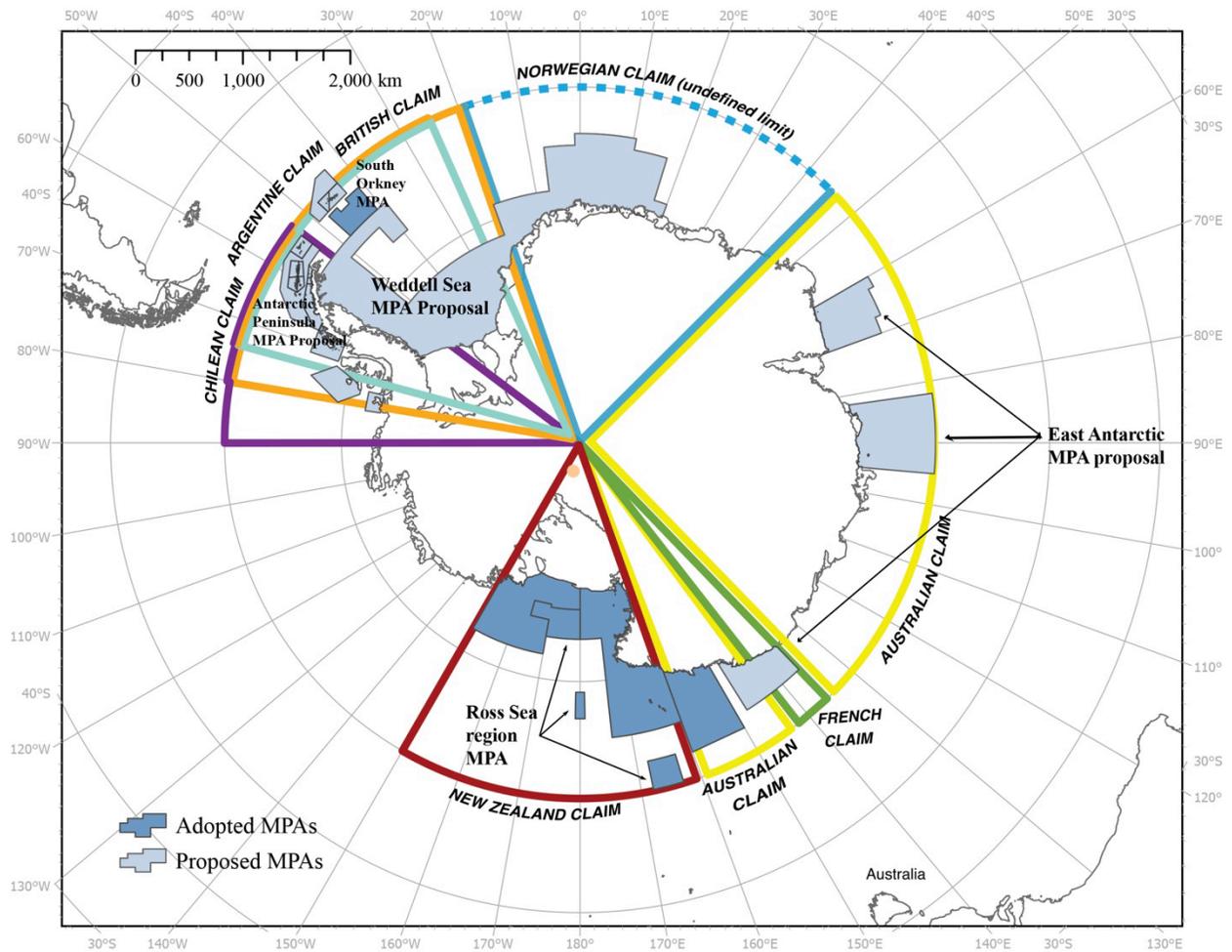


Figure 2: . Historic Antarctic claims and marine protected areas. Boundaries of historic Antarctic claims, suspended with the signing of the Antarctic Treaty, and those of CCAMLR marine protected areas (MPA) both adopted (South Orkney Islands and Ross Sea) and proposed (East Antarctic and Weddell Sea). MPA proponent States and year of adoption are listed in parentheses. MPA areas overlap or align with previously claimed areas such as the New Zealand’s Ross Dependency (Ross Sea MPA) and the territories claimed by Australia and France (East Antarctic MPA). (GIS Claim boundaries from Natural Earth; South Orkney Islands and Ross Sea MPA boundaries from www.ccamlr.org; East Antarctic proposed MPA boundaries based on <http://www.antarctica.gov.au/law-and-treaty/ccamlr/marine-protected-areas>; Weddell Sea and Domain 1 proposed MPA boundaries from proponents (with permission) (From Brooks et al. 2019).

Norway as an Ocean Economy

With an extensive coastline of about 100,955 km, Norway has the world's second-longest coastline after Canada and a long history of ocean interests (Thorsnæs, 2020). The coastline includes many fjords and approximately 239,057 islands (Thorsnæs, 2020). Historians have knowledge of fishery activity in northern Norway starting already in the stone-ages and starting in the 1800s throughout the 1900s exports of fish like the traditional Norwegian dried fish have been central to the Norwegian economy (Hallenstvedt & Dørum, 2020). Before the 1960s Norwegian interests on ocean rights had therefore primarily been concerned with the rights to fisheries (Hallenstvedt & Dørum, 2020). Starting in the 1960s, however Norway also became increasingly interested in petroleum and in securing marine territory, as large amounts of petroleum resources were found in the oceans outside of the Norwegian coastline (Norwegian petroleum, 2019).

Norway continues to be an economy that is largely dependent on ocean industries. In 2018 the total Norwegian catch from all fisheries within the Norwegian exclusive economic zone¹ (200 nautical mile maritime zone around the country) was 2,517,714 tons and 2,687,124 if you include macroalgae harvests (Directorate of fisheries, 2018). This total catch had a total value of about 20,089,948 000 Norwegian Kroner – 20 billion NOK (approximately 2 billion USD) (Directorate of fisheries, 2018). The largest ocean industry for Norway is, however, the oil industry. The petroleum industry has helped lay most of the foundation for the Norwegian welfare state and Norwegian economy with a total contribution of 14,900 billion in current Norwegian Kroner (about 1,490 billion USD) from 1970 – 2019 (Norwegian Petroleum, 2019). The petroleum industry's estimated contribution to government revenues in 2019 was 238 billion NOK and it is expected to contribute an estimated 245 billion NOK to government revenues in 2020 (Norwegian Petroleum, 2019). This makes the petroleum sector the largest sector in terms of Norwegian export value, Norwegian government revenues and investments – accounting for

¹ Exclusive Economic Zone is a 200 nautical mile maritime zone around the country to which the country claims exclusive rights to all fish and Continental Shelf fishery resources – a concept adopted by the Third United Nations Conference on the Law of the Sea (OECD, 2003)

14% of the GDP, 19% of the state revenues , 19% of total investments and 37% of Norwegian exports in 2020 (Norwegian Petroleum, 2019).

Research Questions and Hypotheses

This study aims to understand and produce a thorough report of Norway's motivations and interests in the Antarctic region, concerning the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and the implementation of important marine protected areas (MPAs).

The research questions that the study seeks to answer are:

1. How do Norwegian interests in Antarctica impact the adoption of Southern Ocean MPAs?
2. How does Norwegian support of various MPAs change with regards to the design and location of the MPA?
3. How are the Norwegian interests in developing MPAs related to Norwegian commercial interests in krill fishing or other commercial interests?
4. How does Norwegian historic Antarctic territorial claims impact their support of Southern Ocean MPAs?

To test this hypothesis and answer the research questions, I conducted interviews with key informants, and performed content analysis of Norwegian governmental documents and CCAMLR reports and official documents. Finally, I critically examined the data from the interviews and the content analysis and developed common themes which describe Norwegian interests and motivations behind their Antarctic MPA activity.

Methods

To answer my research questions, I combined semi-structured interviews with government document content analysis to do a process tracing of Norway's role in the CCAMLR MPA process (Bernard, 2011; Krippendorf, 2013). The combination of these different data sources is a way to triangulate and ensure a more reliable overview of Norwegian interests than what one might get by using only one single source (Jick, 1979). The data from the interviews and the content analysis were then compared and potential patterns, themes and descriptions of Norwegian interests behind CCAMLR activity were identified.

I sought to conduct 15 semi-structured interviews with key individuals that would represent Norwegian interests in the Southern Ocean. The goal was to interview a group (3-4 people), that would be representative of the Norwegian government, scientists, conservation organizations, and important Norwegian companies with commercial interests in Antarctica, respectively. Of the 15 individuals I approached, five declined, and I was able to conduct 10 interviews covering all the desired groups (see Table 1). The interviews I conducted were semi-structured, I followed a guide of set questions for the different interviews (Appendix I), but I also allowed myself to alter the questions somewhat according to the setting and what I felt was the natural progression of the interview (Bernard, 2011). Interviews were conducted in person (2), over skype (5) and over email (3). In person and skype interviews were 40-60 minutes. A table of the interviewees, their position and their expertise are listed below (Table 1).

Name	Position
Bjørn Kraft	Senior Scientist at the Institute for Marine Research. He has been working with Antarctica since 2008.
Odd Aksel Bergstad	Marine Biologist at the Institute for Marine Research. Works for the research group on Deep-Water Species for the last 4 years.
Line Overgaard	Hurtigruten representative, has been working 10 years in Antarctica with Hurtigruten.
Nils Hoem	Chief Scientist at Aker Biomarine. He has been working for Aker Biomarine since 2008.
Nina Jensen	CEO of Rev Ocean since January 2018. Leader of WWF Norway from 2012 to 2017. Worked in WWF Norway for 15 years.
Berit Njaastad	Polar Institute - Leader of Antarctica program. She has been working at the Polar Institute for 25 years and equally many years with the topic of Antarctica.
Kristoffer Bjorklund	Senior Advisor for the Norwegian department of fisheries for 10 years.
Baard Ivar Svendsen	Ambassador for Arctic and Antarctic Affairs, since August 2018. Prior to this he has been working in the Norwegian Foreign Service since 1998.
Leif Christian Jensen	Ph.D. in Political science. Works as a Senior Advisor for spatial planning and simultaneously working on a book on Norwegian Antarctic Policy. Before that he worked as a senior research fellow at the Fridtjof Nansen Institute, specializing in Arctic and Antarctic issues.
Karoline Andaur	Interim CEO in WWF Norway for the last 5 months and has in total been working at WWF for 10 years.

Table 1: All Interviewees names, position and background. In total there were 10 Interviewees in total that were representing Norwegian government representatives (2), Norwegian polar scientists (2), NGO representatives (2), and Norwegian Antarctic Business representatives (2), and Norwegian Marine Biologists (3).

For the content analysis I wanted to get a deeper understanding of Norwegian participation and interests in the region by looking at Norwegian government documents and CCAMLR documents (Table 2). I did a content analysis of Norwegian government documents to better understand Norwegian foreign and ocean policy interests. I analyzed the first and only Norwegian Antarctic government document ever published, as well as, other Norwegian marine policy reports relevant for understanding the Norwegian interests behind their participation in CCAMLR. The CCAMLR MPA process has been a long process that started in 2002, thus I analyzed the CCAMLR annual meeting reports from 2002-2019 as well as the CCAMLR MPA proposals and some of the scientific papers on the MPA design process. I then combined all sources to help understand the Norwegian interests and participation in the protection of the Southern Ocean. This method is called process tracing and is a common method used in Qualitative data analysis to help analyze a policy process (Krippendorf, 2013; Bernard, 2011). The documents and a description of them are listed in the table below (Table 2).

Name of document	Short description
Meld St.32 (2014-2015) Norske Interesser og politikk i Antarktis	Meld St. 32
Meld. St.22 (2016-2017) The place of the Oceans in Norway's foreign and development policy	Meld St. 22
Blue Opportunities (2019): The Norwegian governments updated Ocean Strategy	BOP 2019
Meld St.33 (2014-2015) Norske interesser og politikk for Bouvetøya	Meld St. 33
CCAMLR annual meeting reports 2002-2019	CCAMLR Commission Reports
Proposal For a representative system of Marine Protected Areas (RSMMPA) in East Antarctica. Delegations of Australia and France. September 2011.	2011 Proposal presented to the Scientific Committee
Proposal for a conservation measure establishing a system of Marine Protected Areas in the East Antarctic planning domain. September 2012.	2012 Proposal presented to the CCAMLR commission.
Proposal for a conservation measure establishing an East Antarctic Representative system of MPAs. Delegations of Australia, France and the European Union. September 2013.	2013 Proposal presented for the CCAMLR commission.
Revised Proposal for the conservation measure establishing an East Antarctic representative system of MPAs. Delegations of Australia, France and the European Union. October 2013.	2013 Revised Proposal for the CCAMLR commission.
Scientific Background to the proposed East Antarctic Representative system of MPAs. Delegations of Australia, France and European Union. May 2013.	2013 Scientific Background for EARSMPA.
Track Changed version of the Proposal for Conservation Measure establishing the East Antarctic Representative System of Marine Protected Areas. Delegations of Australia, France and the European Union. September 2014.	2014 Track Changes for the EARSMPA.
Revisions to the draft East Antarctic Representative System of Marine Protected Areas (EARMPA) Conservation Measure. September 2015.	2015 Revisions to the EARSMPA.
Revisions to the draft East Antarctic Representative System of Marine Protected Areas (EARMPA) Conservation Measure. August 2016.	2016 Revisions to the EARSMPA.

