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Marine tourism fisheries - Challenges of governance and governability

Northern Norway as a case study

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Maria-Victoria Solstrand

A dissertation for the degree of Philosophiae Doctor – October 2014

UNIVERSITY OF TROMSØ

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DEDICATION

I dedicate this dissertation to my three sons, Gunnar Thor, Kristian and Niklas.

"Rise and rise again until lambs become lions." – *Robin Hood the Movie*, *2010*

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To my boys, Geir, and Trine, you have been wonderful in supporting me through this journey. Attempting this PhD while raising three young children tested my "super-human" abilities of multi-tasking to the absolute limits. In the time it took to complete this PhD, my three beautiful boys grew into the finest of young men. With all my heart, I thank you for the abundant supply of hugs and warm words of encouragement.

To Frøydis Strand, graphic designer for the Faculty of Biosciences, Fisheries and Economics, thank you for the outstanding job in designing the maps used in all the publications and presentations.

I believe this research project reflects the primacy of the Norwegian College of Fishery Science — without any doubt a centre of excellence in fisheries research. It is my sincere hope that this effort to research the governance and governability of marine angling tourism will lead to long-term, positive results for all stakeholders.

FOREWORD

Before living in Tromsø, my sons and I lived in Iceland for several years — first in Reykjavik and then in the village of Hrafnagil, Eyjafjarðarsveit, north-central Iceland. In 2007, my boys and I moved to Tromsø. It was a surprise to discover that we had acquired sufficient knowledge of Icelandic to understand the written text of Norwegian newspaper articles, although it would take more time to understand spoken Norwegian.

The idea for this research project originated from reading articles in the local newspapers reporting on marine angling tourists' activities in Northern Norway. Here was a form of tourism, with potential to contribute significantly to regional development for remote coastal areas, generating conflict, primarily as a result of non-compliance. Having studied and worked on conservation biology and sustainable regional development issues for over 20 years, I found this conflict intriguing. I began to wonder what was behind the media's sensational reporting of headlines such as: *smuggling is on track to becoming organized crime* (Figure 1).

Organized crime is normally associated with trafficking of weapons or drugs. Prior to reading these newspaper articles, I had never personally associated the concept with fish. Article after article presented variations on a common theme of marine tourists as smugglers, using words such as *flås* (to flay) (Figure 1), and *anarkistisk* (anarchistic) (Figure 7). The media was communicating a negative image — a warning sign of something going wrong in the system; and I saw this as a problem that would be interesting to investigate. When the advertisement to study marine angling tourism as a PhD was published in the local paper, I sent in an application. The application was accepted, and I began the PhD in January 2009.

- Kysten flås av fisketuristene

Smugling er i ferd med å bli organisert kriminalitet

Nordlys 19.03.2008

Figure 1: Coast flayed by marine angling tourists — smuggling is on track to becoming organized crime

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List of abbreviations

C&R	Catch-and-release
ICES	International Council for the Exploration of the Sea
IUU	Illegal, unreported, and unregulated
MAT	Marine angling tourism
SES	Socio-ecological system

Photos: Unless otherwise stated, all photographs were taken by the author

Maps: Specially designed by graphic artist Frøydis Strand, Faculty of Biosciences, Fisheries and Economics, for this dissertation

1 INTRODUCTION

Tourism is one of the fastest growing economic sectors in the world, and can serve as a key driver for socio-economic progress and job creation (UNWTO 2014)[1]. Tourism activities can breathe life into remote communities, and play a major role in driving regional development (Hall and Richards 2000); however, tourism is also increasingly being recognized as a major source of resource exploitation, degradation, and depletion (Gössling 2002(a); Gössling and Hall 2006(a), 2006(b); Gössling et al. 2008).

Development of sustainable tourism destinations is a priority programme of the United Nations World Tourism Organization (UNWTO)[2]. Within this programme,

Figure 2: Peak season for MAT with several different nationalities filling the camps

[1] UN World Tourism Organization Secretary General Mr. Taleb Rifai, press release PR 11084, Madrid, 27 October 2011. *Ministers of tourism of major world economies call on decision-makers to use tourism to stimulate the economy:* http://media.unwto.org/press-release/2011-10-27/ministers-tourism-major-world-economies-call-decision-makers-use-tourism-st. Accessed July 2014

[2] UN Sustainable Development of Tourism website: http://sdt.unwto.org/. Accessed July 2014

focus is placed on development of collaborative processes (UNWTO 2010); promoting the principles of the Global Code of Ethics for Tourism[3]; and the sharing of success stories, projects, and practical experiences at the national and international levels related to the sustainable development and management of tourism product offerings. In addition, the UN's sustainable tourism programme has prioritized development of policies and strategies to guide sustainable development of tourism (UNWTO 2007). Norway has been a member state of the UNWTO since 2008.

Consumptive wildlife tourism, a specialized niche sector within tourism (Lovelock 2008(a)) is an example of tourism that has the potential to exploit, degrade, and deplete natural resources. This sector of tourism is steadily growing in popularity, with fishing taking the lead globally as the most popular product offering within this niche (Bauer and Herr 2004) (Figure 2). Can such a form of consumptive tourism that relies on the extraction of wild living resources be sustainable? If so, what are the critical factors that must be taken into consideration? Before one can consider the question of sustainability, it is being argued in this thesis that one must first investigate governance and governability — the departure point for this dissertation.

Marine tourism fisheries was chosen as the research focus. Focus is placed on fisheries in the marine environment only, not freshwater; and marine fisheries only related to tourism activities, not recreational activities by the resident national population. This allows for use of the term marine tourism fisheries — an industry growing so large that in some places holds the potential to enter into resource competition with small-scale and commercial-scale fisheries.

Within marine tourism fisheries, this dissertation presents a case study analysis of **marine angling tourism** (**MAT**) in Northern Norway. **Marine angling tourism** is

[3] UN World Tourism Organization Global Code of Ethics for Tourism: http://ethics.unwto.org/en/content/full-text-global-code-ethics-tourism. Accessed July 2014

the term chosen to describe the activity of the tourists in this study based on three definitions of terms presented in Pawson et al. (2008): 1) the word *marine* must be included to distinguish from freshwater; 2) tourists are required by law to only use hook and line in Norway, so the activity is *angling;* and 3) recreational fishing is defined as fishing that is not deemed to be commercial fishing. As the latter definition includes both fishing by local residents and tourists, "recreational" is too broad a category; therefore, *tourism* must be used to specify a subset.

This dissertation may be considered as a possible contribution to the existing scientific literature in several different areas:

The first area is regarding the review of national legislations governing fishing for recreational or subsistence purposes in 20 EU countries by Pawson et al. (2008). Pawson et al. find a wide disparity between the different countries in how recreational fishing is managed. They conclude that if the European Commission intends to address the increasing tensions and conflicts between inshore commercial fishers and recreational activities competing for the same space and resources, that it is important to develop a common approach. The authors' conclusion of this regulative review is that for management purposes, all non-commercial fishing activities must be accounted for in legislation designed to control the impact on marine resources and their spatial access. Iceland and Norway are not included in this review as neither country is a member state of the EU. Thus, this dissertation may be considered a supplement to the findings by Pawson et al. (2008).

Secondly, this dissertation may be considered to be a contribution to the emerging research calling for a reconceptualization of how both tourism (Farrell and Twining-Ward 2004, 2005; Hunter 1995, 1997, 2002(a), 2002(b); Hunter and Green 1995), and natural resource management (Acheson 2006; Berkes 2010, 2011; Berkes and Folke 1998) are studied.

Although tourism can play a positive role in rebuilding remote coastal communities' economies by creating new business opportunities, it can also negatively affect the very communities that are meant to be stabilized (Craik 1995; Macleod and Gillespie 2011). The negative impacts may not only result from disturbances of natural resources. There are complex inter-dynamics that come into play when tourists and host communities interact. It is not a given that tourists and rural residents will automatically have a positive relationship, or that tourism and other activities in a rural area will be compatible (Butler 2011; Gössling 2002(b); Hall et al. 2006).

Research within the field of natural resource management — and more specifically common pool resources — shows a similar trend (Acheson 2006; Berkes 2010; Ostrom 1990, 2009; Ostrom et al. 1999; McCay and Acheson 1987(a), 1987(b)). Berkes (2010) argues that 'natural resources' and 'management' must be reconceptualised. The resources are not solely free goods for human-centric use. Natural resources must be reconceptualised to include the protection of ecosystems and ecosystem services as resources for human well-being. 'Management' must move away from efficiency, simplification, and command-and-control to an emphasis on stewardship, collaboration, partnerships, and adaptive governance.

Berkes (2010) along with scholars within tourism (e.g. Arlinghaus et al. 2013; McAlpin 2008; Murray 2011; Pálsson and Helgason 1995; Zanotti and Chernela 2008; Farrell and Twining-Ward 2004, 2005; Fennell and Butler 2003) argue for a **complex socio-ecological systems (SES)** research approach — viewing social- and ecological systems as dynamic, coupled and co-evolving, with cycles that are unpredictable. A systems approach is replacing the view that resources and their management can be treated as discrete entities in isolation from the rest of the ecosystem and the social system.

Researching the complex, interconnected relationships requires a complex systems research perspective where no one dimension dominates or can be analysed separately from the others (Farrell and Twining-Ward 2004, 2005; Fennell and Butler 2003).

Thirdly, this study may be considered to contribute knowledge to how an SES perspective can assist in the study of governance and vice versa — i.e. how the study of governance helps understand more clearly the SES perspective. As an example, sustainable tourism scholars have found that reconciling the conflicts, and finding balance between the socio-economic benefits of tourism development and the sustainable use of natural resources is a necessary pre-requisite for developing a path towards sustainable tourism development (Briassoulis 2002; Briassoulis and Straaten 1992; Farrell and Twining-Ward 2004; Gössling 2002(b); Hall 2001; McKercher 1993(b); Robinson 1999; Healy 1994; Moore and Rodger 2010; Solstrand and Gressnes 2014). However, resource management policies related to tourism development and resource access are often made outside the tourism domain (Bauer and Herr 2004; Bramwell 2011; Hall 2008; Lovelock 2008(a)), for example within fisheries management (Berkes 2011).

An SES perspective is applied to the study of governance and governability of marine angling tourism in this dissertation. Such a perspective is consistent with the work of several other researchers who have applied an SES perspective to the study of fisheries (Aas 2002; Arlinghaus et al. 2013; Johnsen and Eliasen 2011; Ommer and Perry 2011; Ommer et al. 2011; Pitcher et al. 2006; Pitcher et al. 2009; Wilson et al. 1994; Young 1999; Ostrom 2009). MAT as an SES is an open system, and part of a larger system that must also be studied using an SES perspective. MAT exerts influence — which includes stressors and other impacts — on this larger system and vice versa. Therefore, the study of governance and

governability, in the same light, assists in a better understanding of the SES perspective.

The theoretical models chosen as the lenses through which to explore and interpret SES relationships in the data were drawn from the principles of interactive governance theory (Jentoft 2000, 2004, 2007, 2011(a), 2011(b); Jentoft and Buanes 2005; Jentoft et al. 2010; Jentoft et al. 1998; Johnsen and Eliasen 2011; Kooiman 2008; Kooiman et al. 2005; Kooiman and Jentoft 2009; Pascual-Fernandez et al. 2005); Scott's institutional theory (Scott 1995, 2001, 2008(a), 2008(b), 2014; Scott and Davis 2014)[4]; and institutional theory applied to common pool resources (McCay 1995; McCay and Acheson 1987(a); Ostrom 1990, 2009; Ostrom et al. 1999). A modification of Scott's theoretical work on institutional theory (2014), modified based on work by Jentoft (2004) and Johnsen & Eliasen (2011), is presented in **Article 3**.

Fourthly, the analyses in **Articles 1, 2 and 3** can be considered to perhaps contribute insights into how conflict within tourism can be broken down and analysed. As such, this thesis may be considered as an addition to the vast literature base on conflict within tourism — both socio-cultural and resource-based (Bramwell and Lane 2011; Briassoulis 2002; Budowski 1976; Burns and Howard 2003; Butler 1991, 1999, 2011; Craik 1995; Erkuş-Öztürk and Eraydın 2010; Farrell and Runyan 1991; Farrell and Twining-Ward 2005; Getz and Timur 2005; Gössling 2002(a), 2003; Hall and Richards 2000; Hunter 2002(a), 2002(b); Hunter and Green 1995; Ris 1993; Robinson 1999; Robinson and Boniface 1999; Yang et al. 2013; Zanotti and Chernela 2008). Reconciliation of conflicts is also identified in the literature on small-scale fisheries management as a key component in building long-lasting institutions with multiple stakeholder interests (Brewer and Moon 2015; Levin 2006; Ostrom et al. 1999; Jentoft 1985).

[4] From this point forward, Scott (2014) will be used to refer to and include all research by Scott to date on institutional theory.

Finally, this dissertation may be considered as contributing toward the literary discourse on MAT in Norway (Borch 2004, 2009; Borch et al. 2008; Borch et al. 2000; Borch et al. 2011; Cap et al. 2003; Ferter 2011; Ferter et al. 2013; Hallenstvedt and Wulff 2001; Vølstad et al. 2011(a); Vølstad et al. 2011(b)).

This dissertation begins by defining the research problem, and presents an outline of the research questions, each of which were individually designed to contribute partially toward a clearer understanding of the research problem. This is followed by two sections — a presentation of the interdisciplinary theoretical framework that was applied to analyse the data; and a detailed description of the methodology that was used to collect and process the data. The reader is then provided with a summary of the main findings from each of the three articles, and an analysis of how these findings contribute to answering the overarching research question. With a better understanding of the research problem, it is logical to assume that effective solutions to the problem can be found. The dissertation concludes with recommendations for future research as follow-up to this study. Appendices 1, 2, and 3 present the articles themselves, and Appendix 4 is the English version of the questionnaire used in the quantitative portion of the study.

Figure 3: Nise (Phocoena phocoena; harbour porpoise) surrounding the boat

Figure 4: Pure happiness! Photograph taken by Morten Willumsen and used with permission — photo dedicated to Burkhard Plichta and Henrik Bolten

2 DEFINING THE PROBLEM

Figure 5: Kamøyvær, Nordkapp kommune. Population in 2011 was 103.
Bilde: www.nordkapphavfiske.com

Marine angling tourism is a form of consumptive wildlife tourism — defined by Lovelock as a form of leisure travel undertaken for the purpose of hunting or shooting game animals, or fishing for sports fish, either in natural sites or in areas created for these purposes (Lovelock 2008(a), p. 4).

Remote coastal communities in Norway (e.g. Figure 5) and Iceland (e.g. Figure 6) serve as host destinations for MAT[5], a popular form of consumptive wildlife tourism in the Arctic fjords. MAT is one of the few forms of tourism where tourists pay a significant amount of money to travel to remote coastal destinations, and willingly stay at these destinations for the duration of their holiday.

[5] A detailed justification for why Norway and Iceland can be compared with regard to MAT is found in **Article 1**. One of the MAT businesses in Iceland boasts the following on their website: "*Fishing on the West part of Iceland can be compared to fishing in northern Norway.*"

Figure 6: Tálknafjörður. A coastal community in the Western Fjords of Iceland, and a location of a fishing camp. Population of the entire municipality, as of January 2014, was 300. www.statice.is

Tourists must sometimes take two airplanes and then complete up to four hours of ground transportation to reach some of these remote areas in Northern Norway. In Iceland, tourists take a plane to Keflavík International Airport, bus transport to Reykjavík, a charter flight to Ísafjörður, and finally bus transport out to the camps. The journey can take up to an entire day of their holiday.

Marine angling tourists are not looking for several different entertainment activities, nor do they demand five-star accommodations or fancy restaurants. Thus, this form of tourism has real potential to contribute to regional development for the remote coastal regions, because it is not demanding more than these small communities can provide — with perhaps one exception.

These small communities have relied on the fish for hundreds of years as part of a long-standing sea fishing tradition, and are now sharing “their” fish with foreign tourists. This raises serious questions with regard to governance, in part because the fish are designated as a common pool resource in both Norway and Iceland.

Some of the regulations are similar in both countries, e.g. tourists are not allowed to sell their catch; and tourists must restrict their fishing equipment to hook and line only.

