

Master's thesis



Marine Operators' Perception Towards the New Proposed Environmental Regulation: A Case Study of Svalbard, Norway

Carol Lopez

Advisor: Julia Olsen, Ph.D.

University of Akureyri
Faculty of Business and Science
University Centre of the Westfjords
Master of Resource Management: Coastal and Marine
Management
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Thesis Committee

Advisor:

Julia Olsen, Ph.D.

External Reader:

Gunnar Thór Jóhannesson, Ph.D.

Program Director:

Brack Hale, Ph.D.

Carol Lopez

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Declaration

I hereby confirm that I am the sole author of this thesis, and it is a product of my own academic research.

A handwritten signature in black ink that reads "Carol Lopez". The signature is written in a cursive style with a period at the end.

Carol Lopez

Abstract

Svalbard, a Norwegian archipelago located in the Arctic Ocean, is experiencing rapid tourism growth. Simultaneously, the archipelago is undergoing dramatic environmental and climatic changes. These changes are noticeable through an increase in precipitation, a retreat in sea ice, changes in species distribution, and the melting of glaciers and ice caps. Some aspects of climate change contribute to the thriving tourism industry. For instance, the melting of sea ice may create new cruise tourism opportunities, and as a result, marine tour operators in the High Arctic will be able to expand the area and season of maritime activities. However, both climate change and the increase in tourism are a challenge for the Norwegian government concerning how to preserve Svalbard's fragile environment while concurrently securing local economic development. To address this concern, my master's thesis explored the perception and responses of marine tour operators in Svalbard towards these new environmental regulations proposed by the Norwegian Environmental Agency. I applied a qualitative case-study approach, conducted semi-structured interviews with marine tour operators in Svalbard, and included public hearing consultation statements. The result of my research demonstrated a clear negative perception and discontent with these newly proposed environmental regulations. The participants argued that in the future, it might damage the marine tourism industry. They concluded by stating they may have to shorten their season, do something different or leave Svalbard. Though my results addressed the perception of the new regulations and possible responses, future research should be carried out once environmental legislation comes into effect to deepen the understanding and impact on marine tour operators.

Útdráttur

Svalbarði, norskur eyjaklasi staðsettur í Norðurheimskauts hafinu, er að upplifa hraða aukningu á ferðaþjónustu. Um leið er eyjaklasinn að verða fyrir stórkostlegum umhverfis- og loftslagsbreytingum. Þessar breytingar eru merkjanlegar í aukningu á úrkomu, hörfun hafíss, breytingum í tegundaútbreiðslu, og bráðnun jöklanna og íspekju. Sumir þættir loftslagsbreytinga stuðla að blómstrandi ferðamannaíðnaði. Til dæmis, skapar bráðnun hafíss ný tækifæri í skemmtiferðaskipa þjónustu og af þessu leiðir að siglingaferða skipuleggjendur á hánorðurheimskauta svæðinu munu geta vikkað svæðið og árstíma siglinga starfseminnar. Samt sem áður eru bæði loftslagsbreytingar og aukning á ferðaþjónustu áskorun fyrir norsku ríkisstjórnina varðandi hvernig á að vernda viðkvæmt umhverfi Svalbarða og tryggja um leið staðbundna efnahagsþróun. Til að takast á við þetta efni, kannar meistararitgerð mín upplifun og viðbrögð siglingaferða skipuleggjenda á Svalbarða í áttina að þessum umhverfisreglugerðum, sem lagðar voru til af Norsku Umhverfisstofnuninni. Ég beiti eigindlegri tilviks-rannsóknarnálgun og og hálfbyggð viðtöl við siglingaferða skipuleggjendur á Svalbarða. Niðurstöður minnar rannsóknar sýna greinilega neikvæða upplifun og óánægju með þessar nýttillögðu umhverfisaðgerðir. Þátttakendurnir færa rök að því að í framtíðinni, gæti það haft skaðleg áhrif á siglingaferðaþjónustu starfsemina. Þau ljúka þessu með því að segja að þau geti þurft að stytta útgerðartímann sinn, gera eitthvað annað eða yfirgefa Svalbarða. Enda þótt mínar niðurstöður fáiist við upplifun á nýjum reglugerðum og hugsanleg viðbrögð, ættu framtíðarrannsóknir að fara fram þegar umhverfislöggjöf verður virkjuð til að dýpka skilning og áhrif á siglingaferða skipuleggjendur.

This thesis is dedicated to my mom, as without her courage to move to Canada, my life would have been totally different.

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Acronyms

AECO	Association of Arctic Expedition Cruise Operators
AMAP	Arctic Monitoring and Assessment Programme
GEC	Global Environmental Changes
IPCC	The Intergovernmental Panel on Climate Change
MOSJ	Environmental Monitoring of Svalbard and Jan Mayen
NASA	The National Aeronautics and Space Administration
NINA	Norwegian Institute for Nature Research
NOAA	National Oceanic and Atmospheric Administration
SDGs	Sustainable Development Goals
SEPA	Svalbard Environmental Protection Act
UN	United Nations
UNFCCC	The United Nations Framework Convention on Climate Change
UNWTO	UN World Tourism Organization

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1 Introduction

The Arctic is experiencing tourism growth, particularly in the marine tourism industry. The region has captivated people's imagination for centuries due to its remoteness, incredible landscape, history, and culture (Bystrowska et al., 2017; Olsen, Nenasheva et al., 2020). Remote areas such as the Canadian Arctic, Greenland, or Svalbard are now more accessible and have seen a rise in cruise tourism (Bystrowska, 2019; Hovelsrud et al., 2023a). For Arctic cruise tourism passengers, this is an opportunity to encounter unique wilderness and wildlife (Olsen, Nenasheva et al., 2020). Nevertheless, this has raised several questions concerning the sustainability of the tourism industry and how it can be governed (James et al., 2020). Moreover, environmental and climate change through sea level rise, ocean acidification and intensification of storms is a worldwide concern and a topic extensively covered from the tourism perspective. This is even more relevant in the Arctic region, an ocean surrounded by land warming four times faster than elsewhere (Guarino et al., 2020; Rantanen et al., 2022). In the Arctic, global warming, such as temperature and precipitation changes, are causing glaciers, permafrost thawing, and sea ice to decrease (AMAP, 2021). This phenomenon is drawing interest from both media and science to the Arctic environment because it plays a vital role in the Earth's climate and is a precursor to the changes to come in the rest of the world (Smieszek et al., 2021a; Sokolickova et al., 2022). The Arctic's rapid transformation due to the increasing effects of climate change and globalisation is causing multiple political, economic, and social-cultural changes (Smieszek et al., 2021a; Sokolickova et al., 2022; Young & Kim, 2021). In the tourism sector, some aspects of climate change might be seen as positive. For instance, the melting of sea ice may create new cruise tourism opportunities. As a result, marine tour operators in the High Arctic can expand maritime activities (Bystrowska, 2019; Hovelsrud et al., 2021). Moreover, these changes implicate a transition from seasonal to year-round tourism, the appearance of new markets and tourism segments, and a move from land-based to marine-based tourism activities (Dannevig et al., 2023). Thus, marine tourism is considered by many Arctic coastal communities as a cost-effective way to generate economic development (Dannevig et al., 2023; Hovelsrud et al., 2021; Olsen, Nenasheva et al., 2020b).

In my thesis, I focused on one Arctic destination, the Svalbard archipelago located halfway between mainland Norway and the North Pole in the Arctic Ocean (Figure 1-1). These islands in the High Arctic are between 74°N and 81°N (Figure 1-2).



Figure 1-1: Map of Svalbard
Source: (Encyclopaedia Britannica, 2023)



Figure 1-2: Map of Svalbard Archipelago
Source: (CIA, 2021)

The biggest island is Spitsbergen, and the highest mountain, Newtontoppen, is 1,713 meters above sea level. Its administrative centre, Longyearbyen, is one of the most Northern inhabited towns in the world. John Munroe Longyear, an American entrepreneur and miner, founded the Arctic Coal Company and called the town Longyear City. In 1916, when the Store Norske Spitsbergen Kullkompani purchased the mine, it was renamed Longyearbyen. Norwegian and Russian populations dominated the archipelago due to their coal mining history. In 2023, the population of Svalbard was 2,530, of which a majority were Norwegian; however, 42 different nationalities also have a presence on the island (Middleton, 2023).

Svalbard is known to have a long history of exploration and cruise tourism and has been a popular cruise tourism destination for over a century. Its remote location, historical and cultural traditions and, for some tourists, the desire for last-chance tourism entices travellers to the archipelago (Saville, 2019b). The reorganisation of the coal company combined with the opening of the airport Longyearbyen has brought a diversified economy to the region as the Norwegian government aims to shift from a coal mine industry to a research, education, and tourism base economy (Hovelsrud et al., 2021, 2023b; Meyer, 2022; Sokolickova et al., 2022). Moreover, Svalbard, like other destinations in the Arctic, has seen constant growth in cruise tourism in the last ten years (Hovelsrud et al., 2020; Middleton, 2023).

Simultaneously, Svalbard is experiencing global warming and is a hot spot for climate change (Sokolickova et al., 2022). Consequently, climate change and the increase in human activities, including tourism, challenge the Norwegian government concerning how to preserve Svalbard's fragile environment while concurrently securing local economic development.

The background of this research was that the Norwegian Environment Agency estimated that the past regulation was no longer sufficient to protect Svalbard's unique nature and has proposed a new regulation to the Ministry of Climate and Environment. Debates in the media suggested that those environmental regulations would change the future of the marine tourism industry. I conducted this qualitative study to understand the impacts of the proposed environmental regulations on marine tour operators in Svalbard and to obtain in-depth insight into the topic. Though there have been various studies on environmental governance in the Arctic, including Svalbard (Hovelsrud et al., 2021, 2023a; Stokke, 2021; Van Bets et al., 2017; Wilson Rowe, 2018), none of them covered the impacts of new environmental regulations on the tourism development. This research sought to understand the viewpoint of marine tour operators toward the new proposed environmental regulations in Svalbard, Norway, and how they would respond to them.

1.2 Research Question

In my master's thesis, I explored the perception of marine tour operators toward the new environmental regulations proposed by the Norwegian government. This was addressed through the following research question:

- How did marine tour operators perceive and respond to the new proposed environmental regulations in Svalbard, Norway?

The following two sub-questions helped me answer the main research question:

- i. How did environmental and climate changes affect marine tour operators?
- ii. How did environmental regulations affect tourism development in Svalbard?

To answer these questions, I applied a combination of qualitative methods, such as semi-structured interviews and public hearing consultation statements, to explore whether and how environmental and climate change affected marine tour operators. Then, I examined how the new environmental regulations affected tourism development in Svalbard. Furthermore, the theoretical framework of stakeholder theory and environmental governance was employed throughout my study.

1.3 Master Thesis Structure

This thesis covered seven chapters in total. The first chapter presented the aim of the research project and the research question, including the two sub-questions. The second chapter provided the background of the study to help you familiarise yourself with marine tourism development, notably in the Arctic and, more specifically, in Svalbard. I followed by explaining climate change that both the Arctic and Svalbard were experiencing and, lastly, by describing the current environmental regulations and the new proposed environmental regulations by the Norwegian Environmental Agency. The third chapter reviewed the theoretical framework of stakeholder theory and environmental governance applied throughout my thesis. The fourth chapter described the research methods, starting with the research approach, the data collection and analysis, the justification of the methods and finishing with the challenges and limitations of the research project. The fifth chapter introduced my findings from the semi-structured interviews of marine tour operators and the public hearings, which explored their perception of climate change, tourism sustainability, current and new proposed environmental regulations and how they foresaw the future of the marine tourism industry. The sixth chapter discussed my findings, which helped me answer my research question and sub-questions in which I applied the lens of stakeholder theory and environmental governance. The last chapter ended with the conclusion on the perception and responses of the marine tour operators towards the new proposed environmental regulation in Svalbard. This included sub-sections for management implications, limitations of my research and further research.

2 Background

To understand the background of this explorative study, it was essential to explain marine tourism development. To do so, I gave a brief overview of global and national marine tourism development. I then provided a portrait of the marine tourism industry, focusing on expeditions in Svalbard (Figure 2-1). In my study, I demonstrated the various ways environmental changes due to climate change affect the Arctic and Svalbard. I also explained how this concerns the marine tourism industry and the Norwegian government. I finished the background chapter by describing the current and new environmental regulations the Norwegian Environmental Agency proposed in Svalbard.



Figure 2-1: Expedition Vessel (left) docked in Svalbard
Photo Credit: Julia Olsen

2.1 Marine Tourism Development

2.1.1 International Marine Tourism

Coastal and marine tourism is expanding worldwide, and many nations wish to increase cruise tourism as it is a significant economic driver for the country. A cruise is a travel experience where tourists travel by ship that may stop over at various ports in the same or different countries depending on their itinerary (Hung et al., 2019). There are several categories of ships sailing: overseas cruises, privately owned yachts, expedition cruises and local cruises. Expedition cruises usually refer to smaller-sized vessels with a capacity between 20 to 500 passengers that allow them to travel to more remote locations, bring people ashore to different landing sites and have flexible itineraries (Van Bets et al., 2017).

Before the pandemic, international cruise tourism was one of the fastest-growing industries in the tourism sector (Papathanassis, 2020). The global cruise tourism industry was estimated at 154,5 billion in 2019, contributing economically to many countries, particularly coastal areas (Lin et al., 2022). Moreover, a growing demand for expedition and coastal cruises was confirmed by the increasing number of construction for those types of vessels (Peručić, 2020). The cruise tourism industry is also expanding to new markets such as South America, Asia, and the Polar regions (Lin et al., 2022; Ren et al., 2021). While cruise tourism operators develop new destinations, tourists, for their part, wish to explore pristine wilderness and new frontiers.

2.1.2 National Marine Tourism

On the national level, Norway has the second-longest coastline in the world, with over 239,000 islands (Innovation Norway, 2023). It is well-known for its fjords, making it a popular year-round cruise destination. Even if the country is known for its cold winters, numerous activities are still possible both in the summer and winter. For example, the tourism industry has products for the whole year; you can go on a cruise to watch the fjords in the summer or watch the Northern Lights, go whale watching and do dog sledging in the winter months (Innovation Norway, 2023). Norway draws three percent of all international cruise tourism, and this is progressively increasing (Innovation Norway, 2023). Norway's coast welcomed about 2,000 cruise stopovers and 850,000 cruise tourism passengers in 2019

(Epinion, 2019b). There were 3,6-million-day calls to Norway’s ports, lasting from a few hours to all day or overnight cruises (Epinion, 2019b).

2.1.3 Svalbard Marine Tourism

The archipelago of Svalbard has been a cruise destination for over 100 years (Dannevig et al., 2023; Hovelsrud et al., 2023a). However, during the 1970s and 1980s, with the opening of the Longyearbyen airport in 1975 and the restructuring of the coal mine, that planning tourism became part of the government strategy (Hovelsrud et al., 2023a). In 1991, Info-Svalbard, nowadays Visit Svalbard, the official tourism board, was established in the archipelago. These measures were instituted to transition the economy towards tourism, research, and education instead of the coal mining industry (Hovelsrud et al., 2021, 2023a; Saville, 2022; Sokolickova et al., 2022). Around the same time, Svalbard saw a growth in the number of tourists, including cruise tourists (Hovelsrud et al., 2021). Expedition cruises have steadily increased from 2015 to 2019, interrupted only by the pandemic in 2020-2021 and growing again in 2022 with 552 expedition cruise ships, the highest ever recorded, as seen in Figure 2-2.

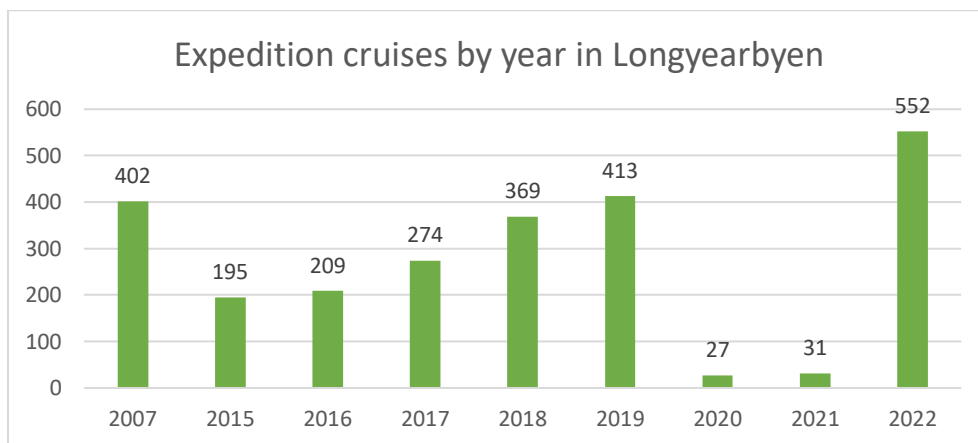


Figure 2-2: Expeditions Cruises by Year in Longyearbyen, Svalbard
Source: (Port of Longyearbyen, 2023)

Figure 2-3 reflects the growth in total passengers from 2,824 in 2006 to 24,148, without considering the pandemic years of 2020 and 2021.

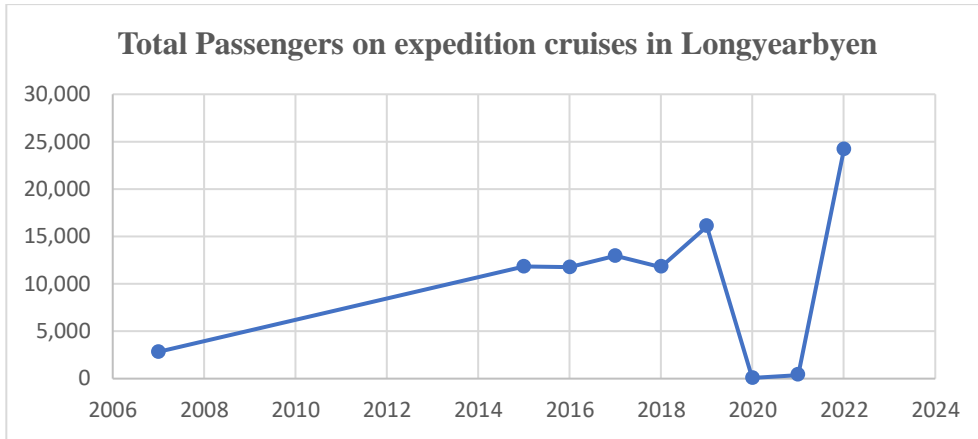


Figure 2-3: Total Passengers on Expeditions Cruises in Longyearbyen
Source: (Port of Longyearbyen, 2023)

There has also been a constant growth in the number of landing sites where passengers go ashore outside the settlement and Isfjorden, as demonstrated in Figure 2-4 (MOSJ, 2023). Tour operators assessed new locations from 53 landing sites in 1996 to 167 in 2005. However, not all were suitable. Between 2006 and 2009, a slight decrease eventually levelled off at 140 landing locations. The number has kept rising from 189 in 2013 to 233 in 2022, whereas the decline in 2020-2021 was caused by the COVID-19 pandemic (MOSJ, 2023). There are several reasons to explain this increase, for instance, the expansion in smaller expedition cruise vessels who chose to land in different areas, including Eastern Svalbard; The development of the Sail & Ski product where expedition vessels brought passengers ashore in various locations; and tour operators choosing other landing sites when several vessels were in one area (MOSJ, 2023).

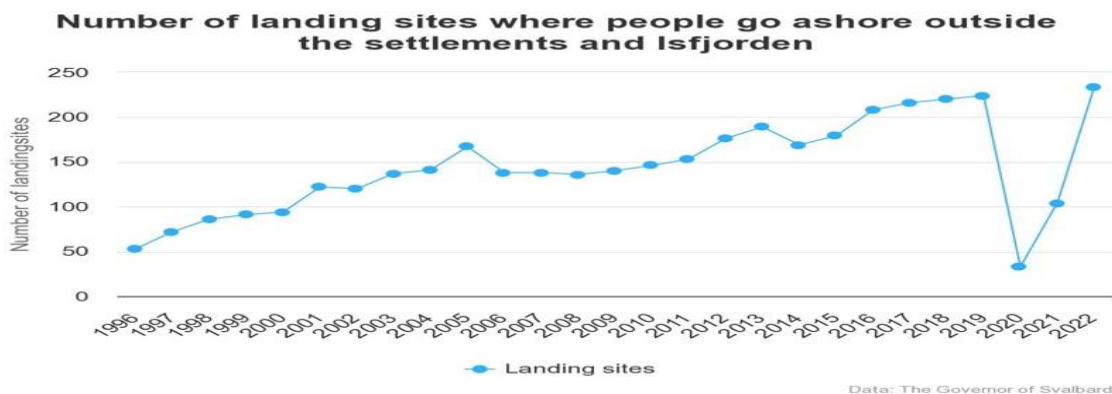


Figure 2-4: Number of Landing Sites in Svalbard, excluding the Settlements and Isfjorden
Source: (MOSJ, 2023)

Cruise tourism in Svalbard was estimated to contribute to approximately ten million euros, of which six million euros were for expedition cruises (Epinion, 2019a). According to a survey made by Epinion (2019), expedition cruise passengers and operators on Svalbard spent 360 euros in total per cruise passenger, five times more than conventional cruise passengers who spent 70 euros. While expedition passengers spent more per person, conventional cruise passengers nevertheless account for larger numbers, making up for the low expenditure. Cruise expedition tour operators also spend more ashore (285 euros, ex. VAT) than conventional cruise operators (33 euros, ex. VAT) (Epinion, 2019a). In sum, both expedition cruises and their passengers contributed more to the local economy.