Draft Conservation Measure for an East Antarctic Marine Protected Area. Delegations of Australia, the European Union and its Member States. August 2017.	2017 Proposal for the East Antarctic Protected Area.
Proposal to establish an East Antarctic Marine Protected Area. Delegations of the European Union and Australia. September 2019.	Proposal for the East Antarctic presented for the Commission 2019.
An MPA Scenario for The Ross Sea Region. Delegation of the United States. September 2011.	2011 USA Ross Sea MPA Scenario presented for the commission.
An MPA Scenario by New Zealand for The Ross Sea Region. Delegation of New Zealand. September 2011.	2011 NZ Ross Sea Scenario presented for the commission
Marine Protected Area planning by New Zealand and the United States in the Ross Sea Region. Sharp, B. R. and Watters, G. M. August 2011.	Comparison of the Ross Sea MPA scenarios
A Proposal for the Ross Sea region Marine Protected Area. Delegation of the USA. September 2012.	2012 USA Ross Sea proposal presented for the commission.
A Proposal for the establishment of a Ross Sea region Marine Protected Area. Delegation of the New Zealand. September 2012.	2012 New Zealand Ross Sea proposal presented for the commission
A Proposal for the establishment of a Ross Sea region Marine Protected Area. Delegation of New Zealand and the USA. May 2013.	2013 Joint Ross Sea proposal presented for the commission.
A Proposal for the establishment of a Ross Sea region Marine Protected Area. Delegation of New Zealand and the USA. October 2013.	2013 Fall Ross Sea Joint Proposal presented for the commission.

A Proposal for the establishment of a Ross Sea region Marine Protected Area. Delegation of New Zealand and the USA. September 2014.	2014 Fall Ross Sea proposal presented for the commission.
A Proposal for the establishment of a Ross Sea region Marine Protected Area. Delegation of New Zealand and the USA. September 2015.	2015 Fall Ross Sea proposal presented for the commission.
Conservation Measure 91-05 (2016) Ross Sea Marine Protected Area	2016 Ross Sea MPA agreement
Proposal on the conservation measure establishing the Weddell Sea Marine Protected Area. Delegation of the European Union. September 2016.	2016 Eu/Germany MPA proposal presented for the commission.
Scientific Background document in support of the development of a CCAMLR MPA in the Weddell Sea 2016 version. Delegation of Germany. September 2016.	2016 German scientific background for the MPA proposal presented for the commission.
The Weddell Sea MPA revisited and wider implications for CCAMLR MPA planning. August 2017. Delegation of Norway.	Norwegian comments on the 2016 proposal. Presented for the scientific committee.
Proposal to establish a Marine Protected Area across the Weddell Sea region (Phase 1). Delegation of EU and its member states and Delegation of Norway. September 2019.	2019 Part 1 Weddell Sea proposal

Table 2: Name and short description of the CCAMLR documents and Norwegian government documents that I analyzed to trace Norwegian interests and participation in the process towards creating Marine Protected Areas in The Southern Ocean.

Results and Discussion

The aim of this project was to produce a thorough report of Norwegian interests and participation towards the creation of MPAs in Antarctica. I had four research questions to guide my focus:

1. How does Norwegian support of various MPAs change with regards to the design and location of the MPA?
2. How do Norwegian interests in Antarctica impact the Adoption of Antarctic MPAs?
3. How are the Norwegian interests in developing MPAs related to Norwegian commercial interests in krill fishing or other commercial interests?
4. How does Norwegian historic Antarctic territorial claims impact their support of Southern Ocean MPAs?

I will in this section describe and discuss my findings in two parts by first answering research question 1 and then combining the answers for question 2, 3 and 4 in the second part.

Part I : 1. How does Norwegian support of Southern Ocean MPAs change with regards to the design and location of the MPAs?

By tracing the CCAMLR commission reports and MPA proposals from 2002-2009, I traced the important events and Norwegian activities and created a table with great detail on the Norwegian positions on all the MPAs (Appendix II -Table I) . I will, however, describe the main takeaways for each of the MPA processes below and have summarized them in a visual at the end of this Part I of the results and discussion (Table 3). The establishment of MPAs in the CAMLR Convention Area has been a slow process progressing over a period of 14 years now. As explained above in the introduction, the process of creating an MPA in the CAMLR Convention Area is ruled by consensus and the establishment of an MPA therefore requires unanimous consensus by all 26 members (Brooks, 2019). More specifically, there is a scientific organization and hierarchy within the CCAMLR system for the MPA process. Within CCAMLR there is a hierarchy of groups working together towards MPAs. For an MPA to be established an MPA proposal has to pass through several steps. The process usually starts with one to multiple

countries compiling the data towards developing an MPA proposal. Then CCAMLR's Working Group on Ecosystem Monitoring and Management evaluates the data and proposal and make recommendations to CCAMLR's Scientific Committee. This Scientific Committee evaluates the scientific basis and data for the MPA before the proposal is presented to the diplomats representing the 26 nations in the CAMLR Convention at the annual Commission meetings (Brooks, 2019). This process has been established to ensure that MPAs are based on the best available science, before presented to the CCAMLR Commission (Brooks, 2019).

Norwegian position towards the Ross Sea MPA

In 2011 the Ross Sea MPA proposals were presented for the Scientific Committee, one proposal was presented by the United States and another proposal by New Zealand. New Zealand and USA proposals were different in size and conservation objectives (Delegation of New Zealand, 2011; Delegation of the United States, 2011). The USA proposal was based on three objectives: 1. Conserving ecological structure and function at all levels of biological organization and protecting important fish, birds, invertebrates and mammals by prohibiting fishing in certain areas; 2. Maintaining a reference area where there is no fishing; and 3. Promoting research and other scientific research (Delegation of the United States, 2011). The New Zealand proposal included eight specific conservation objectives and was developed using a method called Systematic Conservation Planning (Delegation of New Zealand, 2011). This method involves objective driven spatial solutions and is described in the proposal as "ideal for needs of the CCAMLR convention which identifies a balance between protection and rational use" (Delegation of New Zealand, 2011). Furthermore, the New Zealand scenario covered less of the historical fishing grounds for Antarctic toothfish than the U.S. Scenario and avoided those areas where fishing had historically been most concentrated (Sharp & Watters, 2011). These differences in the proposals are interesting because Norway expressed to CCAMLR in 2011 that they believe that the New Zealand proposal presents a more holistic approach and that they appreciated New Zealand's transparency in the process of developing the MPA proposal (CCAMLR, 2011). In the same meeting Norway continued on to express how they believe in a sustainable, ecosystem based MPA. Norway also stated that they believe responsible fishing and sustainable harvest is supported by the definition of responsible use described within Article II in

the CAMLR Convention (CCAMLR, 2011). They also expressed that they cannot support any suggestion that raises doubt about Article II and the importance of rational use (CCAMLR, 2011). In May 2013 USA and New Zealand presented a joint proposal for the Ross Sea MPA (Delegation of New Zealand and United States, 2013). The joint proposal is divided into three different zones: A) General Protection Zone; B) Special Research Zone; and C) Spawning protection Zone (Delegation of New Zealand and United States, 2013). During the Commission meeting the Norwegian representatives raised concerns about the suggested size of the protected area around spawning areas and the suggested catch limits for toothfish (CCAMLR, 2013). During 2013 revisions were made to the MPA proposal and the MPA size was reduced by 41%. The new proposal did not include a spawning area protection part (Delegation of New Zealand and United States, 2013). After these revisions were made, Norway expressed support for the Ross Sea MPA in the fall of 2013 (CCAMLR, 2013). Even though Norway was onboard by the end of 2013, other parties still had concerns on the 2013 Ross Sea MPA proposal (CCAMLR, 2013). The process finalized three years later with the adoption of the Ross Sea Conservation Measure in 2016 (CCAMLR, 2016).

Norwegian position towards the East Antarctic MPA

In 2011 France and Australia presented the East Antarctic MPA to the Scientific Committee and in 2012 they submitted it to CCAMLR (CCAMLR, 2011; CCAMLR, 2012). The proposal in 2012 included seven areas suggested for protection where the objectives and reasoning for each of the spatial areas was explained based on the specific conservation objectives that each area would fulfill (Delegations of France and Australia, 2012). Following the introduction of this MPA proposal in 2012, I found no mentioned comments attributed to Norway specifically (CCAMLR, 2012). The Commission report from 2013 however signals that Norway might have had some concerns in 2012, as they had many mentioned comments in 2013, when the proposal was discussed within the Commission again (CCAMLR, 2013). In 2013, Norway mentions in the general discussions on MPAs that they support Japan in the creation of a sunset clause (a clause in the MPA conservation agreements about the duration of the MPAs which effectively sets an expiration date on the conservation measures)(CCAMLR, 2013). The 2013 Commission report also reveals that Norway seem to have acted as a mediator in the Ross Sea and East Antarctic

MPA proposal processes – by reporting member concerns raised in the Scientific Committee and offering suggested edits that might accommodate these efforts (CCAMLR, 2013). Norway reported that members had very different views on the size and numbers of areas that should be included in the East Antarctic MPA. Norway also expressed member concerns about the role of CCAMLR within the Antarctic Treaty, as well as, CCAMLR's role and legal place in regard to the UN convention on the Law of the Sea (UNCLOS) (CCAMLR, 2013). Norway followed these concerns with the suggestion to address the concerns about legal issues and CCAMLR's role within other international agreements by the inclusion of clauses that clarify the relationship between CCAMLR, the ATS and the UNCLOS (CCAMLR-1, 2013). During 2013 changes were made to the East Antarctic MPA proposal and the process was divided into a two-stage effort where three of the smaller areas suggested for protection (Enderby, Prydz and Wilkes) were excluded and decided to be considered for protection within the next 10 years (Delegation of France and Australia, 2013). Interestingly, these edits were made before Norway in the Fall of 2013 at the Commission meeting explicitly supported the East Antarctic MPA. In their support statement Norway also expressed that they believe that the East Antarctic MPA should be a model for MPAs in data poor regions (CCAMLR, 2013). Despite Norwegian support since 2013, the East Antarctic MPA proposal is, however; still not yet adopted and continues to be under discussion today.

Norwegian position towards the Weddell Sea MPA

In 2015 Germany presented their work towards an MPA in the Weddell Sea region for Scientific Committee and the Commission (Delegation of Germany, 2016; CCAMLR, 2015). Germany had been given the responsibility by EU in 2012 to create a proposal for the Weddell Sea region and had therefore been working on the scientific background to create an MPA proposal for this area. In 2016 Germany presented an MPA proposal for the CCAMLR committee that included three zones: A) General Protection Zone, B) Special Protection Zone, and C) Fisheries research zone (Delegation of Germany, 2016; Delegation of Eu, 2016). During the CCAMLR Scientific Committee meetings a Norwegian scientist raised concerns about datasets that had not been included (despite having been mentioned to Germany since the initial work process during a workshop in 2013) (SC-CAMLR, 2016). During the CCAMLR commission meeting Norway

raised concerns about the scientific background for the MPA proposal and wanted it to go back to the scientific committee (CCAMLR, 2016). In 2017, Norway continued to have concerns about the MPA proposal and presented four main concerns about the Weddell Sea MPA for the Scientific Committee: 1) The transparency of the process, 2) The suitability of some data layers and not adequate consideration of fisheries, 3) Issues with Domain 4 inclusion in the planning area, and 4) Consistency in relation to the Norwegian approach to Area Based Management tools (Delegation of Norway, 2017). Regards to the transparency of the process, Norway claimed that the CCAMLR community was not informed on the detailed expert led process on delineating the MPA boundaries (Delegation of Norway, 2017). The concerns about the data layers were primarily concerns about the inclusion of what the Norwegian delegation considered to be both data poor and data rich areas in the same data-analysis (Delegation of Norway, 2017). This concern was also tied to the 3rd concern where Norway claimed that there was a lack of biological data that created a distinct line at the prime meridian -separating a well-documented (data rich region) in the west from a data poor region in the east of the MPA proposal (Delegation of Norway, 2017). The last concern regarding the consistency of area-based management tools was primarily explained as a concern about the need to have consistent criteria and strategies for developing scientifically based MPAs (Delegation of Norway, 2017). In 2018 Norway continued to raise concerns about the difference in scientific data for the east and west parts of the MPA and requested the MPA to be separated into two parts. Another concern was raised for the gap in protection that would be created from 20 degrees East to 30 degrees East and therefore expressed a wish for an eastward extension of the MPA to bridge this gap (CCAMLR, 2018). In 2019, however, Norway decided to become a co-proponent and during the Commission meeting they presented a proposal together with the EU where the MPA had been divided into a two-step process dividing the MPA at the prime meridian (CCAMLR, 2019; Delegations of Norway and EU, 2019). The 2019 proposal included only the western parts of the original Weddell Sea MPA and were presented as the first step in a two-step process (CCAMLR, 2019; Delegations of Norway and EU, 2019).

