Master's thesis



Setting Course for Sustainability Evaluating Resident's Perspectives of Cruise Tourism in Ísafjörður, Iceland

Elizabeth Riendeau

Advisor: Anna Karlsdóttir, Ph.D.

University of Akureyri Faculty of Business and Science University Centre of the Westfjords Master of Resource Management: Coastal and Marine Management Ísafjörður, August 2023

Thesis Committee

Advisor: Anna Karlsdóttir, Ph.D.

External Reader: Patrick Maher, Ph.D.

Program Director: Brack Hale, Ph.D.

Elizabeth Riendeau Setting Course for Sustainability: Evaluating Resident's Perspectives of Cruise Tourism in Ísafjörður, Iceland

45 ECTS thesis submitted in partial fulfilment of a Master of Resource Management degree in Coastal and Marine Management at the University Centre of the Westfjords, Suðurgata 12, 400 Ísafjörður, Iceland

Degree accredited by the University of Akureyri, Faculty of Business and Science, Borgir, 600 Akureyri, Iceland

Copyright © 2023 Elizabeth Riendeau All rights reserved

Printing: Háskólaprent, Reykjavík, August 2023

Declaration

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



Elizabeth Riendeau

Abstract

The steep growth of cruise ship tourism worldwide has led to concerns about how destinations are able to cope with the increasing volume of tourists. Cruise tourism is associated with several social, and environmental impacts that can often call into question the industry's sustainability. This study focuses on Ísafjörður, a small town situated in the Westfjords of Iceland with a rapidly increasing cruise tourism influx. Following up on a previous study of the social sustainability of cruise calls to Ísafjörður from 2013 (O'Brien, 2014), this thesis explores changes in the perspective of residents towards cruise passengers over a decade. Since then, other studies were conducted on the topic, however, none were conducted utilizing a community survey, or considering post-COVID-19 tourism. I seek to identify how much cruise ship tourism is wanted by residents and their attitudes and tolerance of the industry. Furthermore, this thesis explores the perspectives of managing stakeholders and experts to understand how they might contrast with those of residents. A community survey was used to gauge the resident's tolerance, while interviews were conducted with five key stakeholders. Results show that the cruise industry in Ísafjörður has reached its carrying capacity, and residents are against further growth. However, support for the status quo was found to be more divided, with many residents found to be tolerant towards the current number of incoming tourists. Based on these findings, it is recommended to put in place a cap on cruise passenger numbers, while ensuring that new limitations are informed by local voices.

Útdráttur

Skörp aukning skemmtiferðaskipa þjónustu um allan heim hefur valdið áhyggjum um hvernig viðkomustaðir geti glímt við aukið magn ferðamanna. Skemmtiferðaskipa þjónusta tengist þó nokkrum félags, og umhverfisáhrifum sem geta oft vakið spurningar um sjálfbærni starfseminnar. Þessi rannsókn beinist að Ísafirði, litlum bæ á Vestfjörðum með hratt auknu innflæði á skemmtiferðaskipa þjónustu. Með eftirfylgni á fyrri rannsókn á félagslegri sjálfbærni skemmtiferðaskipa heimsókna til Ísafjarðar frá 2013 (O'Brien, 2014) kannar þessi lokaritgerð breytingar á viðhorfum íbúa gagnvart skemmtiferðaskipa farþegum í áratug. Síðan þá voru aðrar rannsóknir gerðar á þessu efni, en samt sem áður, engar fóru fram með notkun samfélagskönnunar, eða að teknu tilliti til eftir-COVID-19 ferðaþjónustu. Þessi lokaritgerð reynir að skilgreina hve mikla skemmtiferðaskipa þjónustu íbúar vilja og þeirra viðhorf og þolmörk gagnvart starfseminni. Enn fremur, kannar þessi lokaritgerð viðhorf ráðandi hagsmunaaðila og sérfræðinga til að skilja hvernig þau gætu verið andstæð viðhorfum íbúa. Samfélagskönnun var notuð til að mæla þol íbúans, á meðan viðtöl við fimm helstu hagsmunaaðila fóru fram. Niðurstöður sýna að skemmtiferðaskipa iðnaðurinn á Ísafirði hefur náð burðarmörkum, og íbúar eru á móti frekari aukningu. Engu að síður reyndist stuðningur við óbreytt ástand skiptari og margir íbúar reyndust umburðarlyndir gagnvart núverandi fjölda komuferðamanna. Byggt á þessum niðurstöðum, er mælt með að setja mörk á farþegafjölda skemmtiferðaskipa og tryggja um leið að nýjar takmarkanir séu tilkynntar af aðilum á staðnum •

Table of Contents

Abstract	v
Table of Contents	vii
List of Figures	ix
List of Tables	xi
Acknowledgements	xii
1. Introduction	1
1.1 Research questions and research aims	1
1.2 Structure of the Thesis	2
2. Background	5
2.1 Tourism	5
2.1.1 Impacts of Tourism on Host Communities	5
2.1.2 Sustainable Tourism	6
2.1.3 Overtourism	7
2.2 Managing Overtourism	9
2.2.1 Social Exchange Theory	9
2.2.2 Limits to Visitors	9
2.3 Tourism in Iceland	
2.4 Cruise Tourism	
2.4.1 Sustainability of Cruise Tourism	
2.4.2 Cruise Shipping Lines	14
2.4.3 Impact of Cruise Tourism on Host Communities	15
2.4.4 Itineraries and Connectivity to the Global Market	17
2.5 Focus area: Ísafjörður, Iceland	17
2.5.1 Northern Westfjords	17
2.5.2 Ísafjörður Cruise Tourism	
2.5.3 Carrying Capacity Literature	
3 Methods	

3.1 Survey Methods	
3.1.1 Survey-design	
3.1.2 Survey Justification, Distribution and Survey Response	
3.1.3 Method of Analysis	
3.1.4 Limitation of Survey	
3.2 Interview Methods	
3.2.1 Interview Theory and Justification	
3.2.2 Sampling and sample population	
3.2.3 Method of Analysis	
3.2.4 Limitations of Interviews	
3.3 Ethical Considerations	
4 Results	
4.1 Survey Results	
4.1.1 Demographics	
4.1.2 Residents Perspectives	
4.1.3 Growth and Future Perspectives	
4.2 Interview results	
4.2.1 Environmental	
4.2.2 Economic	
4.2.3 Infrastructural	
4.2.4 Social	51
4.2.5 Institutional	
4.2.6 Conclusion	
5 Discussion and Conclusion	
5.1 Residents' Perception	
5.2 Degrowth and Future	
5.3 Management and Recommendations	

5.3.1 Limiting Growth	69
5.3.2 Challenges to Degrowth	70
6. Future Research	73
References	75
Appendix A	83
Appendix B	
Appendix C	
Appendix D	96
Appendix E	97

List of Figures

Figure 1: Map of Iceland, Ísafjörður	18
Figure 2: Map of Ísafjarðarbær and Bolungarvíkurkaupstaður	19
Figure 3: Number of cruise passengers per year entering through the ports of Ísafjörður and predictions for 2023	20
Figure 4: The ports of Ísafjörður and Suðurtangi	21
Figure 5: Distribution of age and gender from the Ísafjarðarbær and Bolungarvík survey respondents	32
Figure 6: Residents' perspectives on social, development, economic and environmental indicators.	33
Figure 7: Survey response in percentage for four direct questions	35
Figure 8: Frequency distribution of the favourability index based on the answer to four direct questions about cruise tourism.	36
Figure 9: Survey response in percentage for three direct questions	39
Figure 10: Frequency distribution of the growth index based on the answer to three direct questions about cruise tourism.	39
Figure 11: Answer to the ideal number of cruise ship passengers in percentage (n=209)	42
 Figure 12: Direct answer to what should be the maximum number of passengers per day in percentage (Answered by people who said yes to a maximum number of passengers) (n=203). 	43
Figure 13: Cruise ship anchored in Skutulsfjörður by Ísafjörður (Photo by: Haukur Sigurdsson).	50

Figure 14: Ísafjörður town center during a day with 6,000 cruise passengers (Photo by:	
Haukur Sigurdsson)	65
Figure 15: Footpath in town during a busy cruise day. (Photo by: Carina Burroughs)	66
Figure 16: Cruise passengers in Ísafjörður. Some are attending a tour others are waiting	
at tender (Photo by: Carina Burroughs)	68

List of Tables

Table 1: Stakeholder's field of expertise	29
Table 2: Sample Demographic Characteristics	31
Table 3: Characteristics of the favourability index.	36
Table 4: Difference in attitude between groups based on favourability index scores of predictor variables.	38
Table 5: Characteristics of the growth index.	40
Table 6: Difference in attitude between groups based on growth index scores of predictor variables	41
Table 7: SWOT analysis	44

Acknowledgements

First and foremost, I extend my sincere appreciation to the participants in the study whose valuable insights and contributions have greatly enriched this research. I am profoundly grateful to my advisor, Anna. Her expertise and support have been invaluable in ensuring the quality of this work. I would also like to thank Byggðastofnun for the supporting the project financially. I extend my thanks to the dedicated staff at UW, especially to Matthias and Laura, for your guidance throught out this process. I would also like to thank Brynjar for his help in translating the survey. I also wish to acknowledge Áine and the rest of my Ísafjörður family, who have been a constant source of encouragement and motivation, I couldn't have done it without you.

1. Introduction

Cruise tourism has evolved in the last decade to become more accessible to people of various backgrounds. The industry which was primarily reserved for a rich clientele a few decades ago, is nowadays marketed toward a wider consumer demographic. Innovation has facilitated a great increase in vessel size, and with it a dramatic growth in cruise passenger numbers (Papathanassis, 2019). The growth of the cruise industry has in turn increased the number of destinations, and many coastal communities have embraced cruise tourism as a new source of income. However, relevant literature identifies negative impacts of cruise tourism that do not align with the principles of sustainable tourism. Loss of control of tourism development and management by local stakeholders to foreign corporations, and overcrowding of destinations (Cerveny, 2008; Johnson, 2002) are examples of negative impacts that may affect the well-being of host communities and therefore be unsustainable. These effects might be exacerbated in small communities because the relative impact is much bigger.

Ísafjörður is a small community in the northern Westfjords of Iceland, with increasing numbers of cruise ships coming every year. Within the last 20 years, record numbers of cruise ships dock in the town to enjoy the scenery and culture the region has to offer. These numbers dropped significantly over the course of the COVID-19 pandemic (2020-21). The Ísafjörður cruise tourism industry have otherwise seen consistent growth (Cruise Iceland, 2023). This thesis takes place as a follow-up to a previous master's thesis: "Sustainable cruise ship tourism: a carrying capacity study for Ísafjörður, Iceland" (O'Brien, 2014). The cruise tourism industry has seen major growth in the number of ships and passengers since 2014. Yet no survey has been conducted since to examine local residents' attitudes towards cruise tourism in the town. This thesis therefore contributes with a follow-up of previous research that enables to detect changes over a decade in the perception of local population to cruise tourism development.

1.1 Research questions and research aims

This thesis surveyed local residents to examine their attitudes and opinions towards cruise tourism and get a better understanding of stakeholders' perspectives on the current management, as well as the direction of industry growth in Ísafjörður according to managing stakeholders. In doing so, this thesis aims to see if the management efforts are in harmony with the residents' tolerance towards the cruise tourism industry.

My thesis aims to answer the following research questions:

- How do residents perceive cruise tourism in Ísafjörður and surrounding communities?
- How much cruise tourism activity is wanted residents of Ísafjörður and surrounding communities?
- How do key stakeholders consider the future of the cruise industry in Ísafjörður?

In order to meet these research questions, this thesis aims to accomplish the following:

- To explore the effects of cruise tourism development on the economy, environment, culture, and society in Ísafjörður and surrounding communities
- To identify residents' perceptions of local cruise tourism
- To identify residents' attitudes toward growth
- To understand how residents attitudes compare to 2014 levels.
- To understand local values, needs, assets, and limitations in order to best manage the cruise tourism industry
- To understand the perspectives of key stakeholders on the management of the cruise industry and to understand the direction in which the industry is moving.

1.2 Structure of the thesis

The subsequent text encompasses an overview of the thesis content and provides a summary of the organization of the content. Chapter Two provides background of the topic, presented as a detailed review of relevant literature. It introduces key themes and concepts like sustainable tourism, overtourism and carrying capacity and provides an overview of some important characteristics of the cruise tourism industry with a focus area: Ísafjörður and surrounding communities. Chapter Three outlines the employed mixed methodologies – survey and interviews – and details the process of carrying them out. Chapter Four presents the outcomes of both the quantitative survey and qualitative interviews. Continuing from this, chapter Five interprets the results to gain insights into residents' perspectives and attitudes on cruise tourism and the potential for growth – or degrowth. Subsequently, this chapter addresses management recommendations. Chapter Six encapsulates a concise synthesis of the results and discussions,

summarized into a coherent conclusion. Furthermore, suggestions for future research directions are presented.

2. Background

2.1 Tourism

2.1.1 Impacts of Tourism on Host Communities

Tourism brings a range of negative and positive impacts, which, transforms the communities it hosts. The economic benefits are usually cited as the primary reason why tourism is desired in a community (Archer et al., 2005). The increase of customers for existing businesses, as well as the creation of new businesses, brings about a desired increase in employment, and stimulates the local economy (Archer et al., 2005). Tourism brings employment and income to more remote or less developed regions of a country, where it might not be as attractive for other industries. As tourism increases, businesses open to respond to the increased demand brought about by tourism. This new infrastructure is then available for residents of the community—a very valuable resource in small or remote communities where infrastructure is limited. A substantial body of literature lists the socio-cultural impacts of tourism (Ramos et al., 2016). Through these efforts, destinations can recognize the economic value of their cultural heritage and there is an increased incentive to invest in their protection (Ramos et al., 2005).

Although the benefits of tourism can be substantial, there are usually tradeoffs. Negative impacts may include environmental degradation, resulting from: increased energy consumption, waste generation, and pollution, which can pose a significant challenge to the destination community (Fridriksson et al., 2020; Van Bets et al., 2017; Archer, 2012). The presence of tourists can strain natural resources and might bring cause a loss of biodiversity, often through the construction of infrastructure to increase the capacity of the town to receive visitors (Fridriksson et al., 2020; Archer, 2012). The presence of large numbers of visitors can also threaten fragile ecosystems and undermine their resilience (Archer, 2012).

Furthermore, socio-cultural impacts on host communities have been observed. The presence of the tourism industry can lead to the commodification of local culture, loss of traditional practices, and the erosion of authentic cultural identities as destinations cater more to the preferences and demands of tourists (Rothman, 1998). George and Reid (2005) highlight the

mummification of past culture, and by association, the disconnection from modern culture, which can keep communities from organically evolving through change and innovation (Ramos et al., 2016). Another phenomenon can be observed in tourist destinations: the commodification of culture, which happens when the character of places changes to cater to tourist's expectations. As the destination changes to cater to tourism, the destination then loses its authenticity (Maousavi et al., 2016).

Another economic fallback of tourism is the exacerbation of inequalities through the concentration of wealth in tourism corporations. This may leave residents with lower-paying jobs, or even concentrate the benefits of tourism in the hands of the few, while the community as a whole suffers the consequences of increased tourism (Archer, 2012).

2.1.2 Sustainable Tourism

Sustainability was originally defined by the Brundtland report as: the fulfilment "of the needs of current generations without compromising the needs of future generations while ensuring a balance between economic growth, environmental care, and social well-being" (Brundtland, 1987). As an industry, tourism is resource intensive, and therefore sustainability needs to be accounted for in its management (Hollenhorst et al., 2014; Janusz and Bajdor, 2013; Lu and Nepal, 2009). Sustainable tourism strives to enhance the welfare of communities by increasing economic opportunities, and preserving the natural resources and cultural heritage of the local community, as well as improving the quality of life (McCool and Lime, 2001).

However, this definition of sustainability in the context of tourism is contested and has many critiques. The Brundtland definition of sustainability is disputed in the scientific community. Numerous approaches are currently used by researchers, policy-makers, and other stakeholders, resulting in numerous interpretations of the concept (MacKenzie and Gannon, 2019; Mika, 2015). Multiple approaches to conceptualizing sustainable tourism have been identified, including the community-based approach. The community-based approach focuses on local communities and their stakeholders, such that local perceptions of acceptability determine sustainability. This approach tends to empower local communities and give them control over the management of local tourism development (McCool et al., 2013; Saarinen, 2014).

The movement for responsible tourism emerged from the idea of sustainable tourism. The same concerns are shared between the two movements, with the distinction that responsible tourism is grounded in ethics and human rights. The first International Conference on Responsible Tourism in Destinations (RTD) concluded with the Capetown Declaration, which defined responsible tourism. One of the critical factors proposed was: "Involving local people in decisions that affect their lives and life chances" (Klein, 2011, p.2). Therefore it is a key to be attentive to the atmosphere and toleration levels among the local population exposed to increasing tourism influx

Cruise tourism literature has proven less comprehensive than studies on general tourism, but among the impacts that place-based studies on cruise tourism can identify are environmental issues: wastewater treatment, air emissions from fuel, solid waste management, the destruction of natural habitats, and the disturbance of wildlife (Klein, 2017). Other impacts of cruise tourism include socio-cultural issues, such as overcrowding, competition for resources, homogenization of the port experience, and sociocultural authenticity (Klein, 2017). Past research comments on the uneven profitability between local merchants, tour providers, and cruise companies that are often reported (Huijbens, 2015; Papathanassis, 2020).

2.1.3 Overtourism

Overtourism refers to the excessive and unsustainable influx of tourists to a destination, resulting in adverse social, cultural, economic, and environmental impacts. It is formally defined as "the excessive growth of visitors leading to overcrowding in areas where residents suffer the consequences of temporary and seasonal tourism peaks, which have caused permanent changes to their lifestyles, denied access to amenities and damaged their general well-being" (Milano et al., 2019, p.1). Overtourism emerged as a critical issue in the field of tourism, and challenges the traditional notions of tourism's benefits, necessitating re-evaluating tourism planning and management practices to achieve sustainable and responsible tourism development (Koens et al., 2018).

Dodds and Butler (2019) highlights that the term overtourism was first coined by marketing and public relations firms and defines an issue that has long been described in the literature. Due to the increased accessibility of travelling, overtourism has become a much more prevalent issue globally. The popularization of destinations through social media, and more generally the internet, has allowed users to become aware of many tourist destinations and ways to reach them (Dodds and Butler, 2019). Experts also suggest that the increase in tourism, leading to overtourism in many destinations, is often due to exogenous forces that these destinations have little control over. Dodds and Butler highlight that a central problem in tourism development is the "absence of willingness to control and manage growth in tourism by the public sector, at all scales from municipal to national, which has allowed the generally unlimited expansion of tourism throughout the world" (p.3).

Degradation of living conditions, as well as degradation of the environment, are cited as a primary issue of overtourism. Consequences include the increasing cost of living, the changes in the social fabric as tourism takes a more prominent place in the community, environmental pollution, rising crime rates, congestion in the streets, privacy issues, as well as changes in the character and culture of the town or neighbourhood (Koh, 2020). These issues affect different aspects of well-being, such as material, community, emotional, and safety well-being (Koh, 2020). Koh and Fakfare (Koh and Fakfare, 2020) stress the importance of local governments, as their policies and regulations will directly impact how the industry is managed and how it affects all involved stakeholders. This is specifically important to consider following the COVID-19 pandemic, which heavily impacted the global tourism sector. Following the pandemic, new framework conditions are being established (Fontanari and Traskevich, 2022).