2.1.4 Sustainable Tourism

Sustainable tourism can be defined in numerous ways, as no worldwide consensus exists (Byrd, 2007). The definition seen in tourism literature refers to the World Tourism Organization (UNWTO), which states that: “Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities” (UNWTO, n.d.). In this definition, UNWTO recognised two stakeholders: visitors and host communities. The definition by Timoshenko (2020) was slightly different, but within the context of the Arctic: “The fundamental principles of sustainable development of Arctic tourism are economical, and social sustainability, support for the local economy, environmentally friendly business, involvement and protection of local people, education of potential tourists, preservation of the environment, minimisation of consumption, waste and pollution, trained personnel as the key to responsible tourism, observance of safety rules when in the Arctic region” (p.539). Timoshenko went further in his identification of stakeholders adding businesses, and personnel to tourists and local people. While Hovelsrud (2021) approach to sustainability was seen as: “an interlinked concept where socio-ecological sustainability depends on an acceptable balance, according to public judgement, between pressures and responses in coupled environmental, economic, and socio-cultural domains” (p.3).

2.1.5 Sustainable Tourism in Svalbard

The definition of Hovelsrud (2021) encompassed the reality of Svalbard’s marine tour operators or all other tourism stakeholders who wished to operate their business while

preserving the environment. For instance, expeditions were an important economic factor in the marine tourism development of the archipelago, and marine tour operators privileged tourism sustainability. Their focus was to provide a good value experience to the tourists by preserving the natural environment (Van Bets et al., 2017). Moreover, Svalbard was part of a collective self-governance (Van Bets et al., 2017). Most of the expedition cruise operators in Svalbard were members of the Association of Arctic Expedition Cruise Operators (AECO) (Epinion, 2019a; Van Bets et al., 2017). In 2018, this accounted for 40 expedition cruise operators and vessel owners managing 55 vessels. About 45 vessels were carrying between twelve to 300 passengers (Epinion, 2019a). Being a member of AECO (2023) involved following guidelines (Figure 2-5) that aimed to preserve the environment, such as nature, culture, and cultural heritage, in addition to demanding safety issues both on land and at sea. AECO also managed member operators' routes and dates with one vessel per site and day limit to reduce environmental impact while offering tourists a unique experience (AECO, n.d.).

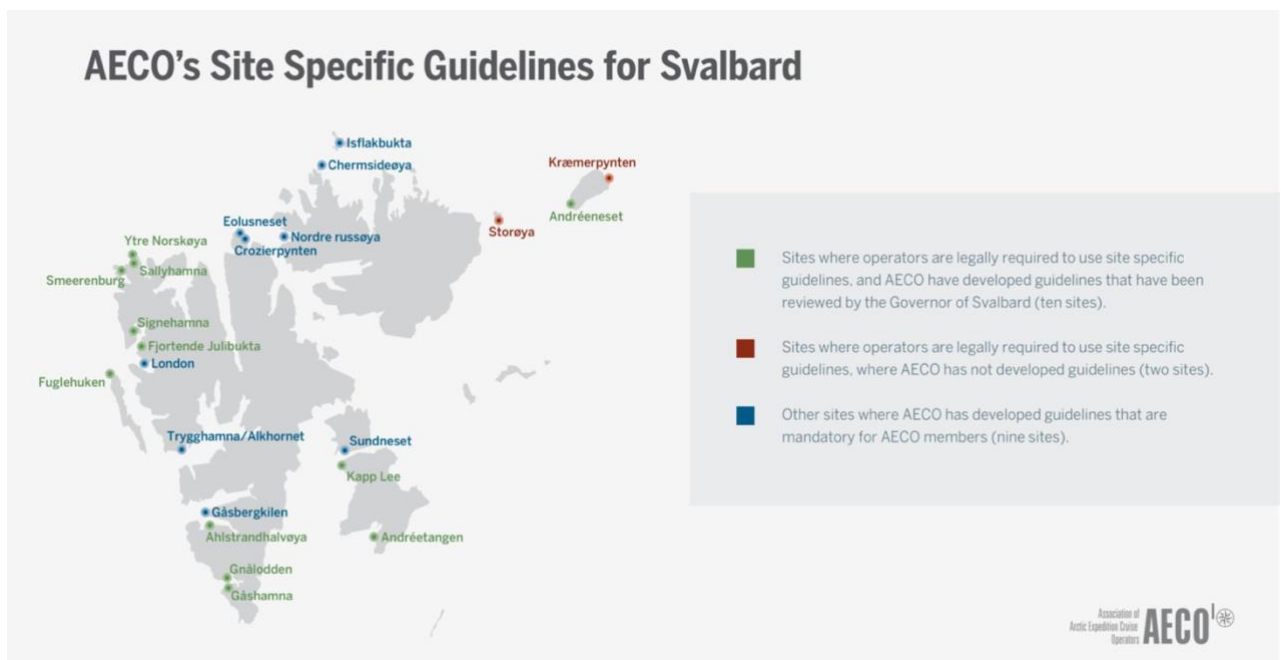


Figure 2-5: AECO's Landing Site Management in Svalbard.
Source: (AECO, n.d.)

Additionally, the official tourism board for Svalbard and Longyearbyen also provided membership through Visit Svalbard to ensure that customers were getting a product that the Board of the Svalbard of the Tourism Council previously approved. Participation came with

explicit obligations from the tourism operators to provide the uppermost degree of personal and state governance for environmental sustainability (Visit Svalbard, 2023). Visit Svalbard (2023) also provided guidelines to read before tourists arrived in the archipelago, which discussed environmental protections and tourism and travel.

Furthermore, marine tour operators depended socially and economically on the environment for their businesses to survive. Therefore, it was in their interest that environmental impact is the lowest possible so the tourism industry can continue to develop sustainably. Meanwhile, the Norwegian government, through the Norwegian Environmental Agency, has a role to play in balancing out the different environmental legislations such as the Svalbard Treaty, the Svalbard Environmental Protection Act, White Papers (2015-2016) and the new proposed environmental regulations to avoid environmental governance contradictions and disagreements as demonstrated in the recent research by (Hovelsrud et al., 2023a).

2.2 Climate Change

The United Nations Framework Convention on Climate Change (UNFCCC), in article 1, described climate change as: “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods” (United Nations, 1992, p.3). The Intergovernmental Panel on Climate Change (IPCC) defined climate change as: “A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or land use” (IPCC, 2022, p.544).

Throughout time, Global Environmental Change (GEC) has been known to be evolving, however, human interference has shifted environmental changes at a much faster pace than ever recorded (IPCC, 2023). GEC is described as the environmental alteration or interference triggered by human or natural activities (European Environment Agency, 2020). The foreseen effects of GEC were likely to cause substantial disruptions to ecosystems and lead to extreme weather events, including but not limited to heatwaves, more rainfall and

droughts, and cyclones with greater intensity. These effects have already been observed in many areas (Crimmins et al., 2016; IPCC, 2023). The Arctic is affected by climate change and strongly influences climate patterns globally (AMAP, 2021). The thawing of permafrost causes damage to the soil and infrastructures like roads and buildings but is also a major contributor to coastal erosion (Hanssen-Bauer et al., 2019). The melting of the Greenland Ice Sheet has a bigger impact on the sea-level rise than the ice melting in Antarctica (AMAP, 2021). The wildfires in the Arctic also contributed to greenhouse gases through carbon emissions. The warming of the sea temperature was making species migrate further North (AMAP, 2021).

The scientific literature considered Svalbard as one of the hot spots for climate change (Hanssen-Bauer et al., 2019; Kaltenborn et al., 2020; Saville, 2019a; Sokolickova et al., 2022). According to the report *Climate in Svalbard 2100* (Hanssen-Bauer et al., 2019), the archipelago has also experienced severe climatic changes in recent years. For instance, the island has seen an increase in air temperature and yearly precipitation, melting of the sea ice and permafrost, and glaciers are decreasing very rapidly (Bystrowska, 2019; Dannevig et al., 2023; Hovelsrud et al., 2021; Urbański & Litwicka, 2022). The archipelago was expected to receive more rain and less snow; as a consequence, flooding and coastal erosion were forecast for the island. It was also predicted that Svalbard would have an increase in avalanches and landslides (Hanssen-Bauer et al., 2019; Meyer, 2022; Saville, 2022).

In the following section, I will describe three climate change effects relevant to the Arctic's tourism industry, including the Svalbard archipelago: changes in temperature and precipitation, changes in the cryosphere, and natural disasters.

2.2.1 Temperature and Precipitation Change

The Arctic has seen temperatures warming four times faster than anywhere else in the world (Rantanen et al., 2022) and will continue to do so into the 21st century (IPCC, 2023). In the period from 1971 to 2019, the average Arctic air temperature has risen by 3.1°C (AMAP, 2021). The scientific literature referred to the phenomenon of the polar region warming quicker than elsewhere as Arctic Amplification (Esau et al., 2023; Hanssen-Bauer et al., 2019; Previdi et al., 2021). Arctic amplification is a global problem that is causing various

impacts and is predicted to continue to present various challenges as the region becomes warmer and snow and ice melt. (Previdi et al., 2021). In Figure 2-6, shown below, it is possible to see how the Arctic warming is overtaking the rest of the world.

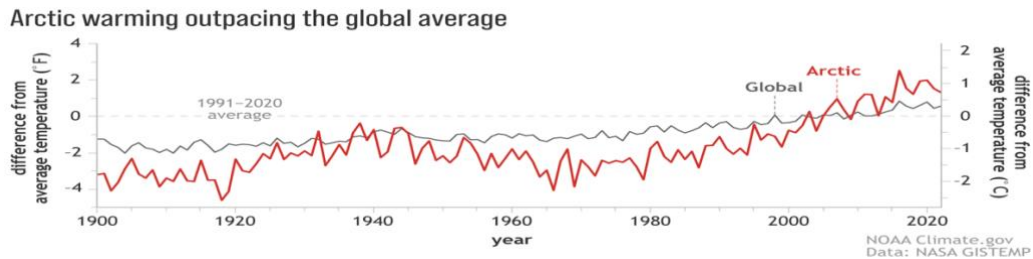


Figure 2-6: Arctic vs. Global Temperature from 1900-2020
Source: (NOAA, 2022)

One consequence of global warming in the Arctic was an increase in precipitation caused by the evaporation of water from the ocean surface, which in turn leads to an intensification of the number of days of precipitation in the form of rain or snow. The region showed a significant rise in precipitation throughout all the seasons from the 1950s to 2022 (NOAA, 2022). The Atlantic, including Greenland, the Barents Seas, and most of the Scandinavian Peninsula, have seen the greatest increase during winter (NOAA, 2022). From October 2021 to September 2022, the conditions were rainier than usual and were considered the third rainiest since 1950 (Walsh et al., 2022). Furthermore, climate models estimated that the Arctic would see an evolution from snow to rain while experiencing an increase in heavier precipitation episodes (Walsh et al., 2022). Figure 2-7 showed that the differences were consistent and demonstrated a yearly rainfall rise of approximately ten percent. As mentioned earlier, the increase in precipitation was more significant in winter.

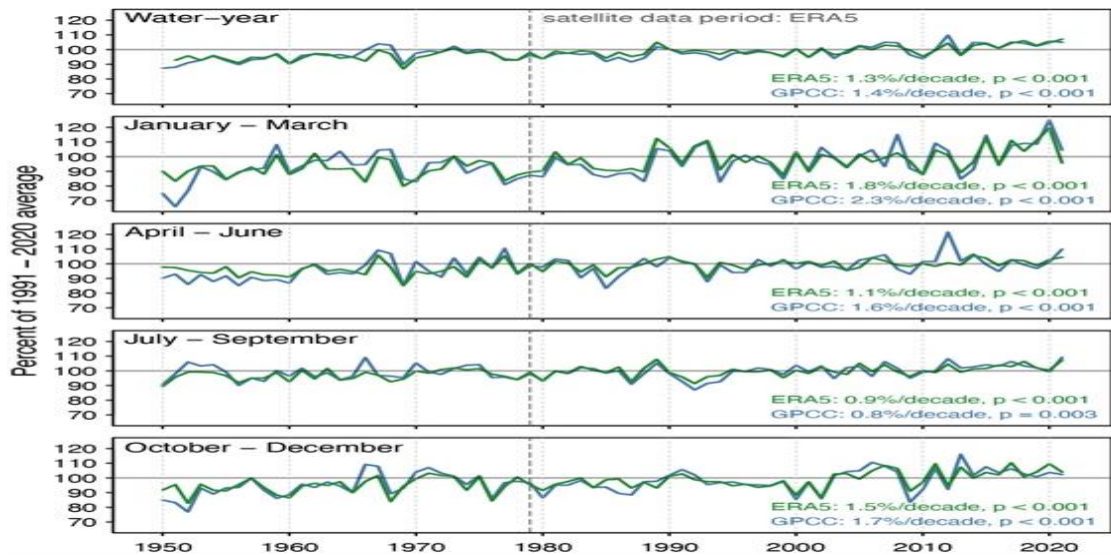


Figure 2-7: Arctic Comparison in Seasonal Precipitation from 1950 to 2020
 Source: (Walsh et al., 2022).

Svalbard was also experiencing warmer temperatures (Meyer, 2022). For example, in the last 50 years (Figure 2-8), Svalbard has seen a rise in the annual mean temperature between 3°C and 5°C in the interior fjords and almost 8°C in the winter (Hanssen-Bauer et al., 2019).

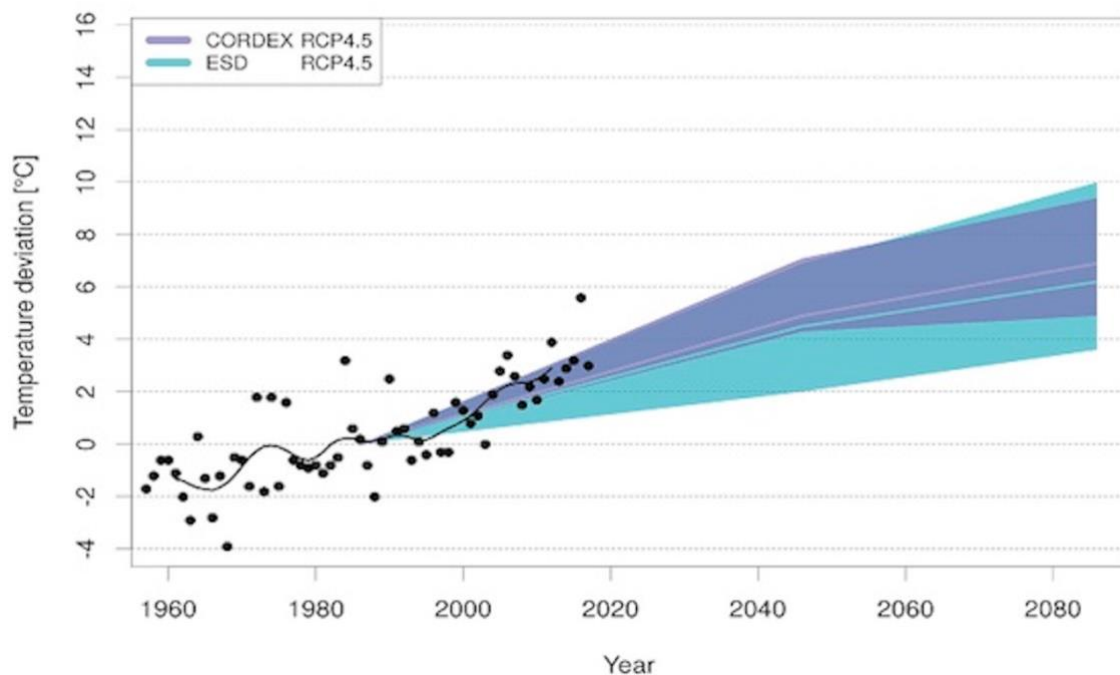


Figure 2-8: Svalbard Annual Mean Area is given as Deviation [°C] 1971 to 2000. The points and black curve show historical values based on reanalysis from 1958 to 2017.
 Source: (Hanssen-Bauer et al., 2019)

Moreover, the temperature was predicted to increase by 10°C by 2100 (Hanssen-Bauer et al., 2019). It is projected to significantly increase temperatures above 5°C while simultaneously having fewer cold days (Hanssen-Bauer et al., 2019). As a consequence, the air temperature rise would have a major impact on ecosystems and lead to an extended season of free sea ice. For instance, in the Isfjorden area, the projection of accessibility is up to 128 days, as commonly it was between two to 55 days (Dannevig et al., 2023; Hanssen-Bauer et al., 2019). In the non-frozen part of the archipelago, it was estimated that the season would be prolonged by three to four months from what it was between 1970 and 2000 (Dannevig et al., 2023; Hanssen-Bauer et al., 2019). Scientists also expected that there would be more precipitations in the archipelago (Figure 2-9) and precipitation events would occur more frequently. The climate will be wetter and warmer, whereas the snow season will be shorter. For example, between 1958 and 2017, snow has been reduced by 20 days, which is consistent with the increase in rainfall (Dannevig et al., 2023).

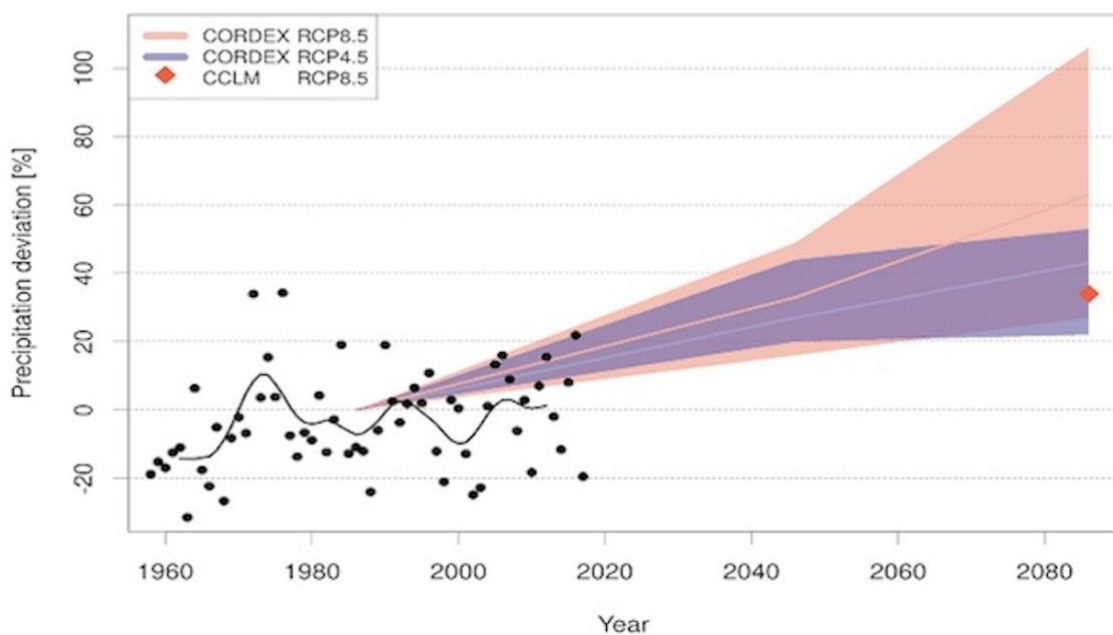


Figure 2-9: Svalbard Annual Mean Precipitation Changes land area
 Deviation reference period 1971-2000.
 Source: (Hanssen-Bauer et al., 2019)

2.2.2 Cryosphere Change: Sea Ice, Glaciers, and Permafrost

The Arctic cryosphere was changing quickly, and the alteration was impacting and fluctuating land, coast, and sea ecosystems (AMAP, 2021). For example, the sea ice type and extent, the melting of glaciers and permafrost, and the loss of the Greenland Ice Sheet

were also causing major changes in the ecosystems (AMAP, 2021). All these changes were disturbing the carbon and greenhouse gas cycle. Furthermore, the Arctic would likely lose its multi-year ice or epoch-old ice (AMAP, 2021). As shown in Figure 2-10, the average monthly Arctic Sea Ice extent from June 1979 to 2023 has been in constant decline. There has been a 13.1% decrease in summer Sea Ice in the last 43 years (NASA, 2023). Moreover, scientists suggested that the Arctic Ocean might be ice-free as early as 2030 (Laliberté et al., 2016; Overland et al., 2019; Wang & Overland, 2015).