However, in Iceland, from a governance perspective, priority is placed on the fish as a natural resource. MAT businesses must operate under the same regulations and laws as those for the commercial-scale fishing fleet, with regard to the fish. Catch-and-release (C&R) fishing is against Icelandic law. This governance approach, being natural-resource centric, restricts the activities of the tourists and how the businesses operate, in comparison to Norway. Marine angling tourists in Iceland must deliver their catch daily to fish processing plants, essentially paying (through their holiday costs) for the privilege to deliver fish. They are not allowed to fillet their own fish, and so if they want to take fish home with them, they must pay additional money to buy fish that is already filleted, and packaged — delivered to the airport for them prior to their departure. With this system, Iceland has full accounting of all statistics related to MAT, and total seasonal catch is reported annually (e.g. Fiskistofa 2010, 2011, 2012, 2013), even though there are only three fishing companies in operation as of 2013. The regulations are such that for any given day in any given season, one can find statistics on the total tonnage of fish caught, how much of each species was caught, the number of boats that were out on the sea, the number of tourists doing the fishing, and where they were staying. Since, C&R is not allowed by law in Iceland (with an exception made for dwindling stocks of halibut), mortality rates from C&R are not an issue.

In Norway, on the other hand, tourists are free to fish as much as they want, and are not required to report any catch data at any time during their visit. This means the tourists do not have to weigh their daily catch, nor do they have to record which and how much of each species are landed, or that die from C&R. This means there are no national statistics for how much of each species is landed

by location or for the season in total, or the mortality rate from C&R fishing from MAT activities. In addition, there are no statistics available for how many marine angling tourists there are in Norway each season, or regularly collected statistics on how many boats are in use by tourists each season.

The most important statistic for MAT could be considered the total seasonal catch. Since no formal monitoring system is in place, three studies have been conducted since 2001 to estimate the total seasonal catch of MAT in Norway (summarized in **Article 3**, Table 2). With each successive study, the estimate of total seasonal catch has decreased considerably, even though all evidence would suggest that MAT is increasing in popularity, with new fishing camps opening up each new fishing season.

Article 1 lists and compares the regulations in effect for MAT in Norway and Iceland. One of these regulations for Norway figures prominently in a discussion on the governance of MAT, namely: §*2: It is not allowed to export out of the country more than 15 kg of fish or fish products per person, including processed products such as fish fillet, in a 24-hour period… In addition to this export quota, it is allowed to export one whole trophy fish, regardless of weight. With non-*

- Totalt anarkistisk turistfiske

Kan føre til konflikter, sier styreleder

Nordlys 03.07.2008 Foto: Ragnhild Enoksen

Figure 7: Totally anarchistic tourism fishing - can lead to conflicts, says board chair

compliance, the fish or fish products over the allowed quota can be confiscated.[6] The coastline of Norway, including all the fjords and small islands, is 100,915 km[7], more than double the circumference of the earth, making this regulation very hard to effectively enforce. Another regulation, enacted in January 2010, sets the minimum sizes for each species of fish, and requires that undersized fish be released.[8]

The fact that tourists are fishing from the same pool of natural resources as the local community residents has the potential to create scenarios for tourism-related conflicts (Arlinghaus 2005; Yang et al. 2013; Butler 1974; Robinson 1999; Budowski 1976). Conflicts are exacerbated when the tourists do not comply with the regulations of the host country attempting to control consumption (e.g. Figure 7). Conflict, in this context, is defined as a serious incompatibility between two or more opinions, principles, or interests[9] — referring here only to *sources* of conflict behaviour (e.g. divergence of interests and/or values), not the conflict behaviour itself (e.g. acts of violence) (Pruitt 1998).

Conflict can have a positive social function and is not necessarily an indicator of dysfunctionality from a governance perspective, but this is in part dependent upon how the institution adapts to resolve or mitigate emergent conflicts. A certain degree of conflict is an essential element in group dynamics and group formation, and can be considered a learning and growth opportunity for institutions (Coser 1956).

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6 Forskrift om utførselskvote av fisk og fiskevarer fra sportsfiske. § 2. Utførselskvote – translation from Norwegian. Regulation on the export quota of fish and fish products from marine angling. § 2. Export quota - translation from Norwegian. http://lovdata.no/dokument/SF/forskrift/2006-06-01-570

7 Norges Statistisk årbok 2013: http://www.ssb.no/aarbok/kart/i.html. Accessed July 2014 (Norway's Statistics Yearbook for 2013). Coastline is more than twice the earth's circumference of 40,075 km, when all the fjord formations and hundreds of islands are included.

8 Minimum size for cod north of 62°N 44 cm; Atlantic halibut 80 cm (entire country) - http://www.fiskeridir.no/fritidsfiske/minstemaal. Accessed September 2014

9 http://www.oxforddictionaries.com/definition/english/conflict. Accessed 14 March 2014

Illegal, unreported and unregulated (IUU) fishing is one of the main issues facing fisheries governance worldwide. FAO's International Plan of Action to Prevent, Deter and Eliminate IUU fishing, released in 2001, states:

> *"IUU fishing undermines national and regional efforts to conserve and manage fish stocks and, as a consequence, inhibits progress towards achieving the goals of long-term sustainability and responsibility as set forth in, inter alia, Chapter 17 of Agenda 21 and the 1995 FAO Code of Conduct for Responsible Fisheries. Moreover, IUU fishing greatly disadvantages and discriminates against those fishers that act responsibly, honestly and in accordance with the terms of their fishing authorizations... If IUU fishing is not curbed, and if IUU fishers target vulnerable stocks that are subject to strict management controls or moratoria, efforts to rebuild those stocks to healthy levels will not be achieved*."[10]

Figure 8: Box full of coastal cod after half a day of fishing in a fjord in Finnmark. This catch demonstrates non-compliance with the regulation on minimum size, frequently observed during field observations

[10] International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing: FAO 2001: http://www.fao.org/docrep/003/y1224e/y1224e00.htm. Accessed July 2014

In 2006, the coastal cod north of 62°N, was listed as *endangered* on the Norwegian Red List.[11] Atlantic halibut was listed as *near threatened*. Atlantic cod (*Gadus morhua*) is currently listed on the IUCN Red List (2014) as *vulnerable*, and the Atlantic halibut (*Hippoglossus hippoglossus*) as *endangered*.[12] In 2011, Iceland passed a regulation banning the catch of Atlantic halibut. If one is caught and is viable, it must be released. This is an exception to the law banning C&R, due to the serious decline in this species.

In their annual reports, Norway's Institute of Marine Research (IMR or Havforskningsinstituttet) has reported that the stocks of coastal cod have been in decline over the last several years. IMR's latest annual report (IMR 2014) states that the stocks of coastal cod remain low and there is little evidence for any substantial stock increase in the coming years. Genetic studies suggest that the coastal cod living in the fjords may be genetically different from the open-sea Arctic cod stocks migrating from Lofoten to the Barents Sea (e.g. Fevolden and Pogson 1997; Pogson and Fevolden 2003).

This would mean the majority of marine angling tourists are most likely fishing distinct populations of non-migrating, local stocks of coastal cod residing in the fjords. The temporal and spatial stressors on fjord stocks intensify during the summer months as a result of MAT activities (Figure 8). For some fjords, these increased temporal and spatial stressors, as well as the disregard for Norway's regulations on minimum size and export, may increase stock vulnerability, but without the availability of baseline statistics, there is no way to confirm or further evaluate this concern.

The 2013 report of the ICES Arctic Fisheries Working Group outlines a rebuilding plan for coastal cod, which was adopted by the Norwegian government in 2010, as the result of a drastic decline of coastal cod stock in recent years (ICES 2013).

[11] Norwegian Red List 2006: http://www.artsdatabanken.no/Article/Article/133540
[12] IUCN Red List 2014: http://www.iucnredlist.org/

> *"The management regime employed is aiming for improved ecosystem monitoring in order to understand and possibly enhance the survival of coastal cod"* (ICES 2013, p. 98).

ICES considers their proposed plan to be provisionally consistent with the precautionary approach. However, there are no monitoring statistics from MAT activities in Norway to support the ecosystem-based monitoring for this management plan.

Given the above, is it likely that a long-term track of sustainable tourism development can be realised for MAT? An answer often heard during field research was, "Of course! What harm can a few tourists do with fishing poles?", even though tourists in Norway exercise non-compliance with Norwegian law on the export of fish (Figure 9). Iceland's tight control on their natural resources with regard to MAT activities might also seemingly lead to an answer "of course". The answer to such a question is multi-faceted, however — neither obvious nor to be determined frivolously. An added dimension to this question in Norway is the media's role in influencing local communities' perceptions and creating a stereotype tourist.

In order to examine the sustainability of MAT, first and foremost one must determine whether MAT is governable (Johnsen 2014); and if so, how should it then be governed? Examination of the governance of the tourism sector without consideration of the resource being consumed; or examination of the governance of the natural resources without consideration of how it affects the tourism dimension, are both missing a large component in the overall analysis of sustainability. Iceland's approach to governance is natural-resource centric. Norway's approach favours tourism development. This is where the reconceptualization mentioned in the Introduction comes in. If MAT is analysed using the SES perspective, the game changer calling for this reconceptualization is

that MAT is consumptive, which therefore crosses into natural resource management domain that must operate in tandem to tourism management. Are there lessons from Iceland's governance of MAT that could be applicable in Norway? Improving or enhancing the governability of MAT in Norway might not bring us all the way to answering whether it is sustainable, or on a sustainable path of development, but such a governance and governability analysis that attempts to evaluate the pros and cons of both approaches together, can be considered a contribution to this end. Here is where this dissertation finds its niche — in asking the following overarching question:

What are the critical components of a governance strategy that would support a sustainable path of development for marine tourism fisheries in Norway?

Figure 9: Norwegian Customs seized 366 kg of fish fillet from marine angling tourists crossing the border at Kivilompolo. Source: Nordlys 30 July 2012

2.1 RESEARCH QUESTIONS

To investigate the problem and attempt to find an answer to the overarching question, the project was broken down into several component parts to answer the following sub-questions, each of which contributes a segment to formulating an answer.

1. How does MAT function? What are the regulations governing MAT and how do they influence sustainable tourism development?
2. Who are the marine angling tourists? Are they as the media portrays them? Is the stereotype correct?
3. How do marine angling tourists view the wild living marine natural resources in Norway?
4. What factors lie behind the non-compliance with the 15 kg export quota?
5. What role does the non-compliance have in determining sustainable tourism development of MAT?
6. Which elements in the overall institutional structure play the most significant role in sustainable tourism development of MAT (e.g. *the tourist experience, fish stock integrity, non-compliance, regulations, etc.)?*
7. What solutions might be available to mitigate conflict, and positively influence non-compliance, in order to encourage sustainable tourism development?

The three articles address these questions, through a sequence of themes.

2.1.1 Research question for Article 1:

Article 1 comparatively investigates MAT in Iceland and Norway — the regulations and laws; how MAT governance functions from a regulatory standpoint; how MAT conflicts manifest as a result of this governance; and how responsive the governments are to conflict mitigation and resolution.

The research question for **Article 1**: Using Iceland as a model, are there management policies Norway could put in place that could reduce the socio-cultural and environmental stressors and put MAT on a more sustainable track?

Article 1 was designed to answer questions 1, 6, and 7 in the above list.

A clarification to this research question is necessary. It is more precise to ask if there are *elements* from the Icelandic system of governance for MAT that could be considered applicable in Norway, because it is outside the scope of this project to analyse whether Iceland's system in its entirety could be adopted.

2.1.2 Research questions for Article 2:

A key design challenge of this project was to figure out a way to hear from the tourists directly in order to answer some of these sub-questions on the tourism dimension of governance. Since questions on non-compliance could not be asked directly, the approach taken was to look at an aspect of tourist behaviour that would not create defensiveness and non-response. Research into tourism theory has revealed many cases where tourist behaviour at home was different from when on holiday, so that idea was chosen as the departure point for **Article 2**.

The underlying hypothesis for **Article 2** is that the more pro-environmentally oriented marine angling tourists are more likely to want to protect the fish stocks and practice angling more responsibly. This hypothesis lead to the following two research questions:

1. Are marine angling tourists who show higher levels of pro-environmental engagement at home more likely to accept stricter marine angling regulations?
2. Will stricter management regulations affect marine angling tourists' willingness to return and/or willingness to recommend?

Article 2 was designed to quantitatively answer questions 2, 3, 4, 5, and 7 in the above list.

2.1.3 Research question for Article 3

Article 3 revisits the comparative approach between Iceland and Norway, looking at four institutional pillars and their inter-dynamics. This article begins by

presenting an empirical example comparing total seasonal catch by calculating the unit of measure of kg/boat/day — a statistic independent of the number of tourists (a figure not available in Norway). Iceland's total seasonal catch are statistics collected as a result of regulations, and provide a new framework within which Norway's estimates can be evaluated. Using this empirical example, the main components of the institutional structure as well as the overall functioning of the institution of MAT are investigated. The research question for **Article 3** is: From an institutional perspective, how is governance influenced by institutional structure, conditions, and inter-dynamics?

Article 3 was designed to answer questions 1, 4, 5, 6, and 7 in the above list.

The answers to the above research questions have each contributed a part to both a better understanding of the dynamics of the problem, and to the formation of a possible answer to the overarching question.

Figure 10: Bobby boats in Súðavík, Western Fjords, Iceland. Bobby boats are the only type of boat permitted for use by marine angling tourists in Iceland

3 Interdisciplinary Theoretical Framework

3.1 Sustainable Tourism Development

In securing a definition — and therefore a roadmap — for sustainable tourism, a common starting point of discussion begins with the definition of sustainable development, rooted in *Our Common Future* (WCED 1987);

> *Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.* *Our Common Future, Chapter 2, Towards Sustainable Development*

and the three pillars of sustainability which subsequently emerged from the Johannesburg Summit in 2002 (Rio + 10)[13].

> *Accordingly, we assume a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development — economic development, social development, and environmental protection — at local, national, regional, and global levels.*
> *Johannesburg Declaration of Sustainable Development, para 5*

Since the writing of *Our Common Future* and Rio + 10's product — the Johannesburg Declaration — definitions of sustainable development have been reworked and tailored to almost all sectors of global society. Even so, it remains a complex and contested concept, difficult to translate into specific policies or end goals (Meadowcroft 2007). Similarly, over the last 20 years tourism scholars have

[13] Johannesburg Declaration on Sustainable Development - Johannesburg, South Africa 26 August to 4 September 2002. http://www.un-documents.net/jburgdec.htm . Agenda 21, named as the agenda for the 21st century, was born from the Rio Summit in 1992, and *Our Common Future*. Agenda 21 set the stage for the development of the well-known 'three pillars of sustainability'. Over the next ten years, sustainable development was analysed and reworked, and the Johannesburg Summit in 2002 (also known as Rio+10) generated the Johannesburg Declaration on Sustainable Development. Accessed July 2014

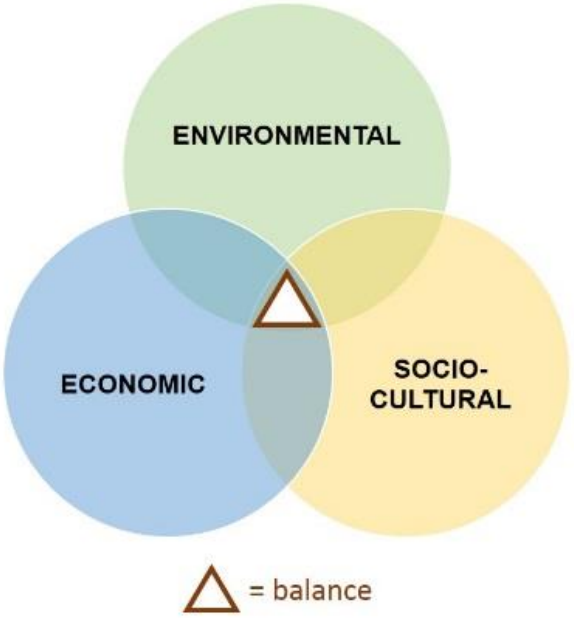

Figure 11: Three dimensions of sustainable development based on the Johannesburg Declaration of Sustainable Development

yet to agree on a common definition for sustainable tourism, nor on what the term actually means in practice (Butler 1999; Hunter 1997, 2002(a); Richards 1998; Sharpley 2000; Swarbrooke 1999). Where there is agreement in the scholarly literature, is that sustainability within tourism must be conceived as a transition, journey or path, rather than a specific end point or an achievable goal (e.g. Miller and Twining-Ward 2005; Farrell and Twining-Ward 2005).