Critics of the term overtourism include Koens, Postma and Papp (2018), who consider the term overused. Considering that overtourism has been used in academic research only in recent years, and originated from outside academia, the term has not been clearly defined and has only been used to describe any excessive negative tourism impacts. The authors highlight that overtourism cannot be used interchangeably with mass tourism. Mass tourism is defined by large groups of tourists visiting the same destination (Koens et al., 2018). Overtourism is based more on perceived tourist presence and tolerance, environmental changes, and infrastructure capacity. Therefore high amounts of tourism in an undeveloped tourist area or small town, not as well suited to cope with large numbers of tourists in a big city, or a destination designed to be more capable of absorbing high numbers of tourists without perceiving significant adverse impacts can be an example of mass tourism without overtourism (Koens et al., 2018).

Further shortcomings are identified by Helgadóttir (2019) who considers that the term overtourism changes the focus of the procedural aspects that are inherent to overtourism. Helgadóttir highlights that achieving social sustainability is the responsibility of policymakers, destination managers and tourism businesses, but the term overtourism transposes this responsibility to tourists.

2.2 Managing Overtourism

2.2.1 Social Exchange Theory

The nature of residents' attitudes toward tourism has often been explained or understood through concept and theories. The concept of the social exchange theory has been one of the most widely used theory to explain and understand support for tourism as well as positive perspective towards the industry (Nunkoo, 2016). The social exchange theory argues that people consider the economic, socio-cultural, and environmental costs and benefits of an exchange with tourists when determining its value. According to this theory, residents' attitudes are most positive when higher economic benefit is perceived (Andereck et al., 2005; McCaughey et al., 2018). Social exchange theory has been used to explain how and why resident's perspectives differ in many studies (Andereck, 2005).

2.2.2 Limits to Visitors

Carrying Capacity

Existing literature features multiple definitions of the term carrying capacity. The concept of carrying capacity originated in ecology, referring to the maximum population size an ecosystem can sustainably support (Pearce, 1989). Pearce (1989) defines carrying capacity in the context of tourism as the maximum number of people tolerated at a destination without saturating facilities, degrading the environment, or diminishing visitor enjoyment. As people not only exert pressure on the ecological system, the field expanded to include pressures on other systems, Swarbrooke (1997) further identifies different six types of tourism carrying capacities: they can be classified as physical, environmental, economic, infrastructural, sociocultural, and perceptual or psychological carrying capacity. Carrying capacity is multidimensional, and for the same destination, calculated carrying capacities can be different depending on the type of carrying capacity considered (Butler, 2020).

Saveriades (2000) defines the social carrying capacity, in the context of tourism, as the maximum number of tourists that can be present while still being tolerated by the host community and being enjoyable for tourists. The theoretical foundations of social carrying capacity in tourism encompass concepts such as resident attitudes, community satisfaction, social carrying capacity thresholds, and the balance between the needs of tourists and residents. However, literature has further argued that there is no systematic procedure to assess the concept of social carrying capacity and that there is no single widely accepted definition of the term (Saveriades, 2000; Mauerhofer, 2013). Zelenka and Kacetl (2014) further point out that carrying capacity is not solely based on the number of tourists but on other factors such as the distribution of the tourists, their activities and behaviours, the state of tourism infrastructure, and others.

While early research on social carrying capacity tended to connect more to the tourists' experiences and expectations, the field has evolved to focus on host communities and their satisfaction with the tourism industry. Saveriades (2000; Tokarchuk et al., 2021) highlight the dynamic nature of carrying capacity. The author points out that carrying capacity maps out possible limits that can change over time and be influenced by other factors, such as managerial techniques. The evolving nature of the field is why constant monitoring is essential. Monitoring allows managers to track changing limits and adapt accordingly (Zelenka and Kacetl, 2014). Furthermore, while carrying capacity is multi-faceted, the different dimensions of carrying capacity are interlinked and are often closely related. For example, Mauerhofer (2008) discussed the interrelations between social and environmental carrying capacity through the example of protected areas that have seen social carrying capacity is attained before the environmental carrying capacity.

There is a gap in the literature regarding the carrying capacity relating the intersection between cruise carrying capacity and social carrying capacity (Stefanidaki and Lekakou, 2014). Stefanidaki and Lekakou (2014) identified residents perception as a core factor in the determination of a cruise carrying capacity.

Tourism Area Life Cycle

TALC is a framework used to describe the evolution of a tourist destination over time. The model was first developed by Richard Butler in 1980 and has been used extensively in the tourism industry to understand the various stages of a destination's development and develop strategies for sustainable tourism development.

The model developed by Butler (1980) is characterized by an S-shaped curve where tourism arrivals and tourist growth rate change over time as the destination evolves. The stagnation point corresponds to the late development stage and is the point where the carrying capacity limit is reached. When the limits of carrying capacity are exceeded, the negative impacts are considered greater than the positive ones (Dedrich et al., 2008).

The TALC model was recently used to inform destination management research in Antarctica which assumed that in protected areas, the implementation of limits on tourism might affect the TALC model, rendering an incomplete TALC model cycle (Kruczek et al., 2017; Weaver and Lawton, 2007). Papathanassis and Bunda (2016) questioned the use of the TALC model in cruise destination, as these destinations provide more complex analytical frameworks that are not necessarily addressed by the model. The authors argued that the application of the TALC model was challenging at larger scales, such as at a destination or port scale. The authors further argue that it is an insufficient framework for these larger scales (Papathanassis and Bunda, 2016).

Limits of Acceptable Change Framework

The Limits of Acceptable Change (LAC) framework is a planning and management tool commonly used in natural resource management. The LAC framework is designed to help managers identify and evaluate the acceptable limits of change for various aspects of the natural environment, including social, ecological, and economic factors (Stankey et al., 1985). The framework is based on the concept that there are limits to the amount and type of change that can occur within a given area, and that exceeding these limits can have negative impacts on the environment and society (Stankey et al., 1985). The LAC framework is based on the premise that managing resources requires the establishment of clear goals and objectives that should be evaluated in the context of environmental, social, and economic factors (Stankey et al., 1985; McCool, 1994; McCool, 1995). The LAC framework explicitly incorporates multiple

stakeholders and perspectives into the planning process. By involving stakeholders in identifying key resources and values and setting the acceptable limits of change, the LAC framework can help build consensus and support around management actions. Additionally, using thresholds to evaluate the acceptability of impacts can provide a clear basis for decision-making (Stankey et al., 1985).

The LAC framework is a more nuanced approach to carrying capacity, focusing not on numbers but on tourism's perceived benefits and disadvantages. Therefore, this approach assumes that the capacity can differ through time by enlarging the physical capacity. Enlargement of physical capacity can be done by acquiring more infrastructure for tourists, such as toilets and bins. This is especially true for limited infrastructures that can cause more significant issues, such as littering where there is a lack of bins. Increasing financial gains through the stimulation of entrepreneurship can also be a way to increase the carrying capacity of a town so that more people experience the benefits of tourism. This framework implies that the limit of acceptable change in a destination is dynamic, and the tolerance of host communities changes through time, and can be influenced by management (Koens et al., 2018).

There is a gap in research on the application of the LAC framework in cruise tourism destinations. However, this study aims to use the LAC framework to contextualize this research in the management process of cruise tourism at the study area. The LAC framework will be used to determine the issues and concerns shared by residents of Ísafjörður and surrounding communities regarding cruise tourism. The methods employed in this study help toward creating a baseline against which change can be measured and compared. This will culminate into management recommendations that were informed by this baseline study.

2.3 Tourism in Iceland

Tourism in Iceland developed later than other destinations in Europe due to its geographical isolation. Historically, very few travellers came to the island due in part to the difficulty of travel between Europe and Iceland, but also within Iceland. Tourism in Iceland has been increasing since the 1950s at a rate of about 10% per year (Sæþórsdóttir et al., 2020b). Since 2010 these figures experienced a sharp increase in with an average annual increase of around 22% between 2010 and 2018 (Sæþórsdóttir et al., 2020b). The year 2016 marked a peak with a 39% increase in tourism compared to the previous year (Icelandic Tourist Board, 2023a). 2019

marked a decrease in arrivals of 14.1% compared to the previous year, the first decline since 2010 (Icelandic Tourist Board, 2023b). The COVID-19 pandemic drastically decreased tourist numbers for 2020 and 2021. While the numbers increased in 2022, the effects of the pandemic were still felt, as numbers did not reach the pre-pandemic levels. The year 2023 is projected to return to pre-pandemic levels based on a 98% increase in revenue from foreign tourists in the first quarter of 2023 compared to the same period in 2022 (Statistics Iceland, 2023). Estimations by Isavia, the national airport and air navigation service provider in Iceland, also expect 2023 to have a higher number of tourists coming to Iceland through the Keflavik International Airport, the main point of entry to the country, than in 2019 (Isavia, 2022).

The discourse around overtourism in Iceland has been part of academic and public discussion, especially through the media, for the last few years. The high visitation levels in Iceland are reflected by its place as the 13th country with the highest resident-to-tourist ratio (WorldBank, 2020). The growth rate of tourism in Iceland is at the centre of discussions around overtourism, as many consider such rates to be unsustainable for the country. Sæthórsdóttir et al. (2020) identified discrepancies between the media's portrayal of tourism and the discourse around overtourism in Iceland. She found that in Iceland the media's representation of overtourism only reports partial information, ignoring many studies showing support of Icelanders for continued international tourism (Sæthórsdóttir et al., 2020). However, the authors also reported many occurrences of overtourism at the national level in Iceland: through tourists' experiences, residents' attitudes at the more popular destinations, and infrastructure (2020). The uneven distribution of visitors and seasonality are cited as two major challenges for the nationwide management of tourism. Sæþórsdóttir et al. (2020) highlights that visitors and residents were generally in favour of tourism in Iceland, which contrasts with other destinations that are part of the overtourism discourse, such as Flåm and Bergen in Norway. (Sæthórsdóttir et al., 2020; Nygaard, 2022; Bergens Tidende, 2019). In these locations, local residents tend to be the source of anti-tourism movements in their community (Sæthórsdóttir et al., 2020).

2.4 Cruise Tourism

2.4.1 Sustainability of Cruise Tourism

The unsustainability of cruise lines has come to light in recent years, whether as a result of negative environmental impacts, dubious working conditions, or a failure to bring beneficial

economic influence to destinations. While the concept of sustainability is gaining momentum in the cruise tourism industry, the industry is still in the initial development stages of sustainability. There are significant challenges to overcome and progress to be made before the industry can achieve sustainability (Kulkov et al., 2023).

In Ísafjörður, James et al. (2020) reported the imbalance of power between global cruise lines and local operators and argued that the power dynamic influences the implementation of sustainable tourism.

2.4.2 Cruise Shipping Lines

Most cruise lines are part of the trade association Cruise Lines International Association (CLIA) with more than 50 cruise lines and 95% of passenger capacity globally (CLIA, n.d.). According to CLIA, cruise tourism is expected to increase by 19% in cruise tourism capacity from 2022 to 2028 (CLIA, 2023a). There is a strong trend in the big international cruise companies of increasing size and passenger capacity of ships. The new ships that have been built in the last few years, and, to a greater extent, the ships that are being built in the next few years, tend to be of increasing size. The newest cruise ships by Royal Carribean can host up to 10,000 passengers/crew (Cruise Industry News, 2023).

Cruise tourism is a dynamic and rapidly increasing market that offers a wide variety of cruise experiences in constantly expanding destinations. The cruise market is characterized by a high ownership concentration—most cruise lines are owned by a few multinational companies (MNCs) (Rodrigue and Notteboom, 2013). Four large corporations dominate the cruise market. Carnival Cruise Line is the largest corporation with 45% of the overall cruise passenger capacity, followed by Royal Caribbean Cruises LTD with 25%, Norwegian Cruise Line with 15% and MSC with 5%. Together, these companies own 83% of the cruise industry market, while each company own a portfolio of lines that cater to specific markets (Statistica, 2021).

Expedition cruises have also experienced considerable growth in the last few years. Although expedition cruising makes up a small amount of total passenger numbers, it comprises a significant part of overall fleet size. Expedition ships typically have a reduced passenger capacity: around 100-200 passengers. The Association of Arctic Expedition Cruise Operators (AECO) is an international association for cruise tourism operators in the Arctic. The association aims to responsibly manage cruise tourism while representing the concerns and

views of its members. The AECO requires members to follow laws, regulations, private policies and a strict set of guidelines to ensure the sustainability of expedition cruises in the Arctic (Van Bets et al., 2017) The expansion of cruise tourism in the Arctic can be seen through the recent inauguration (2021) of the icebreaker *Commandant le Charcot* cruise ship which is the only Polar Class 2 cruise ship in the world, capable of breaking up to 2.5m thick multi-year ice. (Humpert, 2019)

2.4.3 Impact of Cruise Tourism on Host Communities

Cruise tourism is desired by communities for its potential economic benefits, as perceived through landing fees by the ports, and through the purchase of local goods and services by cruise lines and cruise passengers. Cruise Iceland, the organization in charge of promoting and coordinating cruise tourism in Iceland, released the results of a survey estimating the economic benefits of cruise tourism in 2018 at 72.6 million Euros. The same survey estimates the number of jobs created by cruise tourism in Iceland to be more than 900 (Cruise Iceland, 2019). However, the accuracy of these numbers was questioned by Fridriksson et al. (2020) based on the findings of Lanksy (2016) who found overestimations of economic benefits in most surveys conducted by Destination Marketing Organisations (DMOs) or Port Authorities. Furthermore, cruise tourism requires large investments in infrastructure to accommodate thousands of cruise passengers (Lopes and Dredge, 2018).

Cruise ships offer all-inclusive travel packages to their passengers, which means that tourists often avoid purchasing services or products that are included on the ship. Ships offer several entertainment and amenities on board, and food is available onboard, often at any hour of the day. This decreases the profit local businesses can make. Considering the high percentage of ownership concentration, cruise companies often hold power over cruise destinations, making it hard for local communities to negotiate better deals with cruise ships (Huijbens, 2015; Klein, 2017). Many studies have proved that cruise ship passengers spend significantly less than land-based tourists who have to pay for more considerable expenses such as accommodation and meals, partly due to their limited time ashore (Brida and Zapata, 2010; Satta et al., 2014, 2015; Laesen et al., 2013; Larsen and Wolff, 2016). Huijbens and Gunnarsson (2014) found that, on cruise days, there was only a slight increase in sales registered in businesses within walking distance of the port of Akureyri.

Cruise ships demand to be accomodated with varied services from host communities—from tour operators to destination managers. These accommodations can be through reducing prices of landing fees, or excursions offered by tour operators, while selling the tours on board at a greater profit. Commonly, tour operators will receive between 25 and 50% of the ticket price, while cruise operators will keep the remainder, putting pressure on tour operators to give a tour with half the value paid by cruise passengers (Brida and Zapata, 2010).

Furthermore, the cruise tourism industry is the source of many environmental concerns. The most discussed environmental impact is the impact on air quality through the emission of sulphur dioxide (SOx) and nitrogen oxide (NOx). These gases are released throughout the duration of the call to provide electricity for the ship. The release of these gases can have a hazardous impact on human health (Nátturuverndarsamtok Íslands, 2017).

The lack of waste management of cruise ships is also a source of environmental concern. Waste concerns include: the disposal of grey water, sewage, oily bilge water, ballast water, solid waste and hazardous waste. The release of these wastes in the waters can have varrying impacts on marine life, such as the introduction of alien species. However, regulations are in place to stop cruise ships from legally disposing of sewage in Icelandic waters (Umhverfisstofun, 2019). Authors have pointed out the lack of systematic monitoring of the environmental impacts of cruise tourism in Iceland. This makes it impossible to know the true impact on natural environments and can only leave place for estimations (Karlsdóttir and Hendriksen, 2005). Other destinations are more systematic in their testing, such as Alaska (Brooks, 2021).

More specific concerns for cruise tourism in the Arctic include the accidental or illegal discharge of oil, the introduction of alien invasive species, and noise pollution from marine shipping activity (Pashkevich et al., 2015). Other impacts are directly impacting marine mammals: ship strikes and the disruption of migratory patterns (Pashkevich et al., 2015).

Moreover, socio-cultural impacts of cruise tourism on communities have often been observed in cruise destinations. This includes socio-cultural issues, such as crowdedness, competition over resources, intrusions to privacy and livelihoods, and sociocultural authenticity (Klein, 2017; Ren et al., 2021).

2.4.4 Itineraries and Connectivity to the Global Market

The Caribbean still dominates the cruise tourism market in terms of number of passengers, with over 9 million visitors in 2022, representing around 45% of all cruise ship passengers. Europe follows with the Central and Western Mediterranean region and the Northern Europe region with respectively approximately 13% and 7.5% of cruise ship passengers (CLIA, 2023b). Iceland is conveniently positioned between the North Atlantic and the Arctic and is also a convenient distance between Europe and North America. Therefore, Ísafjörður is connected to different cruise regions and itineraries. The most common itineraries passing through Ísafjörður have Iceland as the main destination. These cruises are most often departing from a port around the North Sea for a round-trip or finishing in Reykjavik. Some of these trips also include other destinations such as the British Isles. Due to its geographical position, Iceland is also part of transatlantic itineraries linking the East coast of North America to Western Europe (Seascanner, 2023). Increasingly, Iceland is serving as an entry point to the Arctic for cruise ships travelling to the high north (Maher et al., 2014). Ísafjörður is, therefore, part of itineraries connecting Greenland, the Norwegian Fjords, the Faroe Islands and Svalbard (Seascanner, 2023).

Lau *et al.* (2023) analyzed the most used routes for cruise tourism in the Arctic and found that the route Akureyri-Ísafjörður is the most popular route connecting ports in the region. This route had 36 sailings for the season 2022 and the second most popular route identified connected Ísafjörður towards Reykjavik with 29 sailings. However, this study did not identify Ísafjörður as a port with high connection to other ports in the Arctic region, as most of the connections are with other ports in the country, namely Reykjavik and Akureyri, the two ports with the highest number of cruise passengers in Iceland, followed with Ísafjörður.

2.5 Focus area: Ísafjörður, Iceland

2.5.1 Northern Westfjords

The Westfjords is a region in the northwest of Iceland that is known in Iceland for its remoteness (Figure 1). Multiple factors contribute to its perceived isolation including some geographical characteristics, i.e. topography and coastlines, the harsh climate and the limited infrastructure. Although most of Iceland is not part of the Arctic Circle, with the exception of a part of Grimsey, the country is viewed by most countries and Arctic associations to be an Arctic state, as it shares many of the same challenges as other countries in the region (Ingimundarsonn,

2020). Other relevant organisations in cruise tourism, i.e. AECO, consider Iceland, and its different ports as part of the Arctic.



Figure 1: Map of Iceland, Ísafjörður (Google Maps, 2023).

Ísafjörður is the largest town in the Westfjords of Iceland, with 2,744 inhabitants (Statistics Iceland, 2023). Along with a few villages (Thingeyri, Sudureyri, Flateyri and Hnifsdalur), it is part of Ísafjarðarbær municipality, which holds 3,864 inhabitants. Just north of Ísafjarðarbær is Bolungarvíkurkaupstaður which includes Bolungarvík (Figure 2), the second biggest town in the Westfjords, with 997 inhabitants (Statistics Iceland, 2023).