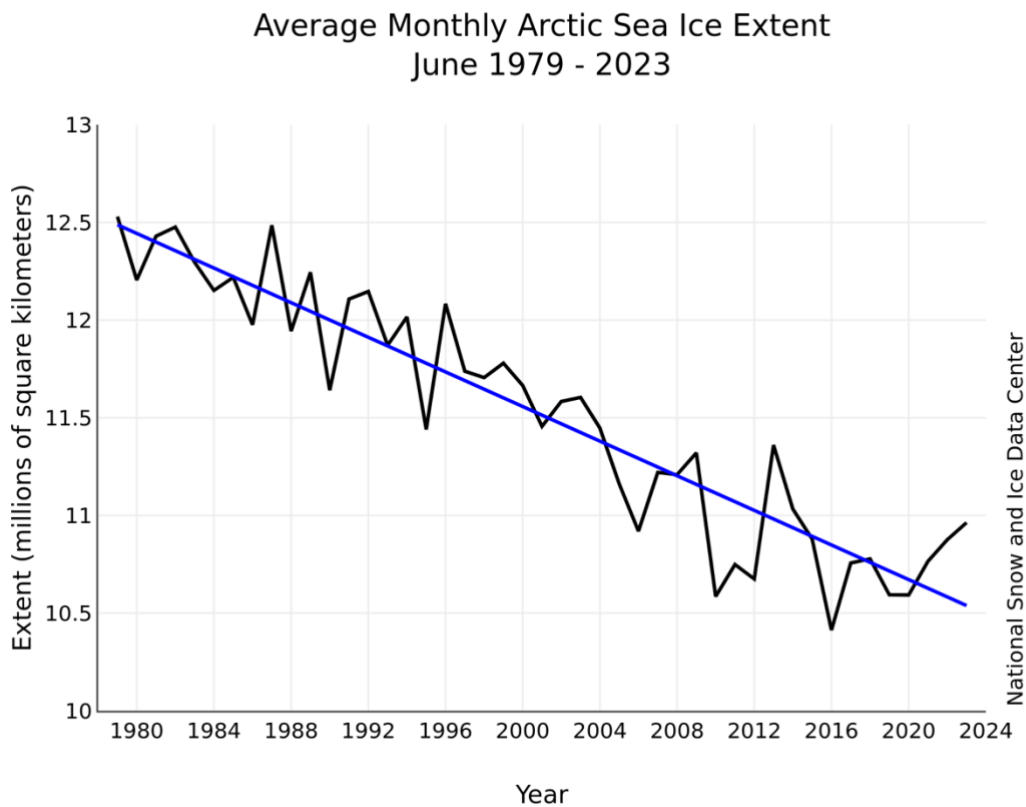


Figure 2-10: Average Monthly Arctic Sea Ice Extent from June 1979-2023
Source: (NASA, 2023)

Glaciers in the Arctic were also in decline (Fig. 2-11), particularly in Greenland. The Greenland Ice Sheet, which accounted for more than half of the Arctic land ice, has decreased for over 20 years in a row (Fig. 2-12). Moreover, in September 2022, an unprecedented temperature increase towards the end of the season caused the surface to melt by more than 36%, even at the 3,200-metre summit (NOAA, 2022). The melting of the Greenland Ice Sheet was the biggest contributor to sea level growth (AMAP, 2021). Whereas the Arctic permafrost supplied close to 1,700 billion metric tons of ice and melting carbon

and covered an area between 13-18 million km² (Miner et al., 2022). Since 1970, the Arctic permafrost has thawed by two or three degrees Celsius (AMAP, 2021). Permafrost is important in many aspects; for example, much of the infrastructure is built on permafrost, and the thawing puts in danger many Arctic communities.

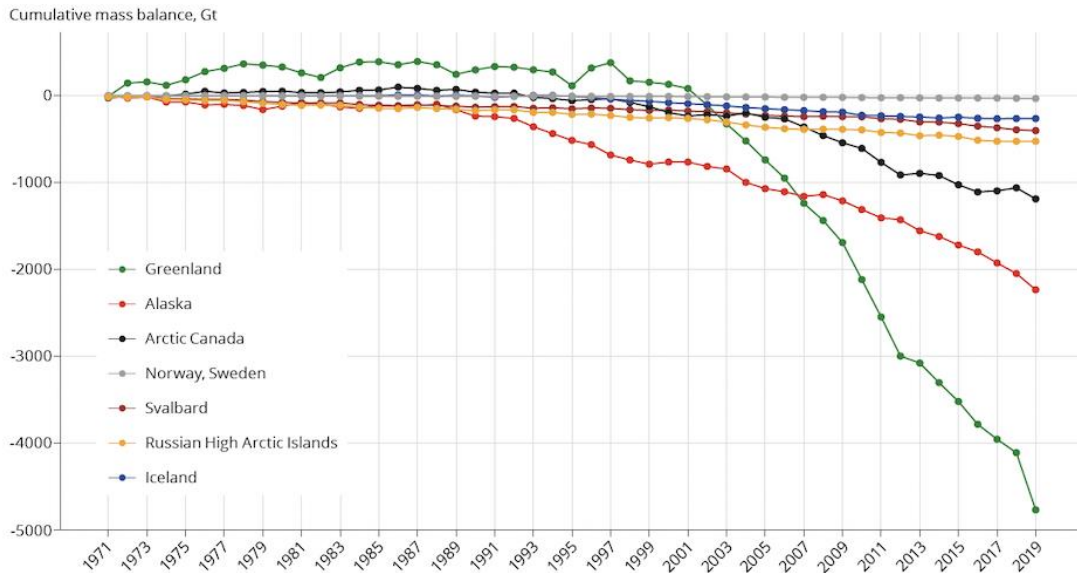


Figure 2-11: Arctic Land Ice Mass Balance from 1971 to 2019
Source: (AMAP, 2021)

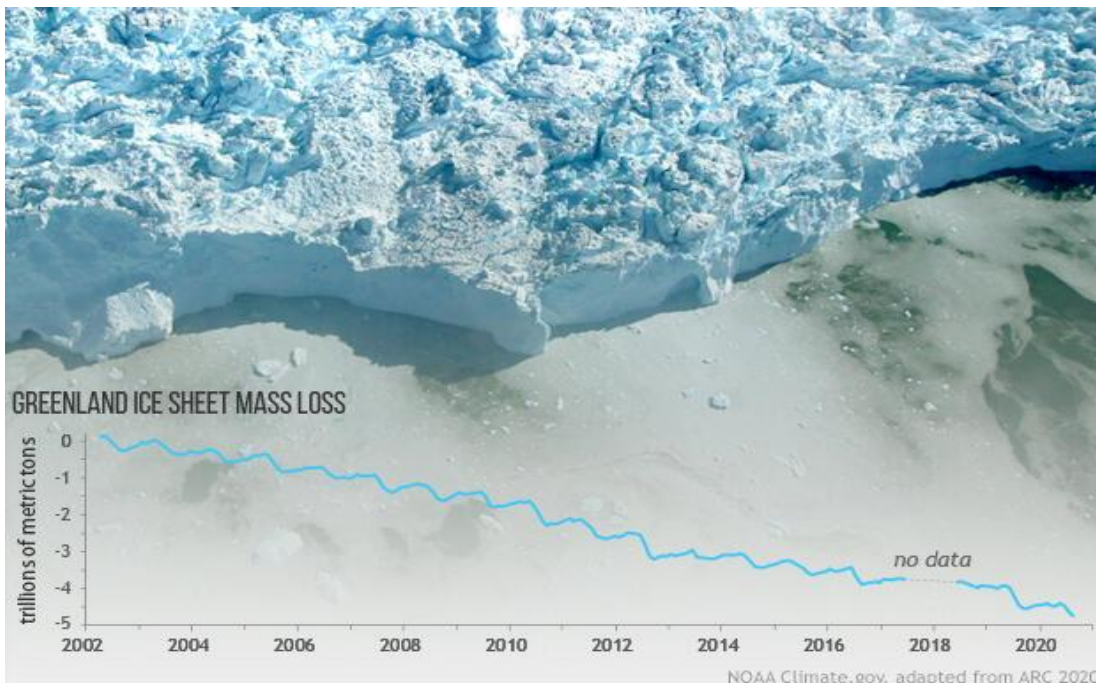


Figure 2-12: The Greenland Ice Sheet Lost Mass from 2002-2022
Source: (NOAA, 2022).

As for Svalbard, the decline of sea ice in the fjords was due to the intrusion of the Atlantic Water from the West Spitsbergen Current that overflows into the fjords. Since 2005, this phenomenon has also prevented sea ice from developing, while the North and West of Svalbard have been significant areas free of ice (Dannevig et al., 2023; Hanssen-Bauer et al., 2019). This is foreseen to influence the ecosystems with the arrival of new species, such as blue mussels (Hanssen-Bauer et al., 2019). Additionally, the fjords in the archipelago have suffered a constant decrease in land-fast ice. As seen in Figure 2-13, from the period 1973 to 2000, the fjords in west Spitsbergen had 50% of their surface surrounded by fast ice for approximately four to five months, whereas the north was completely covered for the same interval (Urbański & Litwicka, 2022). Furthermore, a forecast of a 2°C rise in temperature would imply the disappearance of sea ice in Svalbard (Dannevig et al., 2023; Urbański & Litwicka, 2022).

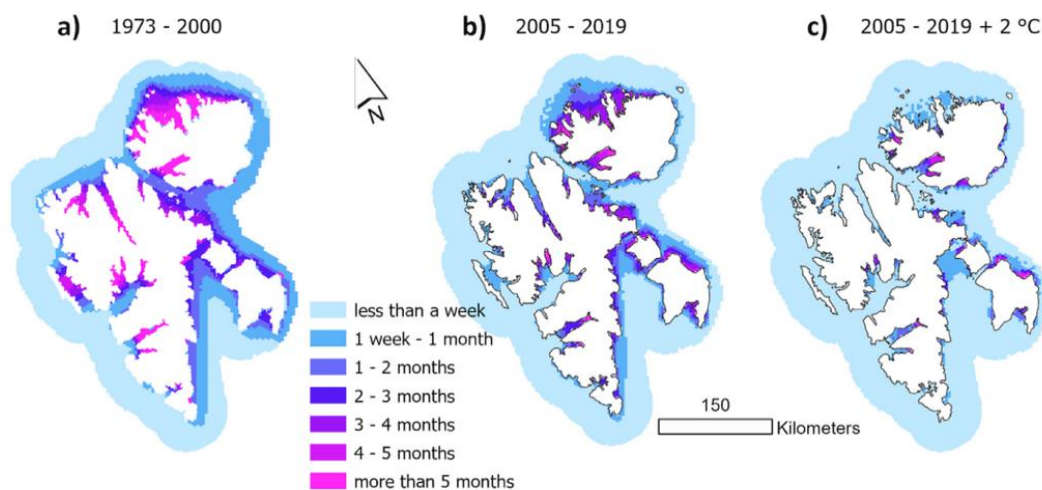


Figure 2-13: Svalbard average distribution of the length of fast ice: a) 1973 to 2000, b) 2005 to 2019, c) projection with a rise in temperature of 2°C in winter
Source: (Urbański & Litwicka, 2022, p.541)

The cost of losing the glaciers in Svalbard is two-fold: it implies the melting of ice while concurrently not having any snow accumulation (Dannevig et al., 2023). Svalbard’s glaciers decreased by seven percent between 1961 and 2000 (Hanssen-Bauer et al., 2019). For example, studies have shown a diminution of one and a half meters of the Longyear Glacier in the summer of 2022 (Dannevig et al., 2023; Geyman et al., 2022). Moreover, all the regions have seen a reduction in glaciers. Scientists predicted that glaciers would have lost twice as much by 2100, which most likely signified their disappearance in Svalbard

(Dannevig et al., 2023; Geyman et al., 2022). This suggested a contribution to the rise in sea level and an impact on wildlife, notably marine mammals and sea birds. For instance, the loss of glaciers affected seals who enjoyed resting afloat on a piece of glacier ice (Dannevig et al., 2023).

2.2.3 Natural Disasters: Avalanche, Coastal Erosion and Landslide

The Arctic has seen an intensification of natural disasters, such as more and longer-lasting wildfires and additional floodings both inland and on the coast (AMAP, 2021). Coastal erosion in the Arctic was considered problematic as the region was losing the most coastline in the world (AMAP, 2021). For instance, 85% of the villages in Alaska were in danger of extreme events such as very bad flooding and erosion, which could reach a loss of up to five meters per year (AMAP, 2021). In Greenland, on the other hand, during the spring of 2016, a combination of warming temperatures in the spring and intense snow precipitation led to almost 800 avalanches in the region; no other similar event occurred from 2007 to 2016 (Abermann et al., 2019; AMAP, 2021). Moreover, in 50 to 100 years, scientists predicted that these events would double or triple in frequency compared to the 1985 – 2014 period (Abermann et al., 2019).

Svalbard was also experiencing an increase in natural disasters. As seen earlier, the temperature rise and rain and snow precipitation have intensified the number of avalanches in the last ten years. For example, in recent years, two avalanches hit the archipelago. In the future, it was expected that those factors, plus the permafrost melting, would provoke more avalanches and landslides on the island (Dannevig et al., 2023; Hanssen-Bauer et al., 2019). It is unsure at present if flooding would increase in Svalbard, but as climate change is expected to intensify on the archipelago, there would likely be a rise in floods, landslides, and coastal erosion (Dannevig et al., 2023; Hanssen-Bauer et al., 2019). As such, Svalbard was a hot spot for climate change, and the impacts were being felt at a faster rate than the rest of the world. Furthermore, these environmental and climate changes majorly impact the local population in every aspect of their livelihood.

2.2.4 Economic Aspects

Some aspects of climate change benefit the thriving tourism industry. For instance, the melting of sea ice is one of the factors that may create new cruise tourism opportunities, and as a result, marine tour operators in the High Arctic will be able to expand the area and season of maritime activities. Climate change is one of the dominant driving forces of the Arctic's environmental, economic, political, and societal transitions today (Hovelsrud et al., 2023a; Sokolickova et al., 2022; Stephen, 2018). There is abundant literature that has studied the new economic opportunities in the Arctic because of environmental changes (Hovelsrud et al., 2023a; Olsen, Hovelsrud et al., 2020; Smieszek et al., 2021b; Stephen, 2018; Tunsjø, 2020). Four key industries have attracted interest from the private sector and non-Arctic nations: fisheries, natural resources such as oil and gas extraction, logistics including shipping, and Arctic tourism, notably sea-based tourism (Smieszek et al., 2021b; Stephen, 2018). In the last ten years, Guggenheim Partners, a global investment and advisory financial services, has kept an Arctic Infrastructure Inventory specifying the material needed in the region. They estimated that USD 1 trillion in investment would be needed in the next 15 years. Guggenheim Partners said the investments needed were in the renewable energy sector, rail transportation, maritime industry, and infrastructure such as schools and hospitals (Pass, 2018). These new opportunities were made possible by climate change, the diminution of global natural resources and advancement in the technology industries (Pass, 2018; Stephen, 2018). Tourism indeed provides employment opportunities for communities; however, the environmental impact should also be considered (Pashkevich, 2014; Stephen, 2018).

2.3 Svalbard Environmental Regulations

In Svalbard, the protection of the natural environment was a key element of the Svalbard Treaty signed in Paris in 1920 and ratified in 1925 (Kaltenborn et al., 2020). The preservation of the environment was regarded as important, and the archipelago strived to be: “one of the best-managed wilderness areas and best preserved in High Arctic destination in the world” (Hovelsrud et al., 2023a, p.102). Moreover, the preservation of the environment was privileged over economic interests, and in the case of activities harming Svalbard's vulnerable nature, the environment would prevail (Hovelsrud et al., 2023a). Many decades

later, in the 1970s, the Norwegian government updated the environmental regulations for the tourism industry. As of 1973, over 50% of the land area was protected in Svalbard, designated as a national park, nature reserve or bird sanctuary.

The main principle of the archipelago and environmental consideration integrated into the Svalbard Environmental Protection Act (SEPA) stated: “to preserve a virtually untouched environment in Svalbard with respect to continuous areas of wilderness, landscape, flora, fauna, and cultural heritage” (Ministry of Climate and Environment, 2001, p.1). In the regulation’s documents, protection of the environment is regarded as such: “Who participates in the activities that the operators and institutions are responsible for, is acquainted with and complies with the rules in these regulations and the rules stipulated in or pursuant to the Svalbard Environment Act relating to the protection of Svalbard's flora, fauna, cultural heritage, and natural environment” (Governor of Svalbard, 2023a, p.1). SEPA regulated the adequate amount of traffic on areas and passages for motorised traffic depending on whether it is a national park, a natural reserve, or protected biotopes, geotopes, and cultural environments. Various environmental restrictions also varied on the season, transport, and location (Hovelsrud et al., 2023a). For instance, seasonal restrictions for accessing some bird reserves ban admittance between May 15 and September 15. There was a prohibition to flying less than one nautical mile where marine mammals and birds were concentrated and on landing where protected cultural heritages were located. Moreover, there was also a distinction between permanent residents who were permitted to go to more locations than visitors, including with their snowmobile and temporary visitors (Hovelsrud et al., 2023a; Ministry of Climate and Environment, 2001). Whereas the White Paper (2015-2016) stated: “Protecting Svalbard’s distinctive natural wilderness is one of several long-established overriding objectives of the Svalbard policy” (p.4). Moreover, the White Paper (2015-2016) remarked that the development of tourism in Svalbard would continue to be guided by strict environmental regulations and lofty environmental goals (Ministry of Justice and Public Security, 2016). At the present time, the archipelago has seven national parks and 22 special protected areas, about 65% of all the protected land areas (Norwegian Environment Directorate, n.d.).

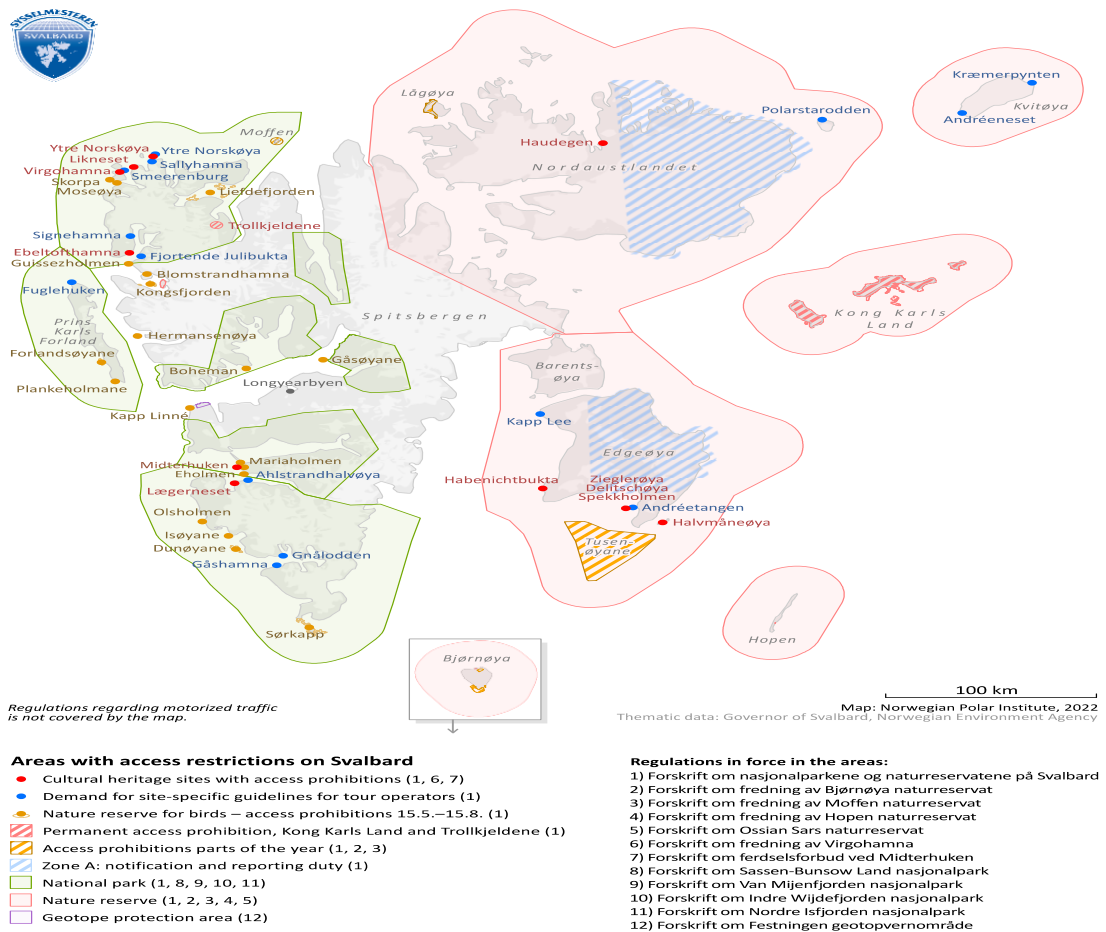


Figure 4-1: Areas with Access Restrictions on Svalbard
Source: Hovelsrud et al., 2023a

2.3.1 Administration Requirements

According to SEPA regulation, every tour operator had to possess insurance to include search and rescue operations or medical transport costs in the event of their activities in Svalbard. The Governor of Svalbard needed to be notified eight weeks before every planned travel activity, both summer and winter season, that also involved notification in the event of a last-minute change. Marine tour operators were obligated to advise the governor of their sailing schedule and any organised visit on land. Under the Svalbard Treaty, all taxes collected in Svalbard can only be used for the benefit of Svalbard and not for the benefit of Norway, while the SEPA regulation (2001) stipulated that tour operators were also obliged to pay taxes to the Governor of Svalbard when their operations and main offices were in the archipelago. These taxes were paid by tourists and those using the wilderness for utilising

the port facilities and for pollution such as sewage, water usage, garbage, and infrastructure maintenance. There was also an environmental tax paid by everyone coming to Svalbard.

2.3.2 Governor of Svalbard's Responsibility

The governor of Svalbard was responsible for ensuring all tourism activities in the archipelago were conducted according to SEPA's rules and regulations. This spans from the preservation and protection of the natural environment and cultural heritage, all the protected areas, the motorised traffic in off-road areas management and all tourism activities. The governor could also ban an organised tour before or during if environmental regulations were not followed by the tour operator. The Governor also fixed the total of the insurance or guarantee. Furthermore, the Governor (White Paper, 2015-2016, p.23):

- Ensured sound, predictable framework conditions that provided a basis for growth in the tourism industry by facilitating the development of tourism products, including Management Area 10.
- To further develop Visit Svalbard as a developer of tourism in Svalbard and Visit Svalbard's coordinating role for the tourism industry.