Swarbrooke (1999) argues that although a definition of sustainable tourism is not easily found, a set of guiding principles should underpin any approach to sustainable tourism management. To help guide the process, the UN World Tourism Organization (UNWTO) and Bramwell et al. (1998) have put forward principles to guide sustainable tourism management and development (Bramwell et al. 1998; UNWTO 2009(a), 2009(b); UNEP and UNWTO 2005; UNWTO 2007, 2010).

The environmental, socio-cultural, and economic dimensions of sustainable development are inter-dependent and mutually-reinforcing (Figure 11). An example here is that the social and cultural fabric of local community dynamics,

the economic balance, *and* environmental integrity all impact and are impacted by tourism development and management. In the same light, the governance strategy chosen for natural resource management also impacts and is impacted by economics, the socio-cultural fabric and the condition of the environment. All dimensions and their inter-linkages must be *balanced* parts of sustainable development (Figure 11)[14].

Although a widely accepted definition for sustainable tourism is not yet agreed upon, for the fish stocks and their ecosystems, there is little room for doubt about what sustainability means. Will the stocks in the fjords still be there in 15-20 years for the next generation, or the generation after that? Sustainability of the fjord stocks is not something that is an end goal to happen sometime in the future. Sustainability must be a mind set to develop an on-going process, requiring immediate participation and actions by all stakeholders that are measurable and maintainable moving forward. Without the fish in the fjords, MAT loses its '*raison d'être'*.

An analysis of the sustainability of any form of tourism, must take into account a series of complex, inter-dynamics between the three dimensions — each one impacting and being impacted by several factors of the other two dimensions. It is one thing to acknowledge that balance is needed; it is quite another to figure out how to achieve such a balance. To aid in this task, a complex socio-ecological systems (SES) perspective was adopted as a lens through which to better analyse these inter-dynamics.

3.2 MAT as a Complex Socio-Ecological System (SES)

To study the multiple dimensions of sustainability, there has emerged in the literature a growing emphasis on bridging the gaps and examining interactions

[14] The economic dimension was not covered in this research project. Please refer to Borch et al. (2011).

and linkages between the social, economic and ecological dimensions of society (Holling 2001; Gunderson and Holling 2002). A conceptual framework taking a complex adaptive systems approach (Levin 1998), has allowed for a more realistic interdisciplinary view to interlinked, non-linear and unpredictable pathways.

Researchers across several disciplines have moved in the direction of applying a socio-ecological systems (SES) perspective. SESs are linked in their dynamics (Berkes et al. 2003; Walker et al. 2004; Walker and Salt 2006; Berkes and Folke 1998; Fennell and Butler 2003 (applied to tourism)), and these linkages are key to coupling environmental protection and economic growth (Levin 2006). Complex systems thinking advances how human and ecological systems are understood and reorients the aim of sustainability (Plummer and Fennell 2009, p. 153).

S*ocial systems*, as defined by Berkes and Folke (1998, p. 4), deal with property rights, land and resource tenure, systems of knowledge pertinent to environment and resources and world views and ethics concerning the environment and resources. *Ecological systems* are defined as ecosystems in the natural environment. The integration of, and linkages between, human interactions with the natural environment creates socio-ecological systems — a *humans-in-nature* perspective (Berkes and Folke 1998). A systems approach takes a holistic view of the components and their interrelationships; and demonstrates why natural resources cannot be effectively managed without taking into account man's activities, and the impacts of these activities on the resources.

> *"Failure to recognize the full implications of this humans-in-nature concept has left oceans, and many fish-dependent communities in both the developed and the less-developed world, in trouble, since both industrial and artisanal or small-scale fisheries are stressed as more and more fish stocks shrink or even become endangered"*
> (Ommer and Perry 2011, p. 3).

A general framework for analysing sustainability of socio-ecological systems in fisheries is provided by Ostrom (2009). Ostrom identifies four main components of a complex SES in fisheries: the resource itself (e.g. the fish), the resource system (e.g. MAT), the resource users (e.g. the tourists, camp owners, and community residents), and the system of governance, recognizing that each of these components has multiple sub-components. Each main component, though separate, has interactions with the other components and multiple sub-components that produce outcomes. These outcomes feed back to affect the system and all subsystems and their component parts, as well as other connected systems. These four main components and several subcomponents feature prominently in the research presented in the three articles for this dissertation. Since the economic dimension of MAT as a complex SES, and as part of the overall picture of sustainability, was not addressed in this research project, some of the subcomponents related to economics were not included.

The fish stocks, as a common pool resource, sit in the middle of the system. Each resource user is part of the system — not isolated in a bubble, but affecting and affected by the system of which it is a part. The resource users are, e.g. community residents (some of whom are also camp owners), the tourists, and the professional fishers. Then there are the regulations governing the system. The media reports continuously on how the regulations are being ignored, and how sanctioning is being handled, most likely effecting local community perceptions.

All resource users share in the right to extract fish as a resource; therefore responsibility and accountability must also be shared by all resource users. From a systems perspective, there is no room to lay blame in one direction or another, especially when no official monitoring of data exists for the tourist or recreational fisheries.

Although long-term sustainability of SESs may initially be dependent upon rules set by the government, the rules may not be sufficient in the long term, especially if these rules are not congruent with local conditions (Ostrom 2009); or with people's own ideas about what constitutes good governance (Jentoft 2007). In other words, rules require legitimacy.

Creating a sustainable system process is in agreement with Ostrom's (1990, p. 90) definition of a long-enduring common pool resources institution — flexible enough to adapt to stressors, yet rigid enough to protect the long-term integrity of the resources. Similarly, this is congruent with the definition of resiliency: the capacity of a system to absorb disturbances and reorganize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks (Walker et al. 2004; Walker and Salt 2006). Berkes (2010) argues that creating resilience within a system necessitates the flexibility of an adaptive management strategy of interactive governance.

This brings us to the third theoretical framework used in creating a more comprehensive picture of MAT — interactive fisheries governance theory.

3.3 Interactive fisheries governance of common pool resources

The definition of **governance**, used in this context, comes from the book *Fish for Life – Interactive Governance for Fisheries*, edited by Kooiman, Bavinck, Jentoft and Pullin (2005, p. 17):

> *"Governance is the whole of public as well as private interactions taken to solve societal problems and create societal opportunities. It includes the formulation and application of principles guiding those interactions and care for institutions that enable them."*

This definition illustrates the importance of interactions. Interactions in the form of broad societal participation are an integral part of interactive governance, from a normative as well as practical point of view (Kooiman and Bavinck 2013). Within the interactive governance perspective, **governability** is defined as "the overall capacity for governance of any societal entity or system" (Kooiman et al. 2008, p. 3). There is a close relationship between governance and governability, driven by interactions. Any exercise that seeks to further the understanding of governance inevitable results in the need to explore and to assess governability (Kooiman et al. 2008, p. 2). Through interactivity, the conditions of governability are in a constant state of change, responding to internal and external factors in a dynamic, on-going process. Further, acts of governance may influence or be influenced by other factors within and external to the system. There are limitations to governability (Jentoft 2007), and as such not every situation is equally governable (Kooiman & Bavinck, 2013).

Governability can be broken down into three main components: the governing system (GS); the system-to-be-governed (SG); and the interactions between these two termed governing interactions (GI) (Jentoft 2007; Kooiman 2008; Kooiman et al. 2005; Bavinck et al. 2013; Kooiman and Bavinck 2013). These three components are consistent with application of the SES perspective (e.g. Ostrom 2009), with each addressing a part thereof. The GS is made up of institutions, steering instruments and mechanisms; and includes the total set of mechanisms and processes available for guidance, control and steerage of the SG. The GS is explored in both **Article 1 and Article 3**. The SG is partly natural, and partly social,

consisting of the ecosystem and the resources within it, and the system of users and stakeholders who form groups among themselves (Jentoft, 2007). **Article 2** examines the GS, the SG and the GI through study of the interplay between the tourists, the fish, and the regulations. To explore the complex dynamics of the GI, an institutional framework was applied to the data in **Article 3**.

The interactive nature of interactive governance theory promotes institutional stability through adaptations, which represent a continuously evolving institutional learning process. A key component of the interactions is an effective flow of communication, most often in the form of feedback loops. Ideally, a feedback loop might consist of a forum where problems are voiced, knowledge is communicated, and the institution responds through identification and execution of solutions. The effectiveness of communication, therefore, in part lies in correctly defining who the stakeholders are, and allowing their collective voices to be heard. In essence, this means providing a forum where communication can take place and knowledge can be passed on — in this way stakeholders are participating in the learning and adaptive process of the institutional framework.

Another of the central concepts in interactive fisheries governance is images. Images come in the form of visions, knowledge, judgements, hypotheses, presuppositions, and convictions (Bavinck et al. 2005; Kooiman and Bavinck 2005). Hardin uses imagery to describe the tragedy of the commons — one example being the analogy of herders and pastureland (Hardin 1968). Governing images for fisheries are no exception to this rule. The SG and the GS are formed according to particular images and it is essential for the sake of improving governability to explore what these images are and what they do (Jentoft et al. 2010). Jentoft's alternative images of governing systems are applied to the data in **Article 1** — applying the theory of imagery in governance to demonstrate how the images of pyramids (Norwegian system for MAT) and roses (Icelandic system

for MAT) work in an empirical example. Imagery is also used in **Article 3** to visually and more clearly demonstrate the complexity of the institutional pillars.

3.4 EXPERIENCE AND EXPERIENCING – JOHN DEWEY

The fourth theoretical framework applied in this project comes from the study of experience and experiencing. The study of the tourist, the tourist experience, and tourist behaviour was inspired by John Dewey's *Experience and Nature* (Dewey 1958 (1925)). Dewey argues that the empirical study of understanding experience is as relevant to the overall understanding of our world as the study of the physical elements.

> *The traits possessed by the subject matters of experience are as genuine as the characteristics of sun and electron. They are found, experienced, and are not to be shoved out of being by some trick of logic. When found, their ideal qualities are as relevant to the philosophic theory of nature as are the traits found by physical inquiry (Dewey 1958 (1925), p. 2)*

Through a series of chapters, Dewey explains why experience and nature are not separate entities, but are interactive, and interdependent. When I first began to research MAT, it became obvious rather early in the project's formulation, that it would not be possible to separate the tourist experience from the fish. In essence, the fish are experiencing (e.g. in the form of extraction and impact to the stocks) as much as the fish are a part of the experience.

> *When objects are isolated from the experience through which they are reached and in which they function, experience itself becomes reduced to the mere process of experiencing, and experiencing is therefore treated as if it were also complete in itself. We get the absurdity of an experiencing which experiences only itself, states and processes of consciousness, instead of the things of nature*
> *(Dewey 1958 (1925), p. 11)*

Building on Dewey's philosophical argument, to explain more clearly the difference between experience and experiencing, Dewey offers an analogy with the concept of fire. First, there is the *what* of fire. What is fire? The "whatness" of fire can be enjoyed or feared, but there is no understanding yet of anything beyond the immediate and present moment of the fire burning.

Next comes the *how* of fire. Here, fire is taken to the next level of understanding, where the *how* questions are answered: *How* does fire start? *How* does it burn? *How* does it die out? *How* does it burn brighter or more intensely?

Through an understanding of the *what,* and the *how*, comes the knowledge for the *making* of fire, which implies control. This is a transition, where fire changes from something of the here and now — for the present and immediate use that just happens and can be enjoyed or feared — to the recognition that there is a method of procedure for its creation and destruction. Understanding the methods of procedure that create and destroy fire then leads to insights into how fire can be controlled.

Figure 12: Russian and English tourists (father and son) in the moment of experiencing a unique filleting experience — receiving instructions on how best to fillet an anglerfish (monk fish – Lophius piscatorius – breiflabb in Norwegian)

Replace the word 'fire' with the word 'experience' (e.g. Figures 12, 13, 14, 15 and 16), and this sets the frame for how this research project was designed to study the tourist experience of MAT. The three articles each explore the marine angling tourist experience in a different way, each shedding light from a different perspective. All together, they form a fairly complete, more holistic picture of the *what*, the *how*, the *making*, and "possible" *control* of the MAT tourist experience. Possible is put in quotation marks here, because it cannot be assumed that the recommendations made from this research project will come to fruition.

Figure 13: The fishing experience. Photo permission given by Torleif Dervola, on behalf of a group of Welsh tourists

Figure 14: First sea-fishing experience and first cod

Figure 15: One fisher's personal best – 5 cod totalling 36 kg in just a few hours

Figure 16: Smile! A wolffish (Anarhichas spp.) weighing 9 kg

4 METHODOLOGICAL APPROACH

4.1 CASE STUDY RESEARCH DESIGN

The methodology chosen for this research project was developed from an extensive literature review of research performed in the social sciences, as well as from a course taken in Qualitative Methods, offered through Bodø University College as part of fulfilling the PhD's course requirements. A multiple-case study analysis was the selected research method based on Yin's *Case Study Research Design and Methods* (Yin 2009), and the unit of analysis was marine angling tourism.

The three northern-most counties in Norway — collectively known as Northern Norway — and the Western Fjords of Iceland were the locations chosen for this comparative multiple-case study analysis (Figure 17). Yin (2009) provides the main methodological structure for this research project following Yin's technical definitions of the case study method, and its differentiation from other social science research methods; the extensive discussion of case study design; and

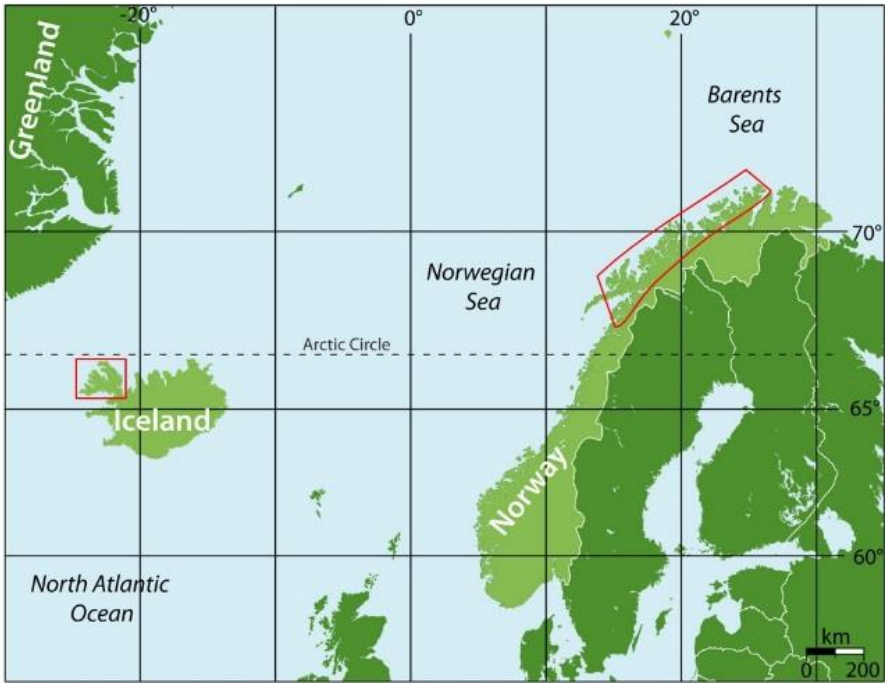

Figure 17: Field areas for research project marked in red

presentation of detail for case study analytical techniques. Yin's methodological approach was supplemented by several studies of triangulation in action (Decrop 1999; Denzin 1978; Jick 1979; Oppermann 2000).