Most of the tourism in Iceland is concentrated around the ring road, with the greatest concentration around Reykjavik. The Westfjords are outside of the ring road, and therefore outside of the mainland-based tourism areas in Iceland, with only about 2% of the land-based tourists (Skúladóttir et al., 2020). Airborn tourism has major limitations in the northern westjords; considering the size of the airport and of the land strip, only small planes can land in Ísafjörður. The weather conditions are another main limitation considering they often result in flight delays or cancellations.



Figure 2: Map of Ísafjarðarbær and Bolungarvíkurkaupstaður (Google Maps, 2023)

2.5.2 Ísafjörður Cruise Tourism

Cruise tourism has been identified by the European Union as one of the main drivers of overtourism (Peeters et al., 2018 in Fridriksson et al., 2020). In Iceland, cruise tourism represents a small, but significant part of tourism. In 2022, 171,000 cruise ship passengers arrived at the port of Reykjavik, which corresponds to a tenth of airborn visitors (Icelandic Tourist Board, 2022). Pre-pandemic levels were comparable with 188,000 cruise passengers in the port of Reykjavik and approximately 2 million overnight visitors in 2019 (Icelandic Tourist Board, n.d.). In Ísafjörður, the main type of tourism is cruise tourism. This fits into the Arctic context, where cruises are the primary form of tourism in polar and northern remote regions (Lück et al., 2010).

Ísafjörður has been receiving cruise ships since 1996. In the following years, the numbers stayed somewhat constant and low with under 3,000 passengers, until the year 2004, when the numbers started going up. The numbers for 2023 are not yet certain but settled at around 230,000 at the beginning of the season (Hafnir Ísafjarðarbær, 2023). This number is most likely over the actual number that will be published at the end of the season, considering these numbers assume that ships will come at full capacity, which is not always the case. Moreover, this does not account for cancellations. Based on similar data available from the previous year, an estimation was calculated of about 70% of the predicted passenger number (Figure 3).

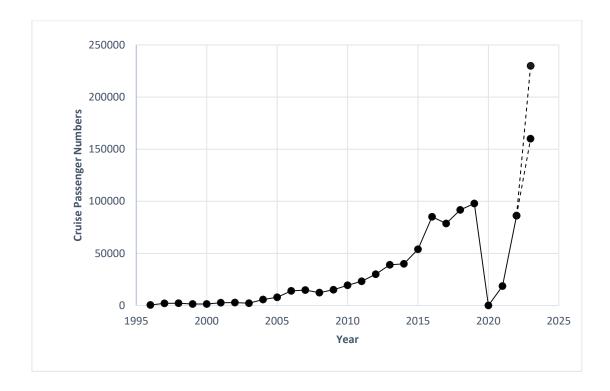


Figure 3: Number of cruise passengers per year entering through the ports of Ísafjörður and predictions for 2023.

At the time of research, the port of Ísafjörður is undergoing an expansion. The Sundabakki pier (Figure 4) is planned to be expanded by 300m resulting in a total length of 490m. Dredging of the seabed by the moorings edge will increase to a maximum of 11 meters, with the current depth being between 7 and 8 meters. The harbour will be able to accept cruise ships with a tonnage of up to 140,000 tons. The expansion project was started in 2021 with a finish date in 2023, but the end of the construction has been delayed to 2024. Upon completion of the project, the Sundabakki pier will be able to receive two large cruise ships at a time. The expansion also plans for the improvement of the Ásgeirsbakki pier, so that cruise ships can sail into Pollinn (inner fjord area) and dock at Ásgeirsbakki.



Figure 4: The ports of Ísafjörður and Suðurtangi (Verkis, 2020).

2.5.3 Carrying Capacity Literature

Much like other destinations in the Arctic, cruise tourism in Ísafjörður has expanded rapidly and the industry has moved beyond the early stages (Lück et al., 2010). This is confirmed by some studies that have examined the impact of cruise tourism on the host population in Ísafjörður. O'Brien (2014) noted that the cruise ship industry in Ísafjörður was moving past stage 2 in the Tourism Area Life Cycle (TALC) model at the time of research (2013). Stage 2 corresponds to the development phase, where the location becomes established as a destination and the tourism sector in the area experiences rapid growth. During stage 2, stakeholders in the destination continue developing services and infrastructure. O'Brien's findings place Ísafjörður at the end of the development stage, the corollary being that the community was soon to enter the consolidation stage, where the industry's growth slows and facilities supporting tourism are replaced by large tourism establishments. At the time of the research, funding was still uncertain for the expansion of the port in Ásgeirsbakki, and O'Brien hypothesized that dredging the harbour would further encourage growth of cruise tourism in Ísafjörður, which might bring the community to the point of saturation.

O'Brien's survey distributed in 2013 found that residents were generally satisfied with the pace of growth of cruise tourism, but that a slight majority did not think that the community could handle an increase in cruise tourism. This was further shown by Regan et al.'s research (2020) on tourism in Ísafjörður, where most participants in a series of interviews expressed concern over carrying capacity being reached, or even surpassed. Another study by James et al. (2020) found that residents of Ísafjörður were concerned by the disruption caused by cruise ships, crowding, and environmental issues.

3 Methods

This study used a mixed-method approach to answer the research questions effectively. Quantitative methods included a 20-question survey for residents of Ísafjörður and surrounding communities, and quantitative methods included semi-structured interviews with direct stakeholders of the cruise industry in Ísafjarðarbær.

This section provides an overview and justifies the main methods used to reach the conclusions. In addition, the methods and analysis tools are outlined to produce a transparent and replicable thesis. Limitations of the method will also be considered.

3.1 Survey Methods

3.1.1 Survey-design

The desired opinion for analysis in this thesis is the residents' perspective of Ísafjörður and surrounding areas. In order to do this, a survey was designed to gather vital insights into the cruise tourism industry, in addition to limited demographic information. Several elements were considered when designing the survey to maximize its effectiveness. During the survey design, an effort was made into keeping the survey brief while ensuring that all essential aspects were covered. This resulted in a 20-question survey, with mostly multiple-choice and Likert scale questions. The survey questions can be found in Appendix A.

The first section of the survey was concerned with gathering information about the respondent about their residency in the region, which will later be used as predictor variables. These questions included how long the respondents have been living here, whether they live here seasonally, whether or not they intend to live here in the future, and where in the northern Westfjords they live. These questions were all asked through multiple choice questions.

The second section looked at the attitudes and opinions of residents towards cruise ships to respond to the aim of residents' tolerance. Many questions in this section were collected using a Likert scale type of question ranging from either 'Strongly agree' to 'Strongly disagree', or 'Very positive impact' to 'Very negative impact'. This section asked participants questions on the benefits of cruise tourism, as well as their views on the growth of the industry.

The third section of the survey was concerned with how much tourism is wanted by residents of Ísafjarðarbær and Bolungarvík. For this part, a short caption was written at the beginning of the section in order to help the respondents understand the numbers that were going to be presented to them in order to increase respondent comprehension. This short text included the numbers of cruise passengers for the previous cruise season, the preliminary numbers for the upcoming season, as well as the number of ships docking in the harbours for both years, the number of "big days" (over 3,000 passengers) and the biggest cruise day of the season. This short text is, a source of error. The numbers for the 2022 season that were presented in the survey were based on information that was available on the harbour's website at the time of distribution. Unknowingly, these figures were higher than the actual numbers for 2022. Speculation on the possible repercussions of this oversight will be examined latern in Section 4.1.3.

The third section also questioned respondents on their ideal number of cruise ship passengers throughout the season, with a multiple choice answer with ranges of amount of passengers. Other questions in this section are about the implementation of a maximum number of cruise ship passengers per day, and the exclusion of certain ships by size.

These three sections were followed by demographic questions and an open-ended comment section.

3.1.2 Survey Justification, Distribution and Survey Response

The survey designed for this thesis aims to take the population's pulse concerning Ísafjörður's cruise tourism industry. Determining the tolerance levels of the population towards cruise ships, as well as establishing a social carrying capacity through a maximum of cruise ship passengers were two aims that the survey was able to help complete. The importance of hearing perspectives of inhabitants has been previously shown (Khoo-Lattimore et al., 2017). This method was chosen because it is effective, at reaching a larger number of participants.

The survey was conducted for 6 weeks in November and December in communities of the Ísafjarðarbær municipality and Bolungarvík that are most affected by cruise ships, including Ísafjörður and the surrounding towns of Suðureyri, Bolungarvík, Þingeyri and Flateyri. Data collection was done through Google Forms. The timing at which the survey was sent out might

have impacted the results of the survey as it was distributed during the low season for cruise tourism.

The survey was mainly distributed through social media, specifically on the *İsafjarðar* markaðurinn! Facebook page which acts as a community marketplace but also, on occasion, as a message board for community-related events due to the presence of most community members in the group. The survey was posted on that page 3 times, once on the 9th of November, generating 89 responses the same day and 71 responses in the next four days. Two more posts were sent on the page on the 14th and 19th of December, which respectively gathered around 33 and 71 responses. The remaining responses were gathered through posters with QR codes promoting the survey, which were hung around various locations, mainly on the pool message boards of every community and restaurant in the towns. Flyers with QR codes were also distributed in person outside the supermarket; however, this strategy was brief, considering the low responsiveness of this method. There were attempts to distribute the survey through other means such as email and other media, but they proved unfruitful. Another attempt to distribute the survey was as an activity in the retirement home in Ísafjörður. However, since COVID, there has been restricted access. The Facebook post gathered many reactions with people interacting with the publication, even going as far as spurring an argument in the comments of the publication (Appendix B).

The survey gathered a total of 290 responses through the various methods listed above. The response rate was 7.4% considering all habitants of Ísafjarðarbær and Bolungarvík over 15 years old. It was, however, highest in Ísafjörður, with a response rate of 10.3%, and lowest in Bolungarvík, with a responsiveness of around 3%, while all other communities ranged between 4 and 5%. The margin of error is calculated to be significant at 6.1% for Ísafjörður, 5.7% for Ísafjarðarbær, and 5.5% for the study scope; however, the surrounding towns' margins of error were calculated to be between 20% and 32%; therefore, the data collected in these towns are not significant.

3.1.3 Method of Analysis

R Studio Statistical software and Microsoft Excel software were used to conduct data analysis. The survey results were separated into three sections: demographics, resident's perspectives and growth and future perspectives. The first section presented a sample of demographics characteristics. The second section analyzed resident's tolerance through a set of indicators which were used to determine if the residents had a negative, positive, or neutral perception of cruise tourism in town. The significance of the indicators was tested through a one-sample t-test. The aim of this test was to determine if the mean of the responses for the indicators and a hypothesized neutral mean of 3 were statistically different. If the indicators were not statistically different, the indicator was marked as neutral. (Kent State University, n.d.)

Responses to tolerance questions were analysed alongside questions about the benefits that the industry brings to the community to form a favourability index. The indexes were created based on O'Brien's methods and results hoping to understand how residents' favourability to cruise tourism and their attitudes toward growth, indexes were based on O'Brien's (2014) indexes and aimed to replicate their method in order to compare the present levels to 2014 levels. Multiple indicators were taken into account into the making of the indexes and were combined into a single numerical score. The composite scores were compiled for favourability to cruise tourism as well as attitudes towards growth. Composite indexes are a common tool in social studies because they can better represent complex concepts than single measures. They can measure the direction and the intensity at which a phenomenon is occurring (Greco et al., 2019; Neuman, 2002).

Furthermore, through the index scores, it was possible to compare groups to identify predictor variables. The predictor variables are questions that were asked in the first section of the survey. Means were calculated for each group and ANOVAs were performed to identify if the means were significantly different from each other. The mean score on the favourability index of different groups were analyzed and compared with predictor variables through one-way ANOVAS to determine if the response to variables was significantly different between the groups.

In the third section, this study analyzed questions indicating attitudes on growth and compounded the answers to make an index of support toward growth of cruise tourism. An analysis between the mean scores and predictor variables was also performed with one-way ANOVAS.

3.1.4 Limitation of Survey

Some limitations were associated with this method of data collection. Like all sample surveys, risks are associated with representation and measurement error. In this case, the researcher tried

to compensate for this misrepresentation of the older age range that can occur with online surveys by recruiting respondents from the local retirement home. This attempt was unsuccessful, as mentioned above. Other representation-based errors can include the language; even though the survey was offered in Icelandic and English, some people might not have answered because of insufficient skills either language. Some minority communities in the northern Westfjords do not have Icelandic or English as a native language, which might have hindered their capacity to participate. The Westfjords have one of the largest immigrant populations in Iceland with 22.3% of the population being from foreign background, and Polish being the largest minority (Statistics Iceland, 2022).

Other shortcomings of the survey included that the survey was not correctly formatted for phone use, as opposed to computer use. This difficulty in filling out the survey might have caused people not to answer some questions or even discouraged participation. This issue was pointed out in the comments of Facebook publications (Appendix C).

Further methodological shortcomings stem from item non-response errors where respondents do not answer one or more questions (Umbach, 2005). This issue was dealt with by deleting observations with incomplete data when analyzing different questions together (e.g. when computing the indexes).

3.2 Interview Methods

The secondary component of this thesis is the use of interviews with experts who provided insight into the management and the future perspectives of the cruise tourism industry in Ísafjörður. The stakeholder's interviews were conducted as a supportive method to the residents' survey. The results of the interview further explored and helped contextualize the responses of the residents.

3.2.1 Interview Theory and Justification

A semi-structured interview is an interview approach that combines a list of questions and topics, generally in a particular order, which can be deferred from to explore different topics and ask follow-up questions as appropriate. This method allows the researcher to compare data between participants while allowing for more in-depth discussions of specific topics which may not have been explored otherwise (Khoo-Lattimore et al., 2019). The interviews for this thesis

were conducted through a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis framework.

Answers from experts and stakeholders who have long-term experience on location or within the tourism industry allowed this study to give insight into why perceptions of community. In other words, the quantitative approach enables answers on "how," while the qualitative part can complement with the "why" aspects of cruise tourism.

A number of five interviews were therefore performed to offer more depth of analyses to the survey and help contextualise or nuance the data that was pulled from the survey. Considering the research primarily relied on other data sources, i.e. the respondent's survey, more resources and time were attributed to the survey, explaining a low number of interviews. However, considering the interviews were a complementary method, they were still able to provide insights, validate findings and offer nuances.

3.2.2 Sampling and sample population

A total of 5 interviews were conducted through a semi-structured format. The interviews were in-person, but email correspondence was used for any follow-up questions. Interviews were carried out following the closure of the survey in January and February 2023. The interview's length ranged from 30 to 45 minutes, allowing for coverage of essential themes such as future perspectives of the industry. The informants were also interviewed in an environment of their choosing, in a one-on-one setting, often at the workplace of the informant.

The informants were chosen using non-probability sampling (Bernard, 2006) because the thesis is interested in the in-depth information that can only be gathered if sampled non-randomly. The informants were chosen for their relationship with the cruise industry through their employment, as seen in Table 1. To balance points of view, an informant was chosen from five different sectors of interest that are either concerned or impacted by cruise tourism. A set list of questions was asked of the informants (see Appendix D).

Interviewee	Field	Stakeholder
1	Environmental	Environmental Agency
2	Economic	Local entrepreneur
3	Social	Vestfjarðastofa
4	Infrastructural	Harbour office
5	Institutional	Municipality

A SWOT Matrix was used during the interview, and points brought up by participants were immediately placed in the matrix.

3.2.3 Method of Analysis

During the interviews, the researcher carried out a SWOT analysis to help access preliminary findings and identify themes for ease of analysis. After consideration, the Strengths and Opportunities elements and the Weaknesses and Threats areas were merged since many points of discussion could be argued in both categories. This initial analysis allowed for the selection of the following themes: Environmental, Social, Economical, Institutional, and Infrastructural. In the interest of anonymity, the interviews are treated as a group, instead of as single interviews.

The interviews were transcribed using the software otter.ai and edited for accuracy. They were then analyzed through the codes mentioned earlier using the software MAXQDA (Version 2022). The five themes were coded as sub-themes under the main themes of Strengths and Opportunities and Weaknesses and Threats. However, the Environmental sub-code was not coded under Strengths and Opportunities.

3.2.4 Limitations of Interviews

There are limitations that are associated with the small sample size of the interviews. The stakeholders were chosen based on their employment and an effort was made to find stakeholders with different views. However, one person does not represent the whole sector and, therefore there can be limits to the generalizability of the interviews.

The semi-structured interview structure is an approach that is especially helpful when the interviewer has prior interview experience. Researchers have argued for incorporating reflexivity into tourism studies and argued the benefits of reflexivity on the researcher-participant relationship (Hall and Callery, 2001; Khoo-Lattimore et al., 2019). Considering that the researcher for this thesis had never led interviews before, interviews might not have been as informative as they could have been. Moreover, differences in the level of English, or the general character of the interviewee (whether they are loquacious or outspoken) may result in some interviews yielding richer content than others. The lack of interviewer experience, paired with interviewees with more laconic replies, resulted in limited information extracted from some people.

3.3 Ethical Considerations

The thesis uses interviews as one of its main methods, which raises many ethical considerations. All interviewees signed informed consent forms (see Appendix E) When analyzing and reporting data, privacy and confidentiality were prioritized. All electronic data was encrypted and password protected. As with survey responses (see Appendix A), privacy was prioritized. Moreover, any information that participants gave off the record was not included in the analysis.

Additional consideration was given to avoid insider and researcher bias. The importance of reflexivity has been noted in many studies (Lowe and Zemliansky, 2011; Khoo-Lattimore et al., 2019). In line with the inclusion of reflexivity, it must be noted that the researcher has worked for one of the tour companies that operate bus tours for cruise ship passengers as a tour guide. It is, in part, during these tours that the researcher's interest in the cruise industry in small communities was developed.

4 Results

4.1 Survey Results

The survey results' presentation is separated into demographics, resident perceptions of the cruise industry currently, and growth and future perspectives.

4.1.1 Demographics

The survey results received a total of 292 responses during the response period. The Icelandic survey received 250 responses, while the English version received 42 responses.

Table 2: Sample Demographic Character	ristics
---------------------------------------	---------

Community	Ísafjörður	Suðureyri	Flateyri	Þingeyri	Ísafjarðarbær	Bolungarvík
Population	2730	295	257	336	3 840	956
(Over 15)	2233	237	224	279	3 152	770
Sample size	Uptown: 76 Eyri: 115 Inner Fjord: 39	10	9	14	267	23
Percent of	78.7%	3.4%	3.1%	4.8%	91.4%	7.9%
sample	/0.//0	5.470	5.170	4.070	71.470	7.570
Gender (%)						
Male	35	50	0	57	36	36
Female	62	50	100	43	62	57
Non-Binary	0	0	0	0	0	0
Prefer not to say	3	0	0	0	2	7
Age (%)						
15-29	27	13	0	14	25	7
30-44	36	50	67	29	36	43
45-59	27	3	33	29	28	36
60+	10	38	0	29	11	14

Table 2 shows an overview of the selected demographics of the survey's respondents. Gender, age, the sample size for each community, as well as the number of residents (population figures from 02.02.2022) and the representation of each community in the survey are represented in

the table above. Most respondents (78.7%) were residents of Ísafjörður, which was expected considering it has the higher population within the survey, and that cruise ship residents mostly come in through the port of Ísafjörður. A similar result trend is observed within Ísafjörður, where half of the respondents reside in Eyri, the neighbourhood closest to port, around a third of respondents are residents of the Uptown neighbourhood, and only around a sixth of the respondents reside in the inner fjord neighbourhood, the furthest from the port. It can also be seen that respondents of the age bracket of 60 years or older are underrepresented in the data. women represented a higher number of responses than men to the survey.