Norwegian position towards the Antarctic Peninsula MPA

In 2017 the Antarctic Peninsula MPA was presented to CCAMLR by the Delegations of Argentina and Chile (CCAMLR, 2017). Following the introduction to the proposal, Norway raised concerns about the inclusion of krill management strategies such as Feedback Management Strategies in the Antarctic Peninsula MPA (CCAMLR, 2017). By 2018 revisions were made to the MPA and when the proposals were presented again in 2018 Norway expressed their support that Feedback Management Strategies were now being considered in the MPA (CCAMLR, 2018). The MPA is still up for discussion in CCAMLR and the Norwegian position is unknown, but in 2019 there were no mentioned Norwegian concerns in the Commission report (CCAMLR, 2019).

The overall Norwegian position towards Southern Ocean MPAs

To summarize this section and conclude on how Norwegian positions towards the various MPAs and how it has changed with regards to the design and location of the MPAs. I summarized the findings above in a table below (Table 3). The major Norwegian concerns about the various MPAs were related to either scientific background (Weddell Sea, East Antarctic), fishery considerations (Ross Sea, Antarctic Peninsula), duration clauses (Ross Sea, East Antarctic), transparency of delineation processes (Weddell Sea, Ross Sea), sizes of MPAs (All MPAs), Research and Monitoring plans for the MPAs (All MPAs) or legal concerns and the role of CCAMLR within the UNCLOS (Ross Sea, East Antarctic). Norway eventually expressed support for Ross Sea, East Antarctic and Weddell Sea MPAs when concerns about legal definitions, scientific data and fishery considerations had been considered or MPA design and the sizes of protection zones were adjusted (see table 3). Based on this, my conclusion is that Norway seems to support MPAs when they are well documented and limited in size so that they can provide consideration for fisheries. Furthermore, Norway seem to appreciate clear definitions of CCAMLR's role within other international agreements like the UNCLOS and appreciates when MPA-designs supports the Norwegian idea of area-based management and sustainable harvest, as well as, the Norwegian view that CCAMLR is a harvest management organization and not a conservation organization. These themes and views are further explained in the below sections.

MPA	YEAR	NORWEGIAN POSITION
SOUTH ORKNEY ISLANDS	2009	Support
ROSS SEA	2011-2016	
	2011	<p>Raised concerns about a balanced approach between fishery and protection.</p> <p>Voices a preference for the New Zealand proposal that includes a smaller part of the areas of highest historical Krill fishing.</p>
	2013 intersessional	<p>Mediator</p> <p>Raised concerns about size, inclusion of spawning areas and CCAMLRs role within UNCLOS</p> <p>Requested all MPAs to be based in sound scientific evidence</p>
	2013	Norwegian Ross Sea support for revised proposal that excludes spawning area protection
EAST ANTARCTICA	2012-2019	Concerns about the role of CCAMLR within ATS and UNCLOS, concerns about size and number of MPAs
	2013 intersessional	MPA is edited in size and 3 areas for protection are excluded for future consideration
	2013	<p>Norwegian Support for EAMPA</p> <p>Believes that the EAMPA should be the model MPA for other data poor areas</p>

WEDELL SEA	2016	Concerns with the scientific evidence – raised issues about datasets that were not included (since workshop in 2013)
		4 concerns; mainly on the transparency of the procedure and scientific basis for the MPA. Claims data difference between the areas East of the prime meridian and West of the prime meridian.
	2017	Still concerned– reiterates the importance of sound scientific evidence and the difference in data between East and the West.
	2018	Difference between East and West data and concerns about 20E to 30E gap
	2019	Stage 1 co-proponent (West Part) Stage 2 under development ? (Yes, According to interviewees Kristoffer Bjørklund and Bård Ivar Svendsen)
DOMAIN 1	2018	Norway thinks that FBM (Feedback and Monitoring plan)/Krill management strategies should be included.
	2019	Expresses happiness that FBMs are now included

Table 3: The major Norwegian interests and concerns mentioned in the CCAMLR Commission reports as well as CCAMLR Scientific Committee documents and MPA proposals from 2002-2019. The green text highlights the time of Norwegian support. All years represent reports from the annual CCAMLR meeting (October), whereas 2013 intersessional refers to a special CCAMLR intersessional meeting held in July 2013.

Part 2. Question 2, 3 and 4:

How do Norwegian interests in Antarctica impact the adoption of Antarctic MPAs?
How are the Norwegian interests in developing MPAs related to Norwegian commercial interests in krill fishing or other commercial interests? How does Norwegian historical territorial claims impact their support of Antarctic MPAs?

From my analysis of the interviews and the content analysis, I believe that the data revealed six major themes that could describe the above Norwegian activities within CCAMLR (see Table 3) by describing the Norwegian interests related to their participation towards MPAs in the Southern Ocean. These themes were: Norway as an Antarctic leader and polar nation; Norway as a sustainable world leader; CCAMLR's purpose as a marine living resource management organization; Norway as a mediator that supports international cooperation; Norway as an ocean industry and marine science leader; and the importance of the UN Convention of the Law of the Sea (Table 4).

Theme Description	Interview	Government Document
<p><i>Norway as an Antarctic leader</i> <i>Norwegian exploration</i> <i>Norway as a bipolar nation</i> <i>Norway as a claimant country</i> <i>Norwegian territory around Bouvetøya</i></p>	<p>Norway has a long history in Antarctica as a with exploration, as a whaling nation, and a historical claimant country. Norway is also the only bipolar nation with territory at Bouvetøya as well as Ian Mayen and Svalbard.</p>	<p>Birgit Njaastad , Nina Jensen, Leif Christian Jensen</p>
<p><i>Norway as a sustainable leader</i> <i>Norway as a sustainable fisheries leader</i> <i>Holistic science- based management and science-based utilization</i> <i>Research and monitoring plans</i> <i>Dynamic MPAs for adaptation to climate change</i> <i>The importance of low trophic levels and marine living resources as a source for future food security.</i></p>	<p>Norway wishes to be a sustainability leader promoting sustainable business, research and policy. Norway as a goal of being a low emission country by 2050. There also seems to be a pride in Norwegian fishery management strategies and healthy fish stocks and wishes to be a sustainable fishery leader worldwide.</p>	<p>Nils Hoem, Bjørn Krafft, Line Overgaard, Nina Jensen</p> <p>Meld 32 Meld 33 FSM, 2013 Meld 22 BP 2019 NOS 2017</p>
<p><i>CCAMLRs purpose = sustainable utilization manager</i> <i>Norway and the importance of science-based protection zones</i> <i>Historic whaling and harvest</i> <i>MPAs as a fishery management tool</i> <i>Research and monitoring plans</i> <i>No takes as small, for special protection or reference zone</i> <i>Zoning support for continued fishery and precaution</i> <i>MPAs for future utilization and fishery and tourism</i></p>	<p>Norwegian government and scientists look at CCAMLR as a resource management organization.</p>	<p>Odd Aksel Bergstad, Bjørn Krafft,</p> <p>Meld 32 Meld 22 BP 19</p>

Norway as a mediator that supports international cooperation

Norway is a small country, with a lot of resources and therefore relatively more power as a global voice. In the case of defense and military power however Norway depends on being good friends with everyone and wishes to help facilitate international cooperation and peace.	Birgit Njaastad	Meld 22 Meld 32 BP 19
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Norway as a Marine Science and Ocean Industry leader

Norway as a krill fisheries leader

Norway as a seafood leader

Norway sees itself as an ocean industry leader with a long coastline, major oil exports, and a long history in shipping and fishing . Norway intends to continue on this path and continues to invest in old , as well as newer ocean industries like Aquaculture , Algae, kelp forests and seabed mining. The Norwegian government wishes to invest a lot in the ocean industries and let them be a big part of the change towards the low emission goal in 2050.	Nils Hoem, Line Overgaard, Nina Jensen, Bjørn Krafft	Meld 32 Meld 22 NOS 2017 BP 2019 Meld 33
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The importance of the UN convention of the Law of the Sea

Since the Norwegian oil adventures started in 1960-1970s in Norway, it has been important for Norway to make clear boundaries and policies around coastal and marine territories to secure resources and set rules for the utilization of marine resources together with neighboring nations. Norway also wishes other nations to value these regulations and enforce them and have programs where they help developing nations establish economic zones for themselves.		Meld 22 NOS, 2017
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Table 4: Common themes and description of themes that came out of my analysis of Research Interviews and Norwegian government documents. The research interviews were interviews with 10 different Norwegian professionals within Marine Biology (3), Polar Science (2), Political Science (2), as well as, representatives (2) for the Norwegian Government, one representative from a Norwegian NGO , one representative from the largest Norwegian Antarctic Krill company and one representative from the largest Norwegian Antarctic Tourist company. The Norwegian government documents included the Norwegian white papers on Antarctica and Ocean policies published from 2015-2019.

Norway as an Antarctic leader

In the first and only Norwegian government document that Norway specifically dedicated to Antarctica it becomes clear that Norway is a proud polar and Antarctic nation (Meld 32., 2014-2015). In Chapter 3 of the whitepaper (Meld 32) the government highlights Norwegian explorers. The document also states that although there is some disagreement about who was first to reach the Antarctic mainland, the best evidence points to the Norwegian team led by Carsten Borchgrevink in 1895 (Meld 32., 2014-2015). The chapter then continues to highlight Norwegian explorers like Roald Amundsen that was the first to reach The South Pole with his team in December 1911 and also mentions that the Norwegian Bernt Balchen was the first to fly over The South Pole in 1929 (Meld 32., 2014-2015). This feeling of pride for Norway as a leading Antarctic nation continues in the description of other past and current research and policy activity in the area within both the Bouvetøya and Antarctic whitepapers, as well as, the Norwegian Ocean Strategies. For example these documents express pride in Norwegian rankings and the potential to rank even better within international polar researchⁱ, highlights that Norwegian Polar research covers both Antarctica and the Arctic as an advantageⁱⁱ and expresses the view that Norway has been an important actor within the Antarctic Treaty System by helping to develop the Environmental Protocol and the agreement for the protection of Seals, as well as, helping to establish the CAMLR Convention.ⁱⁱⁱ The government documents also explicitly state that the Arctic is the most important foreign policy area for Norway.^{iv} With these statements the government show pride in Norway as a bipolar nation, Antarctic leader and reveals an interest in the further improvement of Norwegian research efforts in the area. Further evidence for views of Norway as an Antarctic leader can be said to be found in the description of Norwegian infrastructure and fishery activity in the area. The Norwegian research station Troll is described

as a green research station and the government expresses an interest in establishing Troll as a leader in this regard.^v The Norwegian Satellite station Troll Sat is also described as the largest in Antarctica.^{vi} For the Norwegian fishery activity in the Area, the government expresses pride in the Norwegian Krill fishery.^{vii}

This view of Norway as an Antarctic leader and the pride for Norway as a polar nation was further confirmed in interviews with Birgit Njaastad, Kristoffer Bjørklund, Nils Hoem, Line Overgaard and Leif Christian Jensen. Birgit Njaastad (2019) mentioned that if you were to look at who were the “first” to do something in the Antarctic, it will often be Norwegians including; the first woman on the continent, the first to reach the South Pole (Roald Amundsen) and the first to spend the winter in the Antarctic. Kristoffer Bjørklund (2019) confirmed that Norwegian vessels catch approximately 60-65% of the total krill catch every year and Nils Hoem expressed pride in the Aker Biomarine fishery technology and the company’s approach to sustainability.^{viii}

The interview with Line Overgaard (2019) representing the Norwegian cruise ship company Hurtigruten could also be said to support the theme of Norway as an Antarctic leader. Overgaard stated that Hurtigruten is committed to be a sustainable company and that the company is currently building two new hybrid ships for travels in Antarctica with the names Amundsen and Nansen.

When it comes to the historical claims, Whaling is what is described as the major interest that lead Norway to eventually claim territory in Antarctica (Meld-32, 2014-2015). The notion of the Historic Whaling as the main reason behind historical claims in Antarctica was further confirmed in the interviews with Birgit Njaastad, Leif Christian Jensen and Nina Jensen. Norway is also the only country that has territory in both the Arctic and Antarctic with territory around Bouvetøya, Northern Norway, Svalbard and Jan Mayen (Jensen, 2016). In the policy documents for Bouvetøya, Norway clearly states that Bouvetøya is undisputed Norwegian territory (Meld-33, 2014-2015). This was also confirmed in interviews with Birgit Njaastad (2019) and Baard Ivar Svendsen (2019). Although the policy documents for Antarctica and Bouvetøya state that Norway still recognizes the historical claims for Dronning Maud Land and Peter I Øy, it

emphasizes that the current interest in the area is now to contribute towards continued successful international cooperation under the Antarctic Treaty System.^{ix}

Norway as a sustainability leader

In the government documents and interviews another common theme seems to be a strong pride in Norway as a current sustainable leader - both as a country in general and as a sustainable fisheries leader. The ocean strategies and the Antarctic whitepapers both express a strong wish from the Government to establish Norway as a continued future global sustainability leader, especially when it comes to the Ocean industries going forward, and specifically by promoting sustainable development that can help ensure economic value creation, while also helping to ensure the implementation of the UN sustainability goals.^x In the 2016-2017 and the updated 2019 Norwegian ocean strategies, the Norwegian government also state that Norway wishes to become a low emission country by 2050^{xi} and that Norway believes that the ocean industries will be a large part of this, with the help of green restructuring.^{xii} In both ocean strategies the government reveal interests and plans for large investments in the ocean industries going forward. These investments are justified as investments towards the goal for Norway to become a leading blue economy. Alongside explaining future goals for Norway, the documents also express pride in the current state of Norwegian fisheries, aquaculture and petroleum industries. The Ocean Strategies present the Norwegian belief that one should manage the ocean with the help of holistic ecosystem-based management strategies^{xiii}, with activity supported by and within the rules set by the UNCLOS^{xiv}. Furthermore, the documents reveal the Norwegian view that the current Norwegian fishery management is a globally leading sustainable system based on scientific evidence that ensures healthy fish-stocks that are not comparable to the fish-stocks in most of the rest of the world (and that the current health of most fish-stocks worldwide are worrisome).^{xv} One particular example of this seems to be the strong pride in the Norwegian-Russian fishery management strategies for Cod in Lofoten and Barents Sea.^{xvi}

According to descriptions of sustainable harvests and sustainable management included in Norwegian Ocean strategies and in the interviews conducted, The Norwegian view seems to be that the goal of marine resource management is to ensure the highest possible long-term yield

and that a sustainable harvest is something that will ensure this. In the government descriptions of sustainable harvesting strategies there is also an emphasis on the need to develop quotas and monitoring techniques that continue to ensure the health of fish stocks and long-term yields while limiting impact on the marine environments. ^{xvii}

This pride and interest in a Norwegian method for sustainable fish stock management, as well as, the view that the current state of Norwegian fisheries is more sustainable than most, was also found in the interviews with Nina Jensen^{xviii}, Birgit Njaastad^{xix}, Bjørn Kraft^{xx}.