4.1.1 Case study unit of analysis

The unit of analysis was defined as marine angling tourism. The individuals within this unit of analysis were the marine angling tourists themselves, and the fish camp owners/daily leaders. The organizations that were included in the study were fish camps that provided a specific type of accommodation for marine angling tourists. It must be noted here that of all the fish camp owners and daily leaders interviewed, in all but one case were they local residents, and in some cases were either active or former small-scale fishers. As local residents, they were able to speak of their connections to the community and other local residents, and their experiences as owners of a MAT business in these communities. Interviews with local residents who were not fish camp owners or daily leaders were not conducted. The accommodations were defined as proper fishing camps whose main tourist product offering was marine angling. Accommodations at these camps consisted of several cabins for rental, each

Figure 18: Fishing camp in Troms County showing the cabins, the boats, and the fillet house (red building to the right). Photograph used with permission from camp owner of Lauklines Kystferie

Figure 19: Cabins in Flateyri, Iceland

offering four to eight beds (e.g. Figure 18). Rental of accommodations included the use of a boat for the duration of the holiday, with up to four tourists per boat. In some cases, houses or apartments with several beds rather than individual cabins were the accommodation but the businesses otherwise operated in a similar fashion. For each of the fishing camps included in this study in Norway, filleting and freezing facilities were available for the tourists. Private homes that rented out one or two rooms, and which offered one or two boats for use were not included in this study. Holiday facilities that had marine angling as one of many product offerings for tourists were also not included in this study.

In Iceland, these same defining criteria were used with the exception that in Iceland, filleting/freezing is not part of the product offering for marine angling tourism (Figure 19).

4.1.2 Triangulation

Triangulation is broadly defined as “the combination of methodologies in the study of the same phenomenon” (Denzin 1978, p. 291). This is a metaphor that originated in navigation and military strategy where multiple reference points are

used to locate an object's exact position (Smith 1975, p. 273). Triangulation in research is used to capture a more complete, holistic and contextual portrayal of the unit of analysis (Jick 1979). One highly effective trait of applying triangulation is that although each single method in itself has weakness and/or bias, employing a combination of several data collection methods minimizes these weaknesses and biases (Oppermann 2000). The effectiveness of triangulation rests on the premise that the weaknesses in each single method will be compensated by the counter-balancing strengths of another. That is, it is assumed that multiple and independent measures do not share the same weaknesses or potential for bias (e.g. Rohner 1977; Johnson 1999). Although it has been observed that each method has assets and liabilities, triangulation highlights the assets and neutralizes, rather than compounds, the liabilities (Jick 1979). When all data is compiled, the general idea is that there will be convergence. However, another distinct advantage of triangulation is that if there is divergence in the data, it is more easily identified. Or in other words, the outliers emerge — equally important in the overall analysis. In the social sciences, finding outliers can be more challenging, and triangulation is one way to ensure the most complete analysis is performed.

The case study approach does not imply the use of any particular data collection method. It is more to be considered a research strategy. The distinguishing characteristic of the case study approach is that it attempts to examine a contemporary phenomenon in its real-life context (Yin 1981). This is applicable to the study of marine angling tourism. To eliminate as much as possible the element of bias, and to investigate marine angling tourism in the most fair and objective manner possible, data was gathered from as many sources as possible, and both the emic and etic perspectives of tourism were explored. The etic perspective is more based on the scientific method and quantitative analysis using mathematical tools. The emic perspective involves more the qualitative research (Walle 1997; Cohen 1978). The tourists' perspectives were investigated

using both quantitative and qualitative methodologies; the business owners' perspectives were explored through qualitative only.

4.2 QUALITATIVE INQUIRY – SIX SOURCES OF EVIDENCE

For this project, the following six sources of evidence were collected for the qualitative portion of the data gathering (Yin 2009, p. 101-102).

Documentation:

Might include letters, emails, written reports, minutes of meetings, proposals, progress reports, news clippings and other articles appearing in mass-media or community newspapers. For this project, letters, emails, reports, newspaper and net-based articles were collected.

Archival records:

Might include public use files, statistical databases made available by federal, state and local governments, maps and charts of geographic characteristics, and survey data about a site's residents, employees or participants. For this project, statistics and geographic charts were used both for Iceland and Norway. The empirical example used in **Article 3** demonstrates the use of some of these

Figure 20: Interview with camp owner in Nordland

statistics. Geographic elements and their significance for the governance of MAT for both Iceland and Norway are discussed in **Article 1** and **Article 3**.

Interviews:

Interviews are an essential source of case study evidence because most case studies are about human affairs, experiences, or behavioural events. Well-informed interviewees can provide important insights; however each individual interviewee can present a case of bias, or poor articulation. Therefore, corroboration with other sources of evidence is important. For this project, open-ended focused interviews were chosen which lasted up to one to one-and-a-half hours. Interviews were primarily conducted with fish camp owners/daily leaders (Figure 20), tourists (Figure 21), tour operators, and government officials. A few other interviews were conducted as the opportunities presented themselves, such as with a commercial-scale fisher.

Figure 21: Interview with a group of English tourists at 03.00, after a full day on the sea. Sharing in the experience of grilling and eating five different species of freshly caught and filleted fish

Figure 22: Belgian tourist filleting a wolfish

Direct observations:

For this project, direct observations included visiting the fishing camps for several hours at a time, observing the tourists going out on the boats, coming in with their catches, observing them filleting their catch, and celebrating afterwards while cooking and eating their catch (e.g. Figures 2, 4, 8, 12, 13, 14, 15, 16, 21, 22, 23, and 36).

Participant observations:

For this project, I, myself, participated as a marine angling tourist at some of the camps (Figure 24). I went out on the boats, sometimes invited out with other groups of tourists. I fished, filleted and cooked the fish as a tourist. Since I had never done anything like this before, it was easy to play the role of a tourist.

I had a first time experience, the same as described in interviews with other tourists. In this way, I gained first-hand experience of what it was like to catch and release the different species of fish, and the challenges that came with inexperience — especially when attempting to successfully release the larger-sized fish from the hook (such that the fish would survive).

Photography:

2,211 photographs supplemented the direct and participant observations (e.g. Figure 25, and several other photos found throughout this thesis). Additionally, some photographs were collected from government agencies, and fish camp owners/daily leaders.

Figure 23: Russian father teaching his children how to fillet

Figure 24: Participant observations - driving the boat and fishing

Figure 25: Photographing the photographic experience

4.3 Analysis of the interview data

The objective of the interview portion of the data analysis, was to capture the essence of the experiences related to MAT. Interpretative phenomenological analysis (IPA) was chosen (Smith et al. 2009), but used as a basic guideline only, as the obstacles confronted when conducting cross-cultural (cross-lingual) interviews made following a strict procedure for interpretative analysis too difficult. If another type of methodology had been applied to the interview data, other types of analyses and certainly other conclusions could have been derived. This demonstrates a part of the inherently subjective nature of interview data.

The interview questions were open-ended allowing the interviewee to take the interview in the direction they felt most comfortable. The focus was on obtaining information about their experiences — as camp owners, as daily leaders, or as tourists. The questions remained open and general, which allowed the interviewees to focus on what they wanted to tell. I avoided leading questions that reflected a bias on my part — for example: *I heard that tourists were fighting in your camp…can you tell me what happened?*…. Rather, I wanted them to describe their experiences on their own terms, regarding the camp, daily routines, or special events that stood out in their memories. Thus, the questions took the form of the following: *Could you tell me about your experiences as a camp owner? Could you tell me about how you came to be a camp owner? Could you tell me about your best experiences as a tourist in Norway? Could you tell me about your worst experiences…?* These types of questions usually opened the interview up such that a myriad of interesting stories and experiences emerged. In this way, I actually didn't need to ask many questions, but was busy writing down what was being said. For certain statements, I asked for verification to make sure I got the wording correct. Direct questions on the 15 kg export quota were most often met with an initial reaction of defensiveness, so a necessary qualifier had to be offered, to explain that I was not an investigative reporter. Learning about how the export quota was affecting the tourist experience and

the business operations became a significant embedded unit of analysis in the interview data. Often, tourists would redirect blame to other nationalities, and camp owners to other camps.

Once each interview was over, I would reread through my notes, and ask questions for clarification on points I thought were of importance for the purpose of the research study. After leaving, I would sit in the car and make personal notations on the interview — personal notes, impressions, and what came through as most pertinent in terms of the experiences. Once back at the office, I typed the hand written notes from the interviews into the computer along with my field notes. I searched for common words, identified emergent themes and commonalities, across different interviews to identify patterns of similar experiences. I was careful to focus on the experience as related to MAT. The quotes used in the articles were chosen to capture what I perceived to be relevant statements that were explanatory and reflective of experience. Having said that, however, the methodology I used to collect and analyse the interview data is based on IPA methodology, and it must be reiterated that this process does involve personal interpretations of the data, as all interview analyses do. This is a potential source of bias in qualitative research, and is why triangulation was used.

Whenever possible, the interviews were conducted in English. For those interviews that were in Norwegian, I came away with less information, and fewer notes because at the time these interviews were done, my level of Norwegian was at a basic level. For interviews conducted in English, in which the interviewees' mother tongue was not English, more simple vocabulary was used, which might have limited full descriptions of experiences to some degree. However, in all interviews, emergent patterns and themes within experiences could be identified.

For example, in one interview, a Russian tourist explained: "*fishing good, fishing very good, much big fish. I like. Camp good but Germans I no like. They freeze small fish. I no like."* Although the English is broken, the experience is understandable.

In another example, a camp owner who used very simple English stated: "*What we do with tourists who take much fish? We call and report."* Here, this camp owner was referring to calling the border control to alert them of the license plate number of a vehicle coming across the border with excess fish fillet. It is simple language, but the meaning is understood. As a follow-up, I confirmed with the Customs officials who were interviewed that indeed, several seizures were the direct result of tips from the camps.

4.4 QUANTITATIVE INQUIRY – QUESTIONNAIRE CONSTRUCTION

The English version of the questionnaire used in this study can be found in Appendix 4. The questionnaire was designed following *Designing Surveys – A guide to decisions and procedures* (Czaja and Blair 2005). There are five general stages in the development of a questionnaire: 1) questionnaire design and preliminary planning; 2) pretesting; 3) final questionnaire design and planning; 4) data collection; 5) data coding, data-file construction, analysis and final reporting. All five stages were followed for this project.

4.4.1 Description of field area and data collection

In order to be included in data collection, camps had to meet all the following criteria: 1) fishing camps where marine angling was the main or only product; 2) fishing camps where tourists were paying for a similar type of fishing experience; 3) fishing camps that offered several cabins or apartments for rent (with each cabin typically housing four to eight tourists), and where the rental of a cabin or apartment included the use of a boat 24 hours-a-day for the duration of the rental; and 4) fishing camps that offered filleting/freezing facilities. Private homes

with rooms to rent were not included in this study. No camps in Iceland offer filleting/freezing facilities as described in **Article 1**.

4.4.2 Phase 1 — Exploratory field work in Northern Norway, 2009

An exploratory field season (Phase 1) was conducted in Northern Norway from April to August 2009, and included both qualitative and quantitative data collection. The main goals of this exploratory field season were to:

1) locate and visit fishing camps (based on website research, word of mouth, and field reconnaissance) and identify which camps would be a part of Phase 2 data collection;
2) learn how the camps operate and identify major stakeholders;
3) identify which countries the tourists were coming from;
4) gather information on transportation logistics; and
5) distribute a pilot questionnaire to pre-test the questions (Czaja and Blair 2005).

4.4.2.1 Pre-testing and development of the questionnaire

In the process of defining the criteria for the fishing camps that would be a part of the main study, it was discovered that websites were a most ineffective method of determining camp qualifications. Some camps, with a very low standard of operation had very professional looking websites; while some camps with dysfunctional websites were exceptionally well run. Some fishing camps had no website at all and were located only by word of mouth upon arrival at a local gas station or pub. Other camps depended only on the advertisements placed on tour operators' websites. It was only by visiting each camp individually that it could be determined whether the camp met the criteria for participation in this research project. In all cases, the camp owners/daily leaders were contacted in advance of arrival to the camp.

As part of the exploratory field work, a preliminary questionnaire was designed and distributed (Czaja and Blair 2005) in English and German. 121 completed

questionnaires were collected. This pilot questionnaire was used to test the effectiveness of possible questions, methods of question formulation, which Likert scale to use (1-10 vs. 1-5), and the effectiveness of questions that required written responses. In addition, interviews were conducted with tourists and fish camp owners to identify the key issues that should be focused on as a part of the primary study. Site visits during this exploratory field season also aided in determining the final list of languages for the questionnaire.

What was learned from pre-testing the questionnaire affected the structure and design of the final questionnaire in several different areas. A Likert scale of 1-10 was too broad for the tourists to use effectively. Most of the answers ended up at one extreme or the other, eliminating to a large extent the use of the middle range values (3-7). The scale was therefore changed to 1-5. The questions that required a written response were deleted completely. Language barriers as well as the difficulty of reading handwritten responses were two obstacles that could not be overcome. The way questions were worded had significance as well, and had the potential to create non-response bias. The wording of some questions was ambiguous, and this was also corrected. The tourists held the full range of educational levels, but also had very different cultural backgrounds, and understandings of concepts. The choice of wording had to be simple enough that concepts could be translated across several different languages.

The questions on tourists' environmental views and behaviour were a significant component of the quantitative analyses investigating tourist behaviour, and needed to be appropriately worded for cross-cultural use. An extensive literature search was conducted to find suitable examples to follow. It was originally considered to base the set of environmental view/behaviour questions on the revised version of the New Ecological Paradigm (NEP) published by Dunlap et al. (2000), which appeared to be a highly accepted model to follow to test environmental views. The earlier version of NEP — the New Environmental

Paradigm, originally published in 1978 by Dunlap and Van Liere, was tested in 1976 on Washington State residents in the United States. The revised NEP was pre-tested with college students in Washington State, and then again with Washington State residents. This revised scale touched on a wide range of perspectives on an ecological worldview, and reportedly offered a fairly balanced set of pro-and anti NEP views. The NEP questions were reflective of the American culture and priorities and topics within the media of the USA during that period of time.

Therefore, the questions used in the pilot questionnaire to test for environmental views and behaviour at home more closely followed the revised version of NEP. What was discovered during the pre-testing (Phase 1), however, was that: 1) Not nearly all marine angling tourists were college educated, and thus had difficulty understanding complex wording. The translator also had much difficulty with complex vocabulary and wording, resulting in questions being left blank or comments indicating the questions were not understood. This introduced an unacceptably high non-response bias. 2) Several different cultures would be participating, and not only the wealthiest. Environmental political agendas might or might not be present in their cultures, also introducing a potential source of bias. 3) Pre-testing showed that when translated into another language, NEP-type questions could generate ambiguity and/or a different interpretation both for the translators and for the tourists reading them. This had to be a consideration in generating the final, with special concern for example, for the former Soviet Union countries of Latvia, Lithuania and Estonia, and the Czech Republic.

In summary, the pre-testing and use of back-translations showed that the NEP paradigm is quite sophisticated in its language and promotes world concepts that tourists from some countries would find difficult to grasp. This discovery during the pre-testing, confirmed a similar finding from a cross-cultural study of NEP conducted in the US, Japan, Mexico and Peru by Bechtel et al. (2006), which

concluded that NEP could not be universally used because there were clear and distinct cross-cultural differences in world view and ecological perceptions.

Therefore, during the revision process of the questionnaire, a much simpler language was applied that could be understood by anglers with no education as well as those with higher education — simple questions were designed that (hopefully) would work for all cultures/all languages. Question formulation was modified based on studies done by Ballantyne et al. (2009), Kaiser (1998), Kaiser et al. (1999(a)), Kaiser et al. (1999(b)), Kaiser and Biel (2000), and Kaiser and Wilson (2000). This careful preparation of the question wording resulted in no non-response bias for this battery of questions.

The pre-testing of the questionnaire revealed a few additional issues that were taken into account in the final version. Tourists showed non-response bias on questions that were too specific regarding income. The question on income was therefore structured more vaguely with answers on a scale of *low, low-middle, middle-high, or high*. One additional reason for this type of scale was that cross-culturally speaking, actual figures could not be used. A salary high in one country could be considered low in another. So the question on income had to remain both non-invasive and valid on a relational scale. Tourists also declined to answer any questions that had anything even remotely to do with breaking Norwegian law. This is why the questions concerning this topic had to be worded very carefully such that answers could be obtained. The results from the final questionnaire showed no non-response bias on any of these "problem" questions.

The final questionnaire was translated into 12 different languages based on the most common nationalities represented in the camps: Czech, Dutch, English, Estonian, Finnish, German, Latvian, Lithuanian, Norwegian, Polish, Russian, and Swedish. Reverse translations (back into English) were also performed for all language translations to test the validity and accuracy of the translations. This

means that the translations were given to another translator to translate back into English and the results were sent back to me. This allowed me to check the quality of each language translation as best as possible, and correct text that was ambiguous. With reverse translations in addition, this was a meticulous process.