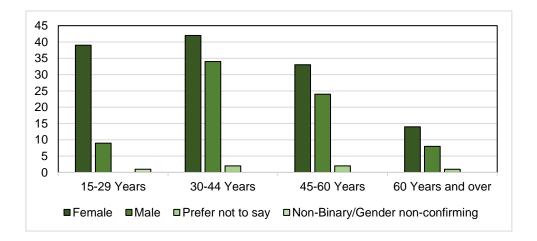


Figure 5: Distribution of age and gender from the Ísafjarðarbær and Bolungarvík survey respondents

As shown on Figure 5, women responded in higher numbers in all age groups. The graph above also shows that men between 15 and 29 years old are underrepresented in the data, as well as people over 60. In Table 1, non-binary and gender non-confirming respondents were not represented because the demographic results were presented in percentage, therefore it rounded-up to 0%.

4.1.2 Residents Perspectives

Indicator analysis

The results of the survey were analyzed to identify how residents of Ísafjarðarbær and Bolungarvík view cruise tourism from a tolerance perspective. Four variables were chosen to gauge the residents' tolerance towards the industry's environmental, development, social, and economic aspects (Figure 6). Figure 6 shows the percentage of indicators which were positive, neutral (no impact) or negative for each category. A one-sample t-test was used to test for a difference in mean between the individual indicator and the hypothesized neutral mean. A favourability index was also created, showing the positivity or negativity of each respondent's answers to questions regarding tolerance.

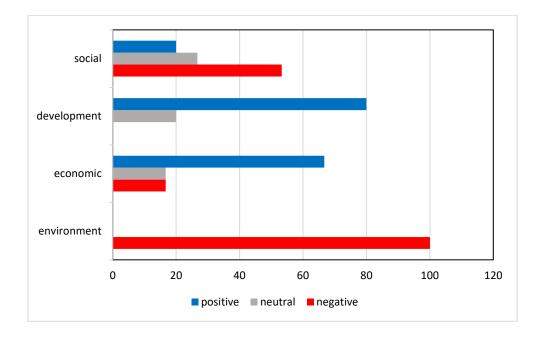


Figure 6: Residents' perspectives on social, development, economic and environmental indicators.

A total of 15 social indicators were considered in this section, 11 of which were significantly different from the neutral value of 3, average p < .001. Three of the 11 indicators corresponded to positive responses and 8 to negative responses. The positive responses were: *a chance to meet new people*, p < .001, *community spirit*, p=0.0193, and *awareness of cultural heritage* p < .001. The negative responses with the most significant differences from the neutral value were: *peace and quiet* p < .001, *crowding and congestion in the streets* p < .001, and *availability of food in the supermarket*, p < .001.

For the economic indicator, 6 questions were considered, among which 4 were significantly positive, 1 was not significantly different from the neutral value, p=0.08, and 1 was significantly negative. Positive indicators included: *number of jobs for residents*, p < .001, *number of jobs for residents*, p < .001, *number of jobs for foreigners* p < .001, *local tax*, p < .001, and *businesses owned by residents* p < .001.

However, residents felt that cruise tourism negatively impacted *fair prices for goods and services*, p < .001.

Development and Economic indicators had the most consistently positive responses, with development indicators having the no negative responses. Five questions were categorized as development indicators, with four being significantly positive and one being not significantly positive, p=0.07682, and, therefore, neutral. Positive categories included the: *preservation of historic buildings*, p < .001, *a variety of entertainment*, p < .001, *variety of restaurants*, p < .001, and *walking/bicycle paths*, p < .001. Respondents felt that the industry did not affect the *number of new buildings*, p < .001.

All four environmental indicators are significantly different from the neutral value, indicating that residents believe cruise tourism negatively impacts the environment. The indicators asked for the *quality of the natural environment*, p < .001, *pollution in the area*, p < .001, *clean air and water*, p < .001, and *litter*, p < .001. Questions regarding environmental indicators received the most consistently negative responses out of all the chosen indicators.

Comments

In total, 72 comments were left by respondents. Out of the respondents, 39 were related to residents' tolerance, among which themes on the negative impact of cruise tourism ranged from negative impacts on the environment (21 comments), lack of privacy (5 comments), crowdedness (3 comments), disrespectful behaviour (3 comments), lack of food availability in the supermarket (3), disregard for traffic rules (4), the negative impact of safety—either near shore or in the harbour (3). Some also mentioned the impact on tourists – cruise or other—when there are too many cruise passengers (3 comments). Positive comments about residents' tolerance and cruise ships included a positive impact on the liveliness of their community (4 comments) and a positive economic impact (2 comments).

Favourability Index

A favourability index (Figure 8) was created by combining multiple questions from one respondent into a single numerical value. Considering that favourability is a complex concept, it can be challenging for a single question to measure this complexity. A composite index allows

consideration of respondents' answers to multiple questions, indicating their overall favourability. Only respondents that answered all the questions in the index were studied (n=252). The index considered questions shown in Figure 7, which shows how the respondents perceive how cruise tourism benefit Ísafjörður, other communities around Ísafjörður, themselves, and other industries.

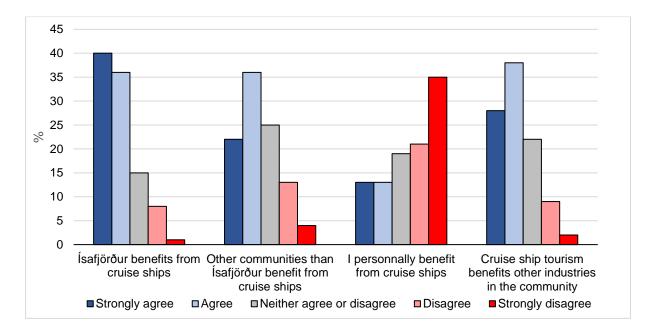


Figure 7: Survey response in percentage for four direct questions

Figure 7 shows that the respondents predominantly agreed and strongly agreed that the town of Ísafjörður and other regional communities benefit from cruise tourism, It should be noted that in other communities the perceived benefit was to a lesser extent than in Ísafjörður. A majority of respondents did not feel like they personally benefited from cruise tourism. Most (%) respondents answered that cruise tourism benefits other industries in the community.

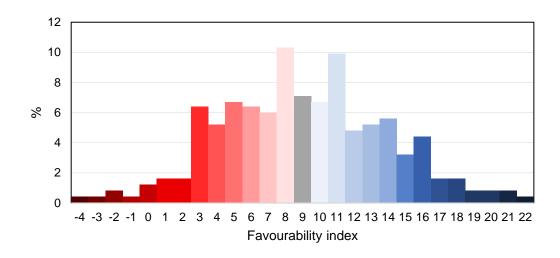


Figure 8: Frequency distribution of the favourability index based on the answer to four direct questions about cruise tourism. The middle value is 9; favourable is marked in blue, and unfavourable is marked in marked.

Table 3 brings further information relating to the overall favourability index graph. The values collected for the growth index range from -4 to 22 on a scale of -5 to 23. The top 50% is the sum of respondents who scored 9 to 23, and the bottom 50% is the sum of -5 to 9. The middle 48% is a sum of 3 to 15, and the top and bottom 26% are the sums of 16 to 23 and -5 to 2, respectively. As the graph and the table show, the favourability index results are balanced and centred around the neutral value of 9, as are both the mean and the median values (Value of 9), meaning that the data does not lean significantly towards favourable or favourable or unfavourable values. The values in the top 50% and bottom 50% are similar at around 50% each, and most values (83.33%) are in the middle 48%, indicating that most people are not entirely against or in favour of the industry. Both the lowest and the highest scores on the index were not reached.

Table 3: Characteristics of the favourability index.

Max	23	Тор 26%	10,32%
Min	-5	Тор 50%	49,21%
Mean	9	Middle 48%	83,33%
Median	9	Bottom 50%	50,79%
Mode	8	Bottom 26%	6,35%
Range	(-4);22	Ν	252

One-way ANOVAS tested how different factor variables impacted the respondents' favourability to cruise tourism (Table 4). The first variable named Town refers to which town of the northern westfjords the respondants live in, while the second variable refers specifically to residents of Ísafjörður and the district that they live in. Neither variable affected how the residents viewed cruise tourism. The amount of time that the resident had lived in the northern Westfjords, or whether their residence was seasonal, did not impact their views of the industry. The income factor determined which proportion of respondents benefitted economically from cruise tourism. Income proved to be very significantly, p < .001, correlated to a respondent's favourability towards the industry. Residents who answered that none of their income is from the cruise industry had a favourability score of 8.42, as opposed to the ones who responded "Some," with a score of 10.54 and "Much," with a score of 14.14. The amount of contact the respondent had with the cruise ship passenger also significantly, p < .001, impacted the favourability of the cruise tourism industry. Respondents with no contact with the cruise industry had a lower tolerance regarding the industry than respondents with "A lot" of contact with passengers, who were much more favourable to the industry add numbers to back these claims here. The last variable, whether the respondents felt like their views were considered by decision-makers, was the most significant variable, p < .001. People who strongly agreed that their position was considered had more favourable views of the industry had a score of 12 of the favourability index and people who responded that policymakers (Strongly disagree) did not consider their position had a score of 5.4. Although the result was not significant, p=0.89, the mean for Bolungarvík was the lowest of all the towns with a score of 7. The other communities outside of Ísafjörður showed that their attitudes were favourable to the cruise industry.

			MEANS					
						Outside	F-	
	Ísafjörður	Bolungarvík	Suðureyri	Flateyri	Þingeyri	town	statistic	p-value
Town	8.95	7	10.9	12.57	8.92	8	1.85	0.89
							F-	
Ísafjörður	Eyri/To	wn Centre	Uptown	Holtahverfi			statistic	p-value
District	8	3.24	9.7	9.35			2.14	0.12
	Less than			11-15	15+		F-	
Place	1 year	1-5 years	6-10 years	years	years		statistic	p-value
attachment	8.4	8.95	8.46	7.36	9.22		1.06	0.38
	Year-						F-	
	Round	Seasonal					statistic	p-value
Residence	8.91	9.33					0.11	0.74
							F-	
	None	Some	Much	All			statistic	p-value
Income	8.42	10.54	14.14	-			11.29	2,02e-05
							F-	
	None	A little	Moderately	A lot			statistic	p-value
Contact	8.17	9.2	8.3	12.85			8.175	3,25e-05
	Strongly						F-	
Political	Agree	Agree	Neither or	Disagree	Strongly d	isagree	statistic	p-value
consideration	12	10.96	9.75	8.86	5.4		51.7	7,35e-12

Table 4: Difference in attitude between groups based on favourability index scores of predictor variables.

n=252, nobody answered all to income, everyone has another job that is unrelated to tourism

4.1.3 Growth and Future Perspectives

The results of the survey were analyzed to see to what extent cruise tourism is wanted by residents of Ísafjarðarbær and Bolungarvík.

Growth Index

Much like the favourability index, the growth index uses multiple questions to better grasp how respondents feel about the growth of the cruise tourism industry. The growth index scores were obtained by combining three questions: whether the cruise industry is growing too fast, whether it can handle more cruise ships, and whether there should be a maximum number of passengers per day, as seen in Table 4.

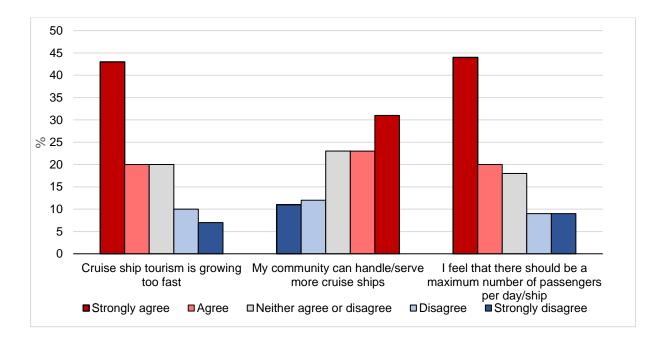


Figure 9: Survey response in percentage for three direct questions

As seen in Figure 9, most respondents agree or strongly agree that cruise tourism is growing too fast, with few disagreeing. Although the contrast is not as stark as in the first question, many more respondents disagreed or strongly disagreed that their community can handle more cruise ships. Most respondents answered that there should be a maximum number of passengers per day, with around 65% agreeing or strongly agreeing to a limit and only around 15% disagreeing.

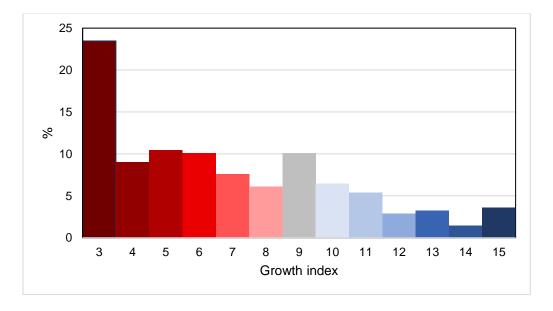


Figure 10: Frequency distribution of the growth index based on the answer to three direct questions about cruise tourism. The middle value is 9; favourable is marked in blue, and unfavourable is marked in red.

The values collected for the growth index, as shown in Figure 10 and Table 5, range from 3 to 15. The top 50% is the sum of respondents who scored 9 to 15, and the bottom 50% is the sum of 3 to 9. The middle 54%, is a sum of 6 to 12, and the top and bottom 23%, are the sums of 13 to 15 and 3 to 5, respectively. The growth index shows that most respondents are against the cruise tourism industry's growth, as 71.84% of respondents are in the bottom 50%--- between 3 and 9—as opposed to 26.50% in the top 50%--- 9 and 15. This is reinforced by the mean and the median, which are both well under the neutral value of 9, at 6.88 and 6 respectively. The graph shows that the scores are distributed unevenly as 42.96% of the scores are on the bottom 23% of the graph, implying that these respondents consistently answered against the growth of cruise tourism to all three questions forming the index. By contrast, the top 23% only holds 8.30% of respondents, and the middle 54% has 48,74% of respondents, meaning that both are underrepresented in the scores, although much more in the former than the latter.

Max	15 (most supportive)	Тор 23%	8,30%
Min	3 (least supportive)	Тор 50%	28,16%
Mean	6,88	Middle 54%	48,74%
Median	6	Bottom 50%	71,84%
Mode	1	Bottom 23%	42,96%
Range	3;15	Ν	277

Table 5: Characteristics of the growth index.

The growth index results were further tested through one-way ANOVAS against the same predictor variables as in Table 4. The results show that none of the predictor variables had significant results. Therefore, none of the categories were significant enough to prove there was an impact between their views on the growth of cruise tourism and the predictor variable. Although non-significant, the results show a difference in the means of the towns. The mean for the town of Suðureyri is much lower than the other towns with a growth index mean of 6.8, while all other towns seem more inclined to growth with a mean closer to neutral (while still being negative). The means also show that the residents of Bolungarvík are the closest to the neutral value, therefore the least disinclined. Interestingly, none of the means presented in Table 6 are above the neutral value which implies that no groups are in favour of cruise tourism growth.

Table 6: Difference	in attitude	between	groups	based or	growth	index	scores	of predic	tor
variables.									

			MEAN	S				
						Outside	- F-	
Tow	n Ísafjörður	Bolungarvík	Suðureyri	Flateyri	Þingeyri	town	statistic	p-value
Growth	7.83	8.64	6.8	9	8.5	7.5	2.59	0.85
Ísafjörðu	r						F-	
distric	t Eyri/To	wn Centre	Uptown	Holtahverfi			statistic	p-value
Growth	-	7.73	8	7.56			0.56	0.58
Plac	e Less 1				15+		F-	
Attachmen	t year	1-5 years	6-10 years	11-15 years	years		statistic	p-value
Growth	7.31	7.58	7.88	7.91	8.06		0.98	0.43
	Year-						F-	
Residenc	e Round	Seasonal					statistic	p-value
Growth	7.92	7.88					0.01	0.92
							F-	
Incom	e None	Some	Much	All			statistic	p-value
Growth	7.96	7.83	7.73	-			2.29	0.0789
							F-	
Contac	t None	A little	Moderately	A lot			statistic	p-value
Growth	8.09	7.74	7.15	8			2.348	0.0729
Politico	Strongly						F-	
consideratio	Agree	Agree	Neither or	Disagree	Strongly di	sagree	statistic	p-value
Growth	7.67	7.45	8.38	7.84	7.5		0.67	0.42

***n=277, nobody answered all to income, everyone has another job that is unrelated to tourism

Future Perspectives

Part of the survey investigated how residents perceive the near future of cruise tourism and how much tourists are desired by residents in the northern Westfjords. As seen in Figure 9, most surveyed residents do not desire growth. Respondents were questioned about the ideal number of cruise passengers desired. Around 25% of respondents felt there is no ideal amount and that as many people as want to come is preferable. At the time of the survey, the 2023 cruise season was announced to be 245,000 cruise ship passengers. Figure 11 shows that 65% of respondents' ideal number of passengers is less than the preliminary analysis for the 2023 season (e.g., less than 200,000). Around 40% of respondents seemed to desire a similar number or less than the previous cruise ship season (2022).

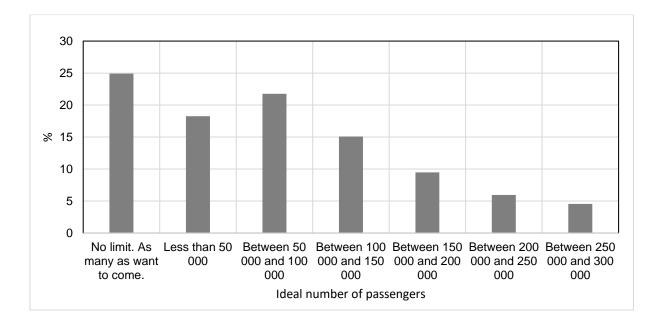


Figure 11: Answer to the ideal number of cruise ship passengers in percentage (n=209).

Residents were also surveyed about possibly implementing a cap on cruise ship passenger numbers. Most respondents, around 72%, felt like there should be a maximum number of people per day. As seen in Figure 12, out of the respondents who answered positively to the imposition of a maximum number per day, 79% felt there should be a cap of 3,000 passengers or less, the number set for "big days." Around 36% of respondents estimated that the maximum at 1,000 passengers.

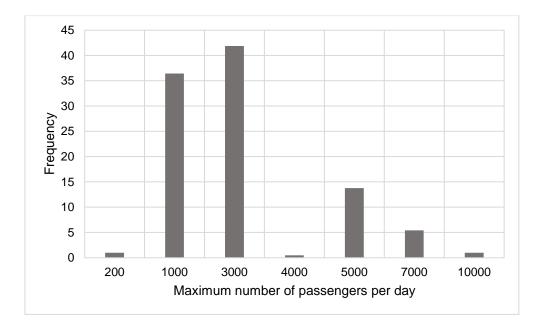


Figure 12: Direct answer to what should be the maximum number of passengers per day in percentage (Answered by people who said yes to a maximum number of passengers) (n=203).

If these finding were to be applied to management, this would mean that only one or two ships would be allowed to call—which does not correspond to future predictions.

Comments

Few comments addressed growth and future perspectives; of all 72 comments, only three asked to stop growth or diminish cruise ship passengers.

4.2 Interview results

The results of this thesis are presented in five parts corresponding to the five analytical themes that were determined: *Environmental, Economic, Infrastructural, Social, and Institutional.* The main points of each section are summarized in Table 7 but will be explained in more detail in the sections below.