2.3.3 New Proposed Environmental Regulations

As far as the new proposed environmental regulations, the Norwegian Environmental Agency considers that, with climate change and the rise in tourists visiting the archipelago, the existing environmental policy was no longer sufficient to protect the vulnerable ecosystem in Svalbard. As such, it recommended new rules to be applied for those visiting the islands. The new proposed regulations (Appendix E) aimed to restrict the number of passengers per ship to a maximum of 200 and to only grant access to 43 selected locations as opposed to about 233 landing sites in 2022 (Figure 2-4) (MOSJ, 2023). It is proposed that motor traffic be banned on sea ice after March 1st on chosen fjords to protect ringed seals and polar bears. If the proposal is adopted by the Norwegian government, ships would not be allowed to seek polar bears and get closer than 500 meters. Vessels would be limited to a speed of a maximum of five knots in a bird zone, particularly during the breeding period. The usage of drones would be banned in protected areas and bird zones during the breeding season (Norwegian Environmental Agency, 2021). Svalbard wished to preserve the fragile

environment and believed that environmental considerations were more important than any other interests. Consequently, the Norwegian Environmental Agency (2021) considered regulating all industries in Svalbard crucial.

3. Theoretical Framework

To assess the marine tour operators' perception and responses to the new proposed environmental regulation, I applied the theoretical framework of the stakeholder theory and environmental governance. I conducted this analysis by reviewing the key concepts of stakeholder theory and environmental governance literature. My aim was two-fold: the first was to categorise the different stakeholders and understand how they were affected by climate change and how the environmental regulations affected tourism development in Svalbard. The second was to apply a theoretical perspective to understand the perceptions and responses of marine tour operators and the new proposed environmental regulations.

3.1 Stakeholder Theory

In the 1960s, the Stanford Research Institute introduced the stakeholder concept while Freeman further developed it: “as a new theory of strategic management that aims to create value for various organizational groups and individuals to achieve business success” (Freeman, 1984, as cited in Fares et al., 2021, p.3). The stakeholder theory encouraged a more efficient and effective way to operate corporations on the basis that: “any group or individual who can influence an organisation to achieve its goals or who is influenced by that goal” (Freeman, 1984, p.46). Social Network to stakeholder theory was then presented by Rowley: “that a focal firm’s response to stakeholder pressure is based on the interplay between the centrality of the focal firm and the density of stakeholder alliances” (Rowley, 1997, as cited in Fares et al., 2021, p.2). The stakeholder theory has evolved in several ways; for instance, Donaldson and Preston have theorised it from descriptive, instrumental, and normative approaches (Donaldson & Preston, 1995; Fares et al., 2021). Later, Mitchell et al. recommended a structure to help identify the stakeholder's importance according to characteristics such as authority, legitimacy, and determination (Fares et al., 2021; Mitchell et al., 1997).

Since early 2000, the stakeholders' theory continued to be applied in abundant literature (Freeman et al., 2007; Phillips, 2011; Wicks, 2009) and has expanded into various fields: organisational management, business ethics, social issues in management and sustainable development (Laplume et al., 2008). Later, the view progressed to stakeholder analysis: "a main systematic analytical process for stakeholder management that involves identifying and categorizing stakeholders and identifying best practices for engaging them" (Fares et al., 2021, p.3). The stakeholder theory has over 55 definitions and several classifications (Fares et al., 2021).

The tourism industry has applied the stakeholder theory to identify stakeholders and their role in tourism development, their perceptions, power imbalance, relations, and diversity in approach to benefit from and deal with tourism impacts (Byrd, 2007). The theory has also been used to encourage their participation in tourism development and management and assess their perception of sustainable development (Rasoolimanesh & Jaafar, 2017). Based on the concept of stakeholder theory, for the tourism industry to develop and thrive, stakeholders must agree with their industry's orientation and strategy (Olsen et al., 2020). Although their equal contribution is not essential when deciding as long as their needs have been acknowledged and valued (Byrd, 2007; Donaldson & Preston, 1995), if not, the process might fail (Clarkson, 1995). Moreover, stakeholders might have different interests and objectives, generating challenges (Olsen et al., 2020).

In my study, I defined stakeholders in the marine tourism industry as social actors who influenced or could be affected by tourism development. Stakeholders comprised operators, travel agencies, ship owners, and local tourism providers. My study's emphasis on the stakeholder theory approach was primarily to examine the role of marine tour operators and their views on environmental regulations in Svalbard. For instance, marine tour operators in Svalbard were important tourism industry stakeholders, contributing to approximately 200 full-time employees (Kaltenborn et al., 2020). Some components that affected marine tour operators' stakeholders included environmental and climate change's unpredictability to the archipelago and the implementation of various environmental regulations simultaneously (Hovelsrud et al., 2023a). Tourism operators in Svalbard were involved and had a desire for sustainable tourism (Hovelsrud et al., 2023a). The majority of marine tour operators were members of networking organisations such as AECO or Visit Svalbard and followed their

environmental guidelines (Van Bets et al., 2017). Therefore, the participation of marine tour operators in tourism development involves them in all the process steps. Byrd (2007) stated that stakeholder involvement must be included in any successful sustainable tourism development plan. This included incorporating stakeholders' knowledge of Svalbard and its tourism industry. Hagen et al. (2012) argued: “The optimal situation is when all stakeholders are confident that all existing knowledge, including knowledge of residents used and the process results in a formal decision” (p.12).

3.2 Environmental Governance

Yoshida (2012) defined governance as: “the actions or conduct of an administration, its management practices, and systems of regulation” and environmental governance as a “structure that enables society to manage the environment, just as a conductor unifies and adjusts the overall performance of an orchestra” (p.76-77). Yoshida (2012) believed that environmental governance was achieved when diverse individuals worked together to preserve the environment, particularly nowadays when environmental issues were increasing worldwide. Davidson & Frickel (2004) had a similar definition when they described environmental governance as: “an attempt by governing bodies or combinations thereof to alleviate recognised environmental dilemmas” (p.471). Benson and Jordan (2017) also had a comparable definition: “Environmental governance denotes the processes through which different actors govern the environment” (p.1). Paavola (2007) suggested a wider definition of environmental governance: “the establishment, reaffirmation or change of institutions to resolve conflicts over environmental resources” (p. 94). Lemos and Agrawal (2006) defined environmental governance as “synonymous with interventions aiming at changes in environment-related incentives, knowledge, institutions, decision making, and behaviours” (p.298). More precisely, it is seen as a: “set of regulatory processes, mechanisms, and organisations through which political actors influence environmental actions and outcomes (p.298). Environmental governance theories offer diversified perspectives, all trying to clarify different environmental problems, whether regional, national, or global (Partelow et al., 2020). Moreover, the literature on environmental governance made the distinction between governance and government, both seen as different (Benson & Jordan, 2017; Lemos & Agrawal, 2006; Paavola, 2007; Yoshida, 2012). In comparison, Lemos & Agrawal (2006) argued that there were four key themes in

environmental governance: “Globalization, decentralized environmental governance, market and individual-focused instruments and governance across scales” (p. 3). In Figure 3-1, they demonstrated classifications of strategies as they originated from the acts of various social structures. These new tendencies were seen as modern approaches to tackling environmental emergencies by demanding new ways to defy the current governance practices.

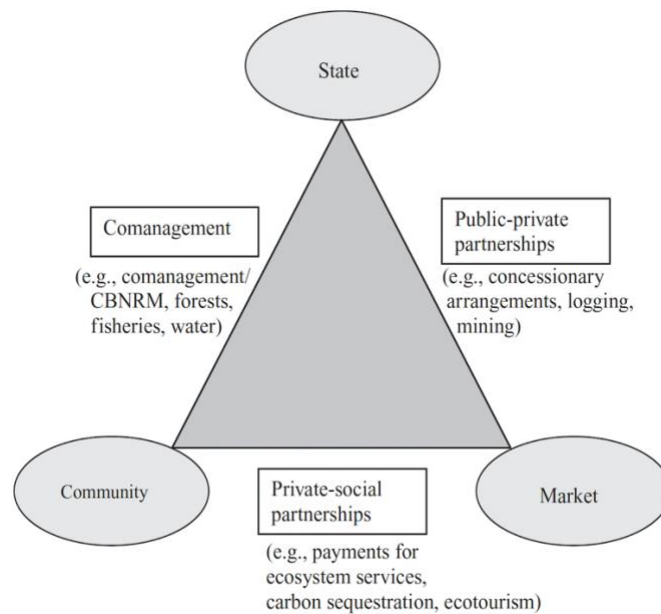


Figure 3-1: Mechanisms and Strategies of Environmental Governance.
 Abbreviation: CBNRM, community-based natural resource management
 Source: (Lemos & Agrawal, 2006).

Lemos & Agrawal's (2006) definition was the most relevant to the aims of my study. Inspired by their mechanisms and strategies of environmental governance. In my study, I assessed environmental governance from the perspective of marine tour operators' environmental regulations in the tourism industry. As a recall from the background chapter, section 2.1.5, marine tour operators and members of AECO were part of the environment governance system as the industry has developed a set of guidelines to minimise the disturbance on the marine environment. Moreover, marine tour operators in Svalbard strongly desire sustainable tourism (Hovelsrud et al., 2021). The tourism industry created socio-economic opportunities needed by marine tour operators and the community (Hovelsrud et al., 2021). Yet, the increase in tourism also had an environmental impact as it accentuated environmental and climate change in the archipelago. Whereas environmental governance

through the Svalbard Environmental Protection Act (SEPA) (2001) specified that environmental issues prevail over the economy in case of discrepancy, and the Svalbard Treaty stipulated that considerable zones are nationally protected with the aim of research and monitoring (Hovelsrud et al., 2021). Currently, marine tour operators were not offered any guidance on how to adjust to these new regulations while simultaneously balancing with increased tourism, protecting the vulnerable archipelago and environmental and climate changes (Hovelsrud et al., 2021). Thus, the effectiveness of Svalbard environmental governance will require support and predictability to permit marine tour operators to recognise and understand the new regulations to maintain their operations.

4 Research Methods

This chapter described the research methods I employed to examine marine tour operators' perceptions and responses to the new proposed environmental regulations. To do so, I applied a qualitative research approach consisting of semi-structured interviews and public hearing consultation statements using an inductive approach related to the marine tourism industry. This permitted me to associate the increase in tourism and climate change with Svalbard governance through the lens of stakeholder theory and environmental governance, as seen in the previous chapter.

4.1 Research Approach

There are two types of research: quantitative and qualitative. The first is centred “on the measurement of quantity or amount, whereas qualitative research focuses on lived experiences and human perceptions” (Kothari, 2004, p.20). Both approaches had assets and limitations. Combining both research methods, known as mixed-method research, was also possible. My study aimed to provide insight into how marine tour operators perceived and responded to the proposed environmental regulations in Svalbard via semi-structured interviews and public hearing consultation statements. As such, my study was designed as qualitative and explorative, applying a case study approach. Since I had a small sample of participants, the qualitative method permitted me to thoroughly comprehend and analyse the results of everyone's actions and meanings, thus maintaining each person's uniqueness (Maxwell, 2008). My study of the proposed environmental regulations was relatively new, and the measures had not been accepted yet, hence the exploratory approach to my research. Blaikie (2010) acknowledged that: “an exploratory approach is privileged when not much is known about the issue being researched” (p.70). Moreover, I applied a case study approach since my research explored the social phenomenon of stakeholder theory and environmental governance within the context of increased tourism and environmental change due to climate change in Svalbard (Blaikie, 2010).

My methodology was an inductive research strategy that aimed: “to establish limited generalizations about the distribution of, and pattern association amongst, observed or measured characteristics of individuals and social phenomena” (Blaikie, 2010, p.83). Moreover, the inductive research strategy required: “the researcher to choose a set of characteristics, collect data related to them and then draw generalizations from them” (Blaikie, 2010, p.83). According to the inductive research approach, the only way to view or measure the social world is by utilising concepts defined by the researcher (Blaikie, 2010). Furthermore, my study adopted a bottom-up approach as I attempted to portray: “description and understanding that reflect the social actor's point of view” (Blaikie, 2010, p.91). My role as a researcher was to decipher and explain the data collected and convert it to a master thesis (Blaikie, 2010). Finally, interpreting and analysing the results of my qualitative, exploratory, and case study through the theoretical lens of stakeholder theory and environmental governance has been a significant part of my thesis.

4.2 Preparation for Data Collection

4.2.1 Semi-Structured Interviews

To prepare for my data collection, I did a web search for marine tour operators. I estimated that the number of local marine tour operators locally based was limited to eleven, and from that selection, I chose nine local marine tour operators in Svalbard. In parallel with preparing the invitation letters (Appendix B) for the respondents to participate in my master’s thesis research project, I wrote the interview guide (Appendix D), which consisted of four topics: background and climate change, current environmental regulation; proposed new regulations; and future perspectives and responses. Some questions were adjusted to include tourism operators. Table 4-2 demonstrates those whom I contacted. Four said yes, one replied that the company did not have time as it was high season, and five did not answer. Another one had said yes; however, after multiple follow-ups and various dates and times offered, I did not receive a response. Due to the lack of responses, I broadened my research scope by contacting nine tourism operators (see Table 4-2). Only one agreed to respond by writing. While another one was very busy and might only be available in June, two responded that it was high season and thus unavailable to be interviewed. Therefore, I decided not to add tourism operators to my research.

Table 4-1: Summary of Tour Operator’s Responses to My Interview Invitation

Tour operators	Yes	No	No answer	Maybe	Not able to set a date	Total
Marine	4	1	5		1	11
Tourism	1*	2	5	1	-	9
*Send responses in written form by email						

I sent the first email with the invitation letter attached to the first selection on April 3rd, 2023, with a follow-up email on April 18th, 2023, which included sample questions of the interview guide. Then, I prepared the invitation letter for tourism operators (second selection) that was sent on April 18, 2023, with the follow-up email sent on May 3, 2023. I also prepared the interview consent form (Appendix C), which was attached to the email once the participant and I agreed on a date, the time, and the method of communication for the interview. Due to the beginning of the high season, it was a busy time for the respondents. To palliate this situation, I agreed to do the interviews at their convenience, date, and time.

4.2.2 Public Hearing Consultation Statements Selection

The public hearing consultation statements were available online through the Norwegian Environment website (Norwegian Environment Directorate, 2021). There was a total of 98 public hearings available in Norwegian and English. I selected eight related to marine tour operations based in Svalbard (see Table 4-3).

Table 4-2: List of Public Hearing Consultation Statements from Marine Tour Operators

Public Hearing Consultation	Year of foundation	Company / Association
Backyard Svalbard	2019	Local tour operator
Basecamp Explorer	1998	Local tour operator
Svalbard adventure	Unknown	Local tour operator
Hurtigruten	1989	Largest and oldest tour operator in Svalbard
AECO	2003	International association for expedition cruise operators
Visit Svalbard	1991	Official tourism board for Svalbard and Longyearbyen.
Anonymous 1	Unknown	Unknown
Anonymous 2	Unknown	Unknown

Three documents were accessible in English. For the other documents, I used Google to translate them from Norwegian to English. To ensure correctness, I asked a native Norwegian to proofread the translations. Furthermore, the main objective of using Google was to understand the essence of the message and idea behind the public hearing responses. Google Translate was considered to have exceptional translation quality compared to other online machine translating services (De Vries et al., 2018). A study by De Vries et al. (2018) remarked: “The results in this paper support the claim that Google Translate is a useful tool for researchers using bag-of-words text models for comparative questions” (p. 428). Translations were similar, with few variances across languages (De Vries et al., 2018). Another study by Aiken (2019) showed an improvement in accuracy for Google Translate with the newer NMT version in Norwegian from 66% in 2011 to 83% in 2019 and scored 96% of text that could be understood. A master’s thesis study by Aksnes (2018) found that: “Google Translate can favourably be used to grasp the essence of a second or foreign language text, and it can also be used similarly to a dictionary” (p.1).

4.3 Data Collection

4.3.1 Semi-Structured Interviews Data Collection

I used semi-structured interviews as my primary method. Semi-structured interviews are a common practice for data collection in qualitative research (Legard et al., 2003). Semi-structured interviews permitted a mix of open-ended and closed questions, allowing the participants to add information if they desired and enriched the interview (Legard et al., 2003). It also allowed me to improve or change the questions if needed as the research progressed, which corresponded to the explorative nature of this study. I conducted four semi-structured interviews with open-ended questions covering the four topics, of which three were done online with the application Teams, varying in duration between 20 to 75 minutes. One interview was conducted on the phone while the person was driving. The interview guide was developed in English, and all the interviewees spoke the language fluently. At the end of each interview, I asked the interviewee if they would like to add any other information or comment we had not discussed and if it would be possible to contact them for further clarification. All of them agreed and told me to contact them through their email. I advised them that my thesis would be made public and available in late September or the beginning of October. They all expressed interest and wished to receive my thesis by email. Lastly, I used the following codes to assure marine tour operators' anonymity (Table 4-4).

Table 4-3: Number and Types of Conducted Interviews and Interviewees

Type of interview	Tour operator	Code	Method
Individual interview	Interviewee 1	MTO1	Teams (online)
Individual interview	Interviewee 2	MTO2	Telephone
Individual interview	Interviewee 3	MTO3	Teams (online)
Individual interview	Interviewee 4	MTO4	Teams (online)

4.4 Data Analysis

4.4.1 Semi-Structured Interviews Analysis

My four interviews were recorded either with the Team application or using the Dictaphone on my mobile phone. I then transcribed the interviews using the program Otter.ai. This approach was employed to facilitate the analysis. First, I analysed each participant's background (Table 4-5) from the data collected during the interviews.

Table 4-4: Summary of Participant Living and Working Experience in Svalbard

Participant	Lived in Svalbard	Worked in Svalbard	Method	Years of experience
MTO1	No	10 years as expedition guide and manager experience	Teams (online)	20 years in marine tourism industry and cruise development
MTO2	4 years	4 years in the cruise industry	Telephone	7 ½ years cruise tourism experience
MTO3	3 years	3 years guide and booking manager in marine tourism 1-year ski and sail	Teams (online)	Unknown
MTO4	Over 30 years	27 years marine tour operator / business owner	Teams (online)	Unknown

I then analysed all four interviews with the software MAXQDA Analytic Pro 2022 and created different categories. I started to study common patterns and themes (Gizzi & Harm, 2021). I identified a set of 20 codes and subcodes using the interview guide questions as a reference point from which I coded 191 segments. I then selected five main themes, once again centred on my interview guide themes, which helped me answer my research question and sub-questions. While coding the interviews, as I mentioned previously, the interview guide was used as a starting point with four main themes: climate change, current environmental regulations, perception of the new proposed regulation and how they perceive the future in the marine tourism industry. I then subdivided any mention of climate change

depending on whether the comments were positive, negative, or neutral. From all the comments I received, I chose the most common responses: sea ice reduction, glacier retreat and permafrost loss. For the current environmental regulation theme, I divided it into two sub-themes: mention of environmental protection or challenges with environmental legislation. The perception of the new proposed regulation was split into three: whether the comments made by marine tour operators were positive, negative, or neutral. I also added individual coding for impact assessment, participation in hearings or discussions, perception of opinion being heard and where they believed the pressure to change the rules came from. The last central theme, the perception of the future in the marine tourism industry, was subdivided into three segments: positive and negative comments and the challenges they expected to have from the new rules in the future. Lastly, a code system for each respondent was used to ensure confidentiality, and all documents were password protected.

4.4.2 Public Hearing Consultation Statements Analysis

I applied the same coding methods and themes to analyse the public hearing consultation statements. I identified 202 code segments in total. A few segments did not apply to the public hearings, such as pressure to change the rules and challenges in the environmental regulations. Moreover, AECO (148 pages), Visit Svalbard (34 pages) and Hurtigruten Svalbard (30 pages) had very long public hearing consultation statements, so I analysed only the parts relevant to marine tourism and environmental protection. As such, the AECO statement was downsized to 73 pages and Visit Svalbard to 26 pages.

4.5 Reliability and Validity

Social studies require reliability and validity; both are essential to assessing the results' consistency, accuracy, and authenticity (Neuman, 2014). Reliability implies the capacity to perform comparable studies by applying a research design in “similar conditions” or equivalent, which will most likely give corresponding findings (Neuman, 2014, p. 217). In my master's thesis, I used semi-structured interviews and public hearing consultation statements to consistently record observations (Neuman, 2014, p.223). In qualitative research, Neuman (2014) acknowledged that researchers can come up with different findings as their data collection: “is an interactive process in which particular researchers operate in

an evolving setting whose context dictates using a unique mix of measures that cannot be repeated” (p.223). As a result, reliability in qualitative research may be employed with various data sources and several ways to measure the methods, making it difficult to achieve similar findings (Neuman, 2014). One way to confirm reliability is when findings are similar to other studies, demonstrating high reliability. In my study, my findings were compatible with other studies. Another method to corroborate reliability is to perform the triangulation method. Triangulation is “using more than one method or source of data to study social phenomena” (Bryman, 2016, p.364). In my study, I combined two data sets, semi-structured interviews and public hearings, to analyse and answer my research question and sub-questions. The information I collected from interviews and public hearings allowed me to compare perceptions and responses to the newly proposed environmental regulations. The triangulation method permitted me to see how well my findings of both data sets aligned. According to Bryman (2016): “The capacity to cross-check different methods or data sources helps researchers expand their perspective and ensure the accuracy of their findings” (p.364).