Originally, 11 languages were chosen, but it was quickly discovered that though Norwegian and Swedish are similar languages, the differences in vocabulary were such that Swedish tourists did not understand the Norwegian version of the questionnaire sufficiently. Therefore, a Swedish questionnaire was developed after the first week in the field. The questions were divided into several distinct sections and clearly labelled. A cover letter explained the project and provided all contact details. See Appendix 4 for an English version of the questionnaire used in this study.

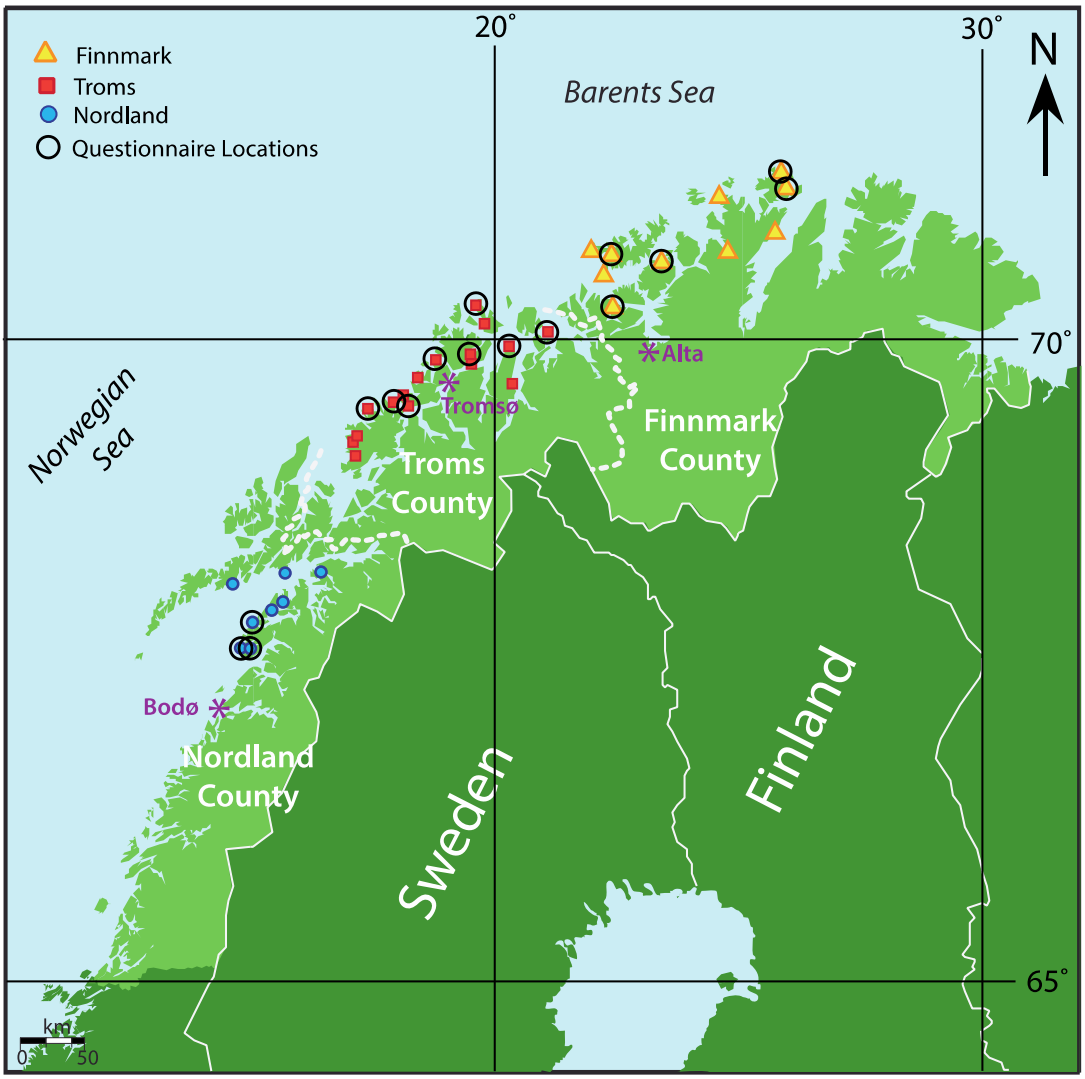

Figure 26: Field sites for data collection in Northern Norway during Phase 2 — circles denote the 16 locations where questionnaires were collected

4.4.3 Phase 2 – Qualitative and quantitative data collection in Northern Norway, 2010

In 2010, Phase 2 began with full-scale qualitative and quantitative data collection in Northern Norway from April through to August (Figure 26). The 34 fishing camps selected from Phase 1 were visited in geographically positioned order by driving to each location beginning from the northern part of Finnmark at North Cape and driving south to northern Nordland over the course of the fishing season. In all cases, the owner and/or daily leader was contacted prior to arrival.

The number of days spent at each camp depended on what the owners permitted in terms of data collection.

4.4.4 Questionnaire distribution and collection

The owners/daily leaders gave permission and therefore determined the distribution options used for the questionnaire: 1) personal distribution directly to the tourists; and/or 2) leaving blank questionnaires in the reception area. Two camp owners permitted *option 1* only. Tourists were approached by knocking on the cabin/apartment doors, handing out the questionnaire in their language of preference, and asking if they were willing to fill it out. The cover letter explained the purpose in their language. If they agreed, the questionnaire was collected one-half hour later. With this method, the return rate was 97% (N=95 out of 98). Four camp owners permitted both *options 1 and 2*. The return rate for hand-distributed and collected questionnaires at these four camps was 92% (N=87 out of 95). In total, 182 questionnaires (35% of all questionnaires received) were personally distributed and collected. If permission was given for *option 2,* 50 copies of each of the 12 languages of the questionnaire were left in the reception area for tourists to pick up and fill out if they desired to participate.

Throughout the course of the summer, as questionnaires were taken/completed, some camp owners/daily leaders requested additional copies of the questionnaires in certain languages. These were then sent by mail or personally delivered. The return rate for *option 2* could not be calculated because it was not known with any certainty how many were actually distributed. The number of completed questionnaires received in this way was N=346 (65% of all questionnaires received).

For distribution *option 2*, there could of course be bias in that this group is a self-selected sample. However, since the return rates for *option 1* were over 90%, an additional check for bias was performed between distribution *options 1 and 2*. A comparison of means was conducted for demographic variables on age and days

on holiday. No significant differences were found between the two groups. Additionally, a chi-square test was run for differences in education and salary, and no significant differences were found. This data is presented in Article 2.

528 questionnaires were received in total from marine angling tourists in Northern Norway. Given the good relationships I developed with the camp owners, the total number of completed questionnaires could have easily been doubled. However, time was a factor, for collection, data entry and data analyses.

4.4.5 Phase 3 – Qualitative data collection, Western Fjords, Iceland

In September 2010 and June 2011, the fishing camps in Iceland's Western Fjords were visited. Figure 27 shows the field sites visited. Ísafjörður is not the site of a fishing camp, but is on the map for reference. One interview with a government employee took place in Ísafjörður. Interviews with camp owners were conducted in the Western Fjords, and all other interviews with government officials took

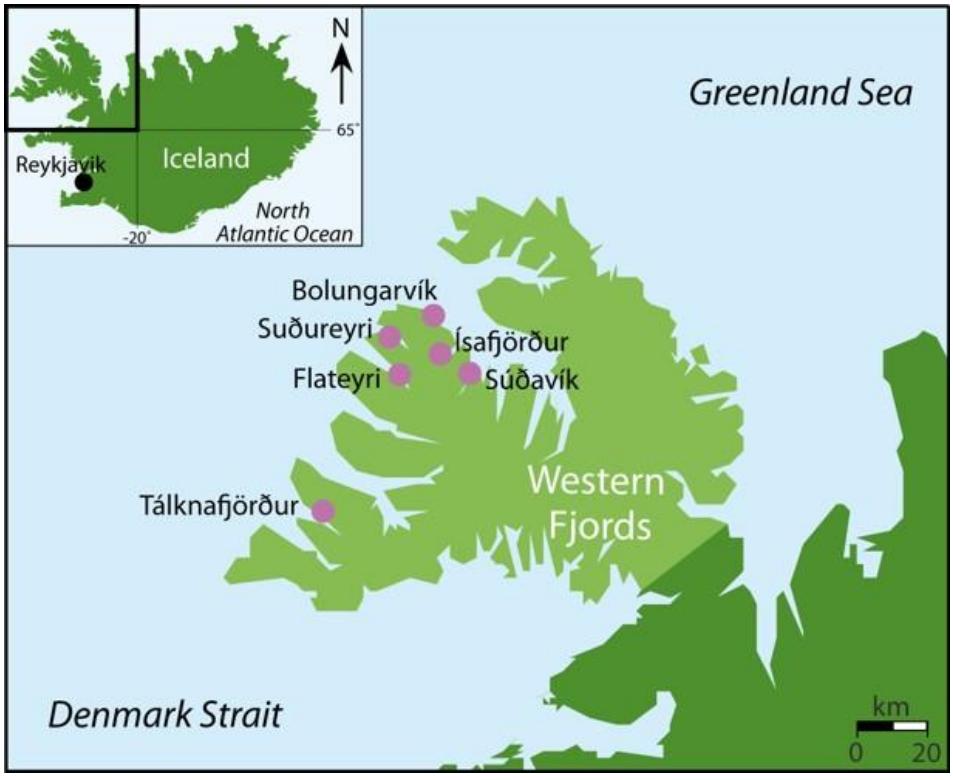

Figure 27: Field sites in the Western Fjords, Iceland. Ísafjörður is shown as a point of reference — it is not the site of a fishing camp.

place in Reykjavik. No tourists were interviewed in Iceland because of the language barrier.

Table 1 is a summary of qualitative data collection in Norway and Iceland. This data was published in **Article 1**.

Table 1: Summary of qualitative data collection - conducted 2009-2011

Sources of Evidence	2009 Norway	2010 Norway	2011 Iceland	Totals
Interviews				
• Fish Camp Owners	13 (2 female)	31 (10 female)	3	47
• Daily Leaders	1	5	-	6
• Tourists	4 interviews with a total of 11 tourists	8 interviews with a total of 21 tourists (1 female)	-	12 interviews with 32 tourists
• Guides	-	7	-	7
• Charter Business Owners	3	-	-	3
• Tour Operators	1	1	-	2
• Professional Fishers	-	1	-	1
• Government Officials	1	1	6	8
Totals:	23	54	9	86
Site Visits	20	25	9	54
Photographs	822	931	458	2, 211

Shaded rows: Phenomenological embedded sub-set of the study

4.4.6 Data entry and data coding

Data entry and data coding were done by me. The final questionnaire of 63 questions x 528 completed gave a total of 33,264 fields of entry. With the exception of nationality and fishing camp, the answers to each question were designed to allow for numerical entries into the database[15], so the time required

[15] Personal communication with Michael Greenacre on data entry techniques – 10 January 2011.

for data entry was approximately three to four minutes per questionnaire. Based on my experience, I would not recommend generating a questionnaire any longer than this one. There was a limit on how much time the tourists were willing to spend filling out the questionnaire; but also how much time was needed for data entry. Each entry for each questionnaire had to be double-checked for accuracy — so it is estimated that data entry took 528 x 8 minutes each = 70 hours, not including the set up and design of the dataset prior to data entry.

4.5 Limitations of the methodology - Potential areas of bias and data deficiencies

The limitations of this project design methodology were primarily the cost and time associated with the distances needed to be travelled to collect data. An exploratory field season and distribution of a questionnaire was only done in Northern Norway. Only after the field work in Iceland in 2011, was it learned how differently the two countries govern MAT, and what areas for comparative work should be focused on. An exploratory field season in Iceland would have revealed this sooner, allowing for better comparative results. However, there was neither enough money in the budget, nor sufficient time to perform an exploratory field season in both countries. Nor was there time to develop a questionnaire that would be appropriate for tourists in Iceland, and still be comparable to the one used in Norway. Time was a limiting factor, both due to the short tourist seasons, and the time constraint for completion of the overall project.

There were in total 86 interviews conducted for this research project. As can be seen in Table 1, emphasis was placed on interviews with fish camp owners, daily leaders, and tourists. When comparing the number of interviews in Norway with Iceland, a few things must be noted. There were only three fishing camp business owners in Iceland. In addition, due to the language barrier, no interviews with tourists were obtained in Iceland. However, several tourists interviewed in

Norway had also been to Iceland, and could comment on a comparison of their marine angling experiences in both countries.

The fieldwork in Iceland revealed that changes to the laws and regulations were happening both regularly, and recently. This meant it was possible to interview government officials who were directly involved in making these regulatory changes. It was also possible to talk to one official responsible for field visits to the fishing camps. No official was located or identified in Norway who could or would serve as a spokesperson for why the regulations for MAT are as they are. Nor could a person be identified to speak on behalf of the officials who enacted the 15 kg export quota in 2006.

In Norway, all but one of the fish camp owners interviewed were also local community residents of the communities where their fish camps were located, and had friends and family members who were also local residents. Therefore, most of the fish camp owners could speak of their experiences as community residents, and on their own experiences with regard to other community residents. Many were also former or active part-time small-scale fishers. However, no interviews were conducted with community residents *not* involved in the marine angling tourism industry, as this was outside the scope of the study framework. This placed some limitations on more in-depth analyses of the consideration of communities as stakeholders. For this reason, a follow-up research project is recommended that places focus on hearing from a variety of community residents.

A line had to be drawn on how much data was to be collected, and from whom. As this is such a complicated and far-reaching research problem, it is clear that more interviews would have shed more light in certain areas.

There may also be some misunderstandings introduced when a language other than the mother tongue is used. Language usage was kept simple, and often statements were double-checked during the interviews for accuracy to confirm

meaning — both from the interviewer (me) and the interviewee. Even so, there might have been the possibility of error in understanding meaning. This will always be a factor when conducting research in a cross-cultural environment.

As a researcher, I have done my best to maintain objectivity with the information collected. Though the quantitative data speaks for itself in *some* ways, the contextual interpretations of the statistical analyses (which are only numbers) were done using the qualitative data in triangulation. In the same way, the interpretation of interview data using interpretive phenomenological analysis also involves a degree of subjectivity. This is unavoidable. Therefore, the quotations selected for use in the published articles, were selected based on the belief that they reflected clear rather than ambiguous meaning — difficult (though admittedly not impossible) to misinterpret. Applying alternative methodologies could also lead to different interpretations. Therefore, as any researcher must admit, this is ultimately a subjective ruling and introduces a source of bias.

These problems are not unique to this study but accompany qualitative research inquiry in general. Nevertheless, it is important to acknowledge where data is lacking, as well as possible sources of misunderstandings and bias.

4.6 Strengths of methodology

Having a multiple-case study design — e.g. comparing MAT in both Iceland and Norway — strengthens the data interpretation. For qualitative inquiry, single-case designs are more vulnerable to bias in data collection and interpretation because there is nothing for comparison. For this reason, single-case designs are more subject to questions of data validity and reliability. Two cases, on the other hand, provide material for identifying a variety of similarities and contrasts. It was never the intent to do a full, line-by-line, detailed comparison of the MAT governance structures in the two countries. The intention was narrower, more focused, and far more realistic — i.e. to identify certain elements in the Icelandic system that

could perhaps highlight elements in the Norwegian governance structure of MAT that deserved closer scrutiny. In so doing, I believe this strengthened the data analyses considerably, as demonstrated in **Article 1** and **Article 3**, and has contributed significantly to answering the overarching research question for this dissertation.

The strengths of the six sources of evidence recommended by Yin (2009) are that in combination, the data can corroborate and augment evidence from other sources. As examples: the collection of documentation such as emails and other letters of correspondence between the camp owners in Iceland and government officials corroborated the direct connection between the reports of and resolution of the various conflicts. In Norway, newspaper articles augmented the interview data with fish camp owners/daily leaders. It must be noted here that the newspaper articles, and the media's choice of wording (especially in the headlines), introduces a possible external influence on the entire discourse. The use of archival data (e.g. catch statistics) supported the comparison of the yearly total catch in Iceland vs. estimated catch in Norway. Participant observations aided in the understanding of the conflicts surrounding catch and release fishing, and the difficulty with releasing the larger fish if inexperienced. Direct observations supported, and in some cases disputed the interview data.