Table	7: SW01	analysis
-------	---------	----------

Strengths	Opportunities
 Harbour profit is distributed to the municipality, funds facilities outside harbour responsibilities and helps other industries through port improvement. Remoteness of the region from capital area means further development of local tourism operations. Facilities put in place because of tourism can also be used by residents and improve quality of life. Possibility for residents to change their perspective on their town. New management at the harbour that seems more open to communicate with the other stakeholders and put in place a carrying capacity limit. 	 Stimulation of the economy. Opportunity to open or grow a business. More employment, diversifying the job market, valuable positions. Income generated by landing fees.
Weaknesses	Threats
 Relaxed environmental regulations in Iceland Lack of energy in the region; Inability to be able to transition towards renewable energy. Lack of regulations prohibiting ship to anchor and tender where they want. Law allowing right of passage. Impossibility to expand the cruise season more than at present. Cruise tourism can affect negatively other types of tourism which are often marketed as 'nature tourism'. Lack of walking paths. Annoyance and irritation. Lack of communication between the harbour and stakeholders Not using the ports of other towns in the municipality for smaller ships. Growth of cruise tourism in town is not a very democratic endeavour. Income model for municipalities in Iceland is weak, municipalities have little means to run themselves properly. 	 Pollution (Air quality). Ships landing outside port areas into areas with sensitive nature. Unknown environmental impacts. Limited income for the region because cruise tourism wants to keep as much of the value chain for themselves. Need for huge infrastructure that is only used for a few months. Visual pollution. Lack of privacy, cruise tourists observing people through windows. Crowdedness. Strain on healthcare system Violation of Icelandic work laws in Icelandic territory on the ship.

4.2.1 Environmental

Stakeholders mentioned environmental impacts throughout the interview. No participants spoke about the environmental impact of cruise ships as a strength or opportunity, but rather as a weakness or threat to the industry. All participants mentioned the negative environmental impacts of cruise ships on the community. The main environmental impacts discussed and elaborated on below are pollution, trespassing into farm areas, regulation of ships, and unknown impacts.

Pollution

Smoke pollution coming directly from the cruise ship was mentioned by all participants. This refers to the air pollutants that the ship emits, as it is running on fossil fuels to operate the vessel. Many stakeholders expressed concern over how the air quality is affected by this pollution. One stakeholder expressed concern over the relaxed regulation of Iceland, as compared to other cruise ship destinations:

"I'm also worried about the fact that we do not have a strong rule regarding pollution in harbours, like, for instance, some of the most popular destinations in Norway, like the Geirangerfjord." (Environmental stakeholder)

Another stakeholder mentioned that the municipality records the level of CO_2 and that the levels of pollution for CO_2 in the air is not yet concerning. However, another stakeholder disclosed that the levels had not been taken consistently in the last year.

Several stakeholders mentioned that the cruise ship industry was heading towards more renewable energy, with the potential to connect to energy grids in the port of destination. However, the stakeholders pointed out that the municipality would not be able to serve cruise ships running on renewable energy considering that there is no excess in the power grids for the Westfjords. Therefore, even with cruise ships able to connect to renewable energy, the ships would still have to burn diesel.

Expedition ships

Additional environmental concerns were raised by stakeholders concerning expedition ships. Due to the nature of these types of cruise ships, they are equipped for landing outside of port areas. This means that they are able to land in "unspoiled" areas. Stakeholders also expressed concern over the lack of regulations protecting these areas.

"So, for instance, they are always looking like these, especially the smaller ships with expedition ships, they're always looking for, like new areas to take land, outside of harbours. And, and that can have a huge impact on a more sensitive nature (...). So I am afraid of more expedition ships, we will have more difficulties, unless we can regulate this for, make some control rules about where they are allowed to take land." (Institutional stakeholder)

Some regulations are in place to protect the nature reserve Hornstrandir, which is close to Ísafjörður. Ships cannot take land on the nature reserve with more than 51 passengers on board (passenger and crew), which excludes almost all cruise ships, even expedition ships.

One stakeholder mentioned a specific instance that happened the previous summer where an expedition ship landed at Holt, a farm in the vicinity of Flateyri. This landing disturbed the eider ducks, as well as other wildlife.

Unknown impacts

One stakeholder also mentioned the unknown impacts of cruise tourism on wildlife, nature, and the environment. There is a gap in literature and research measuring the impact of cruise ships in the area.

4.2.2 Economic

Strengths and Opportunities:

The positive economic impacts of cruise tourism were mentioned in many instances during interviews, and by all 5 stakeholders. The main sentiment from stakeholders was how the cruise ship industry is stimulating the economy of the region in terms of both individual income and community income.

Individual income

The cruise tourism industry is providing opportunities for residents to grow their businesses and increase their income. Some stakeholders mention the opportunity for residents to open new businesses, especially seasonal businesses considering the seasonality of the tourism industry in Ísafjörður. "And I think what it has done is, the good stuff it's done is that it, it has created more opportunities for local people to create businesses, that are at least operational during the summer, these four months." (Social stakeholder)

'We see we see small businesses in the fjords, in the region, small cafes, small tours, hiking tours, etcetera etcetera. This is impact.' (Social stakeholder)

'You see a lot more people in the streets, you see that the stores get more business, the restaurants get more business, tourism can give a foundation for a restaurant to be operational, so to speak.' (Social stakeholder)

Another stakeholder described how the extra income brought by cruise tourism in the summer can give the opportunity for companies to be able to stay open in the winter as well. The positive impacts on employment were highlighted by a participant discussing how the jobs that are made available are valuable positions.

'I can say that, what tourism is able to change, is it offers more valued jobs, and opportunities for locals to set up their own business, be it be it seasonal or not.' (Social stakeholder)

Community/Municipality Income

All stakeholders mentioned the positive impacts of the cruise industry on the community income:

"I know that [cruise tourism] benefits in income for the community and for the municipality [it] is a great impact." (Economic stakeholder)

One of the important economic benefits noted by many stakeholders is the income generated by the harbour in port fees. This income for the harbour funds not only the harbour operations but also helps pay for harbour improvements of amenities, which also serves other industries that use the ports. One stakeholder divulged how the harbour also finances services and facilities that are not within their area of responsibility, which should instead be financed directly by the municipality. An example was given of a facility that should have been funded by the municipality, but instead is funded by the harbour, as it was in close vicinity to one of the ports. Stakeholders noted that the profit is loaned to the municipality indefinitely.

One stakeholder described further that the income to the community was more focused on Ísafjörður, and that one of the communities, Flateyri, was only minimally benefiting. The participant could only find two businesses that were benefitting from cruise tourism: the bookstore; and a travel agent.

Another strength of cruise tourism in the region is due to the location of the region. Since the northern westfjords are a remote destination and somewhat isolated from Reykjavik, services cannot come from the capital and had to be generated here within in the community. Other destinations in Iceland in closer proximity to Reykjavik often are not able to generate much income for the community through cruise tourism.

"The ships came in Grundarfjörður in Snæfellsness peninsula, and the guides and the buses all arrived from Reykjavik. And there was no experience or development of tours at the locals. [Here] at that time, we made the tours, we were too far away from Reykjavik for it to be cost-effective to send buses, which was for advantage because that's we needed to create the tours in order for the ships to come. And that experience and development work is something that can be built up and has been built on." (Social stakeholder)

The remoteness of the community is therefore an economic strength because the northern Westfjords are able to develop their cruise tourism industry and keep a bigger part of the value chain in town.

Weaknesses and Threats:

Notwithstanding the above, stakeholders and experts identified economic weaknesses and threats associated with the cruise tourism industry. Mainly, the nature of cruise tourism makes it so that limited money is spent at the destination. Another economic weakness is that cruise tourism also requires costly infrastructure due to the number of passengers that it brings.

"But the fundamentally wrong thing about cruise tourism doesn't change. They still don't need any hotels; they don't need any restaurants. But when they go on land, they need huge infrastructure and roads and car parking, and buses." (Institutional stakeholder)

Another stakeholder mentioned that cruise ships have been increasingly bringing their own equipment for tours and therefore, taking away from the business that is offered in Ísafjörður and other towns.

'The bad thing about these cruise ships is it's hardcore business. And they want, they prefer to have as much of the value chain as they can. Thus, they sent the bigger ships have now have electric bikes on them. And you see a lot of those, they have electric scooters, and they want to keep the value chain on board.' (Social stakeholder)

Furthermore, as mentioned above concerning expedition cruises, as there is currently no regulation prohibiting docking ships outside port areas. In that way, some expedition cruises

avoid paying landing fees, while also not putting money into services provided by the communities.

One stakeholder mentioned that if the capacity for profit for the products and services offered in town is reached, then it becomes hard to make money from this 'surplus' of people. This in turn might just exacerbate the negative impacts felt by the residents. In the case of cruise tourism, more people do not always mean that businesses are able to get more income.

Cruise tourism might also impact other types of tourism, considering services and amenities in Ísafjörður are limited and it is rather easy to reach maximum capacity. As a result, other types of tourism might be affected by cruise tourism, and the income generated by non-cruise tourists might suffer. Contradictions between the different types of tourism were also mentioned by stakeholders:

"There's actually a big contradiction in the tourist development in the Westfjords: on the one side, they're going for, in a pure nature and on the other side they are building this cruise tourism. And those are two, like opposites in tourism." (Institutional stakeholder)

This contradiction is perceived as an economic threat because it might negatively impact landbased tourism. The town and region are marketed as destinations for nature tourism and branded as "*off the beaten path*." Land-based tourists sometimes come to Ísafjörður where thousands of tourists wander around in town, which comes in direct contradiction with what they have been sold.

4.2.3 Infrastructural

Strengths and Opportunities:

As mentioned in section 4.2.2., a strength of cruise tourism in Ísafjörður is that the harbour uses the profits from landing fees to take care of infrastructure that is not necessarily related to the ports. This is both an economic and infrastructural benefit of the cruise industry in the northern Westfjords.

Weaknesses and Threats:

Both a weakness and a threat mentioned by stakeholders is that the region does not have the infrastructure for the desired amount of tourism. Stakeholders mention that cruise tourism

demands a lot of infrastructure. However, considering it is a very seasonal business, questions are raised regarding whether it was worth the cost to invest in this kind of infrastructure for only a few months a year per year. This was reiterated by one stakeholder who mentioned that there will never be a winter season for tourism in the northern Westfjords because of the sea condition.

"But when they go on land, they need huge infrastructure and roads and car parking, and buses." (Institutional stakeholder)

"that's the kind of obvious disadvantage with this cruise ship tourism, with infrastructure, you want it to be used all around the year, evenly. Every day, you want your car park to be 80%, full every day of the year. All days know, what's bad for every business. Of all sorts is not to be able to use your investment, except for a limited time, per year." (Institutional stakeholder)

Another stakeholder also noted the visual pollution generated by cruise ship infrastructure. Some of the cruise ships are much higher than all the buildings in the town, they dominate the landscape of the town (Figure 13)



Figure 13: Cruise ship anchored in Skutulsfjörður by Ísafjörður (Photo by: Haukur Sigurdsson).

Furthermore, the lack of walking paths in town was noted by one stakeholder. Some safety concerns were raised with cruise passengers disregarding the traffic rules that are put in place by the harbour. Considering that a harbour is a place that is shared between cruise ships and other industries, the space frequently has moving machinery and materials, one of the stakeholders expressed for the safety of the passengers:

"I do think one of the weaknesses we have here is that the walking paths from the harbour are not good enough. [...] We need to set up the infrastructure at the harbour so that security issues are solved regarding the traffic around the harbour region." (Social stakeholder)

As mentioned in section 4.2.1, another weakness is linked to the electrical capacity of the region. If cruise ships shift to using renewable energy, the ships would need to connect to the electric gridlines at their destination. Stakeholders noted that it would be very unlikely that the northern Westfjords would be able to generate enough energy for cruise ships.

"We don't know what energy sources these ships will take. Gas, electricity, whatever. If it's electricity, we could never do that. Not at the current production of electricity in the region." (Social stakeholder

One stakeholder also considered this possible turn towards green energy as a threat to the industry in the region. The unavailability to accommodate this change might deter cruise ships from coming to the region.

4.2.4 Social

Strengths and Opportunities:

The stakeholders noted many strengths and opportunities of cruise tourism in town in relation to social aspects, especially positive impacts on employment. Stakeholders described how the increase in cruise tourism brings advantages to the job market by creating more jobs, and therefore increasing the variety of jobs that are offered in town. The increase in cruise tourism also brings more flexible hours or overtime to existing positions.

Furthermore, the growth of cruise tourism gives the possibility to residents to set up their own business, which might have previously been impossible without profit from this additional market. Additional businesses might also make the services that these businesses offer available to residents or give residents more options. For example, cruise tourism might allow someone to open their restaurant during the summer, which would also benefit the residents by expanding

the range of options available in Ísafjörður. One stakeholder mentioned that cruise tourism might also be able to help businesses stay open year-round:

"If they have business from tourists, maybe six, seven months of the year, they may be able to better survive the winter and provide them service for locals." (Social stakeholder)

Additionally, some of the infrastructure that is bought or created for tourists can also be used for residents. One of the stakeholders mentioned the walking paths as an example that can also improve the quality of life of residents.

"We see walking tour tours around town I believe that we could set up more walking paths around here which is a really good way to welcome people to offer them more walking paths. But it's also really important for us living here to have more varied walking paths it creates good value in the people we're looking at we can offer our guests to use them too." (Social stakeholder)

One of the stakeholders mentioned that tourism allows residents to change their perspective on

the community or town.

"And I think it is it's also a welcome addition for local people to see their places through the eyes of strangers, of people coming from far away. I think it can invoke a sense of pride. And you may start to think a little bit better about your place. And it can bring out the history of the place." (Social stakeholder)

Weaknesses and Threats:

The participants indicated many weaknesses and threats of cruise tourism in the region. On one hand, a few of the stakeholders compared the cruise passenger's behaviour to how they would act in a museum.

"I had heard some stories about it before, but I didn't realize it would be so bad. They actually come and look into your windows, they regard [the town] as a museum and they are [...] not nice tourists. They, somehow, don't have the respect or the education or something."

This type of behaviour brings more specific complaints, such as privacy issues, with cruise tourists regularly observing people through their house windows. Crowdedness was also mentioned by stakeholders.

One participant expressed concern over the strain that the presence of thousands of additional people puts on the healthcare system:

"The security issues are still there and getting 200,000 people or something here during the summer. It puts a strain on the on the healthcare industry and and the local search and rescue need to be on on alert. Because if there's a car accident with one of those buses, we're in trouble. And those are issues I don't think many people are thinking about. Fortunately, we have we haven't had many accidents. But it's it's a risk. Because of one bus accident here with a 60-person bus. You know, with the few doctors and nurses we have, it would be dangerous." (Social stakeholder)

As mentioned previously, expedition ships landing outside of harbour areas create many issues. During the landing in Holt of the previous year, the cruise ship disturbed wildlife. Specifically, eider ducks and eider farmers in the area, whose land the ship landed on, making this incident both an environmental and social issue.

Annoyance and irritation were also identified by stakeholders as a weakness in how some residents perceive cruise tourism. This was brought up as a concern because annoyed residents can be rude to tourists, which might spoil their experience. One stakeholder brought a more nuanced perspective on those threats of cruise tourism:

"It's not really there are a lot more negative things in the life than cruise ship tourists but still that's the only impact they feel, and you know, it's how you notice them in a negative way." (Social stakeholder)

Another weakness identified by a stakeholder is that residents are not seizing this opportunity as much as they could.

"And the first thing was the social acceptance of the local inhabitants so that people can see and feel that there's something in it for them. Okay, you accept the inconvenience, if you know that it creates value for you. If you don't see it, why should we bother again?" (Social stakeholder)

Another threat is that cruise ship employees working laws are different than Iceland, therefore there can be some issues on these violation of Icelandic work laws on Icelandic territory. One stakeholder questioned the ethicality behind accepting these kinds of ships.

4.2.5 Institutional

Many institutional factors were mentioned by stakeholders. Weaknesses and threats in relation to the different institutions involved in the cruise industry are split into two sections: Ísafjörður and the broader national context. Moreover, strengths and opportunities discussed are the expansion of the harbor and the new management of the harbour.

Weaknesses and Threats:

Weaknesses and threats mentioned by stakeholders during the interviews relating to the different institutions involved in the cruise industry in Ísafjörður included poor communication, a lack of planning and management, and undemocratic processes.

An important weakness invoked by the participants is a lack of communication on the management of cruise tourism. According to one participant, the harbour's communication with stakeholders has been qualified as unidirectional.

"That's something that's been lacking a lot, this communication, real communication, not we're doing this, and you can join us." (Economic stakeholder)

A need to manage growth of the industry was also mentioned, alongside comments on intense growth in the last few years. The municipality has not been able to properly manage this increase and plan accordingly. This lack of planning, in turn, caused avoidable issues that were raised by one stakeholder:

"We have had overcrowding issues, which is bad planning. And, and the fact that maybe town authorities should have been more aware of how to set up the harbour, how to work with tour operators how to work with them throughout the year, not start too late in the summer." (Social stakeholder)

One stakeholder also mentioned issues with the management of the cruise calls, and how it could be done more efficiently, through, for instance, the use of other ports in neighbouring towns.

Additionally, stakeholders argued that the plan to bring cruise tourism into Ísafjörður, as well as its growth, was not a democratic initiative.

"There's never been a long-term plan, democratic plan of any sort that decided: this is what we're going to do, we're going to try to build up this cruise tourism to, to help our municipality. It's just the initiative of the Harbourmaster actually." (Institutional stakeholder)

The growth of cruise tourism in Ísafjörður fits into the national context of the separation of powers and duties between the central government of Iceland and the municipalities. One stakeholder explained that in recent years, more and more duties and responsibilities have been transferred from the central government onto the municipality, with little help from the national

authorities. Therefore, while the responsibility taken by the municipalities is increasing, the budget must, be separated into more parts.

"And then slowly, the municipalities take over responsibilities take over the schools, and they take over the welfare systems in terms of, you know, like the handicaps and social welfare, and they get some money from the state, but not enough, they complain. So, the income model of the municipalities is weak, there is a general consensus on that in Iceland, that there are really little means for municipalities to run themselves properly in terms of money." (Institutional stakeholder)

Thus, according to this stakeholder, if the municipality is presented with income possibilities, it is difficult to refuse, considering there are limited opportunities for income for the municipality.

"As I see it, with the question of *should we curb the growth of cruise ships* never rises because Ísafjörður is almost always bankrupt? They always need the money from the parts. So, every time there is idea of increase in cruise tourism, nobody says no. Because money talks, and we need the money." (Institutional stakeholder)

Another institutional weakness when looking at cruise tourism, more specifically expedition ships, is the Right of Passage. According to this law in Iceland, people are allowed to pass through private land that is not theirs. This means that expedition ships can anchor in most places, without needing to ask for authorization from the landowner.

"It should be you should need to buy a guide you should need to pay for the use of the land to either the land terminal or it should be regulated." (Institutional stakeholder)

One stakeholder mentioned the lack of strong environmental regulations. This is especially important considering that the environmental laws were put in place while cruise tourism was not a major industry in Iceland, and therefore does not necessarily address the industry expansion over the last few years.