The interview with Nils Hoem (2019), the representative from Aker Biomarine also indicated a pride in Norway, and his company Aker Biomarine, as a sustainable leader within the krill fishery industry in Antarctica. Hoem (2019) communicated that the company emphasizes sustainability and tries to maximize sustainability in technology and operation efforts. He mentioned that the company has developed many strategies to minimize the fishery footprint including the use of closed systems on vessels with repurposing of water, the utilizing of suction to get the krill onboard alive and thereby minimizing bycatch, and the utilization of a drying technique for conservation of the krill (instead of freezing it for conservation) to save energy.

Another potentially important part of Norwegian interests within the theme of sustainability is the interest in climate change and the consideration of climate change within the fishery management strategies and resource use. The Norwegian Ocean strategies and Antarctic whitepapers both mention the importance of climate change research and considerations. Norwegian Ocean Strategies mention that wild fish is a more sustainable food resource in a future with climate change and growing world populations; “Since wild fish do not need fresh water, fertilizers, pesticides or medicines, the environmental effects of catching wild fish are low compared to other animal-based food production, assuming that marine resources are managed sustainably” (Meld. 22, 2016-2017).

The interest for the consideration of climate change is also consistent with Norway’s effort in CCAMLR to bring this topic into the Commission discussions since 2007 (CCAMLR, 2007). The theme of climate change was brought up in interviews with Odd Aksel Bergstad, Bjørn

Krafft, Nina Jensen and Nils Hoem. Nina Jensen brought up the point that MPAs should be considered more during the design of MPAs. When I asked him about it, Odd Aksel Bergstad suggested that this (climate change) is something implicitly considered in the MPA design process. However, he also mentioned that MPAs may not be dynamic enough, as MPAs are usually static and other conservation measures are more adaptive. For example, when it comes to krill, he believes that krill fishery management and regulation should be more dynamic because the behavior of the krill is changing. He continued to say that this is the recommendation that has been given to the Norwegian government, that MPAs should be more dynamic than they are today (Odd Aksel Bergstad, 2019). Nils Hoem (2019) mentioned that his company Aker Biomarine believes that there should be room for krill fishery within the limits set by CCAMLR because it is a sustainable resource that could be increasingly important and valuable within a future of increasing climate change and food insecurity.

CCAMLR as a Resource Management Organization

Norway's interest in fishing and marine industries seems to be closely tied to the next theme that might be the key theme behind most of the Norwegian work within CCAMLR. Based on the government documents and interviews, the Norwegian view on CCAMLR seems to be that CCAMLR is a marine resource management organization. Statements from interviews give more insight into the Norwegian view on CCAMLR. For example, Kristoffer Bjørklund explicitly stated that Norway is a fishery nation and that it is important for Norway with a well-documented scientific rationale behind MPAs, and he also said that scientific backing helps the fishery industry accept MPAs^{xxi}. Bjørklund (2020) also mentioned that the Norwegian interests in the Area represent both continuity due to a long history in Antarctic exploration and innovation due to the development of new technology for the Antarctic krill fishery.^{xxii} Bjørn Krafft explicitly stated that CCAMLR is not a conservation organization and that the aim is to be able to balance fishery and conservation.^{xxiii} According to Odd Aksel Bergstad all CCAMLR scientists should be presenting MPAs that are within the CCAMLR commitment towards harvest and conservation, and expressed that , in his view, entire no takes zones are neither rational nor politically feasible.^{xxiv} These statements indicate that Norwegian scientist and government officials share the view that CCAMLR is a resource management organization. This matches

well with Norway's emphasis on scientific rationales, consideration of climate change and also resource and management plans for MPAs. Furthermore, government documents seem to share this same view by emphasizing protection based on scientific research^{xxv}, combination of fishery and conservation efforts^{xxvi}, as well as, the Norwegian emphasis on the inclusion of research and monitoring plans, feedback management strategies^{xxvii} and the consideration of climate change in harvest management strategies^{xxviii}.

In Norway's view, the purpose of CCAMLR therefore seems to be to optimize fisheries. With this view of the purpose of CCAMLR, MPAs would have to be backed by science and limited in areas where there is a potential fishery. In this view it would therefore make sense that Norway would, like they have, try to limit the size and numbers of MPAs without what they would deem as valid scientific basis. It would also make sense that Norway would try to maximize the potential for current or future fishery if it is not proven unsustainable or harmful. Then again there would always be a potential discussion about what a sustainable fishery actually is and what the acceptable limits of fisheries might be. The view that CCAMLR is a resource management organization and that the purpose should be fishery management match well with many of the interviewees' views on MPAs, Norwegian activity within CCAMLR, as well as, the government documents on Ocean Strategies and Antarctic policy. Interestingly, this view of CCAMLR also matches well with the roots of the Norwegian historical claims and Norway's interests in the Arctic & Antarctic. When it comes to the historical claims, Whaling is what is described as the major interest that lead Norway to eventually claim territory in Antarctica (Meld-32, 2014-2015). The notion of the historic whaling as the main reason behind historical claims in Antarctica was confirmed in the interviews with Britt Njaastad, Leif Christian Jensen and Nina Jensen. It, therefore, seems that Norway's approach to Antarctica started as an extractive relationship, where Antarctica was seen as an area with important and interesting natural resources. This idea and view also seem to be somewhat consistent with the current view of Antarctica as a place with valuable resources that should be utilized within certain limits, even though the framework and objectives of the resource use have changed over time. Today it seems that Norway still thinks that there are important natural resources that should be taken advantage of in Antarctica. At the same time, they also show an interest in a well-documented and sustainable resource use.

Norway as a mediator that supports International Cooperation

Another possible explanation for Norwegian activity in the area could be grounded in geopolitics and the Norwegian wish to be a mediator and contributor to international cooperation and peace. Norway can be categorized as a relatively small country, that has a lot of resources and a good economy. Due to the geographical location, as well as, a relatively weak military defense it could therefore be an easy target for more powerful nations. During and after the second world war Norway was, and continue to be dependent on good friends and good alliances like NATO (Wilhelmsen & Gjerde, 2018). Norway also wishes to have a good relationship with Russia and maintain peace and cooperation (Wilhelmsen & Gjerde, 2018). In 2014 the Russian invasion of Crimea caused some geopolitical tensions in Europe, and at the same time, Russia was also one of the main opposing parties to the Ross Sea MPA within CCAMLR (CCAMLR, 2014). Norway might, therefore, have felt the need to be more assertive and show that we wish to have a strong presence in Antarctica. This might be part of an explanation for why Norway felt the need to post their first Antarctic Policy white paper, in 80 years, in 2015. Norway also showed a strong presence in Antarctica in 2015 by having the king visit Dronning Maud Land for the first time (Det Norske Kongehuset, 2015). Interviewees did however have other potential explanations for the date of the release of the Antarctic whitepaper that included micropolitical interests like the personal interests of the people in the Norwegian foreign affairs office (Leif Christian Jensen, 2019) and the simple explanation of more time, interest and focus to spend on Antarctica at the time (Birgit Njaastad, 2019) .

The idea of Norway as a mediator with interest in international cooperation could be validated by the Norwegian activity in CCAMLR where Norway did express concerns with MPAs regarding interference with fishing interests and also scientific basis for MPAs, but also proved attempts to get all parties to agree by presenting the concerns from other members and also expressing concern about some parties being unwilling to protect important marine living resources during the Ross Sea MPA process (CCAMLR, 2015). The Norwegian Ocean strategies can also help support this idea or wish from the Norwegian government for Norway to be a mediator and contributor to international development through statements about the Norwegian international

growth program and the Norwegian commitment to help other developing nations (Norwegian government 2016-2017; Norwegian government, 2019). This interest in helping other developing nations is also closely tied to the next themes: Norway as a Marine Science and Ocean Industry Leader and Norway and the importance of the UN convention of the Law of the Sea. I will describe the global growth program and these Norwegian interests below under the next themes.

Norway as a Marine Science and Ocean Industry leader

Norway has a long coastline, and therefore long traditions within fisheries, as well as, a large oil industry that since the 1970s have been generating most of the state revenues. The petroleum industries have helped Norway become one of the world's wealthiest nations with a strong welfare system (Norwegian Petroleum, 2019). In the Norwegian Ocean Strategy documents the government expresses an interest in continuing oil exploitation, but gradually providing a green restructuring of the Norwegian economy with a big emphasis on future sustainable Ocean Industries (Norwegian government, 2016-2017; Norwegian government, 2019). As a consequence of the strong petroleum history and dependency so far, according to the government, Norwegian businesses were also “world leaders” in subsea systems in 2015 regarding: drilling technology, seismology, and offshore supply vessels (Norwegian government, 2016-2017). Several of these businesses in the supply industry also served other businesses like aquaculture and offshore wind companies and the government emphasized that further use of existing knowledge in related ocean industries in such ways can help diversify the economy and shift it towards a more sustainable ocean industry (Norwegian government, 2016-2017). The efforts that are highlighted as “Blue Economy” efforts are the establishments of sustainable aquaculture technologies, carbon capture and more sustainable fisheries. The government mentions that the OECD estimates that ocean-based industries could double their contribution to the global economy by 2030 and emphasizes that Norway wishes to be a world leader in such developments (Norwegian government, 2016-2017). Furthermore, the Norwegian government states that they believe that sustainable fisheries and aquaculture will play an increasingly important part in the future for global food safety and nutrition (Norwegian government, 2016-2017). The document explains that in the future Norwegian aquaculture will probably include more algae, seaweed, and kelp. Currently, however, Norway is the world’s leading producer of

Atlantic Salmon with a yearly production of about 1.2 million tones in 2016 (Norwegian government, 2016-2017). The aquaculture industry has in the later years been the largest contributor to value creation in the seafood industry, mainly due to high prices on salmon. Nearly half the businesses in the Seafood processing industry are located in the northernmost counties and are closely associated with traditional fisheries. The Ocean strategy document highlights that wild fish exports remained stable, while farmed fish exports almost doubled in the period from 2010-2016 (Norwegian government, 2016-2017). The document continues to mention that marine research and technology developments are strong in Norway and that some examples of this include the company BioMar that has started to use algae in its production of fish feed and a research community in Tromsø that is currently searching for valuable, biologically active components from marine organisms through marine bioprospecting (Norwegian government, 2016-2017). Bioprospecting is mentioned as a hopeful future ocean industry that can provide components for use in anything from foodstuff to pharmaceuticals (Norwegian government, 2016-2017). Bioprospecting is also mentioned as a possibility for Bouvetøya in the Bouvetøya whitepaper (Norwegian government, 2014-2015).

Furthermore, the government explains how in Northern Norway, the seafood industry holds a unique position. The oceans outside of Northern Norway have high biological production and aquaculture has been established here for a long time (Meld. 22, 2016-2017). Arctic petroleum and maritime industries are also being developed here, which will help reinforce the industrial development of the northernmost counties in the future (Meld. 22, 2016-2017). When it comes to the development of oil in the Northernmost counties and the Barents Sea, as well as outside the Lofoten Islands, there has been a political debate about whether one should do this since the beginning of the Norwegian oil adventure in the 1970s (Ryggvik, Sander, Weihe Wallin & Smith-Solbakken, 2019). Already in the 1970s there was an interest in the areas around Lofoten because of the discovery of potential large oil reserves (Ryggvik, Sander, Weihe Wallin & Smith-Solbakken, 2019). First the debate was more focused on the potential harm for the fishery and fishing industry in the North and some of Norway's most biodiverse waters, but after the 1990s it also became more of a climate change debate concerned about the climate gas emissions that this would entail (Ryggvik, Sander, Weihe Wallin & Smith-Solbakken, 2019). In 2011 a lot of new oil was discovered in the North Sea and Barents Sea that might have helped make Lofoten

somewhat less interesting, however; the government was composed in a way that held the issue of opening for oil development somewhat left undiscovered (Ryggvik, Sander, Weihe Wallin & Smith-Solbakken, 2019). With the Solberg government starting in 2013 the issue of oil in the North resurfaced because of the government consisting of a majority of parties that were positive to oil developments in the area (Ryggvik, Sander, Weihe Wallin & Smith-Solbakken, 2019). In 2016 a new plant called Goliat was developed in the Barents Sea and according to the Norwegian environment department there are plans for the potential opening of several new areas with the names Johan Castberg and Alta /Goth within the next decade (Faglig forum for norske havområder, 2019). The government also explains that Norway is the world's 7th largest shipping nation (and the world's 11th largest shipping nation when it comes to tonnage) (Norwegian government, 2016-2017). The biggest markets are explained to be China, the US, Brazil, and Australia (Norwegian government, 2016-2017).