Whereas validity was referred to as being truthful and authentic (Neuman, 2014, p.223). Validity in qualitative research recognised authenticity as: “offering a fair, honest, and balanced account of social life from the viewpoint of the people who live it every day” (Neuman, 2014, p.223). The objective was to provide an honest portrait of “social life that is true to the lived experiences of the people we study” (Neuman, 2014, p.223). Moreover, Neuman (2014) portrayed validity as: “emphasising capturing an inside view and providing a detailed account of how the people we study understand events” (p.223). Other process features were also essential to determine validity: “Validity increases as researchers search continuously in diverse data and consider the connections among them (Neuman, 2014, p. 224). The validity of my study was presented with an open-minded and sincere description of the perception of the new proposed environmental regulation from marine tour operators in Svalbard, which I complemented with the triangulation method (Neuman, 2014).

4.6 Ethical Concern

4.6.1 Informed Consent and Confidentiality

Before I began my data collection, I received the ethics training certification and research ethics clearance valid from March 21, 2023, to June 30, 2024, which was provided in the Appendix (Appendix A). All the participants were over 18, and before each interview, they received the consent form (Appendix C), which required a written signature before participating in my research project. All interview participants were informed that their participation was voluntary and that their consent was retractable until submission. Due to the limited sample, I guaranteed each participant to provide anonymity and confidentiality; as such, each tour operator was identified anonymously using letters. One interviewee mentioned that they preferred to avoid being directly quoted for specific questions as the community was tiny, which would provide the possibility of being identified. For the storage of recording and document transcription, I stored them on my computer, and a password was required to access the documents.

4.7 Methodological Limitations

At an early stage of the study, certain changes in conducting the research had arisen. For instance, in my initial research, I intended to select local stakeholders working in the cruise tourism industry. This proved challenging as cruise tourism operators (overseas and expedition operators) do not have their headquarters in Svalbard but elsewhere worldwide, making it difficult to contact them. Instead, I decided to start with marine tourism operators in Longyearbyen, and then I considered expanding to the tourism operators in Svalbard. Moreover, one of the marine tour operators was a Russian entity, and due to the current geopolitical situation, I asked my program director for permission to approach them for an interview. Iceland does not have a specific policy that applies nationally; however, regarding the sensitive nature of my request and the potential ramifications for both the University Centre of the Westfjords and the University of Akureyri, I was required to request approval from the master's Committee before May 12, 2023. The Norwegian government has followed the European Union's sanctions; however, Svalbard was exempted due to the Svalbard Treaty under the equal treatment principle (Edvardsen, 2022). Nevertheless,

according to the High North News, a local boycott of the tourist company Grumont, a subsidiary of the coal mining company Trust Arktikugol, was taking place (Edwardsen, 2022). For all these reasons and to avoid any international incident, I decided not to send an invitation for an interview with this Russian state-owned company. Furthermore, when I first designed my thesis, it was intended in a way to apply an abductive approach because I had planned on empirical data collection and document analysis. My informants making sense of the real world would have provided the voices, which I would have then used to build the theoretical background. This was not the case once I removed the document analysis, which was too descriptive from my result chapter; an inductive approach was more suitable for my study.

Another of the methodological limitations was that the thesis topic was in a remote location. Svalbard is also considered to be a costly destination. Such a small community means that accommodation is limited, and if one is doing a course at the University Centre in Svalbard, it is easier to find a place to stay. As a result, I conducted my interviews online using Teams or by telephone to limit the cost of the research. Creating a bond or a relationship with the interviewee was crucial to understanding the situation, and it was more challenging online (Bryman, 2016). This brought another difficulty in joining marine tour operators, which was only sometimes possible as they often lead their tours outdoors. Therefore, this could only be done by email and follow-up emails, which limited me as I needed to know if the right person had received the invitation for the interview. For example, many tour operators only have general emails on their websites, and one is hopeful that the employee sends them to the owner or founder of the company. My original plan was to use the snowball sampling technique, where I could ask if they could suggest five cruise tour operators. However, this was not possible for marine tourism operators due to the low number from the sample selection. I first intended to conduct ten interviews; this signifies that the majority would have had to respond to my invitation. Most marine tour operators were small businesses and had few staff. However, I was able to collect additional data through public hearings to develop my argument and answer my research question and sub-question. Lastly, some public hearing consultation statements were written in Norwegian, a language I had not mastered. Nonetheless, I used Google to translate, which permitted me to understand the essence of the message, and a native Norwegian proofread the documents translated to ensure accuracy.

5 Results

In this chapter, I presented my research findings. The section started with the results of the semi-structured interviews and the public hearings consultation statements made by marine tour operators, including AECO and Visit Svalbard, available online through the Norwegian Environment Directorate website, which helped me answer my research question on how marine tour operators perceived and responded to the new environmental regulations in Svalbard. The findings also provided responses to my sub-questions, which I recall are as follows: how environmental and climate changes affect marine tour operators and how environmental regulations affect tourism development in Svalbard.

5.1 Semi-Structured Interviews and Public Hearings Consultation Statements

In this section, the results of my research through four semi-structured interviews and a public hearing consultation statement are introduced. Figure 5-1 displays the individual coding from these sources, indicating a widespread recognition of climate change, particularly among the interviewees. Challenges were also widely discussed among interviewees. It also clearly demonstrates the proposed environmental regulation was perceived negatively, especially in the public hearings. Furthermore, there were many negative comments regarding the future of the marine tourism industry. From the individual code segments, five key themes were recognised as important to my study (Figure 5-2). The categories were climate change, the perception of tourism sustainability, current environmental regulations, the perception of the new proposed regulation and how they perceived the future of the marine tourism industry were explained in the following sections.

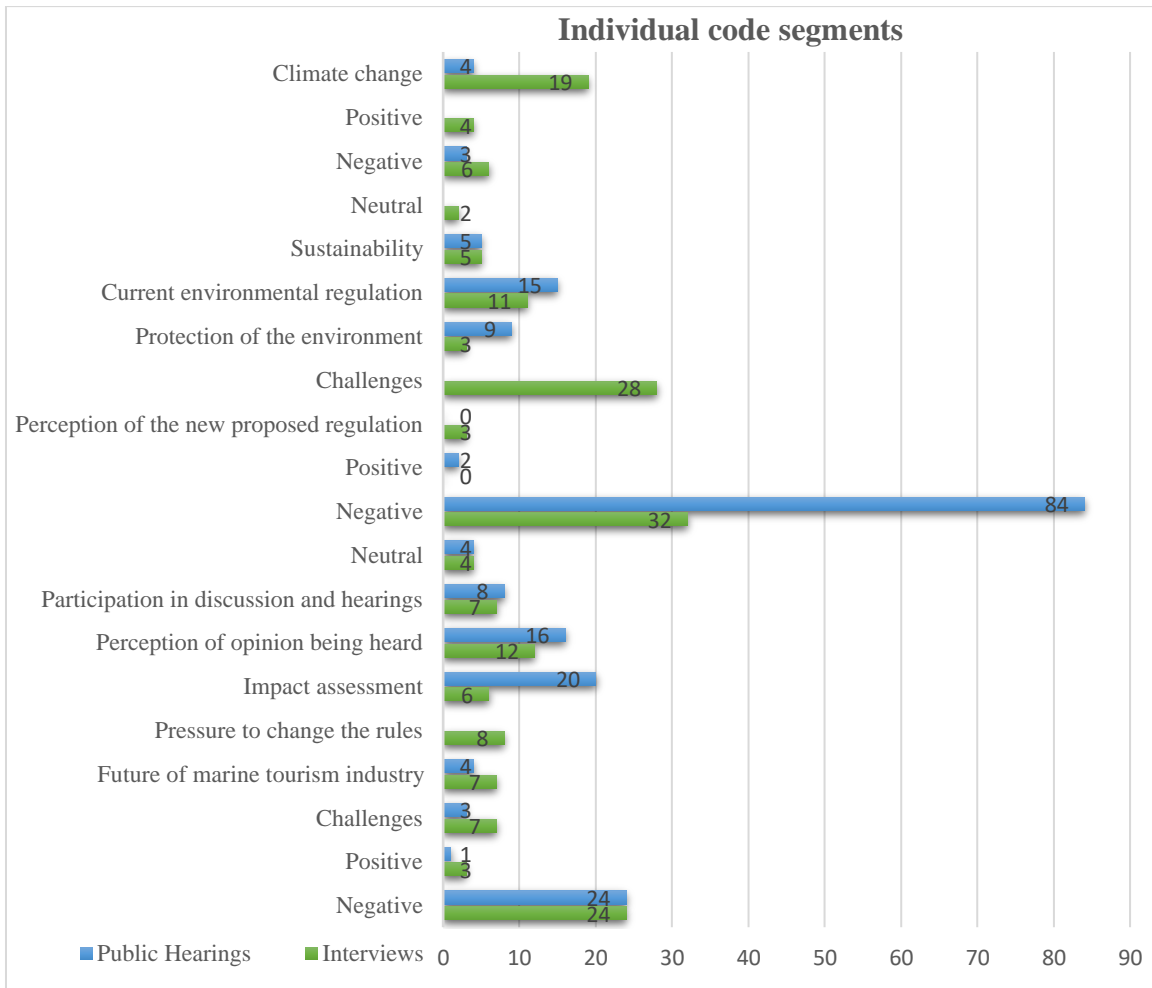


Figure 5-1: Marine Tour Operators' Interviews and Public Hearings Individual Code Segments

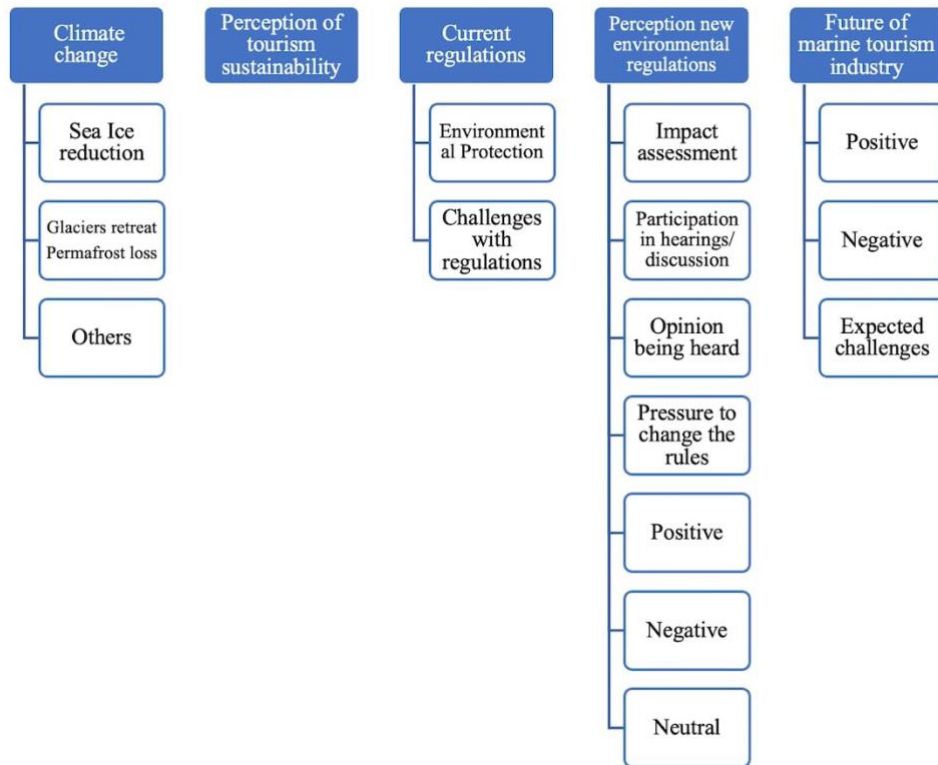


Figure 5-2: The Five Key Categories with Sub-Themes as obtained from my Semi-Structured Interviews with Marine Tour Operators, which were also used for the public hearings consultation statements.

Background

All the participants of the marine tour operators had different backgrounds and residence times (Table 4-5). Three out of four lived in Svalbard, while the other had ten years of experience working on expedition cruises, leading, and guiding on board the vessels, including sailboats for many years. One participant lived three years in Svalbard before moving back to mainland Norway due to the COVID-19 pandemic. This participant worked as a guide and booking manager and travelled back to Svalbard when a tour was reserved. The fourth participant has lived and worked the longest in Svalbard and has been there for over 30 years. The background of the consultation statements the Norwegian Environmental Agency received was quite varied. For this research, only local marine tour operators were selected and went from the small company to the largest and oldest tour operator in Svalbard (Table 4-3). There were also consultation responses from AECO, which has been in operation for twenty years and Visit Svalbard, which was founded in 1991.

5.1.1 Perception of Climate Change

For the first main theme, climate change, I established four sub-themes from the most common responses received by the marine tour operators during the interviews and in the public hearing consultation statements, which are as follows: sea ice reduction, glacier retreat and permafrost loss, other environmental changes such other changes in the terrestrial system. In total, this theme of climate change, including all sub-themes, emanated 38 coded segments, 31 for the interviews and seven for the public hearings.

When I asked the participants if they had noticed any environmental change due to climate change lately, which affects the tourism industry, their views and perceptions differed from one interviewee to another, most likely because everyone had a different background and different residence time. Two participants considered drastic and severe changes since the 1970s, while one dated it back to the last 15 years. The respondents mentioned various changes such as glacier retreats, loss of permafrost, increased precipitation, rain and snow, warmer weather, landslides every year, more avalanches, and small changes in animal behaviour. For example, as one respondent stated: “When it comes to changes, but obviously, as the rest of the world, we're seeing that there are some more severe changes, and maybe the most visible one is the sea ice” (MTO4). One participant mentioned not being affected by environmental changes as they could always change their routes. They stated: “Yeah, but not so big issues where we can have other routes. It's no problem for us. So yeah, I will say it's about nature, and we must deal with it. So, if it's not possible, we do another thing (MTO3). Whereas in the public hearings, references to climate and environmental change were made by AECO and Visit Svalbard, mainly about the degradation of the cultural vestiges. Visit Svalbard remarked: “We also recognise the impact of climate change on wear and tear on nature and cultural monuments” (Visit Svalbard public hearing consultation statement, p.10).

Sea Ice Reduction

Two participants considered the loss of sea ice as positive and negative. One participant believed that reducing sea ice has changed how they navigate. For example, at the beginning of the season, around June, they can't come all the way around the Archipelago, but then later in the season, it becomes possible to go all around Spitsbergen and even the entire

archipelago. According to one participant, the loss of sea ice hurts the experiences of tourists wishing to view sea ice and how, nowadays, they must go further North to experience it: “But I think most people in the industry are quite concerned about it ... yes, easier to go around, but not necessarily have a pack of ice as retreated to 81 or 82¹ ... because it's a great experience, but it's also just troubling” (MTO1). Nonetheless, two participants believed it also to be a positive aspect as it is easier to plan and circumnavigate and have a longer season. However, this participant also acknowledged that other marine tour operators were also able to operate longer in the season. Moreover, this respondent was not convinced that it was only due to environmental change but also from the nature of legislation that controls the scope of activities. “I don't think that is only due to the environment and the changes, but also due to the industry and legislation or lack of legislation that there is an increasing industry, not just because of the environment, but the changes in the environment and opens new possibilities, in a way” (MTO4). Furthermore, this respondent mentioned noticing severe changes, notably sea ice variations, but did not expand on this matter. Whereas, in the public hearings, AECO stated: “climate change and loss of sea ice will force both walruses and polar bears to spend longer periods on land with reduced access to food (p.30). While Visit Svalbard acknowledged sea ice loss, however, were against new restrictions in the proposal. They declared: “We, therefore, propose a different and more positive approach to the challenges of less sea ice than closures and bans” (p.20).

Glacier Retreat and Permafrost Loss

Two participants discussed the substantial retreat of the glacier; one talked about how it was visible that the glacier was retreating and how a docile glacier became quite active in the last year, taking in a large quantity, and the other talked about having to search for the glaciers. There was also mention of the permafrost thawing, which in turn was damaging the cultural heritage. According to this participant, this suggested that it was temperature-induced: “Quite several changes going on with cultural heritage due to permafrost melting temperatures so high that you actually get right in the woods of cultural heritage, which never existed before, that sort of thing” (MTO1). Another participant mentioned seeing it daily: “We'll see it every day. But you don't realise it you see it more or less than, you know,

¹ Reference to Parallel 81 and 82 North

glaciers searching” (MTO3). In the public hearings’ consultation statements, none of the eight marine tour operators mention glacier retreat or permafrost loss.

Other environmental changes

One participant mentioned that there was more snow this year, which is not a yearly occurrence: “There is a lot of snow there this year; there has been a lot of snowfall. That does not happen every year, and they say they have snowmobile conditions” (MTO2). Another talked about the increase in avalanches and a small change in animal behaviour, such as the polar bear, however, the participant did not expand on this. “Maybe you can see it slightly change in the polar bear and animals walking around” (MTO3). One participant talked about the impact of avalanches on their communities. This participant mentioned the loss of lives and the damage being caused to the infrastructure. In the public hearings, AECO stated that the sea ice loss will affect walruses and polar bears as they will stay longer on land with less access to food. They supposed polar bears would pursue the walrus as a substitute food resource. Svalbard Adventure remarked an increase in: “reindeer, polar bears and foxes, although human activity in the area has not changed” (Svalbard Adventure, p.1).

5.1.2 Perception of Tourism Sustainability by Local Marine Tour Operators

The second main theme, the perception of tourism sustainability, emanated from ten coded segments, five for the interviews and five for the public hearings. Two participants talked about sustainability. One participant discussed it in terms of preserving the environment: “We have been trying to be very proactive in terms of sustainability and environmental protection” (MTO1). The other participant discussed the desire to be sustainable while generating an income for their business. “Yes, we want to be sustainable. Yes, we want to go green. Yes, we want to save the Earth, but we also want to earn money” (MTO4). This participant also believed as a small company they had limited access. Furthermore, this participant stated that sustainability is a worthy intention that is no longer ecological when purchasing a plane ticket to Svalbard. Whereas in the public hearings, AECO stated that members must follow their guidelines, which is seen as a sustainable practice. Visit Svalbard believed that the way to obtain sustainable development is to have a set of clear parameters with regulations that are predictable. As Hurtigruten Svalbard stated: “We will build a

tourism industry that is sustainable through activity and emissions; we will develop a year-round industry based on the capacity that is there today and develop as many full-time positions as possible in a serious and responsible industry” (p.29).

5.1.3 Current Environmental Regulation

The third main theme, the current environmental regulations, emanated 42 coded segments, 18 for the interviews and 24 for the public hearings. Two participants commented on the new current environmental regulations. One of the participants summarised the current legislation as a no-disturbance. There is also mention of following all AECO guidelines, which had been created with the purpose of no disturbance, which has additional limitations not in the current legislation. One participant said they are fine with the current environmental regulations and are following the rules: “There are some things we're not against legislation per se, not at all if it makes sense” (MTO1). Another participant described the current environmental regulation as the Svalbard Treaty at the top level, followed by the Environmental Protection Act, considered as being the principal one as it provides all the parameters for almost all legislations in Svalbard. This participant did not reflect any further on the current legislation. Whereas in the public hearings, five participants believed that the current environmental regulations were sufficient to protect Svalbard. Example of comments in the public hearing consultation statements: “We believe that the existing regulations are good and clear and can easily be complied with by all parties” (Basecamp Explorer, p.2); “Today's regulations are largely sufficient” (Anonymous 1, p.1). Moreover, Visit Svalbard stated that AECO guidelines and the Norwegian Institute for Nature Research (NINA) have shown to be adequate for the protection of the archipelago.

In the public hearings, mention of environmental protection was related to using drones, disturbing polar bears and local guides. For instance, AECO has already banned the usage of drones for recreational intent to their members in their guidelines, nonetheless, they believed that in some instances the use of drones for scientific purposes should be allowed. The ban on drones is also mentioned by Anonymous 2 and they considered it to be sufficient to protect Walrus and birds from disturbances. They acknowledged that not everyone is a member of AECO but considered that there is other legislation such as the Svalbard Environment Act, to regulate wildlife disturbance. Both Hurtigruten and AECO stated that the current legislation was adequate to prevent disturbing polar bears. “We believe that the

current legal text is sufficient in terms of the importance of avoiding disturbing polar bears, but we understand the challenges of enforcing the law” (Hurtigruten Svalbard, p.18 and AECO, p.8). Backyard Svalbard is the one who discussed the many years of experience of local guides. For instance, they mentioned that operators already have firmer guidelines than the current environmental regulations and that the new measures would preclude them from working. “Local guides that have been here for years have the experience to handle most of the situations that can happen out in the field on Svalbard, and with such regulations and conditions, they will either not be able to or not want to work anymore” (p.1).