"I'm also worried about the fact that we do not have a strong rule regarding pollution in harbours, like, for instance, some of the most popular destinations in Norway, like the Geirangerfjord. So, all ships come here because they're not allowed to go to some other places. And that's really bad, we have to have like, way more strict rules regarding that. And I think we must find ways to take over before like the industry takes us over." (Environmental stakeholder)

One stakeholder discussed how cruise ship passengers are often not informed about the destination they are in. According to this stakeholder, this is because they do not have to do the research on destinations that most land-based tourists would do, making them unaware of how to behave in town.

Strengths and Opportunities:

The expansion of the Sundabakki port was an opportunity for the municipality because it is in majority funded by the central government of Iceland, therefore it is a project to bring more income into the municipality while paying little for the investment. One stakeholder discussed how the expansion of port facilities in Ísafjörður was seen as a solution for the lack of income of the municipality.

"And that investment is by 80%, financed by the state. So, you have a state funded project in augmenting the facilities for cruise ship tourism, but the revenue goes to the municipality." (Institutional stakeholder)

One strength that was mentioned by a participant is that the new management of the harbour of Ísafjarðarbær is more open to a discussion on the future of cruise tourism in the municipality. The discussion also involves putting in place a limit on cruise calls, as well as establishing a dialogue between the harbour and the different stakeholders.

4.2.6 Conclusion

Facilities put in place because of tourism can also be used by residents and improve quality of life. Also, cruise tourism stimulates economy and opens opportunities of various kinds. However, the peak season is short, and facilities are maybe not rentable on an annual basis, so there are limits to the need for infrastructure extensions when it is only used for a few months (all extensions should keep this in mind, find solutions that are sustainable but flexible). Also, there is power asymmetries between cruise lines and Ísafjörður that can be reflected through cruise lines wanting to keep as much of the value chain, which limits profit and entrepreneurship in town.

The environmental impacts of cruise tourism have raised many concerns — air pollution, trespassing outside port areas, unknown environmental impacts— and the lack of energy in the region means that the region would be unable to supply ships as they transition to renewable

energy. Stricter environmental regulation and monitoring are needed to understand the environmental impact left in the community.

Although the presence of cruise tourism has positive social impacts, such as the diversification of the job market and an increase in employment, there are many negative social impacts that were cited by the stakeholders: annoyance and irritation, visual pollution, lack of walking paths, lack of privacy, crowdedness and strain on healthcare systems.

Some issues hindering the management of cruise tourism include a lack of communication between stakeholders, the non-usage of other port facilities, and the weak income models of the municipality. However, the implementation of a limit to growth seems more attainable considering the new management of the harbour facilitation communication with other stakeholders on placing a carrying capacity limit.

5 Discussion and Conclusion

At the beginning of this thesis, the stated overarching research questions were as follows:

- How do residents perceive cruise tourism in Ísafjörður and surrounding communities?
- How much cruise tourism activity is wanted residents of Ísafjörður and surrounding communities?
- How do key stakeholders consider the future of the cruise industry in Ísafjörður?

This thesis aims to describe residents' perceptions and tolerance toward cruise tourism and their attitudes toward growth. This study takes place in the context of a rapidly growing cruise tourism industry in Ísafjörður, with no recent literature applying a community-wide survey. This section will draw comparisons with O'Brien's (2014) carrying capacity study in Ísafjörður to understand how carrying capacity has evolved in the last 10 years.

5.1 Residents' Perception

Residents' perceptions and tolerance were analyzed throughout the survey and the interview results. Respondents were found to perceive cruise tourism at times favourably, and at times unfavourably. Environmental and social indicators are predominantly seen as negative while the economic and development indicators are predominantly seen as positive (Figure 6). This indicates that environmental impacts, and – to a lesser extent – social impacts, were identified as areas of concern for residents. These results suggests that residents find both benefits and drawbacks in the cruise tourism industry and have a nuanced view on cruise tourism. This nuance is further reinforced by the favourability index, with most participants being in the neutral range, and with measures of central tendency. The results from the interviews support survey findings, considering both drawbacks and benefits were mentioned.

The benefits predominantly brought up throughout this study were mainly considered economic benefits (stimulation of the economy, employment, etc.) but one theme that emerged throughout the interviewees is the multi-usage of amenities and services by residents and tourists; much of the infrastructure put in place to accommodate cruise tourism is simultaneously used by residents of Ísafjörður and surrounding communities. The infrastructure and services are then available to residents and other industries of the town, which, improves their quality of life.

Stakeholders specifically mentioned walking paths, other industries benefiting from the harbour's improvement of facilities, and businesses remaining open year-round due to the extra income made from cruise tourism over the summer.

These findings contrast with O'Brien's (2014) survey results which found that respondents saw economic, development and social indicators as predominantly positive, and environmental indicators as equally positive and negative. Differences can also be noted between the favourability index in O'Brien's study and this thesis, such that O'Brien found residents were favourable to cruise tourism. This contrast suggests that residents' perceptions and tolerance have, become less favourable since 2014, and the benefits of cruise tourism no longer "far outweighs the costs" (O'Brien, 2014, p.x). O'Brien noted that despite the result of the survey, interviewees did not see any negative impact from the industry. This contrasts with the interviews in this thesis, where all stakeholders were aware of negative impacts that cruise passengers and cruise ships in 2022, but also with the increasing depiction of cruise tourism in the media, making the negative impacts more apparent (Sæthórsdóttir et al., 2020). This contrast can also be explained by the decreasing tolerance of residents, as noted by the lower favourability compared to 2014 levels.

What impacts the favourability to cruise tourism?

Some variables were found to have an impact on the favourability of cruise tourism. As expected, income, contact, as well as political considerations, impacted resident's attitudes toward cruise tourism. O'Brien also found income and contact to be significant. However, the previous research did not consider political considerations for correlation. O'Brien reasoned the correlations with the social exchange theory, which states that people consider the costs and benefits of an exchange when determining its value. When an exchange is beneficial to a person, they tend to view it much more positively than if there are no benefits (Andereck et al., 2005). The same applies to perceived costs linked to negative views. When applied to tourism and host populations, this theory infers that the perception and attitudes that an individual will have toward tourism are correlated with the outcome of an — often subconscious — trade-off analysis that they performed weighing the impacts both on themselves and on their community (Andereck et al., 2005). One quote in section 4.2.4 reflected well on the usage of the social exchange theory as it showed the rationale behind weighing the trade-offs of cruise tourism.

This is supported by a stakeholder interview who noted that most people did not feel the personal benefits of cruise tourism, only the negative impacts (Section 4.2.4). Therefore, while residents feel the negative impacts of cruise tourism, people are tolerant because of the benefits brought to the community. With an increase in tourism, this dynamic of skepticism only increases. This supports the social exchange theory and the diminishing favourability since 2014. In the face of increased cruise tourism activity, and therefore increased negative impacts, people that have no stakes in cruise tourism and do not perceive direct benefit can see the industry more negatively.

Moreover, the social exchange theory explains the finding that perceiving benefits such as income and having more contact with cruise tourists is correlated with higher favourability with the industry. The findings of this study imply that the rationale behind residents' perception is motivated by a combination of personal interest and communal interests—especially considering that less than half the respondents acknowledged to perceiving personal benefit from cruise tourism. This finding is supported by Gonzalez (2018) who found similar results. Other studies support the result of this study through the correlation between positive attitudes and employment in tourism (Gonzalez, 2018; Kim et al., 2013; Jurowski et al, 1997).

Political considerations refer to the response to the following statement: "I feel my views about cruise ships are considered by decision-makers." This study found individuals with a lower tolerance for cruise tourism felt that their views were not considered by decision-makers, while people with higher tolerance agreed that their views were considered. The observed correlation between these factors can be explained by the unregulated and rapid growth of the sector in the northern Westfjords.

However, many factors were found to have no relation to residents' attitudes towards cruise tourism, which is not supported by previous research. Other studies (Chiappa et al., 2018; Brida et al., 2012) found a link between geographical proximity to activity concentrations and residents' attitudes and tolerance, with residents living further away from the port being more favourable to cruise tourism. In contrast, the present study found few difference between residents' attitudes based on where in town in Ísafjörður they lived. One explanation could be linked to the small size of the town, and the concentration of economic activities. Businesses are concentrated in Eyri, where most activities take place, meaning that even though not all respondents reside in that neighbourhood, many work in the area, and therefore also feel the

negative impacts. The size of the town also means that most cruise ships are visible from all areas of town.

Although not significant, the results noted a difference between the towns' favourability to cruise tourism, with Bolungarvík being the least tolerant to cruise tourism. Yet, Bolungarvík also seemed to be the most favourable to the growth of cruise tourism. These contradictory findings can be explained by Bolungarvík's position in the cruise industry in the region. All the other towns of the study are part of the Ísafjarðarbær municipality while Bolungarvík is not; hence the town does not perceive the benefit of cruise tourism through the landing fees, with the exception of a few ships landing in the Bolungarvík harbour. There are also no tour operators located within the town that do direct business with the cruise tourism industry. Meanwhile, some tours based out of Ísafjörður have Bolungarvík for a destination, meaning only a few businesses benefiting from the cruise industry at present. Residents of Bolungarvík being more open to the growth of the cruise tourism, perhaps through receiving more cruise ships directly in port. Through further study is necessary to determine the cause of Bolungarvík's desire for growth.

5.2 Degrowth and Future

One of the most relevant findings that emerged in this thesis is the opposition of residents toward further growth of cruise tourism. Respondents were found to be against the growth of cruise tourism, and most respondents agree with the implementation of a limit on the number of cruise passengers per day. Seemingly, this result seems to be spurred by concern for environmental impacts. Most respondents desire a maximum capacity to be put in place. This maximum is desired by the majority (%) to be lower to or equal to 3,000 passengers, corresponding to the threshold that the town had set for "big days." Interestingly, during the period of the study, the town changed the threshold for 'big days' from 3,000 to 5,000 passengers, further demonstrating the rapid growth in the cruise tourism industry.

These results diverge from O'Brien's study which found that the communities were supportive of the cruise tourism industry's growth. Residents, in 2013, did not believe growth had been progressing too quickly, which contrasts significantly with the results of this thesis and indicates clearly that residents' opinions have changed. However, at the time, O'Brien found that a small majority of residents believed that the community could not handle more passengers, indicating

that the study area was approaching saturation. This was contested by Regan (2020) who found that the attitudes toward cruise tourism were generally positive, despite a significant increase since O'Brien's study. O'Brien found a dichotomy between interview and survey results, where many negative impacts of cruise tourism were noted in the survey, but most interviewees could not see any negative impact when asked directly. Regan's methods reflected similar results to the interview results of O'Brien. One possible explanation is that interview methods are better at grasping nuanced opinions and attitudes, therefore were able to better understand 'the whole picture' (Khoo-Lattimore et al., 2019).

The opposition of the respondents toward the growth of the cruise industry, especially when compared to 2014 levels of O'Brien study, is a clear indication that the social carrying capacity in Ísafjörður has been reached. This is further supported by the decrease in the favourability to cruise tourism since 2014.

The interviews conducted for this thesis both support and oppose the findings of the current survey. Some stakeholders were found to be in favour of the establishment of a limit of cruise tourism. One stakeholder was firmly in favour of the continued growth of cruise tourism in the municipality. However, this stakeholder is not part of the community in Ísafjörður, but rather in one of the villages of the municipality, where the impacts of cruise tourism are not felt to the same extent as people living near the port. The usage of ports in neighboring communities could be seen as a solution to alleviate the burden on Ísafjörður, while also giving more opportunities for the residents of these towns to benefit economically. However, this cannot be seen as a solution for all excess cruise ships as the size of the population are smaller and the quantity of services and infrastructure are fewer. Therefore, the carrying capacity for these towns could easily be reached or surpassed.

Limit on Cruise Passengers

The establishment of a limit of the daily maximum number of cruise ship passengers has been done in other places in Iceland. The port of Akureyri accepts a maximum of around 7,000 cruise passengers per day (Personal communication with Advisor, June 13, 2023). Cruise calls are then redirected to smaller ports in the vicinity of Akureyri. Furthermore, this rule of thumb applies to the number of the cruise ship's capacity. This implies that the number of passengers landing is often less considering the cruise ships are often not at capacity. It should be noted that capacity numbers do not account for the crew. The port of Grundarfjörður on the

Snæfellsness peninsula has also established a limit on daily passenger numbers, as informed by two interview participants.

A survey comment left by one respondent discussed the type of limitation for the maximum capacity suggested in the survey. Ports around the world have put different types of capacity on cruise tourism: limits on the number of ships per day, limits on the number of cruise ship passengers, and limits on the number of days per week to receive ships. A limit on the number of ships per day is not relevant to Ísafjörður considering the considerable amount of expedition ships with a low number of passengers. The same rationale was applied for the limit on the number of days per week. Considering the number of expedition cruises that the harbour serves, it seemed irrelevant to use a limit on the number of days, as these ships have usually low numbers of cruise passengers. Moreover, if docking in the harbour was not an option, expeditions ships might resort to docking outside harbour areas, where sensitive nature is at risk of damage. Considering the small size of the study area, it can easily become overcrowded, especially with larger cruise ships. Establishing a limit of passengers per day would ensure that the ratio of cruise passenger to resident remain low.



Figure 14: Ísafjörður town center during a day with 6,000 cruise passengers (Photo by: Haukur Sigurdsson)



Figure 15: Footpath in town during a busy cruise day. (Photo by: Carina Burroughs)

Interestingly, more respondents were found to agree with the following statement: "My community cannot handle serving more cruise ships," than respondents who were in favour of instating a maximum capacity. This dichotomy might be explained through the worry of residents that by putting in place limits, the cruise lines could retaliate by avoiding Ísafjörður as a destination. This power dynamic has been discussed by James et al. (2020) who noted multiple comments by stakeholders in Ísafjörður on the power of cruise lines represented an economic threat which could be enacted if the destination decides to put in place more limiting measures. This idea was further reinforced by one of the interviewees who mentioned the weak income model for the infrastructure. The lack of economic options further reinforces the power asymmetries with the multinational cruise companies.

Change of Harbourmaster

A hopeful sentiment revealed through some interviews in regard to a recent change (January 2023) in harbour management. Some stakeholders expressed their hope that the communication issues of the previous management will be resolved with the change; considering the harbour had started to open a new dialogue with stakeholders of the cruise tourism industry. The new harbour management has shown interest in implementing limitations to stop unregulated growth

of cruise tourism and implement a capacity of cruise passengers per day. This could also open a conversation about the "degrowth" of cruise tourism in the area.

What Impacts Attitudes on the Growth of Cruise Tourism?

This study found no variables are significantly linked with residents' attitudes toward growth of the cruise tourism industry. This finding is supported by a past study in Ísafjörður by O'Brien but is in opposition to findings from other studies. However, other studies found that individuals who worked in tourism had a greater willingness to accept more tourists (Gonzalez, 2018).

Many variables were found to have no relation to growth, which does not support results from previous research. Much research has found a relationship between the proximity of residence to tourism activities and the attitudes of residents towards it. In case studies in India and Iran, studies by Liu and Li (2018) and Rasoolimanesh et al. (2017) found that residents who lived outside of the touristic areas supported tourism growth more. Another study by Weaver and Lawton (2001), like this study, did not find a correlation between residents' attitudes and the proximity of their residence to the tourism centre.

Although not significant, an interesting finding was noted for the town of Suðureyri. Suðureyri was found to be favourable to cruise tourism and therefore the residents are tolerant of the industry. However, the town was also found to have the lowest favourability towards growth. Hence, the residents are happy with the present state of cruise tourism in their town but do not desire growth. This can be explained by the higher presence of cruise tourism through the administration of one tour operator, *Fisherman*, which is based in Suðureyri and is one of the main regional tour operators after West Tours, based in Ísafjörður. Residents of Suðureyri benefit more from cruise tourism through the tour company but also have more cruise passengers presence, and therefore more of the negative social impacts that are associated with cruise passengers. This is one possible explanation for why Suðureyri residents are the least receptive to growth.



Figure 16: Cruise passengers in Ísafjörður. Some are attending a tour others are waiting at tender (Photo by: Carina Burroughs)

5.3 Management and Recommendations

The results of this thesis show that more management of the cruise tourism industry is required to ensure the sustainability of the industry in Ísafjörður. However, the management of cruise tourism in the region cannot be dissociated from the management done nationally. Small destinations have much more difficulty fighting for sustainability when facing multinational cruise lines than countries, or broader regions like the Arctic. Considering the negotiation power between small destinations is very uneven (James et al., 2020), there needs to be more support from the national government, but also from cruise tourism NGOs like Cruise Iceland. Currently, there are no efforts towards systematic monitoring of the environmental impacts of the cruise industry in Iceland (Personal communication with Advisor, July 24th, 2023). Systematic monitoring would help frame suitable policies for managing the growth, or degrowth, of cruise tourism to ensure that the industry becomes or remains sustainable.

However, there are measures that Ísafjörður can implement to limit cruise tourism, either to stop or slow the growth or to introduce degrowth of the industry. It is critically important to put such measures in place as the expansion of the port of Sundabakki makes it possible to accommodate several more vessels. The main management implications are divided into two categories based on the different possible trajectories of the cruise industry: limiting growth or managing growth. These trajectories will be discussed further below.

5.3.1 Limiting Growth

The implementation of a limit on the number of cruise passengers has been explored in this thesis. Port management, local stakeholders and residents would inform this limit, and ensure that it is determined by clear reasoning that takes into consideration the number of passengers, number of calls, size of ships, and simultaneous calls. This study found that most residents are in favour of introducing a cap on cruise passenger numbers, with a majority of residents desiring a capacity set at 3,000 passengers or less. This number also includes an important part of the population desiring less than 1,000 passengers. Therefore, based on the result of this study, the capacity is recommended to be set at 3,000 passengers. Introducing a cap on cruise numbers must be done with consideration for the present capacity and with the possibility to re-evaluate based on changes in carrying capacities and tourism development. More consideration in the management of cruise calls is suggested, considering that a limit on numbers would limit the possibility of simultaneous cruise calls. An option mentioned by one is the possibility to manage cruise calls to avoid overlap within a day by reducing the amount of time that ships spend in port. Introducing a cap would restrict the size of ships that are allowed into port, ships with more than 3,000 passengers would not be allowed to dock in the port.

There are several implications around putting a limit on the number of daily cruise passengers that should be discussed. The port of Ísafjörður is the main port of call for cruise ships in the northern Westfjords, which means that if a limit was put in place, some cruises may be redirected to neighboring towns. Other ports around Iceland have adopted a similar strategy, like Akureyri. As stakeholders suggest, other ports in the northern Westfjords could alleviate this burden by accepting some ships. Some ports could receive small expedition ships in the harbour, or larger ships could use tenders to move passengers to shore. Another option would be for ships to be redirected to the southern Westfjords, in Patreksfjörður where there is existing cruise ship activity.

Other ports have introduced caps including Juneau and Glacier Bay, in Alaska, and Geirangerfjord, in Norway. Bar Harbour, in the USA state of Maine and comparable in size to Ísafjörður, banned cruise ships with over 1,000 passengers (including crew). Growing concern of cruise tourism impact has led the Norwegian Environment Agency (Miljødirektoratet) to propose a list of strict regulations on tourism. Among these restrictions, all cruise ships that bring passengers to the shore in protected areas will have a capacity of 200 passengers and landing has also been limited to 43 selected destinations in protected areas on Svalbard. Another proposal that is currently discussed is the restrictions from 500-750 passengers/crew sailing in Svalbard waters (Payne, 2022).