The Norwegian history, current interest and expertise in many Ocean Industries, might help explain why they wish to be very involved in CCAMLR decisions and also feel like the Norwegian science and expertise needed to be included more into the planning of the Weddell Sea MPA. It might also further help explain that Norway is a fishery nation and nation that has a high focus on finding out how one can increase growth in the Ocean industries while also trying to balance natural resource exploitation with sustainable values.

In this view that Norway sits on a lot of valuable expertise, the Ocean strategies also expresses Norwegian interest in sharing knowledge and expertise with developing nations. In Chapter 7 “Blue economy in development policy” of the Ocean Strategy the Norwegian government describes how they wish to utilize the Norwegian expertise to help developing countries by assisting them in local and regional integrated management, oil for development and fish for development (Chapter 7, Norwegian government, 2016-2017). The first part of the chapter introduces Norway's view that the potential of large freshwater areas and ocean areas could be key elements in the achievement of the UN sustainable development goals (UNSDGs) one and two (the goals that wish to eliminate poverty, hunger, and improve food security and nutrition). According to this chapter it is in Norway's view that oil and gas “if managed responsibly” could help generate sustainable economic growth and welfare for many developing countries. The

chapter continues to describe how Norway has helped more than 10 African countries with advice in the submission of preliminary shelf data to the commission on the limits of the Continental Shelf in an effort to help them secure marine areas with potential for economic growth through “the continental shelf initiative” that started in 2008 (7.1 Norwegian Government, 2016-2017). In addition to this Norway has an “Oil for development program” where they help developing countries in managing oil resources in a way that can help the country establish a welfare system (Ch. 7.3 Norwegian government, 2016-2017). Alongside the Oil for development program the Chapter also describes Norwegian efforts to support fishery establishments in developing countries through UNEP and a program called “Fish for development” that they started in 2015 and The Nansen Programme that has been going on for more than 40 years (Ch. 7.2 & 7.4 Norwegian Government, 2016-2017). The Nansen program is described as a program that assist countries in developing ecosystem-based management systems for fisheries and the “fish for development” program is described as a program that is meant to help partnering countries establish cooperation between their authorities, research institutes and businesses to help monitor and utilize their marine resources. Norway has for example assisted in the establishment of regional management systems for fisheries in the Benguela current, as well as, in the mangroves of Haiti, and state that they wish to continue this work through UNEP (Ch. 7.2, Norwegian Government, 2016-2017).

Norway and the importance of UNCLOS

Because of Norwegian interests for the ocean industries, and a Norwegian dependency on petroleum for most of the current revenues, another theme becomes a natural part of Norwegian interests – the securing of important areas under international agreements or national jurisdiction. The most important international jurisdiction for international law can be said to be the UN Convention on the Law of the Sea. This interest and theme are visible throughout both Ocean Strategies and the Antarctic whitepapers where the government mentions that the government will continue to ensure that Norwegian Ocean Industry interests are safeguarded by these agreements.^{xxix} The Norwegian Ocean Strategies also mentions Norwegian government efforts to help developing countries develop their Economic zones and blue economies through a program called the Continental Shelf initiative^{xxx}.

Limitations

In an ideal study, I would have conducted more research interviews, and I would also have conducted all of the research interviews in person. I originally sought to interview 15 individuals to get 3-4 representatives from each of the 4 groups: Norwegian government, Norwegian scientists, Norwegian Antarctic businesses and Norwegian conservation organizations. I was however only able to interview 10 representatives, including 3 from the Norwegian government, 2 Norwegian fishery scientists, 2 NGO representatives and 2 representatives from companies with commercial interests in Antarctica and one political scientist with expertise on polar issues. Another limitation for the research interview data is the method for the interviews.

Unfortunately, most of the interviews (5) were conducted over Skype and 3 of the interviewees only had time to answer over email. This was despite the fact that I even travelled to Norway and at the time of travel had scheduled 6 interviews in person. I think that a lot of this had to do with the time period for my honors thesis project. First of all, in a future experiment, I would have scheduled the interviews at least two months in advance and started the process of asking for interviews at least three months before the desired dates. The scheduling of the interviews took a long time and I often had to email prospective interviewees three times before I got a response. I think that I underestimated the difficulty of scheduling interviews and that I should have taken this into account. Secondly, I think that the timing could be better planned, as I tried to schedule the interviews in conjunction with my Christmas break, a time when a lot of people are busy with family. Furthermore, I think that the ideal would have been to conduct all the interviews in person because it might have allowed a more natural, less planned response from the interviewees and it would also have allowed for me to observe more body language, as well as, allow me the opportunity to ask for immediate follow up questions for answers that I believed were unclear. For the content analysis I searched for the government documents to analyze myself and I could maybe have consulted experts on Norwegian foreign policy or Ocean policy instead, to make sure that I made good choices. For the process tracing of the CCAMLR documents some limitations include the fact that some Norwegian concerns or comments might not have been mentioned in the Commission reports. For example, the commission reports sometimes report comments made by “members”, to describe comments made by several

members. In these cases, it is not easily understood whether Norway was a part of those members or not. Another limitation in the commission report analysis might be the fact that Norwegian silence or no mention of Norwegian comments might also signify support because of the fact that CCAMLR is a consensus-based organization. Despite this consensus rule, it is sometimes hard to know whether Norway was in fact supporting the MPA in question, even if there is no mentioned comment, because sometimes Norwegian support is also reported explicitly as statements of support. For an improvement or future research, it would be helpful to have had actual meeting notes or observations of Norwegian participation in the CCAMLR meetings.

Conclusion

Norway is a country that heavily depends on marine resources and has until now heavily depended on revenues from the oil and petroleum industries to create a strong welfare state. In addition to the petroleum industry Norway has a long history as a fishery nation. Being the only world nation with territory and long history of interests in both the Arctic and the Antarctic Norway can also be said to be the only “true bipolar state”. In the efforts to protect areas outside of national jurisdiction CCAMLR has been regarded as one of the most successful examples. Even though CCAMLR efforts have been successful in the creation of MPAs within the CCAMLR convention area, proposed MPAs in the East Antarctic, Domain 1 and the Weddell Sea are still under discussion. In this process it is important to understand stakeholder interests. In the efforts to understand Norway and the Norwegian participation within the CCAMLR convention area, I conducted 10 interviews, and did a content analysis of relevant Norwegian government documents and the CCAMLR convention meeting reports, as well as, some of the MPA proposals and scientific documents presented for the Scientific commission and the CCAMLR commission. Based on the analysis of the data it seems like the Norwegian interests can be understood within the larger context of a Norwegian desire to keep a very specific and sometimes potentially difficult to understand balance between exploitation of natural resources and sustainability. It seems that Norway sees themselves as already established leaders in ocean industries and marine science and that it is in Norway’s interest to continue to be global marine leader when it comes to fishery science and sustainability going forward. Their interests in

Antarctic waters do not necessarily seem to be tied to historically claimed areas but seem to be linked to historical and current continued interests in the exploitation of national resources including Antarctic krill fisheries and the view that CCAMLR is a management organization, not a conservation organization. My research therefore proves that Norway is a powerful ocean economy with significant influence and interests within the Arctic and Antarctic spheres. Norwegian interests in any ocean area, including the Antarctica and the Southern Ocean can be understood by looking at the Norwegian interests in their own economic zones, which seem to be the interest to maximize marine resource use, while also wishing to be a leading sustainable nation.

Future research and implications

My research suggests that Norway is a powerful ocean economy with significant influence and interests within the Arctic and Antarctic spheres. Norwegian interests in any ocean area, including the Antarctica and the Southern Ocean can be understood by looking at the Norwegian interests in their own economic zones, which seem to be the interest to maximize marine resource use, while also wishing to be a leading sustainable nation. The research also seems to suggest that Norway is interested in being a mediator and supporting international cooperation within CCAMLR, and that Norway is proud of their own fishery standards and status. Based on these findings it would be interesting in a future study to look into the health of Norwegian fisheries within the Norwegian Exclusive Economic Zones and evaluate the sustainability status of Norwegian fishery strategies. This research would be interesting because it could evaluate if the pride in Norwegian fisheries is indeed legitimated. If Norwegian fisheries are, in fact, found to be one of the healthiest in the world, it would also make sense to further look into their strategies and how one could potentially apply them to fisheries worldwide. Another potential interesting future study would be to look further into the effect and sustainability of the programs that Norway has implemented to help developing nations establish exclusive economic zones or fishery management strategies. It would be interesting to see if these programs are indeed helping the countries establish sustainable ocean economies.

References

- Antarctic Treaty. 1959. Retrieved 15th of March 2020 from <https://www.ats.aq/e/antarctictreaty.html>
- Bernard, H.R. (2011). *Research Methods in Anthropology*. *Altamira Press*: New York.
- Brooks, C. M., Crowder, L. B., Österblom, H., & Strong, A. L. (2019). Reaching consensus for conserving the global commons: The case of the Ross Sea, Antarctica. *Conservation Letters*. <https://doi.org/10.1111/conl.12676>
- CCAMLR. (2020). *Glossary of terms. Marine Protected Area*. Retrieved March 15th 2020 from <https://www.ccamlr.org/en/organisation/what-commission>
- CCAMLR annual commission meeting reports. (2002-2019).
- CCAMLR 2002
- CCAMLR 2003
- CCAMLR 2004
- CCAMLR 2005
- CCAMLR 2006
- CCAMLR 2007
- CCAMLR 2008
- CCAMLR 2009
- CCAMLR 2010
- CCAMLR 2011
- CCAMLR 2012
- CCAMLR 2013
- CCAMLR 2014
- CCAMLR 2015
- CCAMLR 2016
- CCAMLR 2017
- CCAMLR 2018
- CCAMLR 2019
- CCAMLR MPA proposals :
- Delegations of Australia and France. (2011, Sept). Proposal For a representative system of Marine Protected Areas (RSMMPA) in East Antarctica.
- Delegations of Australia and France (2012, sept). Proposal for a conservation measure establishing a system of Marine Protected Areas in the East Antarctic planning domain.
- Delegations of Australia, France and the European Union. (2013, Sept). Proposal for a conservation measure establishing an East Antarctic Representative system of MPAs.

Delegations of Australia, France and the European Union. (2013, Oct.). Revised Proposal for the conservation measure establishing an East Antarctic representative system of MPAs.

Delegations of Australia, France and European Union (2013, May).Scientific Background to the proposed East Antarctic Representative system of MPAs.

Delegations of Australia, France and the European Union. (2014, Sept)
Track Changed version of the Proposal for Conservation Measure establishing the East Antarctic Representative System of Marine Protected Areas.

Delegations of Australia, France and the European Union.(2015,Sept) .Revisions to the draft East Antarctic Representative System of Marine Protected Areas (EARMPA) Conservation Measure.

Delegations of Australia, France and the European Union.(2016, Aug)
Revisions to the draft East Antarctic Representative System of Marine Protected Areas (EARMPA) Conservation Measure.

Delegations of Australia, the European Union and its Member States. (2017, Aug).
Draft Conservation Measure for an East Antarctic Marine Protected Area.

Delegations of the European Union and Australia. (2019, Sept).
Proposal to establish an East Antarctic Marine Protected Area.

Delegation of the United States.(2011, Sept).An MPA Scenario for The Ross Sea Region.
An MPA Scenario by New Zealand for The Ross Sea Region.

Sharp, B. R. and Watters, G. M. (2011, Aug). Marine Protected Area planning by New Zealand and the United States in the Ross Sea Region.

Delegation of the USA.(2012, Sept). A Proposal for the Ross Sea region Marine Protected Area.

Delegation of the New Zealand. September 2012. A Proposal for the establishment of a Ross Sea region Marine Protected Area.

Delegation of New Zealand and the USA. May 2013. A Proposal for the establishment of a Ross Sea region Marine Protected Area.

Delegation of New Zealand and the USA. October 2013. A Proposal for the establishment of a Ross Sea region Marine Protected Area.

Delegation of New Zealand and the USA. September 2014. A Proposal for the establishment of a Ross Sea region Marine Protected Area.

Delegation of New Zealand and the USA. September 2015. A Proposal for the establishment of a Ross Sea region Marine Protected Area.