Challenges with environmental regulations

Several challenges were discussed by marine tour operators, such as the lengthy process of planning to meet the requirements of all these different regulations, particularly for smaller businesses. An increase in bureaucracy was also mentioned by one participant, as now everything takes much longer than before. “The time that it takes to apply for permits that are vital for the operations, it could be a driver's license, vote labour, be a license for a gun, that used to take maybe two, three weeks at the most, now needs between two to four months ahead” (MTO4). The participant believed it is because government employees have a high turnover. They only stay in Svalbard on average a year and four months, while it takes about three to six years to understand the regulations and how it works. The participant explained that the challenge for new governmental employees stemmed from how to interpret the law as they were used to working on the mainland which is a different context from Svalbard. Therefore, it makes it difficult for them to reach an assessment based on the law, particularly, when it is centred on a one-person assessment. Moreover, the participant stated that there was a consensus among tour operators who believed that when an employee has little knowledge of the local community and legislation, this opens the door to law interpretations and this interpretation was rarely in favour of the marine tour operator. This participant supposed it means, that when an employee was not familiar with the law, it is easier for them to deny a tour permit application and refuse the demand creating precedence for other requests. “You need a certain amount of local base knowledge and experience, you need to understand the community, and you need to understand all these interacting parameters that work together. And if you don't understand it, it is understandable if you're in an official job for one and half years to learn all this. The easiest thing is to say no” (MTO4). Most

participants believed that the permit application procedure took too long to process, which in turn could negatively impact the marine tourism industry. Furthermore, marine tour operators also regarded the necessity to be on the island to apply for an individual certificate-related issue as too complicated, particularly because this brings additional costs to companies. For instance, this participant stated: “The company that employs the seasonal worker is quite expensive, because of housing and living costs when you're not actually working and earning money” (MTO4). Whereas, in the public hearings’ consultation statements, there was no mention of challenges faced by marine tour operators.

5.1.4 Perception of the Proposed Regulation

The fourth main theme, the perception of the proposed regulation emanated from a total of 39 coded segments from the interviews and 90 segments from public hearings. There was a consensus of negative perceptions and discontent towards the new proposed environmental regulation from both marine tour operators whom I interviewed and the public hearings. During the interviews, when I first asked about their perception of these new rules, I received these comments: “It’s troublesome. Very, very troublesome” (MTO1); “Anxious to know what is happening and when decisions will take place and what time frame” (MTO2); “Well, it does not make sense at all. No, it's really ridiculous” (MTO3); “They are coming all, mostly at the same time, but they don't seem to be well coordinated” (MTO4). One participant argued that there is no scientific evidence that expedition cruises are distressing polar if they were less than 500 metres distance. That included various studies throughout decades made by the Norwegian Polar Institute which stated that there was not sufficient information concluding polar bear disturbance. The participant remarked that this new rule has a major impact since polar bears are the main attraction in Svalbard. Moreover, two participants were afraid that these new rules would impact the sailing season and that companies might not be able to continue operating in Svalbard. While two other participants were worried that closing some areas may lead to a situation where everyone will go to the same area. They stated: “Okay, it's 20 cruise ships, and it's 2,000 people each. So, it's about 80,000 footsteps or 160,000 footsteps. In the same area, instead of spreading them around in the whole archipelago, that will have less impact, I think, on nature. So that's why it doesn't make sense for me” (MTO3). It might create a bigger environmental impact than if they disperse. One participant commented that the Antarctica Treaty privileges spreading out to

avoid an environmental impact, while the opposite was proposed in Svalbard. Another participant mentioned that the uncertainty was making it difficult to plan, particularly since these new measures were not yet approved, nor do they have a date of when it will be. “They are anxious to know what is happening when decisions will take place, and what timeframe they get” (MTO2). For instance, if the decision were made in early 2024, it would be too late for companies, and they would lose customers. One respondent mentioned: “If the parameters keep changing all the time, there is no predictability” (MTO4). This participant also discussed the various changes in regulation, for instance, prohibition to access an area, but then a new law comes into effect that permits it for a certain time and period. The participants go further by stating that the law did not make a distinction between a local company that operated all year round and one that had their main operation outside of Svalbard and that only comes for four weeks; the participants believed that as they only came for a shorter period, they were not part of the “very unique and small community” and that the impact, such as local infrastructure and cost, was greater on the local community. In the public hearings, eight main issues emerged more often (Figure 5-3).

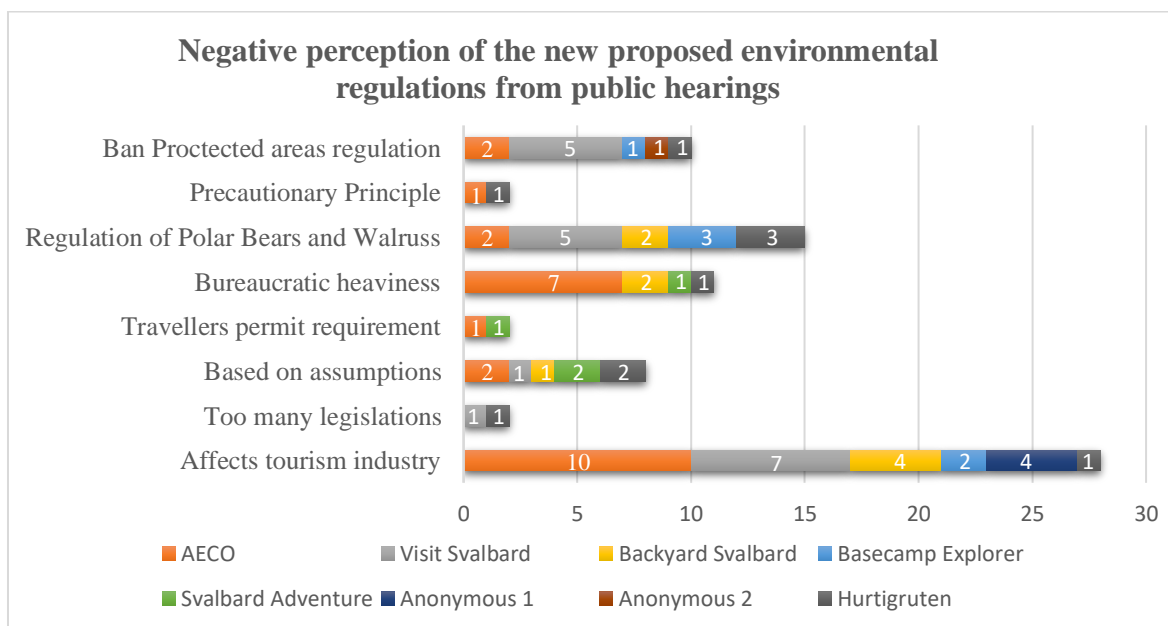


Figure 5-3: Categories of the Negative Perception of the New Proposed Regulations from the Public Hearings

Five companies were concerned about the ban on protected areas. AECO argued that the environmental impact of marine tourism in protected areas had not been sufficiently studied. Moreover, they believed: “that the proposal to ban landing in protected areas goes further

than is legally permitted. The proposal is thus unlawful” (p.11). Both Visit Svalbard and Basecamp Explorer considered that fewer disembarkation points within protected areas had negative consequences for the natural environment, tourism, and the local population, while Hurtigruten remarked that: “20 disembarkation points in the protected areas were not sufficient” (p.11). Two companies remarked that most of the new proposed regulations for future marine tourism in Svalbard are pronounced and on the precautionary principle. Five companies were critical towards the new regulations concerning wildlife, polar bears, and walruses, mainly due to a lack of documentation about distance or prohibition to get close. For example, Visit Svalbard and Basecamp Explorer argued: “We are critical of the distance requirement of 500 meters to polar bears, which we believed is poorly scientifically justified and could very well have unintended negative consequences for the species” (p.4). Backyard Svalbard believed that the regulations concerning proximity to wildlife lacked sense as they were not always visible from afar. AECO remarked there was no information regarding polar bears and distances on land and sea. A major concern was the increase in bureaucracy, may it be the need to apply four weeks in advance for a permit if not a resident of Svalbard, while some question the capacity of the Governor of Svalbard to adjust when the added work created by the new regulations, for example, the certification of guides. Backyard Svalbard maintained that there would be additional administrative work for both companies and the Governor of Svalbard. Svalbard adventure for their part argued: “There was a relatively large amount of bureaucracy and making everyday life difficult for us permanent residents” (p1). There was an issue as well concerning the tax requirement as some believed that this would bring double taxation for marine operators in Svalbard staying over 29 days, resulting in extra cost and loss of profit compared to those companies operating less time. Visit Svalbard was worried that the distance limit regulation in the proposal might be challenging for tourism operators that operated day boat excursions in the Isfjorden.

Impact Assessment

Regarding the question of whether they believed there should have been an environmental assessment before this proposal, one participant believed that one was made by the Norwegian Polar Institute before the public hearing, however, the participant is unsure if it was effective as they stated: “I guess was a part of it was a kind of an impact assessment. At least it could be interpreted as being so there was also no financial impact assessment in the

notes and, or the hearing, but it was for each proposal. It was not a collective combined impact assessment on local industry” (MTO1). Another respondent believed there was one made, nonetheless, the participant thought they should have asked the citizens and companies in town for an impact assessment and, as such, did not believe that the government was listening to them. It is important to note that the participants were not totally against certain rules of the proposal and to protect the vulnerable nature of Svalbard. As one participant remarked: “There's no doubt about it that there are some of these hearing proposals that we have nothing against. Some of them we do already, like, five knots within, you know, a nautical mile of bird cliffs and things” (MTO1). All four participants were part of either AECO, which has its environmental guidelines or Visit Svalbard, a network organisation for tourism companies which oversees the Svalbard Guide Training Course.

While in the public hearings, five agreed that further impact assessment should have been carried out before these new measures. For example, AECO remarked that no evaluation of the vulnerability of the individual location had been made, nor had the environmental impact of traffic and cruise tourism in the relevant areas been carried out. Furthermore, according to AECO, the Norwegian Environmental Agency had not done an impact assessment on the consequences of a rise in traffic in these areas. Visit Svalbard believed that assessments in the proposal were: “Poorly scientifically justified, where precaution is used rather than seeking applicable knowledge and insight through research” (p.4). Backyard Svalbard requested that further information be collected about the subject before making new legislation and demanded that a new process be done. For its part, Hurtigruten stated: “We otherwise agree that new regulations can be a tool to meet the challenges of the future in the meeting between traffic and natural changes, i.e., caused by climate change, but would like to emphasise that these must be professionally assessed regulations - not based on opinion or precaution, or with a bias towards special interests” (p.6). AECO believed that legislation should be simple to grasp for everyone and uncomplicated to implement.

Participation in discussions, meetings, or written feedback

When asked if they had participated in any discussions, meetings, or written feedback, one respondent actively participated by providing some information about the feedback. Another participant mentioned being indirectly involved as a member of Visit Svalbard. This

participant also mentioned that they have been to gatherings, also written feedback in the newspaper and discussed it with other locals over coffee, dinner, or social meeting places. For the public hearings, I had eight written consultation responses regarding the new proposed environmental regulations, however, I did not have further information that they had participated in other forms of activities.

Opinion of being heard

All the participants agreed that the government had listened to them, but they all felt they had not been heard. One participant stated: “So, they heard us, but they didn't necessarily listen to this so much” (MTO1). While the other believed: “I don't think they are listening” (MTO3). When reading the Public Hearings, five of them discussed the impression of not having been heard by the Norwegian Environmental Agency. For instance, one mentioned how very short deadlines were set for the public hearings, giving them little time to prepare. Two remarked that their feedback had not been considered. Three companies mentioned that they deplored the fact that the government did not involve or listen to them, yet they had lived and worked in Svalbard for many years. AECO remarked: “The tourism industry had not been involved and heard in the planning work” (p.37). While Backyard Svalbard reflected that most rules were proposed without consideration of locals’ knowledge.

Pressure to change the rules

Various answers were provided by participants when I inquired about where the pressure to change the rules came from. Geopolitical reasons were mentioned twice. “I think it's your geopolitical; it's got nothing to do with environmental protection” (MTO1). One participant thought it came from the Paris Agreement. One participant believed that the pressure to change the rules came from various sources, such as politicians, decision-makers, locals, and all of Svalbard. One participant supposed that the pressure to change the rules comes from environmental reasons, notably climate change. This participant believed that the whole world needed to change its ways of doing things to protect the environment, however, they suggested most people did not like to change their ways of doing things. There was no comment on the public hearings regarding where the pressure to change the rules came from.

5.1.5 Future of the Marine Tourism Industry

The fifth main theme, the perception of the future of the marine tourism industry, emanated from a total of 73, of which 41 coded segments for interviews and 32 segments for public hearings. All the marine tour operators were pessimistic regarding the future of the marine tourism industry in Svalbard. Comments such as these: “Not good, shorter seasons, market decline, not easy to do business, less and less marine industry, too many changes which increase the cost of operations and more taxation fees” (MTO1, MTO2, MTO3, MTO4). One participant was eager to know if the new environmental regulation would be passed as they needed to prepare for the future and if they could continue sailing under the new conditions. Three out of the four participants were considering leaving: “Chances are that we may actually just not even venture into the problem, and just leave” (MTO1); “It's not so funny for us to do the business. As an owner of the company, I will say, okay, if it continues like this, I will do something else” (MTO3). One participant mentioned the possibility of going to other Arctic destinations. Two participants were concerned about taxation and fees as this was seen as having a negative impact on the future of the marine tourism industry.

All eight companies had negative comments in the public hearing consultation statement, notably the challenges the tourism industry would face if the new environmental regulations were approved. The major concern was that these new regulations would either end or shorten the operations of various tourism companies. As AECO stated: “The most likely consequence is that operators have already started planning how to shorten operations in Svalbard to less than 30 consecutive days” (p.42). Backyard Svalbard remarked: “With these new rules, Backyard Svalbard (and probably most others) as a company did not have the capacity to keep running for many reasons” (p.1). Another worry was that tour operators would choose to move elsewhere to conduct their business. AECO remarked: “Moving turnarounds from Svalbard to other destinations means a substantial loss of revenue for Svalbard” (p.42). Hurtigruten suggested a reduction in expedition cruises in Svalbard. “An obvious consequence of the proposals in the environmental regulations was that the expedition cruise segment, in particular, could be reduced” (Hurtigruten public hearing consultation statement, p.26). These new regulations were viewed as undermining the organized and responsible tour operators in favour of non-organized ones. They feared that there would be a deterioration of products and client experience would suffer, also leading

to a higher cost while making it more difficult for tour operators. Visit Svalbard commented: “Will it lead to a loss of large parts of the activity given what we assume will be a deterioration in the quality of the experience?” (Visit Svalbard public hearing consultation statement, p.23). “Could it lead to unfavourable competitive conditions between businesses, which have previously spread traffic precisely to avoid too many people in the same place at the same time?” (Visit Svalbard, p.23). Svalbard Adventure mentioned the difficulty in hiring employees due to these new regulations. Another mentioned there might be fewer people wanting to live or settle in Svalbard and maintain the Norwegian family society. Hurtigruten concluded: “The tourism industry has been through very demanding times with the pandemic in recent years. It has created unpredictability and uncertainty about how the future would be and this consultation has not made it easier for many players, including a large player such as Hurtigruten Svalbard” (p.29).

6 Discussion

The purpose of my master's thesis was to explore the perception of marine tour operators toward new environmental regulations that the Norwegian government is adopting. My findings illustrated an ongoing dilemma between environmental protection and economic development in the form of the tourism industry. The Svalbard Treaty and SEPA privileged environmental protection over the economy, while the most recent White Paper on Svalbard (2015-2016) was looking to shift the coal mining industry towards tourism, research, and an education-based economy. This was a challenge for the Norwegian government to combine a low disturbance in environmental use while promoting sustainable tourism development. Such dilemmas were also brought up in the semi-structured interviews and public hearing consultation statement responses. Marine tour operators understood the importance of protection measures, given that in the last decades, environmental and climate change had been happening in Svalbard, affecting their operations positively and negatively. Both marine tour operators and the public hearings consultation statements considered the current environmental regulations to be sufficient to protect Svalbard's vulnerable nature. My findings showed that the new proposed environmental regulations were perceived negatively. In the opinion of the participants, the Norwegian Environmental Agency listened to them but did not hear them during the hearing process and while proposing new regulations. All participants are worried and questioned whether the Governor of Svalbard would be prepared to face additional tasks which come with the new environmental protection measures. Moreover, they believed these new legislations would deteriorate tourism development in Svalbard. They described the future of the marine tourism industry as uncertain and stated that many tour operators would consider shortening their seasons or leaving Svalbard altogether.

In the following section, I put my findings into the context of recent advances in the scientific literature that were described earlier in my background chapter, in which I applied the theoretical lens of stakeholder theory and environmental governance. I started the section by answering my first sub-question, followed by the second sub-question, and then finished with my research question.

6.1 Climate Change Impact on Marine Tour Operators

My first sub-question sought to determine how environmental changes through climate change affect marine tour operators. Svalbard is set in a unique and fragile natural environment, and tourism in the archipelago is thriving again after the pandemic hiatus (Dannevig et al., 2023). At the same time, Svalbard is coping with rapid environmental and climate changes (Dannevig et al., 2023). My findings indicated that marine tour operators in Svalbard were concerned with environmental and climate change, which they noticed during their residence time. Sea and fjords ice reduction, glacier retreat, permafrost loss and other changes in the terrestrial system, such as avalanches and landslides, were frequent topics discussed by all the participants during the interviews and in the public consultation statements. The loss of cultural heritage due to permafrost loss was also a reference point. Those described changes were in line with recently published literature that describes environmental changes in Svalbard. As mentioned in section 2.2 of my background chapter, Svalbard is a hot spot for environmental changes through climate change, and my findings appear to be consistent with the results of previous studies (Dannevig et al., 2023; Grünberg et al., 2021; Hanssen-Bauer et al., 2019; Saville, 2022; Sokolickova et al., 2022). Furthermore, Meyer (2022) supported my results on marine tour operators' perceptions of environmental change. For instance, in her research, locals have witnessed the same climate changes and associated them with the environmental changes occurring on the island. My study found that marine tour operators were worried about climate change, even if certain aspects are seen as both positive and negative in terms of how they affected the marine tourism industry. Overall, participants felt that less sea ice is easier to navigate but increased the number of vessels in the area. Additionally, this decreased the experience for tourists wishing to observe sea ice. The tour operator would then go further North at a greater risk. This finding was also consistent with that of Dannevig et al. (2023), who remarked: "The lack of sea ice in the fjords is a major cause for concern for the winter tourism operators in Longyearbyen" (p.9). A different study conducted by Olsen (2020) also gave credence to this perspective: "With reduced sea ice, new areas of the Northern Barents Sea have become accessible to marine tourism, fishing and research activities" (p. 306). Another reoccurring theme of climate change impact was the rise in precipitation during winter months, disturbing the tourism industry. For instance, the lack of snow made it difficult for tour operators to offer activities such as dog sledging or ski tours (Dannevig et al., 2023).

Marine tour operators were concerned about climate change; my study suggested that it stems from both social and economic points of view. This was understandable; for example, in 2015 and 2017, Longyearbyen was struck by two big avalanches. The first destroyed many houses, and two people were killed, an adult and a child, while the second hit the same neighbourhood, damaging homes (Meyer, 2022; Sokolickova et al., 2022). This increased awareness of the consequences of climate change in Svalbard. Marine tour operators were noticing the direct effects, such as a rise in avalanches and landslides, while the melting of the permafrost is leading to damage to the buildings and infrastructure. Such natural hazards add risks to the mobility and safety of operations (Dannevig et al., 2023). For example, snowmobile main inland routes may have to close more frequently, whereas tour operators will see their ski trips possibly cancelled or hindered. Going higher North in search of glaciers also involved a higher security risk as tour operators would go for longer periods, different routes that might be more difficult or come across a dense blizzard (Dannevig et al., 2023). From an economic perspective, the impact of environmental and climate change was generating more uncertainty and unpredictability for marine tour operators. They could no longer plan the season, which increased risks to their business operations. This finding was also reported by (Meyer, 2022), who remarked: “Climate change thus alters the premises of knowledge used to be considered sound. This creates uncertainties and may ultimately result in risks” (p.5).

In conclusion, tourism in Svalbard is booming, while climate change is affecting the tourism industry in several ways. Thus, stakeholder cooperation is necessary to achieve successful sustainable tourism development (Hovelsrud et al., 2021). Marine tour operators, as a stakeholder group, it is essential that they be included in the environmental planning process. This would enhance acceptability amongst stakeholders and a better balance between the impact of climate change and economic development while observing Svalbard environmental regulations (Hovelsrud et al., 2021).

6.2 Environmental Regulation Impact on Tourism Development

My second sub-question was to examine how environmental regulations affected tourism development in Svalbard. The archipelago of Svalbard's environmental regulation may be

described as thorough; however, it can also be viewed as strict and burdensome when it comes to adjusting to change (Kaltenborn et al., 2020). My findings suggested contradictory perceptions and possible governance challenges. First, two sides of the regulations were unfolded. In one stance, both marine tour operators and the public hearings consultations statements perceived environmental regulations (notably the number of new legislations in the last few years and the increase in bureaucracy) as having a major negative impact on their operations. While in another stance, it appeared they also believed the current environmental regulations were suitable to protect the vulnerable nature in Svalbard. For instance, a marine tour operator remarked there have been about seven or eight substantial policy changes in the last few years, which have coincided with the COVID-19 pandemic, making it demanding for their industry. This finding was also reported by (Hovelsrud et al., 2021), who stated that: “The complex regulatory framework thereby creates a challenging action space for tourism operators and decision-makers alike” (p.2). Currently, there is a lack of guidelines for marine tour operators to adapt to these new regulations while also ensuring sustainable tourism practices, safeguarding the archipelago's fragile ecosystem, and mitigating the effects of climate change. Therefore, to ensure the efficiency of Svalbard's environmental governance, it is necessary to provide marine tour operators with assistance and consistency so they can comprehend and comply with the latest regulations and continue their business.