For the questionnaire, one of the main strengths was that it was pre-tested. If this had not been done, the quality of the questionnaire would have been far lower and far less effective. Although pre-testing required a significant amount of extra field time (and money), the end result was worth the added effort. From all statistical analyses performed, the questionnaire held up under very rigorous testing, and is considered to be a success. Another strength of the questionnaire was that it was translated *and* back-translated in 12 different languages. This allowed all interested tourists to participate. With a little more money and time, the questionnaire could have been distributed with even greater success.

5 Main Findings

5.1 Article 1

Article 1 (Solstrand 2013) is a multiple-case study analysis (Yin 2009) of the laws and regulations governing MAT in Iceland and Norway. Using principles of interactive fisheries governance theory (Jentoft et al. 2010; Kooiman et al. 2005), this article answers the following research question:

Using Iceland as a model, are there management policies Norway could put in place that could reduce the sociocultural and environmental stressors, and put MAT on a more sustainable track?

The main findings of **Article 1**:

1) Although Iceland's Fisheries Management Act states that the fish are a common pool resource, Iceland's MAT sector must adhere to the same regulations written for the commercial fishing fleet (with minor exceptions), including total allowable catch and individual transferrable quotas.

2) Iceland's regulatory system is rigid with regard to holding control on who is doing the fishing, and how much and which species of fish are landed. C&R is not allowed by law in Iceland (with an exception made for halibut on grounds of dwindling stocks). Conflicts were identified in Iceland, primarily with regard to MAT business owners having to adjust to regulations and laws written for the commercial fleet. Owners of the fishing camps and the government have found ways to mitigate these conflicts, which empirically demonstrate principles of interactive governance theory. The camp owners are participatory stakeholders and communication mechanisms, such as active feedback loops, are in place. The camp owners communicate through email or other correspondence, and the government officials visit the camps. After identification of where the problem areas are, the government has shown flexibility in frequently modifying both the laws and regulations

to mitigate emergent conflicts. These interactions – demonstrative of inclusive, participatory adaptability are representative of a rose image of governance (Jentoft et al., 2010).

3) Norway's regulations for MAT are more open, with the most significant regulation — the 15 kg export quota (enacted in 2006 and remaining unchanged since) –- having the greatest influence on governance of MAT. It is this regulation that has created most of the conflicts identified in Norway — host-host, host-tourist, and tourist-tourist. No mechanisms for conflict mitigation or resolution were identified in Norway at an institutional level. This particular regulation is representative of a top-down, pyramid form of governance (Jentoft et al., 2010).

4) This article identifies three critical components missing in Norway's management strategy that have the potential to negatively impact the socio-cultural and environmental sustainability of MAT: interactive governance principles; mechanisms for conflict mitigation and resolution; collection of vital catch statistics. Furthermore, this article explores some of the possible consequences surrounding these missing components.

5.2 ARTICLE 2

In the same way that healthy fish stocks are a critical component for the long-term success of MAT, so are the tourists. Without the tourists choosing Northern Norway as a tourism destination, the entire MAT system becomes jeopardized. Fish camps are reliant on the tourists' willingness to return and recommend. In addition, it should be expected that tourists will conduct themselves in a responsible manner while on holiday, and adhere to the regulations of the host country. What if they do not?

Article 2 (Solstrand and Gressnes 2014) quantitatively examines tourist behaviour with regard to non-compliance in Northern Norway, and analyses what effects

possibly stricter management regulations might have on the choices tourists make with regard to choosing Northern Norway as their fishing holiday destination. The underlying hypothesis for this article is that the more pro-environmentally oriented marine angling tourists are more likely to want to protect the fish stocks and practice angling more responsibly. This hypothesis lead to the following two research questions which are answered with **Article 2**.

1. Are marine angling tourists who show higher levels of pro-environmental engagement at home more likely to accept stricter marine angling regulations?

2. Will stricter management regulations affect marine angling tourists' willingness to return and/or willingness to recommend?

The main findings of **Article 2**:

1) The underlying hypothesis for this article is disproved. No statistically significant correlations were found between pro-environmental behaviour at home and support for more stringent regulations. This quantitative finding crossed all nationalities, and is further supported (using the triangulation methodology) by interview data with both tourists and fish camp owners/daily leaders. Statistical correlations with method of transport were identified.

2) Strengthening regulations would likely have a negative impact on both the willingness to return and recommend. Right now, 85.5% of tourists responding to the questionnaire stated they would return to Northern Norway to fish; and 95.5% would recommend Northern Norway to others. 63% would not return if C&R was the only option; 54% are against having to get a fishing license; and 40% would not come to Northern Norway if there was a daily bag limit. These were some of the highest percentages in the study.

3) Findings suggest that the majority of tourists do not view the fish as a resource that should be more tightly controlled if it were to mean their holiday fishing experience would be negatively affected. Since restricting access is not feasible, management of such a complex SES requires finding a balance between the economic profit from tourism, the conflicts surrounding non-compliance which directly affects community wellbeing, and the sustainable management of the fish stocks.

4) Data suggest that possible governance solutions might lie in two primary areas: creating incentives for the tourists to willingly alter their non-compliant behaviour by providing information with attention given to languages; and enhancing the tourist fishing experience while promoting best practices in natural resource management. Ethical responsibility and accountability for non-compliance does not rest solely with the tourists, although that is how the current regulation in effect can be interpreted. Part of enhancing the tourist fishing experience should include community involvement.

5.3 ARTICLE 3

Article 3 (now under review by Maritime Studies) provides another comparative analysis of Iceland and Norway. Having explored, **in Article 1**, the differences in the regulative pillar and the consequences of these differences, **Article 3** revisits the same comparative approach for an in-depth analysis of all four pillars of the institutional structure. Applying an interdisciplinary theoretical framework, this paper investigates possible reasons for the contrariety between Iceland and Norway, and explores how these differences contribute to and/or result in conflict creation and mitigation.

Beginning with MAT as a complex socio-ecological system (SES), **Article 3** modifies institutional theory from Scott (2014), using interactive fisheries governance theory from Jentoft (2004, 2007) and Johnsen and Eliasen (2011). This article

presents a new, graphical representation of an institutional structure with the natural pillar added, and serves as an example of how such an institutional analysis can be utilized to meet the challenges faced in governing complex SESs such as consumptive wildlife tourism, where resource use and conservation come into conflict.

The following research question was answered with this analysis: **From an institutional perspective, how is governance influenced by institutional structure, conditions, and inter-dynamics?**

The main findings of **Article 3**:

1) Already identified in **Article 1**, as a result of the management strategy, Iceland has full accounting of the total seasonal catch each fishing season. Article 3 begins by presenting am empirical example comparing total seasonal catch by calculating a unit of measure of kg/boat/day. Iceland's official statistics for each of the last four years were used. The average is fairly consistent, between 48-61 kg/boat/day, and is independent of the number of tourists.[16] This calculation provides a baseline for evaluating Norway's three estimates on total seasonal catch for MAT, where the only figure claimed to be somewhat certain may be the number of boats. See Figures 28, 29, and 30 which supplement the tables presented in **Article 3**.

2) Using the empirical example as a starting point, a new model is presented for analysing institutional inter-dynamics of an SES that includes four institutional pillars — the natural, regulative, normative, and cognitive.

[16] The total number of tourists fishing on any given day is also a statistic available in Iceland, but these were not used in the calculation in Article 3, as such data is not available in Norway. Only statistical data that had equivalent (albeit estimated) figures available in Norway were used.

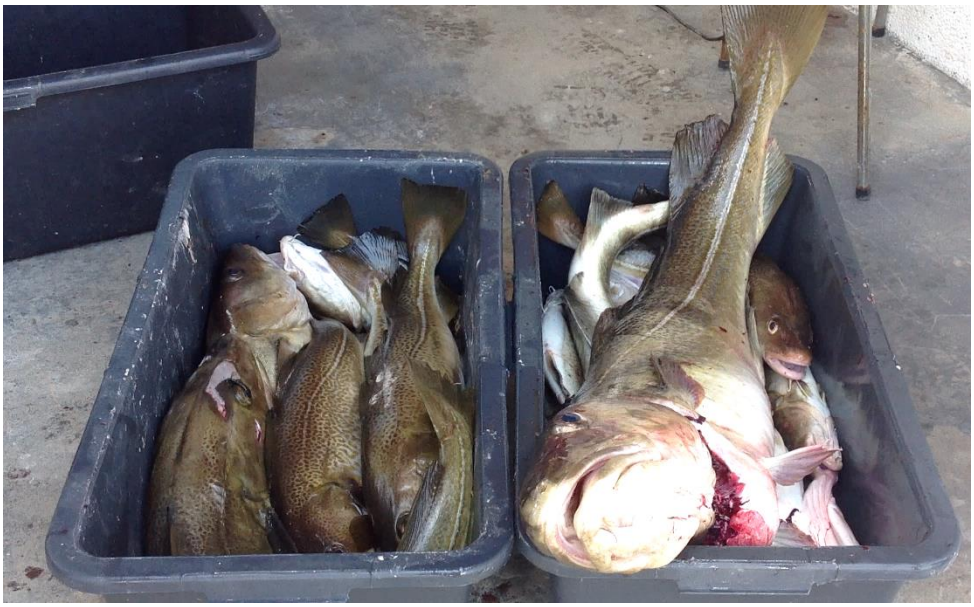

Figure 28: Typical catch after a day of fishing — 74 kg. Large cod resting on the top measured 19 kg

3) Application of this institutional analysis shows how each pillar taken individually, and all four collectively, contribute to the function of the institution. One of the primary purposes in applying such an analysis is to demonstrate how the natural pillar influences and is influenced by the regulative, normative, and cognitive pillars. This finding reinforces the findings from both tourism scholars and natural resource management scholars that the management of natural resources cannot be done outside or independent from the rest of the management system, if this system fills the criteria to be defined as a complex SES.

4) From an interactive fisheries management perspective, the institutional analysis brings forward the importance of properly defining who the stakeholders are, and ensuring that these stakeholders are active participants with a contributory and interactive role, in the overall functioning of the institution.

Figure 29: Typical catch totalling 51 kg

Figure 30: Top cod from Figure 29 weighing in at 16 kg

6 CRITICAL COMPONENTS OF A GOVERNANCE STRATEGY THAT WOULD SUPPORT A SUSTAINABLE PATH OF DEVELOPMENT FOR MARINE TOURISM FISHERIES

Each of the three articles has explored different governance segments of MAT as a complex SES. **Articles 1 and 3,** built upon qualitative data from several different sources, have presented comparative analyses between Northern Norway and Iceland**. Article 1** provides an in-depth comparative analysis of the regulations; and investigates how the overall governance system is structured and operating as a result of these regulations. **Article 3** examines MAT as a complex SES, breaking down the intricate inter-dynamics through a four-pillar institutional analysis. **Article 2** focuses entirely on the tourist segment of MAT from a purely quantitative standpoint — examining tourists' perspectives on both the fish as a natural resource, and possibly stricter regulations. These three articles together represent the triangulation methodology applied to the data, and provide a fairly comprehensive picture of the socio-cultural and environmental dimensions of MAT in Northern Norway. The conclusions drawn from each of these three different types of analyses, contributes in part to offering what are believed to be critical components of a governance strategy that would support a sustainable path of development for marine tourism fisheries.

6.1 MARINE TOURISM FISHERIES

A question often heard during the field research was: "What harm can a few fishers do with fishing poles?"

One of the main findings from this research project is that marine angling tourism is rapidly expanding in Northern Norway, as part of a global trend in popularity of consumptive wildlife tourism around the globe (Bauer and Herr 2004; Lovelock 2008(b)). In Northern Norway, estimates of the total seasonal catch (**Article 3**) together with interviews from camp owners suggest that the impacts may be larger than previously thought.

Figure 31: Group of four tourists heading out for a day of fishing

Figure 32: Four marine angling tourists driving out to sea

Looking out onto a fjord, watching a group of tourists driving a boat out to sea for a day of fishing (Figures 31 and 32), one might be persuaded to believe that the impacts must be minimal – and admittedly, in some coastal areas, this may in fact be true. It is being argued in this dissertation, however, that **marine tourism fisheries** is a sector that must be considered in its entirety, separate from recreational fishing and alongside commercial-scale and small-scale fisheries. The data and analyses from this project suggest that the impacts of marine tourism fisheries should not be dismissed as insignificant in comparison, but rather should be considered as seriously; and that the impacts must be taken into consideration in forming a governance strategy, and in forming a plan for ecosystem-based monitoring. **Article 3** demonstrates that the tourists sit outside the normative and cognitive pillars, although they are exerting influence on these pillars. This is not the case for recreational fishers who have residence in Norway.

Under the socio-cultural and environmental dimensions of sustainability, establishing a path of sustainable tourism development for MAT can be seen to fall into three main categories: achieving balance with the fish stocks; achieving balance at the community level with the local residents and camp owners for future development (e.g. agreement with the increase in the number of fish camps, welcoming MAT tourists as visitors, cooperation and participation in building up support networks); and enhancing the tourist experience, such that the tourists will return and/or recommend to others. The following sections describe the analyses within these three categories:

6.2 THE REGULATIVE PILLAR SHOULD SUPPORT HOW MAT FUNCTIONS IN PRACTICE

Data from interviews and field observations show that ethical responsibility and accountability for non-compliance does not rest solely with the tourists. The regulations for MAT in Norway are not congruent with how MAT functions in practice, creating the impression that the regulations lack legitimacy. The 15 kg of

fillet can easily be fished the first day. What are tourists to do, legally, with the fish they catch for the rest of their holiday? **Articles 1 and 3** discuss this issue in detail. Many of the fish do not survive C&R, as it is not a given that the fish are always hooked in the mouth. The hook can cause serious damage to sensitive parts of the body (abdomen, eye, etc.). The larger fish are next to impossible to safely release without experience, and the wolffish has a dangerous bite reflex, regardless of size. Fish that come from depths of 100 meters are dead on arrival to the surface due to rapid pressure differentials. The mortality from C&R is high — and is not being monitored. The fish are released dead or dying. If the tourist lands the fish, nothing legal can be done with the quantities of fish over and above the 15 kg fillet taken for export. **Article 1, Article 2,** and **Article 3** explore how compliance and non-compliance are affecting MAT in Norway.

Steike for ei kveite!
Tysker fanget gigantkveite på 245 kilo på Senja
Nordlys 30.09.11
Photo: Bnps.co.uk

*Figure 33: Holy **** what a halibut!*
Germans caught a gigantic halibut of 245 kg on Senja

As an example, tourists asked one camp owner in Finnmark if they could fish as much as they want. The answer was yes, according to regulations. Over the next two days, four tourists landed everything they caught over minimum size — a total of 1.2 tonnes of fish — equivalent to 150 kg per day per person. Some fish was given away to local residents, but most of this fish had to be thrown away, because the fish could not be sold, and could not be exported.

In another example, six eager tourists on their first day filled their boat with 700 kg of fish — the equivalent of 117 kg of fish per person. The tourists exported only what was permitted by law (a total of 90 kg). Legally speaking, if tourists were to follow regulations, the rest had to be thrown away.

In a third example, with regard to the trophy fish regulation, when a tourist actually catches one of the prized monster-sized fish being advertised in the marketing brochures, after all the photos are taken, the fish is most probably dead (Figure 33). Freezing a 175-200 kg halibut whole, and transporting it home

Figure 34: A frozen halibut — approximately 150 kg (with head and tail), left behind for the camp owner to throw away

in a personal car or camper as a trophy fish (as the regulation allows) was a scenario that all the interviewed tourists stated was highly unlikely. The only other option available, which allows tourists to remain in compliance, is to discard the fish (Figures 34 and 35). The regulations should be structured to match the way MAT functions in practice. This would contribute to the support of the entire MAT sector, and introduce much needed legitimacy, credibility, and trust into the institutional system that is currently lacking from several different perspectives.