- CCAMLR (2016). Conservation Measure 91-05 (2016) Ross Sea Marine Protected Area
- Delegation of the European Union. September 2016. Proposal on the conservation measure establishing the Weddell Sea Marine Protected Area.
- Delegation of Germany. September 2016. Scientific Background document in support of the development of a CCAMLR MPA in the Weddell Sea 2016 version.
- Delegation of Norway. August 2017. The Weddell Sea MPA revisited and wider implications for CCAMLR MPA planning.
- Delegation of EU and its member states and Delegation of Norway. September 2019. Proposal to establish a Marine Protected Area across the Weddell Sea region (Phase 1).
- Edgar, G. J., Stuart-Smith, R. D., Willis, T. J., Kininmonth, S., Baker, S. C., Banks, S., ... Thomson, R. J. (2014). Global conservation outcomes depend on marine protected areas with five key features. *Nature*, 506(7487), 216–220.
- Faglig forum for norske havområder (2019) Verdiskaping i næringene - Faggrunnlag for revisjon av forvaltningsplanen for Barentshavet og havområdene utenfor Lofoten M-1297/2019 <https://www.miljodirektoratet.no/globalassets/publikasjoner/m1297/m1297.pdf>
- Fiskeridirektoratet. 2018. Økonomiske og biologiske nøkkeltall fra dei Norske fiskeria 2018. Received on March 15th 2020 from <https://www.fiskeridir.no/Yrkesfiske/Tall-og-analyse/Statistiske-publikasjoner/Noekkel-tall-for-de-norske-fiskeriene>
- George, A.L. & Bennett, A. (2005). Case Studies and Theory Development in the Social Sciences. *MIT Press*: Cambridge, MA.
- Giakoumi, S., Mc Gowan, J., Mills M., et al. 2018. Revisiting “Success” and “Failure” or Marine Protected Areas: A conservation scientist perspective. *Frontiers in Marine Science*. Retrieved from <https://www.frontiersin.org/articles/10.3389/fmars.2018.00223/full>
- Gjerde, K. M., L. L. Nordtvedt Reeve, H. Harden-Davies, J. Ardron, R. Dolan, C. Durussel, S. Earle, J. A. Jimenez, P. Kalas, D. Laffoley, N. Oral, R. Page, M. Chantal Ribeiro, J. Rochette, A. Spadone, T. Thiele, H. L. Thomas, D. Wagner, R. Warner, A. Wilhelm and G. Wright (2016). "Protecting Earth's last conservation frontier: scientific, management and legal priorities for MPAs beyond national boundaries." *Aquatic Conservation: Marine and Freshwater Ecosystems* 26.
- Hallenstvedt, Abraham & Dørum, Knut. (2020, 8. januar). Norsk fiskerihistorie. *Store norske leksikon*. Retrieved 15th of March 2020 from https://snl.no/Norsk_fiskerihistorie
- Jick, T.D. (1979). 'Mixing Qualitative and Quantitative Methods: Triangulation in Action', *Administrative Science Quarterly*, 24: 602–11.

- Keil, K. 2014. The Arctic: A New Region of Conflict ? *Cooperation and Conflict*, Vol. 49, No. 2 (June 2014): 162-190. Retrieved from <https://www.jstor.org/stable/45084252>
- Kongehuset (Det Norske Kongehus). (2015, 11th of February). Kongen i Antarktis. Retrieved from: <https://www.kongehuset.no/nyhet.html?tid=125753&sek=26939>. Accessed on March 31st 2020
- Krippendorff, K. 2013. Content Analysis. Third Edition. *Sage*.
- Liu, N., & Brooks, C. M. (2018). China's changing position towards marine protected areas in the Southern Ocean: Implications for future Antarctic governance. *Marine Policy*, 94, 189–195. <https://doi.org/10.1016/j.marpol.2018.05.011>
- Leif Christian Jensen (2016) From the High North to the Low South: bipolar Norway's Antarctic strategy, *The Polar Journal*, 6:2, 273-290, DOI: [10.1080/2154896X.2016.1241490](https://doi.org/10.1080/2154896X.2016.1241490)
- Lubchenco, J. and K. Grorud-Colvert (2015). "Making waves: The science and politics of ocean protection." *Science* **350**(6259): 382-383
- Norwegian Government (2014-2015). Meld St.32: Norske Interesser og politikk i Antarktis Accessed on October 7, 2019 from <https://www.regjeringen.no/no/dokumenter/meld.-st.-32-20142015/id2415997/sec1>
- Norwegian Government (2016-2017) Meld. St.22: The place of the Oceans in Norway's foreign and development policy.
- Norwegian Government (2019) Blue Opportunities: The Norwegian governments updated Ocean Strategy
- Norwegian government (2014-2015) Meld St.33: Norske interesser og politikk for Bouvetøya
- Norway outlines arctic boundary. (2009, Apr 16). *Star - Phoenix* Retrieved from <https://colorado.idm.oclc.org/login?url=https://search-proquest-com.colorado.idm.oclc.org/docview/348968599?accountid=14503>
- Norwegian Petroleum. (2020, Feb. 7th). The governments revenues. Retrieved march 15th from <https://www.norskpetroleum.no/en/economy/governments-revenues/>
- Njåstad, Birgit. (2020, 22. February). Antarktis. *Store norske leksikon*. Retrieved 15. mars 2020 from <https://snl.no/Antarktis>
- OECD. 2003. Glossary of Statistical terms: Exclusive Economic Zone (EEZ). Retrieved April 20th 2020 from <https://stats.oecd.org/glossary/detail.asp?ID=884>
- Rapp, Ole M. (2015, Sept. 19th) Norge Utvider Dronning Maud Land helt frem til Sydpolen. *Aftenposten*. Retrieved March 26th 2020 from

<https://www.aftenposten.no/norge/i/dw1q/norge-utvider-dronning-maud-land-helt-frem-til-sydpolen>

Ryggvik, H. , Sander, G., Weihe, H., Wallin, J. & Smith-Solbakken, M. (2019, 12. december). Striden om oljeboring i nord. *Store norske leksikon*. Retrieved 15. mars 2020 from https://snl.no/striden_om_oljeboring_i_nord

Ryggvik, H. & Smith-Solbakken, M. (2018, 3. december). Norsk oljehistorie. *Store norske leksikon*. Retrieved 14. mars 2020 from https://snl.no/Norsk_oljehistorie

"RUSSIA - Arctic Deal with Norway." *APS Review Gas Market Trends*, vol. 79, no. 7, 13 Aug. 2012. *Gale Academic OneFile*, <https://link-gale-com.colorado.idm.oclc.org/apps/doc/A300241968/AONE?u=coloboulder&sid=AONE&xid=084eb8de>. Retrieved 15 Mar. 2020.

Thorsnæs, Geir. (2020, 27. januar). Norges geografi. *Store norske leksikon*. Retrieved 15th of mars 2020 from https://snl.no/Norges_geografi

Wilhelmsen, J. & Gjerde, L. K. Norway and Russia in the Arctic: New Cold War Contamination? *Arctic Review on Law and Politics*, vol 9: 382-407.

United Nations, 2015. United Nations Sustainable development goals. Retrieved from <https://sustainabledevelopment.un.org/?menu=1300>

Appendix I

Interview Questions

For government officials:

1. For the record, can you state your name and position? How long have you been in your current position?
2. What are Norway's interests and activities in the Antarctic? Can you elaborate on historic interests and activities as well as current interests, activities and priorities? For example:
 - a. What is the history of Norwegian activities?
 - b. How did Norway come to claim Droning Maud Land?
 - c. What is the current state of that claim?
 - d. What is the status and interest in Bouvetøya?
 - e. Can you explain the history and current status of Norwegian fishing activities?
 - f. Can you describe any other current interest and activities?
3. Can you describe CCAMLR's efforts to establish Marine Protected areas in Antarctica?
 - a. What has gone well? What has gone poorly?
4. What has been Norway's involvement with CCAMLR's MPA process?
 - a. Norway supported a Ross Sea MPA. Can you describe how and why they supported this MPA?
 - b. Does Norway support additional MPAs (East Antarctica, Weddell Sea; Domain 1).
 - c. Why or why not?
5. The first Weddell Sea MPA proposal (2016, 2018; proposed by Germany and the EU) spanned from the Antarctic Peninsula out to 20E. The 2019 revision, of which Norway is a co-proponent, has been reduced to spanning to 0 degrees. Can you describe why this change occurred?
 - a. What is the scientific rationale?
 - b. Why is Norway now a co-proponent?
6. Meld 32 (2015) states that Norway wishes to fulfill their international duties under the Antarctic treaty and help contribute to protect areas of the Southern Ocean, as well as, establishing marine protected areas. It specifically says: "From the Norwegian side, an emphasis is placed on creating MPAs that have a well-documented scientific rationale, that the MPAs are goal oriented and effectively implemented to ensure a long-term protection of nature and ecosystems... it is important that the creation of MPAs does not lead to a more difficult surveillance, makes it more difficult to collect important scientific data or shifts the fishing fleet in a way that might involve higher risk of unwanted

pressure and fishing in one area due to the closing of another area.” Can you explain this Meld further? Explicitly,

- a. How has it been initiated and put into action?
 - b. How has this impacted Norway’s position or efforts towards MPAs in the Antarctic?
 - c. How does apply or relate to the revisions made to the Weddell Sea MPA proposal?
7. The Norwegian government has expressed interests in establishing Norway as a leading “blue economy” and to become leading nation for innovation, science, policy and economic growth in the ocean Industries. How important do you think Norwegian interests in Antarctica are in this pursuit to be a leading blue economy?
 8. Norway currently has the largest harvest of Krill in Antarctica. How does this impact Norway’s policy and behavior in CCAMLR?
 - a. How does this affect Norwegian positions or interests in creating Marine Protected Areas there?
 9. Meld 32 states that: “Norway is holding the same standard for their Antarctic territories as the other ocean regions where Norwegian fisheries are active” (“Norge stiller de samme kravene til en bærekraftig utvikling i havområdene rundt Antarktis som i andre havområder der den norske fiskerieringa er aktiv»). Can you explain this further? How has this initiative been put into action?
 10. Is there anything else you would like to add that I have not asked about?
 11. Can I approach you with follow-up questions or clarifications later?
 12. Would you like to review a copy of my notes from our interview?

For Norwegian Scientists:

1. What is the purpose of a marine protected area? In general (in the world’s ocean) and within the Southern Ocean managed by CCAMLR?
 - a. What are the different possible areas within an MPA? (e.g., no-take versus multi-use)
 - b. What are the differences between the different kinds of areas and values of the general protection areas, special protection areas and scientific fishing areas?
2. Can you describe Norwegian scientists’ involvement in the development of the Ross Sea MPA?
 - a. What did Norway see as the scientific rationale underpinning the creation of the Ross Sea MPA?
 - b. Can you describe the scientific value of conserving the Ross Sea?

3. Can you describe Norwegian scientist involvement in the East Antarctic MPA proposal?
 - a. What is the scientific rationale underpinning this MPA?
 - b. What is the conservation value of the MPA in this region?
4. Can you describe Norwegian scientist involvement in the Domain 1 MPA proposal?
 - a. What is the scientific rationale underpinning this MPA?
 - b. What is the conservation value of the MPA in this region?
5. Can you describe Norwegian scientist involvement in the original 2016 and 2018 Weddell Sea MPA proposal?
 - a. What was the scientific rationale underpinning this MPA?
 - b. What was the conservation value of the MPA in this region?
6. What is the scientific rationale supporting the new (2019) version of the Weddell Sea MPA proposal, which Norway is a co-proponent on?
 - a. Could you explain the value and/or need for protecting the Weddell Sea from a biodiversity, ecosystem, and environmental sustainability standpoint?
 - b. How was this MPA developed and designed? Can you describe the different zones within the MPA and the scientific rationale behind them?
 - c. Can you describe the major differences between the 2016/18 Weddell Sea MPA proposal and the 2019 revised proposal? Can you describe the rationale behind them?
 - d. As a scientist, how would you compare the potential conservation outcomes for the two different proposals?
 - e. Could you explain what value there would be in protecting the Weddell Sea from a biodiversity, ecosystem, and environmental sustainability standpoint?
7. Is there anything else you would like to add that I have not asked about?
8. Can I approach you with follow-up questions or clarifications later?
9. Would you like to review a copy of my notes from our interview?

For Norwegian Krill Fishery representatives:

1. For the record can you state your name and position? How long have you been in your current position?
2. Can you describe a standard Antarctic krill fishing operation in Antarctica?
 - a. When during the year does it occur?
 - b. What kind of gear does your company use?
 - c. Are there environmental or ecosystem interactions or threats?
 - d. How many fishing vessels does your company send to the Southern Ocean each year?
 - e. How do you manage for those? How much is a typical harvest in a year?

3. What interests does your company have in Antarctica / the Southern Ocean?
 - a. Describe these historically, in the short term and in the long term.
4. Describe your company's involvement and knowledge of Antarctic MPAs and the Norwegian involvement in the creation of Antarctic MPAs.
 - a. What has been the involvement or knowledge of the Ross Sea MPA (adopted in 2016)?
 - b. What has been the involvement, knowledge, and support of the proposed East Antarctic MPA?
 - c. What has been the involvement, knowledge or support of the proposed Weddell Sea MPA?
 - d. What has been the involvement or knowledge of the proposed East Antarctic MPA?
5. How does your company define sustainable harvest? Explain any measures taken by the company to ensure sustainable harvest of marine resources.
6. Can you describe your company's involvement in the Association of Responsible Krill Harvesters (ARK)?
7. What role do you think fisheries in Antarctica plays in the Norwegian economy?
 - a. How important do you think Southern Ocean fisheries are in the future?
 - b. Can you describe the future of Southern Ocean fisheries?
 - c. How do you see Southern Ocean fisheries in regard to environmental sustainability?
 - d. What role do you think that this kind of fishing can play in the securing of future global food security ?
8. Is there anything else you would like to add that I have not asked about?
9. Can I approach you with follow-up questions or clarifications later?
10. Would you like to review a copy of my notes from our interview?