The second challenge came with the high turnover in government employees, who only stayed on average for one and a half years. It was problematic, particularly because the governance system in Svalbard is unique, and it took about three to six years to understand all the regulations in Svalbard. This was consistent with a study from Kaltenborn et al. (2020) that explained: “The environmental governance in Svalbard exhibits complexity and particularities which differ in important ways from environmental governance in mainland Norway” (p.9). For example, an employee with little knowledge of the local community and legislation could open the door to law interpretations, and this interpretation was rarely in favour of the marine tour operator. It means that when an employee was not familiar with the law, it was easier for them to deny a tour permit application, creating precedence for other requests. Lastly, the permit application procedure may have a long process time, which in turn can negatively impact the marine tourism industry. This finding aligned with Hovelsrud et al. (2023) on the discussion of environmental governance which argued that

the new environmental legislations were not bringing any assistance or support to tourism operators who were trying to satisfy all these directives simultaneously. The marine tour operators considered the intensification of bureaucracy to be time-consuming and damaging to tourism development in the archipelago. This also aligned with the study from Kaltenborn et al. (2020), which maintained that the current environmental regulations were too strict and inefficient when regulating land use and not cohesive with other administrative sectors. Too much legislation complexified and created confusion, particularly because they were implemented simultaneously with marine tour operators' adaptation to environmental and climate changes. Here, it is important to emphasise that marine tour operators were exposed to changes in regulations, market conditions, and environmental changes (Dannevig et al., 2023; Hovelsrud et al., 2021).

Another interesting finding was that the majority of the interviewees believed the current environmental legislation was suitable, well-defined for everyone and sufficient to protect Svalbard's vulnerable nature. It is comprehensible that participants would feel this way as they understood their livelihoods depended on the protection of the archipelago. As discussed in the results chapter, many participants have lived in Svalbard for many years and have seen and experienced the environmental changes occurring in Svalbard first-hand. It can further be argued that AECO has implemented stricter environmental guidelines to protect the island's vulnerable nature. For example, the AECO guidelines have introduced a general ban on the usage of drones on their member's ships. The polar bears' directive was to evacuate instantly if they encountered one ashore. Their guideline already followed the guideline of not exceeding the five-knot measure near Bird Cliff. This finding was also reported by (Van Bets et al., 2017), who believe that AECO is a strong illustration of self-governance, whose goals are to lessen the environmental impact while sustaining the tourism industry. Thus, marine tour operators already addressed the environmental aspect of environmental governance with sustainability. For instance, all tour operators in Svalbard followed and were committed to strict regulations; the sustainability approach was very strong and higher compared to other destinations. Moreover, tourists in Svalbard could go hiking and skiing, which did not put too much pressure on the environment, and the regulations also supported it. Nonetheless, the tourism industry was also preoccupied with the social and economic aspects. My thesis unfolded the challenge of how difficult it was to focus entirely on the environmental, social, and economic aspects of sustainable tourism.

My findings revealed elements of environmental governance theory, as shown in Figure 3-1 of the theoretical framework chapter. For instance, in my study, the main stakeholders for the state were represented by the Governor of Svalbard, the Norwegian government and the Norwegian Environmental Agency. The market included marine tour operators, AECO, ship owners, and local tourism providers, while civil society involved the local population and tourists. My findings showed that focusing on the environment was important, but at the same time, when environmental regulations were too strict, marine tour operators were at risk of losing their businesses. My data showed evidence that Svalbard's environmental governance might be too complex and severe, making it difficult for the marine tourism industry to operate (Hovelsrud et al., 2023a). For example, although the tourism industry implicated several stakeholders in environmental governance, the state still had significant power and control over it. Moreover, the governance of expedition cruise tourism in Svalbard was viewed as complex due to issues related to governance and institutional structures (Van Bets et al., 2017). This was the result of the co-existence of state governance and self-governance bodies such as AECO and tour operators (Van Bets et al., 2017). Therefore, the expedition crew played a vital role in bridging the gap between public and private policies and acting as an intermediary between research and cruise user communities. The collective self-governance system worked in tandem with state governance to ensure sustainable cruise tourism. However, my findings demonstrated there was a lack of communication between the state, the market and the community. Many marine tour operators considered that the government had listened to them but not heard them.

6.3 New Proposed Environmental Regulation – Marine Tour Operators' Perceptions and Responses

My research question sought to determine how marine tour operators perceived and responded to new environmental regulations in Svalbard, Norway. According to the Norwegian Environment Agency, there was a need to update the environmental regulations as several spots across the islands showed evident consequences due to the increased traffic (Bye, 2023; Norwegian Environmental Agency, 2021). One important finding was the high number of participants in the public hearings. 98 business operators, including the tourism sector and the local community, provided written feedback in the public hearings and the

discussions. Overall, there was a strong negative reaction to the environmental regulation the Norwegian Environmental Agency proposed. In my study, marine tour operators also perceived the new proposed environmental regulations negatively, and the responses were either leaving Svalbard or doing something else. In common with the study of (Hovelsrud et al., 2023a), which stated: “The proposed changes signal increased state control, and the process resulted in significant reactions from Longyearbyen business operators, the local population, and others” (p.91). The initial obstacle to tourism development was that it often came from a hierarchical approach, in this case, the state. Therefore, the stakeholder’s perception was that decisions are divergent from society's interests and views (Byrd, 2007). Moreover, overlooking stakeholders’ participation may lead to the failure of the process (Byrd, 2007). This is particularly true of Svalbard, where the tourism industry privileges inclusive and authentic strategies for participation (Bye, 2023). What is surprising is that one marine tour operator and two public hearing consultation statements agreed that new environmental regulations were necessary to face environmental change triggered by climate change, nevertheless, the participants thought this has to be done with dialogue between all parties and with environmental regulations that had been properly evaluated beforehand. Furthermore, the marine tour operators were dissatisfied with the lack of time to adjust to the new measures, particularly the precautionary approach. The fact that the parameters keep changing constantly while simultaneously dealing with environmental and climate change creates great uncertainty and unpredictability for marine tour operators. Research done by Hovelsrud et al. (2023) gave credibility to this perception: “A common denominator is that regulations are grounded in the precautionary principle and not necessarily integrated with the knowledge that can define the carrying capacities of different areas in Svalbard” (p.100) Moreover, this finding supported the stakeholder theory that argued the need for the involvement of all stakeholders in sustainable tourism development, fostering their collaboration and coordination and a shared approach on the growth of the tourism sector.

Another finding is that the marine tourism operators argued that there is no scientific evidence that expedition cruises are upsetting polar bears if they are less than 500 meters. These results reflect those of the study from (Hovelsrud et al., 2023a), who also found that the Svalbard Environmental Protection Act applying the precautionary principle appeals to an inquiry whether: “the regulations are fully informed by or based on existing expert and scientific knowledge” (p.101). The absence of scientific and non-scientific knowledge

concerning the capacity of species and habitats to support themselves generated uncertainties and conflicts regarding the validity of the basis of the regulations and the administration policies (Hovelsrud et al., 2023a). Moreover, marine tour operators questioned the regulation that allowed access to only 43 selected locations as, according to them, this added environmental pressure if everyone stopped in the same area. The result of the study by (Hovelsrud et al., 2023a) argued: “The proposed access restrictions to some areas will lead to a greater footprint in areas that are currently available for tourism purposes” (p.101). Furthermore, marine tour operators commented that the Antarctica Treaty privileged spreading out to avoid an environmental impact while the opposite was proposed in Svalbard. This was a clear demonstration of different ways of environmental governance not only in Polar regions but also in mainland Norway (Kaltenborn et al., 2020).

My study found that marine tour operators’ responses to the new proposed environmental regulations were either coping, adjusting, adapting, stopping doing business or leaving Svalbard. For instance, findings from both marine tour operators and in the public hearings consultation statements suggested that there would be less marine tourism industry in the future. Some discussed the idea of stopping completely their operators in Svalbard or moving away to Greenland. Svalbard would, therefore, experience a decline in the number of ships and passengers, which would affect the marine tourism industry. Although they understood that there were environmental and climate changes and that tourism was growing, they believed that environmental regulations needed to be more predictable and anticipated. The most important resolution regarding environmental governance in Svalbard was a cumbersome and time-consuming procedure, mainly because of the Norwegian policy landscape. Thus making it challenging for stakeholders to know how their views and concerns were being handled and what implications may arise in the future (Kaltenborn et al., 2020). For instance, if the decision to approve these new regulations is made in early 2024, it will be too late for companies, and they will lose customers. The success of Svalbard's environmental governance will entail assistance and predictability to permit marine tour operators to comprehend and understand the new regulations to continue their operations. Thus far, the development of the archipelago has been guided by the balance between economic expansion and environmental preservation, without any distinct objective in terms of sustainable tourism practices and social or environmental impact (Hovelsrud et al., 2023a). This could make it challenging for the tourism industry to assess the balance

between economic development and environmental preservation correctly (Hovelsrud et al., 2023a). Moreover, my findings exposed that both theories, the stakeholder theory and the environmental governance, gave emphasis to a diversity of stakeholders. Yet, these stakeholders had different relationships among them. For instance, environmental governance in Svalbard is unique as it can be seen as vertical and horizontal. Vertically referred to the relationship between the Norwegian government and the Svalbard governor (Hovelsrud et al., 2021). This can also be viewed vertically through a policy chain on the international level. For example, the United Nations' sustainable development goals (SDGs) and the Paris Agreement. While the national level included the White Papers, the Svalbard Treaty, the Svalbard Environmental Protection Act, and the local level comprised observations of climate change and the transition towards tourism, research, and education (Hovelsrud et al., 2021). My study illustrated how difficult the balance between the three levels was: "One key aspect is vertical policy integration, where the Norwegian government's interpretation of international-level policies and its goals for the Svalbard Archipelago support extensive tourism while also stipulating strict protection of the environment that attracts tourists" (Hovelsrud et al., 2023a, p.99). Furthermore, cooperation and coordination were necessary between different stakeholders to protect Svalbard's unique and fragile environment (Hovelsrud et al., 2023a).

7. Conclusion

I addressed this topic in my thesis because tourism in Svalbard is rising while simultaneously climate change is impacting the archipelago. Tourism development also increases the environmental impact and raises several questions regarding sustainability practices and environmental governance. I believed in answering my research question on how marine tour operators perceived and responded to the new environmental regulations, I contributed to the ongoing conversation surrounding marine tourism development in Svalbard. To answer my research question and related sub-questions, I applied a qualitative method using semi-structured interviews and public hearings through the theoretical perspective of stakeholder theory and environmental governance. This exploratory case study's main findings demonstrated that there was a negative perception and dissatisfaction with the proposed new environmental regulations. Marine tour operators argued that the future of the marine tourism industry might be compromised in Svalbard. They claim that these new regulations would have a damaging impact on their industry. They anticipated shortening their season, doing something different, or leaving Svalbard. I concluded that dramatic environmental changes were happening, which have significant implications for marine tour operators. In addition to the environmental changes, new environmental regulations necessitated prompt and effective actions from marine tour operators. As such, it was critical that they responded effectively to both environmental and new regulation changes. My thesis showed several outcomes that this could entail for the marine tourism industry. For example, environmental and climate change was impacting the marine tourism industry in various ways, both positively and negatively. Marine tour operators were now coping with the challenge of balancing the sustainability of tourism development with the social and economic factors at play and being concerned with the state, which has a stronghold and gives little action space for the tourism industry. Furthermore, my thesis unfolded that the sustainability approach posed a challenge for marine tour operators, who were even contemplating leaving due to the strict regulations, raising concerns about the cost of implementing sustainable practices. In addition, even though my thesis brought a new set of knowledge for environmental governance, there were some limitations to the stakeholder

theory. For instance, although not all stakeholders need to be equally involved in decision-making, it is essential to recognise and listen to as many of them as possible to make sure their interests are heard. The result of ignoring even just one stakeholder group may derail the entire process.

In conclusion, it should be noted that the Norwegian Government encouraged tourism in Svalbard while implementing strict environmental regulations that limited tourism in the archipelago. It raised the question of whether Svalbard would face mass tourism, like Venice, if such stringent regulations were lifted. Alternatively, it could be compared to destinations like Antarctica and the Galapagos, which have severe regulations and higher fees for tourism. Likewise, how does Svalbard consider having sustainable tourism practices compared to similar other Arctic destinations? Travelling to the archipelago involves many forms of transportation, may it be planes or cruise vessels; however, once in place, Svalbard is sustainable by practising eco-tourism. Marine tour operators adhered to rigorous regulations and prioritised sustainability, resulting in stronger commitment compared to those of other tourist destinations.

7.1 Management Recommendations

My thesis also had practical implications for the tourism industry and marine management in general. To enhance tourism development management in Svalbard, there was a need for marine tour operators and the tourism industry to identify and comprehend the specific requirements that concern them. This may implicate engaging with the state or different ministries in charge of these new regulations. Another recommendation could be the preparation of a guide that would summarise all pertinent information in one place, facilitating marine tour operators' understanding and operations. Moreover, it would be important to coordinate the environmental regulations as now there is confusion caused by the newly proposed regulations and the White Paper planned for 2024. Marine tour operators are unsure how many changes those new regulations will implicate. Having many changes simultaneously complicates the comprehension of the various rules marine tour operators must follow. Therefore, ensuring that all environmental regulations are coordinated is a must, which would provide more predictability for marine tour operators, increasing their ability to operate their businesses successfully.

Implementing environmental regulations also necessitates ongoing monitoring and reporting to regulatory bodies. For example, initiating environmental monitoring closely associated with certain tourism activities would be beneficial for the tourism industry. This may also comprise collecting and analysing data on environmental performance, keeping accurate records, and submitting reports regularly to establish compliance with environmental regulations. It is essential that the Governor of Svalbard and the Norwegian Environmental Agency not only have sufficient employees but also that they are properly trained in the unique reality of the archipelago of Svalbard to achieve good environmental management implementation. In sum, the execution of environmental regulation in practical management in Svalbard is a multifaceted process that will require better coordination in explaining the various regulations, a commitment to sustainability, and ongoing monitoring and reporting.

7.2 Future Research

My master's thesis research can be construed as an initial step in the interpretation of the perception of marine tour operators towards the new proposed environmental regulation. For instance, further research could increase the number of locally based marine tour operators interviews and include tourism operators as they would also be impacted by the new environmental legislation. To add a new perspective on this topic, it would also be interesting to fill the gap in the literature by gaining insight into tourists' points of view regarding these rigorous environmental measures taking place in Svalbard. Moreover, since the proposed environmental regulations have not yet been approved by the Ministry of Climate and Environment of Norway, future research on the current topic is therefore recommended once this environmental regulation is official to compare my current findings to the new study. Lastly, the environmental change triggered by climate change is an important issue, particularly in Svalbard, a hot spot for climate change, and it is thus critical that further research is carried out to evaluate how this will continue to affect marine tour operators.

References

- Abermann, J., Eckerstorfer, M., Malnes, E., & Hansen, B. U. (2019). A large wet snow avalanche cycle in West Greenland quantified using remote sensing and in situ observations. *Natural Hazards*, 97(2), 517–534. <https://doi.org/10.1007/s11069-019-03655-8>
- AECO. (n.d.). *Site guidelines*. AECO. Retrieved August 15, 2023. <https://www.aeco.no/guidelines/site-guidelines/>
- Aiken, M. (2019). An updated evaluation of Google translate accuracy. *Studies in linguistics and literature*, 3(3), 253-260.
- Aksnes, V. E. (2018). *Google Translate: Friend or Foe? An exploration of the use and attitudes to the use of Google Translate among teachers and pupils in two Norwegian upper secondary schools* (Master's thesis, NTNU).
- AMAP. (2021). Arctic climate change update 2021: Key Trends and Impacts. Summary for Policy-makers. <https://www.amap.no/documents/doc/arctic-climate-change-update-2021-key-trends-and-impacts.-summary-for-policy-makers/3508>
- Balbus, J., Crimmins, A., Gamble, J. L., Easterling, D., Kunkel, K., Saha, S., & Sarofim, M. C. (2016). Climate change and human health. *The impacts of climate change on human health in the United States: A scientific assessment*, 25-42.
- Benson, D., & Jordan, A. (2017). Environmental governance. *International Encyclopedia of Geography*.
- Blaikie N. W. H. (2010). *Designing social research: the logic of anticipation* (2nd ed.). Polity Press.
- Bryman, A. (2016). *Social research methods*. Oxford University Press.
- Bye, H. G. (2023, March 24). *Strong criticism towards new environmental regulations on Svalbard*. High North News. <https://www.highnorthnews.com/en/strong-criticism-towards-new-environmental-regulations-svalbard#:~:text=In%20addition%2C%20the%20Environment%20Agency,500%20meters%20from%20polar%20bears.>
- Byrd, E. T. (2007). Stakeholders in sustainable tourism development and their roles: applying stakeholder theory to sustainable tourism development. *Tourism Review*, 62(2), 6–13.

- Bystrowska, M. (2019). The Impact of Sea Ice on Cruise Tourism on Svalbard. *Arctic*, 72(2), 151–165. <https://www.jstor.org/stable/26739925>
- Bystrowska, M., Wigger, K., & Liggett, D. (2017). The use of information and communication technology (ICT) in managing high arctic tourism sites: A collective action perspective. *Resources*, 6(3), 33.
- Clarkson, M. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of Management Review*, 20(1), 92–117.
- Dannevig, H., Søreide, J.E, Sveinsdottir, A.G., Olsen, J., Hovelsrud, G. K., Rusdal, T., & Dale, R. F. (2023). Coping with rapid and cascading changes in Svalbard: The case of nature based tourism in Svalbard. *Frontiers in Human Dynamics*, 5, 21. <https://doi.org/10.3389/fhumd.2023.1178264>
- De Vries, E., Schoonvelde, M., & Schumacher, G. (2018). No longer lost in translation: Evidence that Google Translate works for comparative bag-of-words text applications. *Political Analysis*, 26(4), 417–430.
- Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of Management Review*, 20(1), 65–91.
- Edvardsen, A. (2022, May 5). *Svalbard gets exemptions from new sanctions against Russia*. *High North News*. <https://www.highnorthnews.com/en/svalbard-gets-exemptions-new-sanctions-against-russia>
- Epinion. (2019a). Cruise Study Svalbard. <https://www.aeco.no/wp-content/uploads/2019/09/2019-Epinion-Cruise-Study-AECO-and-VisitSvalbard-Final-report.pdf>
- Epinion. (2019b). Cruise tourism in Norway 2019. https://assets.simpleviewcms.com/simpleview/image/upload/v1/clients/norway/Cruise-report_2019_Innovation_Norway_756af9e6-677f-47f6-837b-bcad3ce82b46.pdf
- Esau, I., Pettersson, L. H., Cancet, M., Chapron, B., Chernokulsky, A., Donlon, C., ... & Johannesen, J. A. (2023). The Arctic Amplification and Its Impact: A Synthesis through Satellite Observations. *Remote Sensing*, 15(5), 1354.
- European Environment Agency. (2020, November 23). 2. *Environmental changes and human development*. European Environment Agency. <https://www.eea.europa.eu/publications/92-826-5409-5/page002new.html>
- Fares, J., Chung, K. S. K., & Abbasi, A. (2021). Stakeholder theory and management: Understanding longitudinal collaboration networks. *Plos One*, 16(10), e0255658.
- Freeman, R. E. (1984). *Strategic management: a stakeholder approach*, Pitman.
- Freeman, R. E., Harrison, J. S., & Wicks, A. C. (2007). *Managing for stakeholders: Survival, reputation, and success*. Yale University Press.