Ethical and moral dilemma is introduced as a result of the regulations not matching how MAT is functioning in practice. Example after example emerged in the interviews where the regulative pillar itself was *forcing* non-compliance by sport fishers who would have well-preferred to operate within the regulations, but for moral or ethical reasons could not comply. This in turn tests the legitimacy and credibility of the entire system, and thus some interviews revealed non-compliance of a different kind.

As examples, some tourists trade these larger fish for the price of diesel fuel or accommodations; or fish is sold to local fishers, to the local fish factory, or the camp owner. In summer 2014, a group of tourists who caught a 200 kg halibut,

Figure 35: A frozen cod — approximately 30 kg, left behind by tourists

sold it for 8.000 NOK[17] to a local fish factory. What options the tourists have available, depends in large part on the philosophy of the camp owner. However, by regulations, tourists are not allowed to sell their catch.

Article 2 quantitatively demonstrates that creating stricter regulations that would be perceived to take away from the tourist experience would not be well received. However, findings also show that the majority of marine angling tourists are willing to participate in filling out a catch report. To install effective regulations, there has to be a clear understanding of the contextual influences and causal relationships (Moore and Rodger 2010). "It is difficult to find effective rules that both match the complex interactions and dynamics of a resource and are perceived by users as legitimate, fair and effective" (Ostrom et al. 1999).

The lack of legitimacy and credibility produced by a regulative pillar that does not support how MAT functions in practice, undermines efforts toward building a sustainable pathway of development.

6.3 MAT SHOULD SUPPORT EFFORTS TOWARD ECOSYSTEM-BASED MANAGEMENT AND STEWARDSHIP

Global initiatives to develop principles and guidelines for better control on the sustainable utilization of marine resources such as the UN/FAO Code of Conduct for Responsible Fisheries[18], the EU's Marine Strategy Framework Directive (MSFD 2008)[19], IUCNs report on the precautionary principle[20], as well as reports from the ICES Arctic Fisheries Working Group (e.g. ICES 2010, 2013), all stress the

[17] 8.000 NOK is the equivalent of 1,240 USD or 980 Euros – as of September 2014.

[18] Code of Conduct for Responsible Fisheries: http://www.fao.org/docrep/005/v9878e/v9878e00.htm. Accessed 3 September 2014

[19] Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive): http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:164:0019:0040:EN:PDF. Accessed 3 September 2014

[20] IUCN Policy and Global Change Group - The Precautionary Principle in Biodiversity Conservation and Natural Resource Management: https://portals.iucn.org/library/efiles/documents/PGC-002.pdf . Accessed 3 September 2014

precautionary approach, ecosystem-based management and stewardship for biodiversity conservation and natural resource management.

The conclusion that MAT activities are having a negligible impact on the fish stocks may or may not be valid (Vølstad et al. 2011(a); Vølstad et al. 2011(b)), as discussed in **Article 3**. Under cognitive evaluation, Vølstad et al.'s latest estimate might or might not have provided sufficient scientific knowledge to justify keeping the regulations as they are, or to support the conclusion that MAT as an institution is too small to justify the resources required to implement a wide-scale, comprehensive monitoring programme. As a rule, scientific reports on the fish stocks in Norway usually distinguish between stocks north and south of 62°N. It is being suggested that perhaps estimations of total seasonal catch from MAT activities should follow suit. Field observations and interview data suggest that the catches from MAT activities in Northern Norway might be higher, and thus the impacts may be greater than previously thought.

The marine angling tourists, as stakeholders, have an interest in the long-term sustainability of the fish stocks. It is argued in this dissertation that they should be required to report catch statistics, as part of best practice in ecosystem-based fisheries management. This is congruent with activation of the tourists' role as stakeholders, addressed in more detail in Section 6.4. Gathering of statistics is a global trend that should be familiar to most fishers travelling the globe for exotic fishing experiences (Pitcher and Hollingworth 2002; Pawson et al. 2008; Aas 2002; Aas et al. 2002; Arlinghaus 2005, 2006, 2008; Arlinghaus et al. 2007; Arlinghaus et al. 2013). Iceland's MAT industry, although on a significantly smaller scale, records MAT activities as part of the national priorities for ecosystem-based management and stewardship. In Iceland, the tourists do not need to report their own catch personally because the system is designed to do it for them.

For some fjords in Norway, the increased temporal and spatial stressors may increase stock vulnerability, but without the availability of baseline statistics,

there is no way to further evaluate this. Genetic studies suggest that the coastal cod living in the fjords may be genetically different from the open-sea Arctic cod stocks migrating from Lofoten to the Barents Sea (e.g. Fevolden and Pogson 1997; Pogson and Fevolden 2003). This would mean that the tourists are most likely fishing distinct populations of non-migrating, local stocks of cod residing in the fjords. The report of the ICES Arctic Fisheries Working Group 2013 outlines a rebuilding plan for coastal cod, adopted by the Norwegian government in 2010, as the result of a drastic decline of coastal cod stock in recent years (ICES 2013).

> *"The management regime employed is aiming for improved ecosystem monitoring in order to understand and possibly enhance the survival of coastal cod"* (ICES 2013, p. 98).
>
> *"Based on simulations, ICES concludes that the plan, if fully implemented, is expected to lead to significant rebuilding. Nonetheless, accounting for realistic uncertainties in the catches, surveys, and the assessment model, a rather long rebuilding period is required even if fishing mortality is markedly reduced within the next several years. Whilst not fully quantifiable, the needed reductions in fishing mortality will require accompanying reductions in the catches. ICES considers the proposed rule to be provisionally consistent with the Precautionary Approach. The basis of this evaluation is the precautionary approach, and not the new ICES MSY [maximum sustainable yield] framework"* (ICES, 2013, p. 99).

ICES considers their proposed plan to be provisionally consistent with the precautionary approach, however the lack of statistics on tourist and recreational fishing activities (fishing mortalities and landings) inhibits the effectiveness of such a plan.

From an institutional perspective, if a resource management plan is based on estimates that are too far off from the actual figures, this has the potential to

seriously impact the natural pillar, thereby also jeopardizing the institutional structure as well as future development of MAT (**Article 3**). **Article 2** reports that 54.8% of tourists would be willing to fill out a catch report if required. By engaging the tourists, necessary data could be collected. Even if only 50% participated, it would go a long way toward filling a serious knowledge gap for ecosystem-based management. Current developments in app technologies for smart phones would make it relatively easy to create an app to record catch data that could feed digitally into a central database. Camp owners could use similar app technology to supply certain data such as the number of tourists, number of active boats, and number of kilos thrown away at the camp. At the very least, this could identify fjords where the stocks may be more vulnerable. Action to to engage participatory stakeholders at the governance level, do not have to necessarily be written into legislations to be priority areas within a strategy.

6.4 Consideration of Tourists as Stakeholders – identification and activation of their participatory role

The definition of a stakeholder most commonly used in the scientific literature is that from Freeman (1984): "[*A*] *stakeholder in an organization is (by definition) any group or individual who can affect or is affected by the achievement of the organization's objectives*." Donaldson and Preston (1995) take this definition a step further by adding that the interests of all stakeholders are of intrinsic value. That is, each group of stakeholders merits consideration for its own sake, and not merely because of its ability to further the interests of some other group. In a paper by Waligo, Clarke and Hawkins (2013), "stakeholders within tourism refer to those groups or individuals who are associated with tourism development initiatives and therefore can affect or are affected by the decisions and activities concerning those initiatives" (Waligo et al. 2013, p. 343). Researchers have applied stakeholder theory to the consideration of tourists as stakeholders (e.g. Burns and Howard 2003; Hardy and Beeton 2001; Robson and Robson 1996;

Sautter and Leisen 1999); and in planning of the coastal zone and fisheries management (e.g. Mikalsen and Jentoft 2001, 2008; Buanes et al. 2005; Buanes et al. 2004; Brewer and Moon 2015).

The argument to consider tourists as stakeholders, in the context of MAT, is in part dependent upon regional and national priorities to build up marine angling tourism in remote coastal regions (Figure 36). Interviews with camp owners revealed that there is a regional priority to build up marine angling tourism, and many camps have received substantial amounts of financial aid from regional organizations to build up their individual businesses. If this is a regional priority, then the tourists hold power in their willingness to return and recommend.

The tourists also hold legitimacy and urgency, as defined by Mitchell et al. (1997).[21] The tourism industry cannot grow without the tourists; but in the same

Figure 36: A group of Italians filleting their catch

[21] *Urgency* is interpreted as the degree to which stakeholder claims call for immediate attention. In other words, their interests and concerns are pressing: they have a need that must be addressed in the short term and cannot be postponed until a later date. *Power* is a relationship among social actors, in which one (or more) of them possesses the ability or resources to persuade another, or others, to yield in the planning process. *Legitimacy* refers to the perception that stakeholder interests and concerns are particularly appropriate, justifiable, desirable and valuable (Mitchell et al. 1997, as cited in Buanes et al., 2004).

light, the tourists won't return if the fish are gone, or the experience is not worth the money.

In the case of consumptive wildlife tourism, it is being argued in this dissertation that the tourists hold responsibility and accountability for their actions with regard to the resource being extracted. It is not a given that since they have paid for the tourist experience, they have the right to behave as they wish. Their actions influence the SES system of MAT as well as the larger SES of common pool resources. Identification and activation of the participatory role the tourists play as stakeholders (e.g. Brewer and Moon 2015), and then engaging the tourists as active participants in the system is an important element in finding a solution to the problems generated by non-compliance, and the lack of monitoring statistics. The tourist industry has an interest in having the tourists return and recommend, but the tourist industry cannot change tourist behaviour — it is up to the tourists themselves to change their behaviour.

Interactive fisheries governance theory does not make a distinction between tourists, small-scale, or commercial scale fishers. All are fishers. Following this logic, all parties must exercise responsibility and hold accountability (Burns and Howard 2003; Jentoft 2007; Mangel et al. 1996; Puhakka et al. 2009; Reed et al. 2009; Wesley and Pforr 2010; Yang et al. 2013). One could argue that because they are tourists, they must sit outside the management framework, but as shown in **Article 3**, although they are currently sitting as outsiders, their actions are affecting and are affected by how the institutional structure is operating. It is being argued here that the tourists' role must be activated within this institutional framework — returning again to the concept of interactions in interactive governance theory. The tourists must, in some way, be allowed to interact, because they have a role that should be acknowledged and put to use.

The interview data combined with the questionnaire data, direct field observations, and participant observations reveal that the majority of the tourists

are sport fishers who understand the importance of catch statistics. This is not in agreement with the stereotype tourist that the media portrays. In addition, 72% of the tourists surveyed would like more information on how fish stocks are doing in Norwegian waters (**Article 2**).

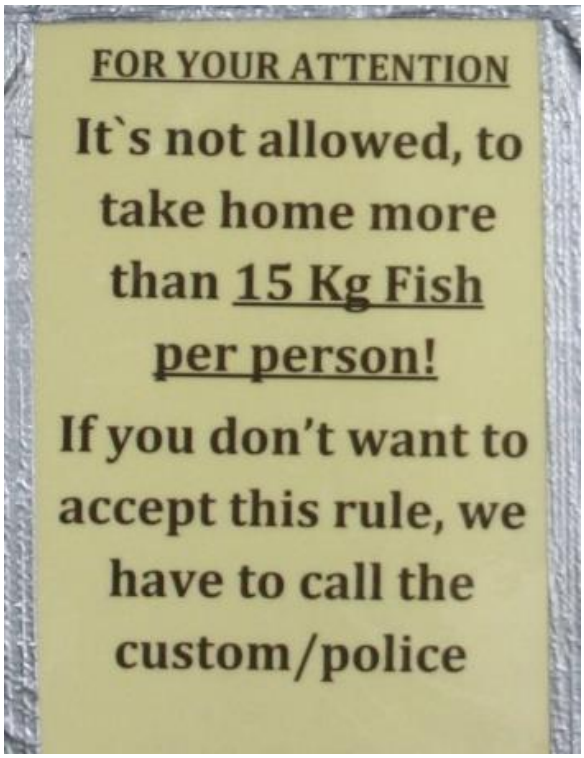

Figure 37: Sign at a fishing camp — only posted in English. This sign reflects the owner's personal philosophy on non-compliance. Such a sign is not mandated by regulations

How stakeholders are treated can take several different forms. It does not necessarily mean or imply that to be considered as a stakeholder, it must be formally written into legislation under the regulative pillar, or that tourists as stakeholders would then have decision-making authority in writing legislation. Activation of the tourists' participatory role can, for example, have significance in prioritizing a communication strategy for MAT. The marine angling tourists today exist in a communication vacuum upon arrival in Norway. Having critical

information available in the tourists' native languages would go a long way toward filling such a vacuum.[22]

Activation of the tourists' participatory role has implications for how a communication strategy is designed, and what would be included in such efforts to communicate. As examples, at the camp level, camps could provide the national regulations for MAT, and boat safety regulations clearly written out in all languages used by their guests. Camp rules such as garbage handling, cleaning of accommodations, as well as how to care for the fish waste, could also be provided in all languages. The latter examples are specifically camp responsibilities, but informing on regulations has significance at the national level. **Article 2** presents several statistics on the general lack of knowledge that tourists have regarding Norwegian regulations for marine angling tourism. Not one camp visited during Phase 1 or Phase 2 had the complete list of Norwegian regulations for MAT translated into the languages used by all their guests (e.g. Figure 37).

Prioritizing communication would be a step toward activating the tourists' role as stakeholders — i.e. those who hold the potential to affect and be affected by the institutional functionality of MAT. So then, how would this affect behaviour?

Compliance and involvement are interrelated phenomena…participation contributes to compliance through the process of involvement (Hall 1972). Conclusions by Hines et al. (1986) on a meta-analysis of responsible environmental behaviour suggest that knowledge of issues, knowledge of action strategies, and an individual's sense of responsibility play a significant role in choice of behaviour. Providing clear management guidelines for wildlife/ tourist

[22] None of the camps visited had information available in all the languages used by their guests. The Directorate of Fisheries website has information available for marine angling tourists in only six languages http://www.fiskeridir.no/fritidsfiske . Accessed September 2014. The questionnaire for this study was translated into 12 different languages and all were used by the tourists.

interactions that build on both providing critical information, and enhancing the tourist experience creates the potential to influence tourist behaviour; and encourage long-term environmentally sustainable practices (Orams 1995, 1999; Wilson and Tisdell 2001; Ballantyne et al. 2011(a); Ballantyne et al. 2009; Ballantyne et al. 2011(b); Higham and Carr 2002). The information, however, must be communicated in a language understood by the tourists.

Tourists are aware of their own individual actions. They are not aware of the effects of their (tourists) collective actions of non-compliance. The interview and questionnaire data revealed that the tourists are unaware of the headlines in Norwegian newspapers (e.g. Figures 38 and 39), how their behaviour might possibly be linked to the local communities' perceptions of MAT, or how non-

- Ulovlig turistfiske øker

Tromsø (ANB): En tredobling i forhold til hele fjoråret

Nordlys 28.07.2009 Foto: Anita Arntzen/Tollregion Nord-Norge

Figure 38: Illegal tourist fishing increases — a trippeling compared to last year


NYHETER NYHETER

TURISTFISKET

– SMUGLING AV FISK ER TYVERI

Nordlys 02.06.09
Tekst: Bengt Nielsen; foto Anita Arntzen

Figure 39: Smuggling of fish is thievery

compliance violates their ethical responsibility as a tourist[23]. If no efforts are made to improve communication with the tourists, this communication vacuum will most likely continue, with no change in behaviour.

Fish stocks in the smaller fjords are particularly vulnerable to spatial and temporal stressors, which can also serve as an added source of conflict for MAT. As tourists' impacts differ in degree from fjord to fjord, community involvement in providing local information is important. An enhanced communication strategy could well include providing tourists with information (in their languages) on what is being reported in the local newspapers, the numbers of confiscations, information regarding the fish stocks, and the socio-cultural impacts to the local fishing communities. Research from this project suggests that providing such information might influence behaviour, in essence building on a sense of personal responsibility and ethics.

Asking the tourists to participate by supplying their catch data, discussed under section 6.3, also falls under this category of activating the tourists' participatory role as stakeholders. Communicating to the tourists that preserving the integrity of the fish stocks is a collective responsibility, and that it is in their own best interests to help contribute to collecting the much needed catch data, would most likely result in better catch statistics, and an improvement in tourists' handling of the fish.