Appendix II

Appendix II Table

Year	CCAMLR action	Norwegian involvement
2002	CCAMLR added MPAs as agenda item	No mention of Norwegian activity in commission report (CCAMLR-2003)
2004	Working group Decided on a workshop for MPAs (CCAMLR-2004)	No mention of Norwegian comment in commission report (CCAMLR-2004)
2005	CCAMLR MPA Workshop CCAMLR endorses the Scientific Committees advice arising from the workshop on MPAs, agreeing that the goal is to create a harmonized regime for the protection of marine environments across the ATS (CCAMLR-2005)	No mention of Norwegian comment in commission report (CCAMLR-2005)
2007	Bioregionalization workshop Workshop on MPAs 13.-17 August in Brussels, Belgium (CCAMLR -2007)	Norway and UK present the idea that climate change should be included in future agendas in both the commission and the scientific committee of CCAMLR (CCAMLR-2007)
2008	IUCN and ASOC representatives both ask the commission to consider protecting the Ross Sea. (CCAMLR-2008)	No mentions of Norwegian comments in the commission report (CCAMLR-2008)
2009	<u>South Orkney Island MPA is adopted conservation measure 91-03 (2009)</u> (CCAMLR -2009)	No mentions of Norwegian comments in the commission report (CCAMLR-2009) Norway was chair of the Scientific Committee: Mr. Svein A. Iversen at the Institute of Marine Research in Bergen. (CCAMLR-2009)
2011	<u>General MPA conservation measure is adopted CM-91-04</u> (12.38 (CCAMLR-2011))	7.19 In Norway's view, the New Zealand text takes a more holistic approach, enabling a customized approach to the different parts of an MPA and to what kind of measures are needed in each MPA. Norway also appreciated the transparency of the proposal. (CCAMLR-2011)

<p>New Zealand presents Ross Sea proposal (CCAMLR-2011)</p> <p>USA presents Ross Sea proposal (CCAMLR-2011)</p> <p>France and Australia present East Antarctic MPA (CCAMLR-2011)</p>	<p>7.15 Norway stressed the importance of a balanced approach with regard to the provisions in a measure to establish an MPA. For Norway, sustainable, ecosystem-based, responsible fishing founded on science is a fundamental part of harvesting and harvesting is a fundamental part of Article II of the CAMLR Convention. Any suggestion that raises doubt of the definition of 'rational use' as it is defined in Article II in the Convention will not be helpful and cannot be supported. (CCAMLR-2011)</p>
<p>2012</p>	<p>No mentioned comments by Norway (CCAMLR-2012)</p> <p>New Zealand and USA submit a joint proposal for the Ross Sea MPA (CCAMLR-2012)</p> <p>France and Australia and EU submit East Antarctica MPA Proposal (CCAMLR-2012)</p> <p>EU gives responsibility of developing MPA in the Weddell Sea to Germany (CCAMLR-2012)</p>
<p>2013</p>	<p>US and New Zealand revised MPA for the Ross Sea (CCAMLR-2013)</p> <p>EU, Australia and France present revised East Antarctic MPA (CCAMLR-2013)</p> <p>Discussions within CCAMLR on the term rational use and size and numbers of MPAs needed in the East Antarctic (CCAMLR-2013)</p> <p>Norway presents the concerns on the Ross Sea MPA particularly the inclusion of Spawning areas in the North East, the size of the Scott Seamount, Catch limits in tonnage for toothfish in the special research zone & zero catch limits on the south and east slope next to the special research zone. (CCAMLR-2013)</p> <p>3.35 Japan raises issues about sunset clauses and Norway agrees (CCAMLR-2013)</p> <p>3.53 Norway reports from the members of the scientific committee, the members had very different views on the size and numbers of MPAs needed to meet the conservation goals. No recent stock assessment of toothfish and krill was also raised as an issue by members. (CCAMLR-2013)</p>

	<p>3.60 Norway reports the legal issues raised by members 1. The role of CCAMLR within the ATS to establish MPAs in the CCAMLR area 2. A definition of how CCAMLR works within its mandate in this regard and the relationship of CCAMLR and the UNCLOS. 3.No legal definition of MPAs in the CM-91-04. (CCAMLR-2013)</p> <p>7.29 “Norway proposed text for inclusion in both MPA proposals, noting that MPAs should be implemented in a manner consistent with the rights and obligations of states under international law, including those reflected in the United Nations Convention of the Law of the Sea.” (CCAMLR-2013)</p> <p>7.48 Norway expressed support for both Ross Sea and East Antarctic MPAs and thinks that the proponents have been good at listening to concerns raised. (CCAMLR-2013)</p>
<p>2014</p> <p>Revised MPA for the Ross Sea (CCAMLR-2014)</p> <p>Revised MPA for the East Antarctic (CCAMLR -2014)</p>	<p>7.58 & 7.59 Norway emphasizes that all MPAs should be established based on sound scientific evidence and thinks that a sound scientific justification together with a research and monitoring plan that can ensure that the objectives are being met is important for this. (CCAMLR-2014)</p> <p>7.73 Norway acknowledges that the East Antarctic MPA process has been lengthy and thanks the members for their hard work and flexibility, collaboration and discussions towards an MPA agreement. Norway hopes that the East Antarctic will be implemented, states that most of concerns have been addressed and believes that any remaining issues can be resolved in the drafting of conservation measure. (CCAMLR-2014)</p> <p>7.73 Norway requested that CCAMLR begins conservation measure drafting on a revised proposal for the Ross Sea MPA and that they are ready to undertake this task once the revised proposal is ready. (CCAMLR -2014)</p>
<p>2015</p> <p>New Revised Ross Sea proposal significantly reduced (Delegations of New Zealand and USA, 2015)</p>	<p>8.112 Norway acknowledges that the Ross Sea process has been lengthy and thanks the members for their hard work and effort and all the changes made. Norway hopes that the Ross Sea will be implemented. (CCAMLR-2015)</p>

<p>Germany presents their data and work since 2013 for the Weddell sea MPA and thank the commission for their positive reception of the documents – They also present a document with the priority areas for protection where identified (Delegation of Germany-2017)</p>	<p>8.103 Norway expresses concern for some members unwillingness to restrict activity in certain areas for the East Antarctic and Ross Sea MPAs “... – we are somewhat surprised by some of the rather extreme opinions expressed today regarding unwillingness to accept restrictions on science activities or fishing activities in areas that are considered by most to be worthy of special protection. Such opinions negate the possibilities for CCAMLR to be “pre-emptive” in ensuring conservation objectives. This is not in keeping with the conservation mandate (CCAMLR-2015)</p> <p>No mentioned comments made by Norway in the commission report. (CCAMLR -2015)</p>
<p>2016</p> <p>8.85 Germany and the EU submitted their proposal for the Weddell Sea MPA with a different design that did not follow the priority areas identified in 2015 (Delegation of Germany-2015) (CCAMLR-2016)</p> <p><u>8.48 Ross Sea MPA is adopted</u></p> <p>Revised East Antarctic MPA is presented by EU, France and Australia</p>	<p>8.92 & 8.93 Norway says that they are concerned with the evidence for the WSMPA and wanted it to go back to the scientific committee for discussion (CCAMLR-2016)</p> <p>Dr. Godø states that there are datasets whose existence have been raised by several occasions since the workshop in 2013 that were not included (SC-CCAMLR-2016)</p> <p>8.63 Norway expresses that this is a historic moment and thank the US and New Zealand for their efforts, Norway is committed to contribute towards the research and monitoring plan and scientific knowledge that is needed for the successful management of this MPA. “This MPA is a result of science-based decision making. It is developed using the best available science to promote the most appropriate levels of protection and rational use of the resources in the Ross Sea.” (CCAMLR-2016)</p> <p>8.76 Norway expresses their support for the EARMPA and how, in an area with limited data, the East Antarctic MPA was drafted: “Norway expressed its support for this proposal and noted that the approach taken by the proponents differed to that taken by the proponents of the Ross Sea region MPA. The necessarily different approach taken in the proposed EARSMPA reflected the limited scientific information available, and such an approach should be considered by CCAMLR as an approach for similar data-deficient areas around Antarctica” (CCAMLR-2016)</p>

2017

5.63 D1 – (Antarctic Peninsula) MPA proposal is presented (CCAMLR-2017)

8.29 Revised East Antarctic MPA (CCAMLR-2017)

5.54 Weddell Sea MPA (CCAMLR-2017)

5.66 Norway expresses concern about the integration of current and potential future management strategies for Krill fisheries in the proposal. “5.66 With reference to discussions at WG-EMM and the Scientific Committee (SC-CAMLR- XXXVI, paragraph 5.28), Norway noted an issue that requires additional attention is how to integrate current and potential management strategies of krill fishing activities, such as FBM, within any Domain 1 MPA.” (CC-2017)

8.33 Norway expresses their support towards this MPA and say that they are encouraged by the changes that have been made. Norway also wishes that the EAMPA process should model how MPAs in “data-poor” areas should be drafted. “The thinking underlying the East Antarctic MPA proposal is also consistent with that adopted in data-poor areas of regional fishery management organizations (RFMOs) in the Atlantic Ocean in their designation of biogeographically representative VME closures as well as in the designation of high-seas MPAs in the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR). The positive way the proponents have worked with Members to achieve consensus is highly appreciated. Norway is ready to participate in drafting to develop a conservation measure. We also think that having both the Ross Sea region MPA and East Antarctic MPA adopted will be very helpful as a model for developing additional MPAs in the Convention Area.”(e-cc-xxxvi-2017)

Norway submits request for Toothfish research in area 48.6 (e-cc-xxxvi-2017)

	<p>Norway raised concerns – 4 major concerns: 1. Transparency of the expert led process by which MPA boundaries were delineated.</p> <p>2. Suitability of some data layers, not adequate discussion and consideration of fisheries.</p> <p>3. Issues with Domain 4 inclusion in the planning area</p> <p>4. Norway asks for consistency in relation to the Norwegian approach to area-based management tools. (2017-WG-EMM-17/42)</p>
<p>2018</p> <p>2018 AP / Domain 1 revised proposal is presented (e-cc-38-2018)</p> <p>2018 Weddell Sea MPA (e-cc-38-2018)</p> <p>East Antarctic proposal the same as 2017 (2018_e-cc-xxxvii-24; e-cc-38-2018)</p>	<p>Norway is happy that the Krill Fishery Management Plans and Feedback management plans are now being considered in the MPA proposal. (e-cc-38-2018)</p> <p>6.31 & 6.32 Norway notes that there still remains a difference in data availability between the East and West parts of the current planning area. Norway therefore wishes to split the contrasting subareas. Norway also raises concerns about the gap between 20E and 30E and would prefer an eastward extension. “This would allow the inclusion of the priority areas for protection that were identified by German scientists in the WSMPA proposal, put more emphasis on a north–south ecosystem connectivity and a better connectivity with other areas further east in the context of a representative system of MPAs.” (e-cc-38-2018)</p>

2019

<p>6.47 The Delegations of the EU and its member States and Norway presented a proposal to establish an MPA in the Weddell Sea region (CCAMLR-38/23) (e-cc-39-2019)</p> <p>East Antarctic proposal the same as 2018 (2017?) (e-cc-39-2019)</p> <p>6.51 New Domain 1 MPA with only two zones and a larger area proposed 2019_e-cc-38-25 - D1MPA (e-cc-39-2019; 2019_e-cc-38-25 - D1MPA)</p>	<p>6.47 The process would happen in two phases. “These delegations described the two phases of the proposal with phase 1 focused on the establishment of an MPA area in Domain 3 and the western parts of Domain 4 and phase 2 that will extend the WSMMPA across the Domain 4 region. They clarified that there was no automaticity to phase 2. The aim was to provide a coherent outcome overall. Norway recalled the discussion at CCAMLR-XXXVII (paragraphs 6.29 to 6.33) and expressed its pleasure at being able to co-sponsor the revised two-phase proposal that had maintained the objectives and rationale of the original proposal for a WSMMPA.” (e-cc-39-2019)</p> <p>No mention of Norwegian comments in the commission report (e-cc-39-2019)</p>
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Appendix II Table: Progression of MPAs and Norwegian comments based on CCAMLR commission reports from 2002-2019 and some of the CCAMLR MPA proposals. The colors indicate what Marine protected area the action and comments pertained to; Green text indicates that the action or comment is related to the Ross Sea MPA proposal, Purple indicates that it is related to the East Antarctic MPA proposal, Orange text indicated that it is related to The Weddell Sea proposal, Red text indicates that it is related to the Domain 1 MPA proposal any text in black is an significant action or comment that is not related to any specific MPA proposal.