- Geyman, E. C., JJ van Pelt, W., Maloof, A. C., Aas, H. F., & Kohler, J. (2022). Historical glacier change on Svalbard predicts doubling of mass loss by 2100. *Nature*, *601*(7893), 374–379. <https://doi.org/10.1038/s41586-021-04314-4>
- Gizzi, M. C., & Harm, A. (2021). Using MAXQDA from Literature Review to Analyzing Coded Data: Following a Systematic Process in Student Research. *The Practice of Qualitative Data Analysis Research: Examples Using MAXQDA*.
- Governor of Svalbard. (2023, June 30). *Regulations relating to tourism, field operations and other travel in Svalbard*. Governor of Svalbard. <https://www.sysseimesteren.no/siteassets/lover-og-forskrifter/regulations-relating-to-tourism-field-operations-and-other-travel-in-svalbard.pdf>
- Grünberg, I., Groenke, B., Jentzsch, K., Westermann, S., & Boike, J. (2021, November). Rapid climate change drives soil temperature warming and permafrost thaw on Svalbard.
- Guarino, M.-V., Sime, L. C., Schröder, D., Malmierca-Vallet, I., Rosenblum, E., Ringer, M., Ridley, J., Feltham, D., Bitz, C., & Steig, E. J. (2020). Sea-ice-free Arctic during the Last Interglacial supports fast future loss. *Nature Climate Change*, *10*(10), 928–932.
- Hanssen-Bauer, I., Førland, E. J., Hisdal, H., Mayer, S., Sandø, A. B., & Sorteberg, A. (2019). Climate in Svalbard 2100. *A knowledge base for climate adaptation*.
- Hovelsrud, G. K., Kaltenborn, B. P., & Olsen, J. (2020). Svalbard in transition: adaptation to cross-scale changes in Longyearbyen. *Polar Journal*, *10*(2), 420–442. <https://doi.org/10.1080/2154896X.2020.1819016>
- Hovelsrud, G. K., Olsen, J., Nilsson, A. E., Kaltenborn, B., & Lebel, J. (2023a). Managing Svalbard Tourism: Inconsistencies and Conflicts of Interest. *Arctic Review on Law and Politics*, *14*, 86–106. <https://doi.org/10.23865/arctic.v14.5113>
- Hovelsrud, G. K., Olsen, J., Nilsson, A. E., Kaltenborn, B., & Lebel, J. (2023b). Managing Svalbard Tourism: Inconsistencies and Conflicts of Interest. *Arctic Review on Law and Politics*, *14*, 86–106. <https://doi.org/10.23865/arctic.v14.5113>
- Hovelsrud, G. K., Veland, S., Kaltenborn, B., Olsen, J., & Dannevig, H. (2021). Sustainable tourism in Svalbard: Balancing economic growth, sustainability, and environmental governance. In *Polar Record*. Cambridge University Press, 57(3). <https://doi.org/10.1017/S0032247421000668>
- Hung, K., Wang, S., Guillet, B. D., & Liu, Z. (2019). An overview of cruise tourism research through comparison of cruise studies published in English and Chinese. *International Journal of Hospitality Management*, *77*, 207–216.
- Innovation Norway (2023). *Visit Norway*. Visit Norway. <https://www.visitnorway.com/>

- IPCC. (2022). Annex I: Glossary. In *Global Warming of 1.5°C* (541–562). Cambridge University Press. <https://doi.org/10.1017/9781009157940.008>.
- IPCC. (2023). Summary for Policymakers. *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. doi: 10.59327/IPCC/AR6-9789291691647.001
- James, L., Olsen, L. S., & Karlsdóttir, A. (2020). Sustainability and cruise tourism in the arctic: stakeholder perspectives from Ísafjörður, Iceland and Qaqortoq, Greenland. *Journal of Sustainable Tourism*, 28(9), 1425–1441. <https://doi.org/10.1080/09669582.2020.1745213>
- Kaltenborn, B. P., Østreg, W., & Hovelsrud, G. K. (2020). Change will be the constant—future environmental policy and governance challenges in Svalbard. *Polar Geography*, 43(1), 25–45. <https://doi.org/10.1080/1088937X.2019.1679269>
- Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- Laliberté, F., Howell, S. E. L., & Kushner, P. J. (2016). Regional variability of a projected sea ice-free Arctic during the summer months. *Geophysical Research Letters*, 43(1), 256–263.
- Laplume, A. O., Sonpar, K., & Litz, R. A. (2008). Stakeholder theory: Reviewing a theory that moves us. *Journal of Management*, 34(6), 1152–1189.
- Legard, R., Keegan, J., & Ward, K. (2003). In-depth interviews. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, 6(1), 138–169.
- Lemos, M. C., & Agrawal, A. (2006). Environmental governance. *Annu. Rev. Environ. Resour.*, 31, 297–325.
- Lin, L. Y., Tsai, C. C., & Lee, J. Y. (2022). A Study on the Trends of the Global Cruise Tourism Industry, Sustainable Development, and the Impacts of the COVID-19 Pandemic. *Sustainability (Switzerland)*, 14(11). <https://doi.org/10.3390/su14116890>
- Maxwell, J. A. (2008). *Designing a qualitative study* (Vol. 2). The SAGE handbook of applied social research methods.
- Meyer, A. (2022). Physical and feasible: Climate change adaptation in Longyearbyen, Svalbard. *Polar Record*, 58(2). <https://doi.org/10.1017/S0032247422000079>
- Middleton, A. (2023). Norwegian and Russian settlements on Svalbard: An analysis of demographic and socio-economic trends. *Polar Record*, 59(3). <https://doi.org/10.1017/S0032247423000050>

- Miner, K. R., Turetsky, M. R., Malina, E., Bartsch, A., Tamminen, J., McGuire, A. D., Fix, A., Sweeney, C., Elder, C. D., & Miller, C. E. (2022). Permafrost carbon emissions in a changing Arctic. *Nature Reviews Earth & Environment*, 3(1), 55–67.
- Ministry of Climate and Environment. (2001). *Svalbard Environmental Protection Act*. Government of Norway.
<https://www.regjeringen.no/en/dokumenter/svalbard-environmental-protection-act/id173945/>
- Ministry of Justice and Public Security. (2016). *White Paper 32 (2015-2016)*. Government of Norway
<https://www.regjeringen.no/contentassets/379f96b0ed574503b47765f0a15622ce/engb/pdfs/stm201520160032000engpdfs.pdf>
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, 22(4), 853–886.
- MOSJ. (2023, June 6). *Cruise tourism*. Environmental Monitoring of Svalbard and Jan Mayen. <https://mosj.no/en/indikator/influence/traffic/cruise-tourism/>
- NASA. (2023). *Arctic Sea Ice News and Analysis*. National Snow and Ice Data Center. <https://nsidc.org/arcticseaicenews/>
- Neuman, L. W. (2014). *Social research methods, 7/E* (Seventh Edition). Pearson Education India.
- NOAA. (2022, December 13). *2022 Arctic Report Card: image highlights*. National Oceanic and Atmospheric Administration.
<https://www.climate.gov/news-features/features/2022-arctic-report-card-image-highlights>
- Norwegian Environment Directorate. (n.d.). *The National Parks in Svalbard*. Norwegian National Parks. Retrieved July 30, 2023.
<https://www.norgesnasjonalparker.no/en/nationalparks/svalbard/>
- Norwegian Environment Directorate. (2021, September 3). *Hearings Proposal for changes to the Svalbard Environment Act and associated regulations*.
<https://www.miljodirektoratet.no/hoeringer/2021/september-2021/forslag-til-endringer-i-svalbardmiljolooven-og-tilhorende-forskrifter/>
- Norwegian Environmental Agency. (2021, March 9). Proposed changes to the regulations in Svalbard. Norwegian Environmental Agency.
<https://www.environmentagency.no/news/2021/proposed-changes-to-the-environmental-regulations-in-svalbard/>
- Olsen, J., Hovelsrud, G. K., & Kaltenborn, B. P. (2020). Increasing shipping in the Arctic and local communities' engagement: A case from Longyearbyen on Svalbard. *Arctic*

marine sustainability: arctic maritime businesses and the resilience of the marine environment, 305-331.

- Olsen, J., Nenasheva, M., Wigger, K. A., Pashkevich, A., Bickford, S. H., & Maksimova, T. (2020a). Marine Tourism Development in the Arkhangelsk Region, Russian Arctic: Stakeholder's Perspectives. *Arctic Marine Sustainability: Arctic Maritime Businesses and the Resilience of the Marine Environment*, 365–389.
- Olsen, J., Nenasheva, M., Wigger, K. A., Pashkevich, A., Bickford, S. H., & Maksimova, T. (2020b). Marine Tourism Development in the Arkhangelsk Region, Russian Arctic: Stakeholder's Perspectives. *Arctic marine sustainability: arctic maritime businesses and the resilience of the marine environment*, 365-389. https://doi.org/10.1007/978-3-030-28404-6_17
- Overland, J., Dunlea, E., Box, J. E., Corell, R., Forsius, M., Kattsov, V., Olsen, M. S., Pawlak, J., Reiersen, L.O., & Wang, M. (2019). The urgency of Arctic change. In *Polar Science*, 21, 6-13. Elsevier B.V. <https://doi.org/10.1016/j.polar.2018.11.008>
- Paavola, J. (2007). Institutions and environmental governance: A reconceptualization. *Ecological Economics*, 63(1), 93–103.
- Papathanassis, A. (2020). The growth and development of the cruise sector: a perspective article. In *Tourism Review* (Vol. 75, Issue 1, pp. 130–135). Emerald Group Holdings Ltd. <https://doi.org/10.1108/TR-02-2019-0037>
- Partelow, S., Schlüter, A., Armitage, D., Bavinck, M., Carlisle, K., Gruby, R. L., Hornidge, A.-K., Le Tissier, M., Pittman, J., & Song, A. M. (2020). *Environmental governance theories: a review and application to coastal systems*.
- Pashkevich, A. (2014). *Arctic tourism: realities & possibilities*.
- Pass, J. E. (2018, March). Development in the Arctic. *The Circle*, 1–24. www.grida.no/resources/1151
- Peručić, D. (2020). Analysis of the world cruise industry. *DIEM: Dubrovnik International Economic Meeting*, 5(1), 89–100.
- Phillips, R. A. (2011). *[Introduction to] Stakeholder Theory: Impact and Prospects*. Edward Elgar Publishing.
- Port of Longyearbyen. (2023, March). *Statistics Port of Longyearbyen 2007 and 2015-2022*. <https://portlongyear.no/>
- Previdi, M., Smith, K. L., & Polvani, L. M. (2021). Arctic amplification of climate change: a review of underlying mechanisms. *Environmental Research Letters*, 16(9), 093003.
- Rantanen, M., Karpechko, A. Y., Lipponen, A., Nordling, K., Hyvärinen, O., Ruosteenoja, K., Vihma, T., & Laaksonen, A. (2022). The Arctic has warmed nearly four times faster than the globe since 1979. *Communications Earth and Environment*, 3(1). <https://doi.org/10.1038/s43247-022-00498-3>

- Rasoolimanesh, S. M., & Jaafar, M. (2017). Sustainable tourism development and residents' perceptions in World Heritage Site destinations. *Asia Pacific Journal of Tourism Research*, 22(1), 34–48.
- Ren, C., James, L., Pashkevich, A., & Hoarau-Heemstra, H. (2021). Cruise trouble. A practice-based approach to studying Arctic cruise tourism. *Tourism Management Perspectives*, 40, 100901.
- Saville, S. M. (2019a). Tourists and researcher identities: critical considerations of collisions, collaborations and confluences in Svalbard. *Journal of Sustainable Tourism*, 27(4), 573–589.
- Saville, S. M. (2019b). Tourists and researcher identities: critical considerations of collisions, collaborations and confluences in Svalbard. *Journal of Sustainable Tourism*, 27(4), 573–589. <https://doi.org/10.1080/09669582.2018.1435670>
- Saville, S. M. (2022). Valuing time: Tourism transitions in Svalbard. *Polar Record*, 58(15). <https://doi.org/10.1017/S0032247422000055>
- Smieszek, M., Young, O. R., Hoel, A. H., & Singh, K. (2021a). The state and challenges of Arctic governance in an era of transformation. *One Earth*, 4(12), 1665–1670.
- Smieszek, M., Young, O. R., Hoel, A. H., & Singh, K. (2021b). The state and challenges of Arctic governance in an era of transformation. *One Earth*, 4(12), 1665–1670. <https://doi.org/https://doi.org/10.1016/j.oneear.2021.11.014>
- Sokolickova, Z., Meyer, A., & Vlachov, A. V. (2022). Changing Svalbard: Tracing interrelated socio-economic and environmental change in remote Arctic settlements. *Polar Record*, 58(240). <https://doi.org/10.1017/S0032247422000213>
- Stephen, K. (2018). Societal Impacts of a Rapidly Changing Arctic. In *Current Climate Change Reports* (Vol. 4, Issue 3, pp. 223–237). Springer. <https://doi.org/10.1007/s40641-018-0106-1>
- Timoshenko, D. S. (2020). Sustainable Tourism Development in the Russian Arctic: Challenges and Prospects. *IOP Conference Series: Earth and Environmental Science*, 539(1). <https://doi.org/10.1088/1755-1315/539/1/012097>
- Tunnsjø, Ø. (2020). The Great Hype: False Visions of Conflict and Opportunity in the Arctic. *Survival*, 62(5), 139–156. <https://doi.org/10.1080/00396338.2020.1819649>
- United Nations. (1992). *United Nations Framework Convention on Climate Change* <https://unfccc.int/resource/docs/convkp/conveng.pdf>
- UNWTO. (n.d.). *Sustainable Development*. Retrieved September 16, 2023. <https://www.unwto.org/sustainable-development>

- Urbański, J. A., & Litwicka, D. (2022). The decline of Svalbard land-fast sea ice extent as a result of climate change. *Oceanologia*, 64(3), 535–545. <https://doi.org/https://doi.org/10.1016/j.oceano.2022.03.008>
- Van Bets, L. K. J., Lamers, M. A. J., & van Tatenhove, J. P. M. (2017). Collective self-governance in a marine community: expedition cruise tourism at Svalbard. *Journal of Sustainable Tourism*, 25(11), 1583–1599. <https://doi.org/10.1080/09669582.2017.1291653>
- Visit Svalbard (2023). *Boat trips*. Visit Svalbard. <https://en.visitsvalbard.com/things-to-do/activities/boat-trips>
- Walsh, J. E. B. S., McAfee, S. A., Lader, R., Serreze, M. C., & Ballinger, T. J. (2022). *Arctic Report Card: Update for 2022*. National Oceanic and Atmospheric Administration. <https://www.arctic.noaa.gov/Report-Card/Report-Card-2022/ArtMID/8054/ArticleID/993/Precipitation>
- Wang, M., & Overland, J. E. (2015). Projected future duration of the sea-ice-free season in the Alaskan Arctic. *Progress in Oceanography*, 136, 50–59.
- Wicks, A. C. (2009). *Business ethics: A managerial approach*.
- Yoshida, F. (2012). *The Theory of Environment Governance*. Hokkaido University.
- Young, O. R., & Kim, J. D. (2021). Next steps in Arctic Ocean Governance Meeting the challenge of coordinating a dynamic regime complex. *Marine Policy*, 133, 104726. <https://doi.org/10.1016/J.MARPOL.2021.104726>

Appendix A: Ethics Certification



Research ethics training and clearance

University Centre of the Westfjords

Suðurgata 12

400 Ísafjörður, Iceland

+354 450 3040

info@uw.is

This letter certifies that **Carol Lopez** has completed the following training modules of:

- (X) Basic ethics in research
- (X) Human subjects research
- (X) Animal subjects research

Furthermore, the Masters Program Committee has determined that the proposed master's research entitled *Cruise tourism stakeholders' perception of the new proposed environmental regulation in Svalbard, Norway* meets the ethics and research integrity standards of the University Centre of the Westfjords. Throughout the course of their research, the student has the continued responsibility to adhere to basic ethical principles for the responsible conduct of research and discipline-specific professional standards.

University Centre of the Westfjords ethics training certification and research ethics clearance is valid for one year past the date of issue unless otherwise noted.

Effective Date: 21 March 2023

Expiration Date: 30 June 2024

Reference number: 2023-157-03

Prior to making substantive changes to the scope of research, research tools, or methods, the student is required to contact the Master's Program Committee to determine whether or not additional review is required.

Appendix B: Invitation Letter

Perception of the new proposed environmental regulation in Svalbard, Norway: a viewpoint from marine tourism operators.

Dear _____,

I wish to invite you to participate in my master's thesis research project about how marine tourism operators perceive the new proposed environmental regulation in Svalbard, Norway. The aim of the research is to further explore the impact of the new environmental regulation on the marine tourism industry. The benefit for the participant is that the information collected in this research could provide an overall assessment of the effect of these new rules on marine tourism operators. My aim is to interview approximately 10 marine tourism operators in Longyearbyen.

What would your participation implicate?

- Your presence (in person, online or by telephone) will be required between 45 to 60 minutes at a time suitable for you.
- You will be invited to answer interview questions in a semi-structured way, which means I will ask a set of questions, nonetheless, allowing the flexibility to discuss other issues that may occur during the conversation.
- The proposed interview period is between April 24 to May 18, 2023.

I wish to inform you that notes and audio records of the interview will be taken to collect the information accurately. If you feel uncomfortable and prefer not to be recorded, I can refrain from doing so. Both participation and recording are on a voluntary basis, and you can withdraw your consent if you wish to without notice. Prior to the interview, I will require your signature on a consent form which emphasizes your rights. It is understood that all information collected will be anonymous and all data will be stored confidentially on a

private computer using a password. The data collected will only be used for the purpose of this thesis and the University Centre of the Westfjords, Iceland, oversees this project. Furthermore, my master's thesis meets the ethics and research integrity standards of the University Centre of the Westfjords in Iceland.

Please let me know your availability to participate in the interview and which date and time would be convenient for you.

Looking forward to hearing from you.

Sincerely,

A handwritten signature in cursive script that reads "Carol Lopez".

Carol Lopez

Master candidate in Coastal and Marine Management

University Centre of the Westfjords, Iceland

+371 22 42 72 54 | carol22@uw.is

Appendix C: Informed Consent Protocol

Perception of the new proposed environmental regulation in Svalbard, Norway: a viewpoint from marine tourism operators.

Master's thesis research project

I wish to invite you to participate research project about how marine tourism operators perceive the new proposed environmental regulation in Svalbard, Norway. The research aims to further explore the impact of the new environmental regulation on the marine tourism industry. The benefit for the participant is that the information collected in this research could provide an overall assessment of the effect of these new rules on the marine tourism industry. Approximately 10 marine tour operators in Svalbard will be interviewed. Your presence (online) will be required between 45 to 60 minutes at a time suitable for you.

I would like to take notes and audio records of the interview, to help me collect the information accurately. If you feel uncomfortable and prefer not to be recorded, I can refrain from doing so. Both participation and recording are on a voluntary basis, and you can withdraw your consent if you wish to without notice. It is understood that all information collected will be anonymous and all data will be stored confidentially on a private computer using a password. The data collected will only be used for this thesis and the University Centre of the Westfjords, Iceland, oversees this project. Furthermore, my master's thesis meets the ethics and research integrity standards of the University Centre of the Westfjords in Iceland.

If you have any additional inquiries about this research project, do not hesitate to contact us.

Warm Regards,

Student

Carol Lopez

carol22@uw.is

Advisor

Julia Olsen

julia.olsen@nord.no

I was given information about this research project and understood what my participation implies. I give consent to participate in this interview.

(Participant signature)

(Date)

(Print name)

(Company/Organization)

Appendix D: Interview Guide

Perception of the new proposed environmental regulation in Svalbard, Norway: a viewpoint from marine tourism operators.

Introduction and presentation

I am studying in the Coastal and Marine Management master's program at Iceland's University Centre of the Westfjords. The aim of the research is to explore further the perception of the new environmental regulation on marine tourism operators. I will do this through approximately ten in-depth interviews with marine tour operators in Svalbard.

The consent form should be sent by email and be signed prior to the interview. I will inform the interviewee that this interview is voluntary, that they can stop at any moment if they wish, and that anonymity will be provided. I will ask for authorisation to record the interview and mention that they are free to ask me to erase it if they wish.

1. Background

- a) How long have you lived and worked in Svalbard?
- b) Please describe what is your role in the marine tourism industry.
- c) Have you noticed any changes in the environment lately?
- d) How does that affect your industry?

2. Current environmental regulation

- a) Can you describe the present environmental regulation in Svalbard? And what implication they have for your company. For example, planning activities, reporting practices, etc.
- b) What challenges may these regulations pose for your company or marine tourism in general?

3. Perception of the new proposed regulation

- a) How do you feel about these new measures?
- b) What are the strengths and weaknesses of this new proposal?
- c) Where do you think is the pressure to change the rules coming from?
- d) Have you participated in any discussions, meetings, or written feedback?
- e) Do you feel that your opinion was heard?
- f) What difficulties do you expect will arise in the operations of your industry?
- g) Do you believe an impact assessment should be carried out before this new proposition is adopted by the Norwegian government?

4. Future

- a) How do you foresee the future of your marine tourism industry?
- b) How do you think other companies will receive or adjust to the new regulation?
- c) Would you like to add any other information or comment we haven't discussed?
- d) Would it be possible to contact you for clarification, if necessary?

Appendix E: New Environmental Regulation

Main Norwegian Environment Agency recommendations after the hearing:

Disembarking in a protected area: The disembarkation of tourist businesses is proposed to be regulated in the protected area on Svalbard so that disembarkation here can take place in 43 mapped areas in connection with tourist activities. The hearing motion will be maintained, and a disembarking area will be added on Sjuøyane based on responses from the hearing.

Polar bears: A proposal has been made to ban seeking out polar bears and a requirement of a 500-meter distance to polar bears. The Norwegian Environment Agency recommends that the proposal be maintained and that a ban on unnecessary disturbance of polar bears is specified.

Walrus: A ban on motor traffic in the sea closer than 300 meters from a walrus roost was proposed. The Norwegian Environment Agency recommends a new and reduced distance limit of 150 meters from the roost and a maximum speed limit of 5 knots 300 meters from the roost.

Passenger delimitation in protected areas: It is proposed that ships sailing in protected areas may have a maximum of 200 passengers on board. The Norwegian Environment Agency recommends that the proposal be maintained.

Ice-breaking: In the hearing, a ban on breaking fast ice and ice that is about to settle was proposed. Following input from the hearings, the Norwegian Environment Agency recommends that the ban on icebreaking be limited to only apply to land-fast ice.

Motor traffic on sea ice: In the hearing, a ban on motor traffic on sea ice after 1 March on selected fjords for visitors and permanent residents was proposed, with several exceptions, e.g., to facilitate the need to get between areas and to cabins. The Norwegian Environment Agency recommends that the proposal be maintained.

Drones: In the hearing, a ban on the use of drones in protected areas and a ban on the use of drones at bird cliffs was proposed. The governor can grant permission for the use of drones, e.g., in connection with scientific investigations. These proposals are maintained.

Source: (Bye, 2023)



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