The implementation of a tourist tax is another strategy that destinations have implemented. A tax can provide revenue for the destination to put towards sustainable management of the industry. The implementation of a tourist tax in Alaska caused generation of additional revenue and a simultaneous decline in cruise calls (Brida and Zapata, 2010). The implementation of a tourist tax in the northern Westfjords may cause a decline in cruise calls; however, this might be beneficial for the degrowth of the cruise industry.

5.3.2 Challenges to Degrowth

This study took place during the construction of the expansion of the Sundabakki pier in Ísafjörður which will allow further expansion of the cruise industry. This is concerning considering this thesis found that the carrying capacity for the town has already been reached, and that residents are against the growth of the cruise industry. The expansion of the port was done with the expectation of economic growth through increased tourism, as mentioned in the harbour report:

"The goal of Ísafjörður town is to expand the mooring at Sundabakki on Ísafjörður and increase the sea depth outside it so that larger and more ships can dock. The project is intended to increase diversity and services in the use of the port, as well as increase income. The trend is that cruise ships are getting bigger and longer, and there is also a prospect that they will stop here for longer" (Verkis, October 2020, p.2).

The port expansion shows that the harbour is expecting continuous growth of cruise tourism, which makes management of the cruise industry and the introduction of limits even more pressing. If managers decide to put in place limits to growth, the port might need to turn towards

other industries to use the new expansion. For instance, the report mentioned the possibility to increase fish landing, as well as increasing transportation of goods through the port.

Other concerns can be raised over the infrastructural carrying capacity of town, which might be exceeded with additional cruise tourism. As previously mentioned by a stakeholder (Section 4.2.4), it is pointless to accept more cruise tourism if people are not perceiving benefits.

Kulkov et al. (2023), in their systematic literature review on cruise tourism management, identified the establishment of stricter regulations as an urgent need to ensure sustainable practices in cruise tourism. Some of the cruise calls in Ísafjörður are done by cruises that are members of the AECO and adhere to stricter standards and ethics, showing there is a market for this type of responsible tourism in the Westfjords. Other destinations have started putting in place stricter environmental standards for their ports. There are currently many restrictions on cruise ships in Svalbard, including a complete ban on heavy fuel oil in Svalbard waters. Norway also passed a bill allowing the operation of only zero-emission ships in World Heritage Fjords by 2026. The Norwegian Maritime Authority had already previously put in place stricter standards for emissions of NOx in the same sites. Following this example, allowing only ships with stricter environmental guidelines is a possibility for destination management in Ísafjörður. This was further suggested by one of the stakeholders who expressed concern over the more relaxed environmental regulations in comparison to other destinations. This is also of vital importance considering the result of the survey showed that environmental impacts were at the forefront of resident's concerns.

Moreover, comments over the education of cruise tourists on the destination were mentioned by one stakeholder. This might affect behaviour of tourists in town. However, this raises the questions of who should be responsible for informing the passengers, and how should this be done. Especially, in some context where the crew might also be unaware of information on the destinations.

Similar management of cruise calls can be done as discussed in section 5.4.1, even without the implementation of a cap, to alleviate the burden on Ísafjörður. There are various ways to better manage cruise calls. These measures can include the redirection of tourists to other ports as a solution to manage growth, so that cruise tourism becomes more spread out within the region. Another measure would be to shorten the time that cruises spend in port, especially for days

with multiple cruise calls. Other measures include putting in place a tourist tax, or implementing technical access limitations, such as a cap on passenger numbers.

6. Future Research

This study aimed to describe residents' perceptions and tolerance toward cruise tourism and reporting their attitudes toward growth as well as understanding the challenges faced by managing bodies and key stakeholders of the industry in the northern Westfjords in the context of rapidly growing cruise tourism. This study found that residents of the northern Westfjords are against further growth of cruise tourism and are in favour of implementing limits to growth. Residents' attitudes and tolerance towards cruise tourism are relatively neutral, although more residents view the industry in a negative light, which further indicates that the point of saturation of the cruise tourism industry has been reached in the northern Westfjords. Introducing a cap is one recommended measure for limiting cruise tourism, however, such a cap must be carefully implemented and follow a clear goal. A cap size must also be informed by local stakeholders and residents. Concerns over environmental impacts extended throughout the survey results and show that the environment is a priority for residents that must be addressed. To better understand the impacts of cruise tourism, it is critical to implement systematic monitoring of the impacts of cruise tourism, both socially and environmentally. Social carrying capacity is dynamic and can change depending on measures, policies, or adaptation from residents. Therefore, systematic monitoring would help understand residents' attitudes towards cruise tourism. Environmental monitoring is crucial to understand the impact on host communities' natural environment.

The carrying capacity approach, the TALC and the LAC form three complementary approaches that served to identify limits to visitor. This is especially relevant considering the unprecedented increase in cruise tourism in the study area. This study found that Ísafjörður and surrounding communities has reached its social carrying capacity with most residents being opposed to growth. This is further confirmed by the stark difference in residents tolerance when compared to O'Brien (2014), with residents being currently less tolerant. This study identified environmental and social impacts as a common source of concern for residents, as well as the continued growth of cruise tourism being identified as an issue.

The findings of this study are relevant to other places in the world because it attests to the social impacts of cruise tourism in host communities. On one hand, it is especially relevant to small

communities, where the carrying capacity is lower. On the other hand, this study is relevant to other Arctic communities because they might be facing similar challenges.

The present construction of the harbour expansion means that the pressure put on the northern Westfjords to accept more cruise calls will increase in the future. Managing stakeholders in Ísafjörður will face many challenges as they try to limit cruise tourism. More research informing managers and experts on how to proceed effectively with the degrowth of cruise tourism, while also losing minimal benefits from the industry is a vital next step. Given the imbalances of power between multinational cruise lines and small cruise destinations, a nationwide agreement, or an Arctic-wide cooperation agreement would be most effective in counter-balancing this power dynamic and giving more power to host communities.

From the finding of this thesis, it is suggested that managers start implementing limits to growth such as a daily limit of cruise passengers. Further research is needed, especially through the implementation of long-term, systematic studies that consider the how carrying capacity can change over time. Further research exploring ways to enhance community engagement in decision-making processes related to cruise tourism; this could involve developing mechanisms for residents to provide input on cruise ship policies and developments. As the discourse of overtourism gains momentum in Iceland, it is important to keep the focus on managing stakeholders and not transpose the responsibility of limiting tourism onto tourists. The implementation of limit and the subsequent negative impact on destinations -due in part to the power asymmetries with multinational cruise lines- can be reduced through the cooperation of national or transnational actors, i.e., Arctic cooperation on Tourism such as AECO. Systematic monitoring of environmental impact is primordial to inform decision-making in Iceland and the attitudes of residents must be considered to ensure a good management of the industry for a sustainable future.

References

- Andereck, K. L., Valentine, K. M., Knopf, R. C., and Vogt, C. A. (2005). Residents' perceptions of community tourism impacts. *Annals of Tourism Research*, 32(4), 1056–1076. https://doi.org/10.1016/j.annals.2005.03.001
- Archer, B. Cooper, J. and Ruhanen, L. (2005). *The Positive and Negative Impacts of Tourism*. Elsevier Butterworth-Heinemann. p. 561.
- Bergens Tidende. (2019). *Debatt: Dra hjem og elsk din egen by!* Available online: https://www.bt.no/btmeninger/debatt/i/pLm83E/dra-hjem-og-elsk-din-egen-by (Accessed on 15/08/2023)
- Brooks, J. (2021). Alaska environmental regulators introduce plan to monitor cruise ship pollution after Gov. Dunleavy vetoed funding for onboard observers. Anchorage Daily News. Available online: https://www.adn.com/politics/2021/01/26/alaskaenvironmental-regulators-introduce-plan-to-monitor-cruise-ship-pollution-after-govdunleavy-vetoed-funding-for-onboard-observers/ (Accessed on 13/08/2023)
- Brundtland, G. H. (1985). World commission on environment and development. *Environmental* policy and law, 14(1), 26-30.
- Butler, R. W. (2020). Tourism carrying capacity research: a perspective article. *Tourism Review*, 75(1), 207-211.
- Capocchi, A., Vallone, C., Amaduzzi, A., & Pierotti, M. (2020). Is 'overtourism'a new issue in tourism development or just a new term for an already known phenomenon?. *Current Issues in Tourism*, 23(18), 2235-2239.
- Cerveny, L. K. (2008). Tourism and its effects on southeast Alaska communities and resources: Case studies from Haines, Craig, and Hoonah, Alaska. DIANE Publishing.
- Chiappa, G., Lorenzo-Romero, C., and Gallarza, M. (2018). Host community perceptions of cruise tourism in a homeport: A cluster analysis. *Journal of Destination Marketing and Management*, 7, 170–181. https://doi.org/10.1016/j.jdmm.2016.08.011
- Cruise Industry News. (2023) 2023 Global Cruise Ship Index. Available online: https://www.cruiseindustrynews.com/store/product/digital-reports/2023-global-cruiseship-index/ (Accessed on 13/08/2023).
- Dodds, R., and Butler, R. (2019). The phenomena of overtourism: a review. In *International Journal of Tourism Cities*, 5(4), 519–528. Emerald Group Holdings Ltd. https://doi.org/10.1108/IJTC-06-2019-0090
- Fontanari, M., & Traskevich, A. (2023). Smart-solutions for handling overtourism and developing destination resilience for the post-covid-19 era. *Tourism Planning & Development*, 20(1), 86-107.

- Fridriksson, J., Wise, N., and Scott, P. (2020). Iceland's bourgeoning cruise industry: An economic opportunity or a local threat? *Local Economy*, *35*(2), 143–154. https://doi.org/10.1177/0269094220911369
- Frost, R. (May 16, 2023). Destinations struggling with overtourism are putting a stop to cruises docking. EuroNews.travel. https://www.euronews.com/travel/2023/04/20/cruise-ships-erosion-air-pollution-and-overtourism-are-driving-cities-towards-bans
- Brida, J. G., Del Chiappa, G., Meleddu, M., & Pulina, M. (2012). The perceptions of an island community towards cruise tourism: A factor analysis. *Tourism: An International Interdisciplinary Journal*, 60(1), 29-42..
- George, E. W., and Reid, D. G. (2005). The power of tourism: A metamorphosis of community culture. *Journal of Tourism and Cultural Change*, *3*(2), 88-107.
- Gonzalez, V., Coromina, L., and Gali, N. (2018). Overtourism: residents' perceptions of tourism impact as an indicator of resident social carrying capacity-case study of a Spanish heritage town. *Tourism review*, 73(3), 277-296.
- Greco, S., Ishizaka, A., Tasiou, M., & Torrisi, G. (2019). On the methodological framework of composite indices: A review of the issues of weighting, aggregation, and robustness. *Social indicators research*, *141*, 61-94.
- Hafnir Ísafjarðarbær. (2023). Cruise Ships 2023. Available online: https://port.Ísafjörður.is/cruise/index.php?l=enandw=c (Accessed on 04/08/2023).
- Hall, W. A., and Callery, P. (2001). Enhancing the rigor of grounded theory: Incorporating reflexivity and relationality. *Qualitative Health Research*, 11(2), 257–272.
- Helgadóttir, G., Einarsdóttir, A. V., Burns, G. L., Gunnarsdóttir, G. Þ., and Matthíasdóttir, J. M. E. (2019). Social sustainability of tourism in Iceland: A qualitative inquiry. Scandinavian Journal of Hospitality and Tourism, 19(4–5), 404–421. https://doi.org/10.1080/15022250.2019.1696699
- Hollenhorst, S. J., Houge-Mackenzie, S., and Ostergren, D. M. (2014). The trouble with tourism. *Tourism Recreation Research*, 39(3), 305–319. https://doi.org/10.1080/02508281.2014.11087003
- Huijbens, E., and Gunnarsson, B. (2014). Skemmtiferðaskip við Ísland Úttekt á áhrifum.
 Rannsóknarmiðstöð Ferðamála. https://www.rmf.is/static/research/files/skyrsla-skemmtiferdskip-2014-vefutgafapdf
- Huijbens, E. H. (2015). Cruise tourism in iceland and the north atlantic: Gateways to the arctic and the challenges to port readiness programs. *Tourism in Marine Environments*, 10(3–4), 241–254. https://doi.org/10.3727/154427315X14181438892928
- Humpert, M. (2019). French Cruise Ship Set to Travel to North Pole in 2021. In High North News. Available online: https://www.highnorthnews.com/en/french-cruise-ship-set-travel-north-pole-2021 (Accessed on 01.07.2023)

- Icelandic Tourist Board. (n.d.) Numbers of Foreign Visitors to Iceland. Available online: https://www. ferdamalastofa.is/en/recearch-and-statistics/numbers-of-foreign-visitors (accessed on 10 July 2020).
- Ingimundarson, V. (2020). Iceland as an Arctic state. *The Palgrave Handbook of Arctic Policy and Politics*, 251-265.
- Isavia. (2 December 2022). 2023 Expected to Be the Third Biggest Year in the History of Keflavik Airport. Available online: https://www.isavia.is/en/corporate/news-andmedia/news/2023-expected-to-be-the-third-biggest-year-in-the-history-of-keflavikairport#:~:text=Isavia%20has%20presented%20its%20passenger,2.2%20million%20t ourists%20in%20Iceland (Accessed on 1 August 2023).
- James, L., Olsen, L. S., and 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
- Janusz, G. K., and Bajdor, P. (2013). Towards to Sustainable Tourism Framework, Activities and Dimensions. *Procedia Economics and Finance*, 6, 523–529. https://doi.org/10.1016/s2212-5671(13)00170-6
- Johnson, D. (2002). Environmentally sustainable cruise tourism: a reality check. In *Marine Policy* (Vol. 26).
- Jurowski, C., Uysal, M., and Williams, D. R. (1997). A theoretical analysis of host community resident reactions to tourism. *Journal of travel research*, *36*(2), 3-11.
- Karlsdóttir, A., and Hendriksen, K. (2005). Et komparativt studie af Islands og Grønlands position i forhold til udviklingen af Krydstogtturisme. Institut for Produktion og ledelse. Danmarks Tekniske Universitet DTU, ISBN: 87-91035-43-0
- Kent State University. (2023, July). SPSS Tutorials: One Sample T-Test. Kent State University:
UniversityUniversityLibrary.Availableonline:
online:
https://libguides.library.kent.edu/SPSS/OneSampletTest (Accessed on 12/09/2023).
- Khoo-Lattimore, C., Mura, P., and Yung, R. (2019). The time has come: a systematic literature review of mixed methods research in tourism. *Current Issues in Tourism*, 22(13), 1531–1550. Routledge. https://doi.org/10.1080/13683500.2017.1406900
- Kim, K., Uysal, M. and Sirgy, J. (2013). How does tourism in a community impact the quality of life of community residents?. *Tourism Management*, *36*, 527-540.
- Klein, R. (2017). Adrift at Sea: The state of research on cruise tourism and the international cruise industry. *Tourism in Marine Environments*, *12*(3–4), 169–182. https://doi.org/10.3727/154427317X15022384101324
- Klein, R. A. (2011). Responsible cruise tourism: Issues of cruise tourism and sustainability. *Journal of Hospitality and Tourism Management*, 18(1), 107–116. https://doi.org/10.1375/jhtm.18.1.107

- Koens, K., Postma, A., and Papp, B. (2018). Is overtourism overused? Understanding the impact of tourism in a city context. *Sustainability (Switzerland)*, 10(12). https://doi.org/10.3390/su10124384
- Koh, E. (2020). The end of over-tourism? Opportunities in a post-Covid-19 world. *International Journal of Tourism Cities*, 6(4), 1015–1023. https://doi.org/10.1108/IJTC-04-2020-0080
- Koh, E., and Fakfare, P. (2020). Overcoming "over-tourism": the closure of Maya Bay. International Journal of Tourism Cities, 6(2), 279–296. https://doi.org/10.1108/IJTC-02-2019-0023
- Kulkov, I., Hellström, M., Tsvetkova, A., and Malmberg, J. (2023). Sustainable Cruise Tourism: Systematic Literature Review and Future Research Areas. In *Sustainability* (*Switzerland*), 15(10), 8335. https://doi.org/10.3390/su15108335
- Lansky, D. (2016). Can destinations increase revenue by limiting (or banning) cruise ships? Yes, keep reading. Destination Development Watch, 9 January 2016. Available at: www.destinationdevelopmentwatch.com/can-destinations-increase-revenuelimiting-banning-cruise-ships-yes-keep-reading/ (accessed 27 June 2023).
- Lau, Y.Y., Kanrak, M., Ng, A. K., and Ling, X. (2023). Arctic region: analysis of cruise products, network structure, and popular routes. *Polar Geography*, 1-13.
- Liu, X., and Li, J. (2018). Host perceptions of tourism impact and stage of destination development in a developing country. *Sustainability (Switzerland)*, *10*(7), 2300.
- Lopes, M. J., and Dredge, D. (2018). Cruise tourism shorte excursions: Value for destinations?. *Tourism Planning & Development*, 15(6), 633-652.
- Lowe, C., and Zemliansky, P. (Eds.). (2011). Writing Spaces 2: Readings on Writing. Parlor Press LLC.
- Lu, J., and Nepal, S. K. (2009). Sustainable tourism research: An analysis of papers published in the Journal of Sustainable Tourism. *Journal of Sustainable 17*(1), 5–16.
- Lück, M., Maher, P. T., and Stewart, E. J. (2010). Setting the scene: Polar cruise tourism in the 21st century. In M. Lück, P. T. Maher, and E. J. Stewart, (Eds.), *Cruise tourism in Polar regions: Promoting environmental and social sustainability*, (pp.1-10). Routledge. https://doi.org/10.4324/9781849776394.
- MacKenzie, N., and Gannon, M. J. (2019). Exploring the antecedents of sustainable tourism development. *International Journal of Contemporary Hospitality Management*, 31(6), 2411–2427. https://doi.org/10.1108/IJCHM-05-2018-0384
- Maher, P. T., Gelter, H., Hillmer-Pegram, K., Hovgaard, G., Hull, J., Jóhannesson, G. T., ... & Pashkevich, A. (2014). Arctic tourism: realities and possibilities. *Arctic yearbook*, 2014, 290-306.
- Maher, P. (2017) Tourism futures in the Arctic, In Latola and Savola, H., (Eds.) The Interconnected Arctic UArctic Congress 2016.