Endnotes : Quotes from Interviews and Government documents that help support arguments in result and discussion

ⁱ *“Norwegian polar research exceeds the global advantage in terms of the frequency of publication citations, but Norway still trails leading nations. We have the potential to rank in the top 10 by building up expertise, recruiting competent researchers and participating extensively in international collaboration”*(Chapter 6, Meld-32, 2014-2015) , *“Norwegian polar research exceeds the global advantage in terms of the frequency of publication citations, but Norway still trails leading nations. We have the potential to rank in the top 10 by building up expertise, recruiting competent researchers and participating extensively in international collaboration”*(Chapter 6, Meld-32, 2014-2015)

ⁱⁱ *“The fact that Norwegian polar research cover both the Arctic and the Antarctic is an advantage...What we have learned in the Arctic can be applied to our study of developments in the Antarctic”*”(Chapter 6, Meld-32, 2014-2015)

ⁱⁱⁱ *“Norway has been an important contributor to the AT and worked to help develop good management strategies. For example, Norway helped develop the Environmental protocol under the AT. (Chapter 3 in Meld 32, 2014-2015)”*

“Norway was active in the development of the convention for protection of seals in 1972 and the establishment of CCAMLR in 1982.”(Chapter 6, Meld 32, 2014-2015).

^{iv} *“The Arctic is Norway’s most important foreign policy priority. There are growing opportunities for industrial development such as seafood, oil and gas. (Meld. 22, 2016-2017)”*

^v *“Troll is a green station with ambitious environmental goals for energy use, waste handling, transport and other aspects of its operation. Its goal is to be on par with the leading stations in Antarctica in developing and implementing environmentally friendly solutions”* (9.2 in Meld-32, 2014-2015) and *“The government will foster Troll’s development as a logistical hub and strengthen cooperation with other countries to implement efficient new transport solutions with positive economic and environmental effects”* (Chapter 9.5 in Meld-32, 2014-2015)

^{vi} *“Troll Sat is the largest station for receiving satellite information in Antarctica”* (8.6.2 in Meld-32, 2014-2015)

^{vii} *“Today Norway represents more than half of the Krill fishery in the Antarctic followed by South Korea and Japan. Norway plays an important role in the krill fishery”* (Chapter 8.4 in Meld-32, 2014-2015)

^{viii} *“This is the fourth year that we will get the highest sustainability rating that is possible for fisheries. It is very important for us that marine mammals live unaffected by us and it is also very important for us that the ocean is not polluted because that is important for krill.”* (Hoem, 2019)

And *“WWF was giving us consulting us from our beginning in 2005 and they helped us establish the premises of our fishery. One of the things they recommended was that we hosted independent observers on all our boats to observe our fishery and we do now have that on all our fishing vessels.”* (Hoem, 2019).

^{ix} *“Norway wants to contribute to a successful CCAMLR and AT cooperation (Meld 32, 2014-2015)”* ,

“For fisheries and environmental management in Antarctic waters, the most important cooperation mechanism is the commission for conservation of Antarctic Living Marine Resources (Meld.22, 2016-2017)”

“The Norwegian politics emphasizes peace, science and environmental protection. (Meld 32, 2014-2015)”.

“The international cooperation under AT has been mainly successful. It has kept a whole continent peaceful. It has been successful with international agreements around environmental protection. It has worked well because all the parties have been willing to find cooperative solutions. (Meld 32, 2014-2015)”.

^x *“Norway wishes to be a responsible ocean nation. Norwegian politics are founded on the principles of sustainable management, based upon scientific knowledge and recommendations (Meld. 32., 2014-2015)”*

And

“The government will ensure national implementation of UN sustainability goals 14 to preserve and use marine resources in a way that promotes sustainable development.”(Meld. 22, 2016-2017)

And

“The Norwegian government is actively promoting a transition to a greener and more sustainable Norwegian economy. If we are to succeed, we must safeguard biodiversity for current and future generations. At the same time, we must make the most out of opportunities for economic development in maritime areas (Meld. 22, 2014-2015).”

And

“The main objective of the Norwegian government ocean strategy is to contribute to the greatest possible sustainable value creation and employment in ocean industries (Meld 33, 2016-2017).”

^{xi} *“The government goal is that Norway will be a low emission country by 2050 and to do this we are looking into zero emission tech for the petroleum industry (Meld 22, 2016-2017)”*

^{xii} *“The goal is for Norway to become the world’s foremost ocean economy. We will achieve this by green restructuring (Meld 22, 2016-2017)”*

^{xiii} *“Norway wishes to be a leading country in the questions around holistic ecosystem-based management systems.” (Meld. 33, 2014-2015).*

^{xiv} *“Norwegian fishing activity is based in the principles of sustainability, sustainable management based on scientific consulting and the UNs rules under the 1982 international ocean convention.” (Meld 33, 2014-2015).*

^{xv} *“Norway’s experience of sustainable marine management has given us a valuable expertise that we can use in our international efforts to advocate development that fosters growth through the protection of the marine environment and not at its expense (Meld. 22, 2016-2017)”.*

“Although fish stocks in Norwegian Sea areas are harvested sustainably around 31% of the worlds commercially fished important fish stocks are overfished.”(Meld. 22, 2016-2017)

“Although the situation for fish stock harvested in Norwegian areas are good, the situation for fisheries worldwide is somewhat different developments are worrying, with the proportions of stocks harvested at sustainable levels decreasing” (Meld. 22, 2016-2017).

^{xvi} *“Norwegian-Russian fisheries management cooperation dates back decades and is an internationally recognized example of sustainable management (of the Lofoten and Barents Sea cod stocks) (Meld.22, 2016-2017)”.*

^{xvii} *“It is a goal to manage wild marine resources so as to achieve the highest possible long-term yield. This forms the basis of employment, value creation and export revenue (Meld 22., 2016-2017).”*

“The government will strengthen knowledge base for implementing new monitoring technology for harvestable stocks (Meld 22,2016-2017).”

“A sustainable fishery management is dependent on that quotas are kept, and markets are increasingly demanding documentation for sustainably harvested fish. The government wants better control of fisheries management and has elected a council in 2018 to advice the future of fishery management (BOP, 2019).”

^{xviii} *“I am actually very proud to be Norwegian in terms of fisheries and fishery management. I think we have done very well both ensuring that it is science based, trying to look at holistic management plans and other impacts on the other areas that are being fished as well, trying to balance out the degree of impact in those areas. I think that if all areas managed their fisheries as well as Norway is doing, I think that would be an incredible move forward for the world’s fisheries” (Nina Jensen, 2019)*

^{xix} *“Within CCAMLR there is some room for exploitation of resources, but within the framework that CCAMLR has set. At the same time, there is from the industry side ,especially within the Norwegian krill industry, a lot of interest in innovation and being in the forefront of the industry. They are with this, therefore helping to build what we can call a sustainable industry.” (Birgit Njaastad, 2019)*

^{xx} *“The marine environments that we have in Norway and that we are responsible for in the North are some of the most well managed oceans that we have globally. The Marine Research Institute is one of the largest institutes for Marine Research in the world and we have our own vessels that are always in the ocean surveying” (Bjørn Krafft, 2019).*

^{xxi} *“Norway’s policy in CCAMLR regarding MPAs (and other issues) is identified in Meld 32 (2015). Our position as a fishing nation is attended to by the criteria identified there, for example well documented scientific rationale. If it is ample evidence that a measure is justified, for example area closures, it is easier to get the fishing industry to accept it” (Kristoffer Bjørklund, 2019)*

^{xxii} *“Our interests in CCAMLR represent both continuity and innovation. Continuity because we have had interests in exploitation of living marine resources around Antarctica for a long time, and innovation because succeeding with a biological, economically and socially sustainable fishing industry requires development of new technologies, logistics solutions, markets, creativity and risk acceptance.” (Kristoffer Bjørklund, 2019)*

^{xxiii} *“CCAMLR is not a preservation organization, but a management organization. The aim is to be able to have a fishery, but it should be sustainable and not impact any of the populations or organisms in the system.” (Bjørn Krafft, 2019)*

^{xxiv} *“No-take zones aim to afford protection to natural features of high value, maybe something that is under a lot of risk or pressure and this is the strictest form of regulation. This strict regulation is not necessary everywhere and you therefore have other places where more activity is allowed. Research-fishery or research fishery zones are usually created for the investigation of fishery resources and for research on the potential impacts of fisheries in an area, and the tightly regulated fishing allowed in these areas is evaluated as not harmful. The alternative to this would be to make entire MPAs no-take zones, but this would be neither rational nor politically feasible.” (Odd Aksel Bergstad, 2019)*

And

“All scientists that are working within CCAMLR have a commitment to design MPAs according to the CCAMLR mission, both when it comes to conservation and harvest regulation. One cannot just suggest pure conservation measures, the convention also allows for harvest. This is also Norway’s policy.» (Odd Aksel Bergstad, 2019)

^{xxv} *“Area-based management measures can be important tools in the work to promote conservation and sustainable use of marine biodiversity. In the governments view it is important to ensure that such areas and the management measures introduced are based on the best available science and can be combined with sustainable use of the areas.” (Meld. 22).*

“The Marine Protected Area in the Ross Sea was designed using the best available science between conservation and sustainable use.”(Meld. 22)

“Norwegian players currently harvest Krill, a plankton in cold waters surrounding Antarctica. Assessment of the Krill stock is based on expedition from 2000, and the knowledge must be updated.” (Norwegian Ocean Strategy, 2016-2017).

“The government is working towards sustainable management of marine living resources based on the best available science/scientific evidence and an ecosystem approach.” (Meld 22).

“Under the UN convention for the law of the seas For Norway it is important that any new agreement must retain the focus of balancing marine environmental conservation with sustainable use of marine resources.” (Meld. 22).

“In Norway’s firm view, decisions to establish Marine Protected Areas should be scientifically well founded, sustainable use must be compatible with the purpose of the protection measure in question”(Meld. 22).

“A good management of Norwegian marine environments has to be based in knowledge, In order to do this one has established many research efforts for ex the Nansen legacy that is working on research to understand climate and marine ecosystems in the Barents Sea .”(Norwegian Ocean Strategy, 2019).

“Norway wishes to actively push internationally science-based sustainable management of resources.” (Norwegian Ocean Strategy , 2019)

“For Norway it is important that management tools are based on the best available science.” (Meld. 32).

“For Marine Protected Areas creation Norway wishes to emphasize the scientific rationale and that proposals are in line with the framework that was created in 2011.” (Meld 32).

^{xxvi} *“By combining systems for sustainable fishing with a well-designed research program, the fisheries can play a central role in the monitoring and collection of information. Norway has been working to communicate this idea within CCAMLR about fisheries and that they can contribute positively to the MPAs. It is important that the fishing fleet is not moved in such a way that it involves risk in one area, due to another area being closed.” (Meld 32.)*
And “According to Article 2, the goal of CCAMLR is to conserve and responsibly utilize the marine living resources in Antarctica.” (Meld 32).

^{xxvii} *“Do not want "sleeping" agreement without real effect. Evaluation of the MPA is important to ensure proper function” (Meld. 32).*

“Wishes to improve research and monitoring on marine living resources by creating 5-year monitoring and research plans.” (Meld 32.).

“To ensure the effectiveness of the prospective measure (The Ross Sea) , the CCAMLR contracting parties will have to contribute research and knowledge in the Area (Meld. 22).”

“Feedback Management strategy is under development.” (Meld. 32).

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“Norway as a part of the environmental protocol has agreed to protect the environment and wishes to be a party that pushes this. Wish to establish reference areas for science on climate change.” (Meld 32)

“Climate change can impact the Marine Living resources and krill in Antarctica. (Meld 32)

Government wishes to adapt the management strategies for Antarctic environments to climate change” (Meld. 32).

“The regulated fishery under CCAMLR does not really cause a treat to the ecosystem due their ecosystem principles, but it is important that we include the potential migration of krill to deeper waters and effects of climate change in future evaluations of fishery quotas.” (Meld 32).

“The scientific base for management in CCAMLR is limited. Quotas are set based on precautionary principle. If we wish to increase the utilization of resources, we have to increase research efforts.” (Meld. 32)

“There is a special need for research that quantifies how the physical environment impacts local distributions and populations of krill. --How the annual fishery impacts the local distributions and populations of krill and the ability of top predators to get food.” (Meld 32).

“There is a need for more information about the ecosystems around Bouvetøya and the different factors impacting them; There is very little data on Krill, studies on Seal, Penguin and Seabirds together with krill would be very useful.” (Meld. 33).

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“The government will ensure that the interests of the Norwegian ocean industry are safeguarded through active participation in the development of international regulations and standards. The Focus is directed towards international forums such as the UN and IMO International Marine Organization. Collaboration with the EU through Efta is also prioritized.”

“International discussions on maritime Law are currently giving sustainable use and resource management priority and the UN is trying to develop a new international regulatory framework for the protection and sustainable use of resources/marine biodiversity outside of national jurisdiction -The government will continue to advocate for the UNCLOS balance between the use and protection, to be respected and clarified in new rules of protection.”

This interest in strengthening the UNCLOS is again closely tied with the Blue economy for development programmes described above. According to the Norwegian Ocean Strategy the Norwegian government believes that such programs will benefit both the developing countries and Norway;

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“The continental shelf initiative has been important for several reasons. It is in Norway’s foreign policy interest to ensure that the Law of the Sea works as intended, allowing all states to take advantage of their rights. The shelf

initiative therefore serves the interests both of poor countries and of Norway. For Norway's part, helping to strengthen implementation of the Law of the Sea is essential. The initiative was also important because the countries involved, in line with the United Nations Convention on the Law of the Sea, took the first important steps towards cooperating with their neighbours to settle maritime delimitation lines in contentious areas." (Chapter 7.1.1 Meld. St.22, 2016-2017)