- Mauerhofer, V. (2008). 3-D Sustainability: An approach for priority setting in situation of conflicting interests towards a Sustainable Development. *Ecological Economics*, 64(3), 496-506.
- Mauerhofer, V. (2013). Social capital, social capacity and social carrying capacity: Perspectives for the social basics within environmental sustainability. *Futures*, 53, 63-73.
- McCaughey, R., Mao, I., and Dowling, R. (2018). Residents' perceptions towards cruise tourism development: the case of Esperance, Western Australia. *Tourism Recreation Research*, 43(3), 403–408. https://doi.org/10.1080/02508281.2018.1464098
- McCool, S., Butler, R., Buckley, R., Weaver, D., and Wheeller, B. (2013). Is Concept of Sustainability Utopian: Ideally Perfect but Impracticable? *Tourism Recreation Research*, 38(2), 213–242. https://doi.org/10.1080/02508281.2013.11081746
- McCaughey, R., Mao, I., and Dowling, R. (2018). Residents' perceptions towards cruise tourism development: the case of Esperance, Western Australia. *Tourism Recreation Research*, 43(3), 403–408. https://doi.org/10.1080/02508281.2018.1464098
- McCool, S., Butler, R., Buckley, R., Weaver, D., and Wheeller, B. (2013). Is Concept of Sustainability Utopian: Ideally Perfect but Impracticable? *Tourism Recreation Research*, 38(2), 213–242. https://doi.org/10.1080/02508281.2013.11081746
- Mc Cool, S. F., and Lime, D. W. (2001). Tourism carrying capacity: Tempting fantasy or useful reality? *Journal of Sustainable Tourism*, 9(5), 372–388. https://doi.org/10.1080/09669580108667409
- McCool, S. F., and Martin, S. R. (1994). Community attachment and attitudes toward tourism development. *Journal of Travel research*, *32*(3), 29-34.
- McCool, S. F. (1995). Linking tourism, the environment, and concepts of sustainability: setting the stages. *Linking Tourism, the Environment, and Sustainability, USDA Technical Report INT-GTR-323, Ogden, UT: US Department of Agriculture, Forest Service, Intermountain Research Station.*
- Mika, M. (2015). Sustainable tourism: A critique of the academic feasibility of the concept. *Tourism(Poland)*, 25(1), 9–17. https://doi.org/10.2478/tour-2014-0015
- Milano, C., Cheer, J. M., and Novelli, M. (Eds.). (2019). Overtourism: Excesses, discontents and measures in travel and tourism. Cabi.
- Mousavi, S. S., Doratli, N., Mousavi, S. N., and Moradiahari, F. (2016). Defining cultural tourism. In *International Conference on Civil, Architecture and Sustainable Development*. 1(2), 70-75.
- Nátturuverndarsamtok Íslands (2017). Mengun frá skemmtiferðaskipum í Reykjavíkurhöfn. Available online at: https://natturuvernd.is/Sida/ Mengun-fra-skemmtiferdaskipum-i-Reykjavikurhofn (accessed 27 January 2020)
- Neuman, L. (2002). Social Research Methods: Qualitative and Quantitative Approaches. Teaching Sociology, 30(3). https://doi.org/10.2307/3211488

- Nunkoo, R. (2016). Toward a More Comprehensive Use of Social Exchange Theory to Study Residents' Attitudes to Tourism. *Procedia Economics and Finance*, *39*, 588–596. https://doi.org/10.1016/s2212-5671(16)30303-3
- Nyggaard, L.-E. (2022). Cruise ute av kontroll?– Når de store ski-pene kommer, er det ikke plass til oss. In *Klikk*. Available online: https://www.klikk.no/reportasje/cruise-ute-av-kontroll-nar-de-store-skipene-kommer-er-det-ikke-plass-til-oss-7208931 (accessed 15/08/2023).
- O'Brien, M. A. (2014). Sustainable cruise ship tourism: A carrying capacity study for Ísafjörður, Iceland (Masters dissertation), University Centre of the Westfjords.
- Papathanassis, A. (2020). The growth and development of the cruise sector: a perspective article. In *Tourism Review*, 75(1), 130–135. Emerald Group Holdings Ltd. https://doi.org/10.1108/TR-02-2019-0037
- Papathanassis, A., & Bundă, N. R. (2016). Action research for sustainable cruise tourism development: The Black Sea region case study. *Tourism in Marine Environments*, 11(2-3), 159-177.
- Pashkevich, A., Dawson, J., and Stewart, E. J. (2015). Governance of expedition cruise ship tourism in the arctic: A comparison of the Canadian and Russian arctic. *Tourism in Marine Environments*, 10(3–4), 225–240. https://doi.org/10.3727/154427315X14181438892883
- Payne, H. (2022). Cruise lines prepare for major changes coming to Svalbard. SeaTrade Cruise News. Available online: https://www.seatrade-cruise.com/news/cruise-lines-preparemajor-changes-coming-svalbard (Accessed on 12.08.2023)
- Pearce, D. W., and Turner, R. K. (1989). *Economics of natural resources and the environment*. Johns Hopkins University Press.
- Peeters, P., Gössling, S., Klijs, J., Milano, C., Novelli, M., Dijkmans, C., ... & Postma, A. (2021). Research for TRAN Committee-Overtourism: impact and possible policy responses.
- Ramos, H., Stoddart, M., and Chafe, D. (2016). Assessing the Tangible and Intangible Benefits of Tourism: Perceptions of Economic, Social, and Cultural Impacts in Labrador's Battle Harbour Historic Distric. *Island Studies Journal*, 11(1), 193–208. https://doi.org/10.24043/isj.343
- Rasoolimanesh, S. M., Ringle, C. M., Jaafar, M., and Ramayah, T. (2017). Urban vs. rural destinations: Residents' perceptions, community participation and support for tourism development. *Tourism Management*, 60, 147–158. https://doi.org/10.1016/j.tourman.2016.11.019
- Regan, J. A. (2020). Viewing tourism: investigating residents experiences and perceptions of different forms of tourism in Ísafjörður, Iceland (Masters dissertation), University Centre of the Westfjords.

- Ren, C., James, L., Pashkevich, A., and Hoarau-Heemstra, H. (2021). Cruise trouble. A practice-based approach to studying Arctic cruise tourism. *Tourism Management Perspectives*, 40. https://doi.org/10.1016/j.tmp.2021.100901
- Rodrigue, J. P., and Notteboom, T. (2013). The geography of cruises: Itineraries, not destinations. *Applied Geography*, 38(1), 31–42. https://doi.org/10.1016/j.apgeog.2012.11.011
- Rothman, H. (1998). *Devil's bargains: tourism in the twentieth-century American West*. Development of Western Resource.
- Saarinen, J. (2014). Nordic Perspectives on Tourism and Climate Change Issues. In *Scandinavian Journal of Hospitality and Tourism*, 14(1), 1–5. https://doi.org/10.1080/15022250.2014.886098
- Sæthórsdóttir, A. D., Hall, C. M., and Wendt, M. (2020). Overtourism in Iceland: Fantasy or reality? *Sustainability (Switzerland)*, *12*(18). https://doi.org/10.3390/SU12187375
- Sæþórsdóttir, A. D., Hall, C. M., and Wendt, M. (2020). From boiling to frozen? The rise and fall of international tourism to iceland in the era of overtourism. *Environments - MDPI*, 7(8), 1–19. https://doi.org/10.3390/environments7080059
- Satta, G., Parola, F., Penco, L., and Persico, L. (2015). Word of mouth and satisfaction in cruise port destinations. *Tourism Geographies*, *17*(1), 54-75.
- Saveriades, A. (2000). Establishing the social tourism carrying capacity for the tourist resorts of the east coast of the Republic of Cyprus. *Tourism management*, 21(2), 147-156.
- Seascanner. (2023). Isafjördur Cruises. Available online: https://www.seascanner.com/cruisesisafjoerdur?ansicht=listeandsortierung=1A%2C0Aandseite=6 (Accessed on 01.07.2023)
- Skúladóttir, L. K., (2020). Vestfirdir: Stöðugreining 2019. *Byggðastofnun*. Available online: https://www.byggdastofnun.is/static/files/Skyrslur/stgr19_20/vestfirdir-stodugreining-2019-2020-loka.pdf (accessed on 12/08/2023)
- Stankey, G. H., Cole, D. N., Lucas, R. C., Petersen, M. E., and Frissell, S. S. (1985). The limits of acceptable change (LAC) system for wilderness planning. *The limits of acceptable change (LAC) system for wilderness planning.*, (INT-176).
- Statistics Iceland. (15 June 2023). *Tourist short-term indicators in June*. Available online: https://statice.is/publications/news-archive/tourism/tourism-short-term-indicators-injune-2023/ (accessed on 1 August 2023)
- Statistics Iceland. (2023). *Municipalities and Urban Nuclei*. Available online: https://www.statice.is/statistics/population/inhabitants/municipalities-and-urbannuclei/ (accessed on 6 July 2023)
- Stefanidaki, E., & Lekakou, M. (2014). Cruise carrying capacity: A conceptual approach. *Research in Transportation Business & Management*, 13, 43-52.

Swarbrooke, J. (1999). Sustainable tourism management. Cabi.

- The World Bank. (2020) International Tourism, Number of Arrivals. Available online: https://data.worldbank.org/indicator/ST.INT.ARVL (accessed on 27 August 2020). [CrossRef]
- Tokarchuk, O., Gabriele, R., and Maurer, O. (2021). Estimating tourism social carrying capacity. *Annals of Tourism Research*, 86. https://doi.org/10.1016/j.annals.2020.102971
- Umbach, P. D. (2005). Getting back to the basics of survey research. *New directions for Institutional research*, 2005(127), 91-100.
- Umhverfisstofnun. (2019). Guidelines for masters of cruise and passenger ships arriving in Iceland. Available online: www.ust.is/library/ sida/haf-ogvatn/Enska%20Lei%C3%B0beiningar%20fyrir%20stjo%CC%81rnendur%20Far%C3 %BEegaskipa%20sem%20koma%20til%20I%CC%81slands%20ju %CC%81ni%CC%81%202019.pdf (accessed 27 January 2020).
- Van Bets, L. K. J., Lamers, M. A. J., and van Tatenhove, J. P. M. (2017). Collective selfgovernance 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
- Verkis. (October 2020). Dýpkun við sundabakka á Ísafirði: Mat á umhverfisáhrifum. [Report]. https://port.Ísafjörður.is/harbor-project/?lang=en.
- Weaver, D. B., and Lawton, L. J. (2001). Resident perceptions in the urban–rural fringe. *Annals* of *Tourism Research*, 28(2), 439-458.
- Weaver, D. B., & Lawton, L. J. (2007). 'Just because it's gone doesn't mean it isn't there anymore': Planning for attraction residuality. *Tourism Management*, 28(1), 108-117.
- Zelenka, J. ;, and Kacetl, J. (2014). The Concept of Carrying Capacity in Tourism. In *Amfiteatru Economic* http://hdl.handle.net/10419/168848http://creativecommons.org/licenses/by/4.0/

Appendix A

Resident's perceptions of cruise ships in Ísafjarðarbær and Bolungarvík

This survey aims to evaluate residents' perceptions of the cruise ship industry coming through the port of Ísafjörður.

Living in the Northwest	tern Westfjords
-------------------------	-----------------

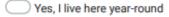
1. How many years have you lived in Ísafjarðarbær/Bolungarvík?

Check all that apply.

Less than 1 year
1 to 5 years
6 to 10 years
11 to 15 years
More than 15 years

2. Do you live here year round?

Mark only one oval.



- No, only seasonally
- 3. Do you see yourself living in the Northwestern Westfjords in the mid to long term future?

Mark only	one oval.
-----------	-----------

\bigcirc	Yes,	l plan	to	live	here

- I plan to stay only for a few years
- I plan to stay only for a few months
- I don't know

4. Where do you live?

Mark only one oval.

Skip to question 5

Bolungarvik Skip to question 6

Flateyri Skip to question 6

Suðureyri Skip to question 6

Dingeyri Skip to question 6

Outside of any town, but within Isafjarðarbær Skip to question 6

Skip to question 17

Ísafjörður specific

5. E. If you live in Isafjörður, which area do you live in?

Mark only one oval.

Holtahverfi/inner fjord/Bonus area

- Eyri / Town Center
- Uptown

Tourism in the Northwestern Westfjords

6. F. Are you aware when a cruise ship is in port?

Mark only one oval.

- All the time Skip to question 7
- Only when they are big/there are multiple Skip to question 7

Sometimes Skip to question 7

Rarely Skip to question 7

Never Skip to question 8

Cruise Ship Awareness

7. G. What makes you aware of the presence of cruise ships? Mark all that applies.

Check all that apply.

Passengers walking streets
Schedule provided by municipality
Sight of the cruise ship
Number of buses
Newspaper or talk in town
Busyness of amenities/business
Through employment
Other:

Cruise tourism impacts and opinions

8. H. For each of the following statements, mark what best applies to you.

Mark only one oval per row.

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1. Ísafjörður benefits from cruise ships	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
2. Other communities than Ísafjörður benefit from cruise ships	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
3. I personnally benefit from cruise ships	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
4. Cruise ship tourism benefits other industries in the community	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
5. Cruise ship tourism is growing too fast	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
6. My community can handle/serve more cruise ships	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
7. I feel my views about cruise ships is	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

eonsidered by decision makers					
8: I feel that there should be a maximum number of passengers per day/ship	\bigcirc	\bigcirc	\bigcirc	0	\bigcirc

9. I. Impact of cruise ship tourism on daily life. How is a day with cruise ships different from a normal day?

Mark only one oval per row.

	Very positive impact	Slightly positive impact	Not positive nor negative impact	Slightly negatlve impact	Very negative impact	No Impact
Privacy in my house or garden.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
2. Peace and quiet	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
3. Crowding and congestion in the streets	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
4. Ability to use recreational areas	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
5. Safety from Crime	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
6. Ability to conduct everyday business	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
7. Car traffic	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
8. Crowding in bars, restaurants and supermarkets	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
9. Litter	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
10. Less food available in supermarkets	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

10. J. To what extent are you involved with cruise ship passengers?

Mark only one oval.

	Not at all
C	A little
C	Moderately

🔵 A lot

11. K. How much of your household income comes from the cruise ship industry?

Mark only one oval.

\subset	None
\subset	Some
\subset	Much
\subset	

12. L. How much of your personal income is dependent on cruise tourism industry?

Mark only one oval.

- None
- Much

13. M. How much has the growing presence of cruise ship tourism affected the environment, society and town?

Mark only one oval per row.

	Very positive impact	Slightly positive impact	Neither positive nor negative	Slightly negative impact	Very negative impact	Not applicable/Will not answer
1. Quality of the natural environment	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
2. Number of jobs for residents	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
3. Number of jobs for foreigners	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
4. Community spirit	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
5. Awareness of cultural heritage	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
6. Pollution in the area	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
7. Variety of restaurants	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
8. Local tax	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
9. Preservation of historic buildings	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
10. Number of new buildings	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
11. Variety of entertainment	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
12. Decision- making in the municipality	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
13. Clean air and water	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

decision making/government making/government						
15. My personal 15. My personal quality of life quality of life	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
16. Eair prices for 16. Fair prices for goods and services goods and services	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
17. Value of my 17. Value of my house or land	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
18: Walking/bicycle paths paths	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
19. Business owned 19. Business owned by residents by residents	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

Future perspectives

From May to September 2022, there has been 116 ships docking in the port of Ísafjörður, bringing just under 125 000 passengers (+50 000 crew members). Over the last summer, the day with the most cruise ships has carried 5300 passengers, and 6 days were considered 'big days' with over 3,000 passengers.

According to the preliminary plan, the cruise season 2023 has over 245,000 passengers. (+ more than 100 000 crew members) coming through 218 ships docking. This includes 35 planned 'big days' with over 3,000 passengers, including one days with over 8,200 passengers.

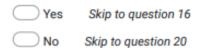
14. N. How many cruise passengers is an ideal number (throughout the season) to you?

Mark only one oval.

- Less than 50 000
- Between 50 000 and 100 000
- Between 100 000 and 150 000
- Between 150 000 and 200 000
- Between 200 000 and 250 000
- Between 250 000 and 300 000
- No limit. As many as want to come.

15. O. Do you think there should be a maximum number of cruise passengers per day?

Mark only one oval.



Maximum number of cruise ship passengers

16. P. What should be the maximum number of cruise ship passengers per day

Mark only one oval.

Less than 1 000 passengers Less than 3 000 passengers Less than 5 000 passengers Less than 7 000 passengers Other:

Ship size

17. Q. Would you exclude one of the following boat classes?

Mark only one oval.

- Ships that can receive more than 5,000 passengers
- Ships that can receive more than 3,000 passengers
- Ships that can receive more than 2,000 passengers
- Ships that can receive more than 1,000 passengers
- Ships that can receive more than 500 passengers
- I would not exclude any ships
- I would exclude all cruise ships

Demographics

18. R. Gender

Mark only one oval.

Male
- Female
Non-Binary/Gender non-confirming
Prefer not to say
Other:

19. S. Age

Mark only one oval.

- 15-29 Years
- 30-44 Years
- 45-60 Years
- 60 Years and over

Additional comments

20. T. Any additional concerns, comments, stories or anecdotes.

Appendix B

Elizabeth's Post	×
need to be able to share this 🙂	
Like Reply See Original (Icelandic) 39w	
Looking forward to seeing the results of this study Everyone participate so this will be significant!	
Like Reply See Original (Icelandic) 39w	4
Too complicated to get into the mugs and since then I'm against these many ships	
Like Reply See Original (Icelandic) 39w	
Come on down 💗	
Like Reply See Original (Icelandic) 39w	
"As per the Bureau of Transportation Statistics, a 3000-passenger cruise ship generates one million gallons of gray water, 210,000 gallons of sewage and 25,000 gallons of oily bilge water in just 7 days."	
Like Reply 38w	

🎉 Yo	u and 13 others		5 comments 2 shar
	┢ Like	💭 Comment	🖒 Share
			Most relevant
Ugh			
Like	Reply See Original (Ice	landic) 38w	
This	is getting crazy 😳		
Like	Reply See Original (Ice	landic) 38w	
		ummer and it was only in Stavang e ports in each arrival 😵	ger, then I had Hamburg
	Like Reply See Origi	nal (Icelandic) 38w Edited	۲
	beth Riendeau for survey: https://form	ns.gle/A59hhkEYaZWMRutb8	
	nfjørðarbær og í kernntiferðaskipa mender Menders		i
	skemmtife	úa í Ísafjarðarbæ og í Bolunga rðaskipa	arvík til
	Reply Remove Preview	/ 38w	0
Like			

Appendix C



Appendix D

To start the interview, could you tell me a bit about yourself - what are you doing exactly and for how long have you been living in the Westfjords?

Have you observed any changes in town in recent years?

How do you feel about tourism in the Westfjords?

Has the growth of tourism changed the way you think about Ísafjörður/community (town of work, town where they live)?

How do you think Ísafjörður/community has changed in recent years because of cruise tourism?

How does cruise ship tourism impact you?

- How does cruise tourism improve your quality of life? Of your fellow residents?
- What are some negative impacts that cruise tourism has on your daily life? (W)

How does cruise ship tourism impact your community?

- What are the positive impacts of cruise tourism on your community (and your job)? (S)
- What are some negative impacts that cruise tourism has on the community? (W)

What is your opinion of how the cruis industry is currently managed?

• Is there any way that the management of cruise ships could be improved?

Future

What does the future of cruise ship tourism in Ísafjörður look like to you realistically? (O-T)

- What place does cruise tourism take in the economy, in the town, numbers, management?
- In your best case scenario, what is your vision for the future of cruise tourism in town? (O-T)
- What concerns or fears, if any, do you have for future cruise ships in Ísafjörður and surrounding communities? (T)

How is the topic of cruise ship tourism discussed in your community? (What are the positions being taken? Whose interests are at stake?)

Do you consider cruise ship tourism to be a controversial issue in Ísafjörður? (T?)

Do you see any challenges for the community when there are big days? Can you describe the challenges or can you describe how you experience those days in general? (O-T)

How is the growth of cruise tourism beneficial for the community? (O)

Appendix E



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 Elizabeth Rideneau 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 masters research entitled *Evaluating Carrying Capacities and Perceptions of Residents towards cruise ship tourism in Isafjordur, Iceland* 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: 20 October 2022 Expiration Date: 30 June 2023

Reference number: 2023-152-04

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

Catherna Clarber

Catherine P. Chambers, Ph.D Research Manager