[23] In accordance with the World Tourism Organization's Global Code of Ethics for Tourism: http://ethics.unwto.org/en/content/full-text-global-code-ethics-tourism. Accessed July 2014

Another effort to communicate could come in the form of a DVD available at the camps demonstrating best practices in catch-and-release techniques, in multiple languages. Such important information could also contribute to reducing mortality rates.

6.5 Enhancing the tourist fishing experience

Preserving and enhancing the tourism experience sits at the core of willingness to return and recommend. Marine angling tourists come to Northern Norway and Iceland based on an image — an image created through very skilled advertising from tour operators, as well as advertising on the websites of the marine angling tourism businesses. Photos of enormous fish can be enticing. The image being marketed is the extreme sport fishing experience of a lifetime. The marine angling tourists coming to Norway are responding to appealing marketing campaigns that use photos the fishers themselves refer to as “fisher porn”.

When the tourists get to Northern Norway, they sleep in cabins, and they are out on the boats fishing, simply doing what was advertised, with the dream of catching “the big one”. If their holiday destination is close to a community, they can be tempted to visit the local shops and the local pubs. Interviews revealed the tourists do not always experience a friendly greeting when away from the camp. Local newspaper articles, which can portray these tourists in the worst possible light, are all published in Norwegian, so there is little reason to suspect that the tourists are aware of why they might possibly receive unfriendly welcomes. There is a lot of information that could be more richly explored with regard to community perceptions of MAT, which is why this is recommended as an area of follow-up to this dissertation.

Understanding the *what* and the *how* of the tourist experience (Dewey, 1958 (1925)) leads to being able to *make* and *enhance* the experience. Some examples of enhancing the tourist experience might include:

- Allowing the tourists to fish as much as they want AND allowing them to turn in the fish for processing. This would not be for payment of course – the payment comes in the form of the experience, and no fish is wasted. The model for this is found in Iceland already.
- Supporting local efforts (through extra subsidies) to allow small-scale fishers to provide an extra tourist experience, if interest was expressed.
- When the weather is bad, having other product offerings (including those of other small businesses) to enhance the tourist experience. Offering traditional Norwegian seafood and cultural experiences is just one possible example here.
- Offering tourist products that increase the numbers of families enjoying this type of tourism.

Building a path of sustainable tourism development, in part, means caring for the tourist experience so they will: 1) return; and 2) recommend to others. Above all else, part of the fishing experience is making the tourists feel welcome in Northern Norway — from when they first arrive at the airports.

6.6 Consideration of Communities as Stakeholders

Marine angling tourism holds great promise for remote coastal regions both in Norway and Iceland. This is a form of tourism where the tourists purposely travel to areas that may take up to one day to reach, and remain in these remote areas for the duration of their holiday. For more than 90% of these tourists, their sole motivation is to fish in the sea (from questionnaire data). They can be out for hours and hours, enjoying the pristine nature, the wide open sea, and the never-ending challenge to get the next “big one”.

Consideration of the communities as stakeholders has less to do with modifying regulations. Rather, it has to do with strengthening the normative and cognitive pillars by creating a new philosophy of inclusion and interactions through feedback loops. The institutional analysis presented in **Article 3**, backed up by the regulatory analysis in **Article 1**, shows that the tourists, are for the most part sitting outside the institutional framework, although exercising tremendous

influence on it from all directions. In the same way that inclusion of the tourists as participatory stakeholders (and redesigning the communication strategy) is being recommended to bridge this gap; consideration of the communities as participatory stakeholders is also being recommended to bridge this gap. This requires a modification of philosophy, which would stem, not from anger, resentment, and/or suspicion, but rather from a spirit of cooperation to build up a network of support for the benefit of the entire community. This is in support of the principles of interactive fisheries governance theory (e.g. Jentoft, 2000; Jentoft, 2011b).

Some examples of this follow. It should be noted that this is a finding that developed from the interview data, and it is recommended that this topic receive closer scrutiny in possible follow-up projects.

Some of the higher-end fishing camps have invested millions of Norwegian kronur to build up their businesses. Financial support comes in part from monies borrowed from regional and national organizations dedicated to regional

Figure 40: Maintenance of the boats is a substantial operating expense

development. For the most part, fishing camp owners use building materials and diesel fuel from local suppliers, and labour from local residents.

Some of the camps sell alcohol and depending on the nationalities of the guests, this can be a successful form of additional income or not. Certain nationalities travel into Norway with all their own food and alcohol, and at the end of their vacation, this luggage weight is replaced with fish fillet. Therefore, depending on which country the tourists come from has a great deal to say on how much they themselves contribute back to the local economies of the surrounding communities.

Some camps are in the vicinity of local pubs and grocery stores which allows the profits of tourism to be more easily shared with other business owners.

Managing the boats is a considerable operational expense for the fishing camps (Figure 40). Maintenance as the result of inexperienced boat drivers can be both practically and financially problematic. Some of the camps purchase and manage their own boats, while others give this over to other businesses for management; but unfortunately not necessarily Norwegian. There are several camps that have Swedish companies holding full responsibility for boat supply, management, maintenance, and insurance. It appears that Norwegian insurance rates and other boat services are not competitive. Some camps employ a fishing guide who has the responsibility to take care of the boats and help the tourists find fish. If the tourists are not experienced in driving boats, this can lead to some serious maintenance issues. The fishing guides usually speak German and English, and perhaps a third language as well, but more often than not, they are not Norwegian.

According to interview data with fish camp owners, the marine angling tourism businesses have breathed life into dying economies. This is their personal perspective, as the interviews are statements of their own personal views; however this was not just mentioned by one or two owners. It was mentioned by

several. It would appear that the influx of monies from this form of tourism has kept some small communities alive. However, this seems to partly depend on the owner's personal philosophy, and how much effort is put into "sharing" the tourists with other businesses.

Some camp owners in both Northern Norway and Iceland have prioritized purposely directing their tourists to support other local businesses. For one camp in Northern Norway, though the tourists might arrive at the camp at 01:00 in the morning, the local grocery store will open to provide an extra service to the tourists, demonstrating cooperation among business owners. For another camp, two separate and locally-owned businesses operate the boats, and operate a fishing equipment shop in the vicinity of the camp. In Iceland, one camp owner made the effort to translate a grocery-shopping list into the tourists' native languages, which was sent out ahead of their arrival, asking them to pre-order the food they would like to have — delivered to their cabin upon arrival. This particular action has encouraged less import of food. Interviews revealed that for many tourists, taking their own food with them is not so much a matter of saving money, but saving time and providing a sense of security. They do not read Norwegian, nor are they familiar with what they can buy in Norwegian shops, if they even have the opportunity to shop at all. These types of uncertainties could be considerations of the camp owners, but are not always taken into account.

An obvious question came to mind, with communities full of small-scale fishers with boats and experience…why was not more cooperation being seen between the fishing camps and the small-scale fishers, most of whom were on land for the summer months? Interviews with camp owners revealed some answers — once again, their own personal experiences. Reasons mentioned included: 1) the resentment/jealousy factor prevented cooperation; 2) it is too expensive; 3) there is too much bureaucracy. Retrofitting a small-scale fishing boat to take on tourists

requires an inordinate amount of certification, and a “prohibitively” expensive amount of money.

Many of the tourists expressed interest in the idea of spending a day out at sea with a small-scale fisher, learning about the Norwegian fishing industry, and perhaps sharing a traditional Norwegian seafood lunch or dinner. Only one example of this type of cooperation at the community level was found. However, tourists in some camps were offered the services of an experienced fishing guide, for which they paid extra.

One camp visited represented an example of best practice, which provided the model from which this section is written. This camp made a concerted effort to encourage the set-up of three new local businesses that could provide services to the fishing camp, and share in the profits of this form of tourism.

After experiencing an outcry of objections from local residents, another camp that had been demonstrating an isolated business practice, had a series of meetings with the local board members of the community, to form a plan for how other businesses in the community could benefit from MAT. Food, fishing equipment, diesel, and alcohol are four primary purchases for most marine angling tourists. With a little creativity, working with the idea that maybe some other tourist products/services could be offered, some other businesses could be set up. Community cooperation could go a long way toward mutually supporting local business efforts to strengthen the benefits of tourism.

Another side to the consideration of communities as stakeholders is that the locals know where the excessive fish smuggling is taking place. However, according to Norwegian law, these camps are operating in full compliance with regulations, in just the same way as the ones that do not allow excessive fish smuggling. This re-enforces the quote from FAO on IUU (pg. 14), discriminating against the camp owners who want to enforce regulations, because if non-compliance is permitted in one camp and not another, this might lead to a type of

destructive competitive advantage. Allowing the multiple levels of conflict to manifest, without any form of conflict mitigation strategy in place, will most likely contribute to an increase in community residents' anger and resentment, generated partly from the media reports, and partly because of camp owners' personal philosophy. This has the potential to work against sustainable tourism development of MAT in Northern Norway.

6.7 Improvement in conflict mitigation mechanisms

The suggestion to improve conflict mitigation mechanisms touches upon both consideration of the tourists and communities as participatory stakeholders. The "flame" of conflict — tourist-tourist, tourist-host, and host-host — is primarily being fanned by the 15 kg export quota, non-compliance, and confiscations at the borders. The media reporting on these confiscations, has had a tendency to sensationalize and dramatize, as can be seen from the headlines, and a stereotype tourist emerges that is not reflective of the entire group, but only a small part.

The data from this study did not uncover mechanisms working positively against this build-up of conflict at the institutional level, as Ostrom (1990) indicates is a necessary part of a long-enduring common pool resources institution (pg. 90). Further to this, nothing was identified in the field research to show that any measures were in place to mitigate conflict as part of the institutional mechanisms that should be functioning in this regard. That is not to say that the Norwegian government should be responsible for mitigating conflicts between two MAT businesses, or between groups of English and German tourists. The level of conflict mitigation strategies being referred to here, must operate at a higher level than individual conflicts in individual camps.

Interviews with camp owners revealed that many had constructive solutions for conflict mitigation at a higher level than their own individual camp, but no mechanisms to establish feedback loops were in place to communicate

knowledge. This was a source of frustration for many owners. Interactions, in the form of feedback loops, work toward building knowledge in the system, through shared experiences, thus helping to find solutions to conflicts. The only evidence found for localized conflict mitigation was when the fish camp owner took personal responsibility to enforce the export quota (e.g. Figure 37).

Taking a broader perspective on this point, it is being argued in this dissertation that the lack of monitoring statistics moves the system in a different direction than the many global initiatives trying to build cooperation in caring for the worlds' global fisheries. The lack of statistics feeds conflict because no side of the argument on how much fish is actually being extracted by marine angling tourists can be substantiated. Without the monitoring statistics, it cannot be argued or substantiated that a particular fjord has too many fishing camps for the conditions of the local stocks, or that MAT is a fisheries sector large enough in terms of resource extraction, that it warrants more attention. However, there are recognizably significant challenges associated with how to put such a monitoring system in place, how to fund it, and how to effectively maintain it.

With no identified efforts to date to bring non-compliance under control, the media will continue to report the confiscations, and most likely the sensational headlines will continue, with a stereotypical presentation of the marine angling tourist that is not representative of the majority, according to the data from this study. Such media stories do not necessarily feed a favourable image to the local community residents. *NIMBY*, a well-documented expression of community resistance in the United States comes to mind here — *Not In My Back Yard.* The governance strategy must balance these stressors, for the system as a whole to come into balance.

Monitoring statistics alone would not resolve all of these emergent conflicts. However, what is *done* with the monitoring statistics would make a contribution toward minimizing conflicts (e.g. incorporation of the statistics into the

communication strategy). Without conflict mitigation mechanisms, the conflicts will most likely continue to escalate. It may be considered that implementing some or all of the suggestions within this dissertation could also perhaps work toward conflict mitigation at the institutional level.

7 RECOMMENDATIONS FOR FOLLOW-UP RESEARCH

The questionnaire data in combination with interviews and other qualitative methods of data collection provides a solid foundation upon which to build further research. There are four primary areas where follow-up research is recommended.

7.1 RESILIENCY OF THE COASTAL COMMUNITIES

Resiliency is defined as the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks (Walker et al. 2004; Walker and Salt 2006). Long-term resiliency is dependent upon the ability to adapt in the face of global change (Berkes et al. 2003; Folke et al. 2010; Lebel et al. 2006). As an extension to this project, a future direction of research could concentrate on how the growth and development of MAT (and perhaps other forms of coastal-based tourism as alternative options) are affecting the resiliency of the remote coastal communities.

Therefore, a recommendation for follow-up research is to collect data (quantitative and qualitative) from residents of the remote coastal communities where marine angling tourism is located. The purpose is to form a more holistic picture of the community residents' side of the story. The following sub-questions could be addressed:

- How do the media reports of the confiscations influence community residents' perceptions of this form of tourism, and tourism in general?
- How likely is it that community businesses want to build cooperation with the fishing camps?
- How do community residents perceive the marine angling tourism businesses and business owners? As a positive for community wellbeing, or as a negative?
- How do community residents view the regulations that control tourists' access to the wild living marine resources? Should regulations be strengthened/changed?
- Do the answers to the above questions change from community to community, or is there consistency of viewpoints across communities? If viewpoints are changing, what factors might be contributing to these differing opinions?
- What role is the media playing, from the community residents' viewpoint? Positive or negative?

7.2 CAN TOURIST BEHAVIOUR BE INFLUENCED?

Another potential area for follow-up research would be to create a pre- and post-study which investigates the effects of having improved communication mechanisms in place. This would apply to both the fish camp owners/daily leaders and the tourists. One example would be to improve communication between camp owners and government officials — to create the foundation for participatory feedback loops. Another example is that most of the fishing camps do not go to any/enough effort to supply written information in the languages used by all tourists visiting the camp. Such information might include the status of fish stocks in Norwegian waters, the effects of tourism on the local communities, and tourists' responsibility with regard to the Global Code of Ethics for Tourism[24]. Marine angling tourists are not exposed to the same information that Norwegian residents receive through the local media. So, it would be interesting to see if communicating, in the tourists' own languages, the following information would

[24] UN World Tourism Organization – Global Code of Ethics for Tourism: http://ethics.unwto.org/en/content/full-text-global-code-ethics-tourism Accessed July 2014.

have any effect on their views toward non-compliance or how they view their personal role/responsibility as a marine angler in Norway:

- confiscation statistics
- tourists' ethical responsibility in the host country
- media reports and how tourists' actions are affecting local fishing communities
- the status of fish stocks in the local fjords

Given the language barriers, quantitative analyses would work best for collecting data from tourists. It must be noted that such a project would face similar challenges with regard to limitations on asking questions that directly relate to breaking Norwegian law.

7.3 Enhancement of the tourist fishing experience

Building on the findings from **Article 2**, the tourist fishing experience is a primary motivator for this type of consumptive wildlife tourism. Therefore, it is recommended to put in place two or three local pilot projects to enhance the tourist fishing experience, while at the same time building community participation, and measure the quantitative and/or qualitative results. Some examples might include:

- Delivery of the fish to a local processing plant, where tourists might receive incentives (perhaps in the form of extra fish fillet) for their efforts.
- Create opportunities for tourists to interact with local, small-scale fishers — for example, out on their boats, a tour of fishing facilities, learning about Norwegian commercial fishing, an evening with a fisher (including traditional Norwegian seafood dishes), or in some other way. Some of these could be alternative activities when the weather is bad, for example.

Building up other products/services was mentioned by several camp owners as a means of increasing the number of women and families, and extending the season. Other family-oriented activities mentioned were berry picking trips in the

fall, and northern lights tours which begin in early September and run through to April.

Such a project might have unforeseen benefits in building community involvement, and support the development of feedback loops at the community level.

7.4 Ethnographic study of a fishing camp

It would be interesting, from a social-anthropological perspective, to conduct an ethnographic study of fishing camps – in Northern Norway as compared to those in Southern Norway. Within fisheries management in Norway, a distinction is most often made between fish stocks north and south of latitude 62°N (e.g. ICES 2013; IMR 2014). The following questions could be studied: Are there significant differences in the fishing activities of MAT tourists north and south of 62°N? Are there differences in how fishing camps are run, and the types of problems faced? Is non-compliance present in the fishing camps to the same degree? Do the accommodations in Southern Norway take on a different form? Such a project could identify, for example, some of the key areas of similarities and differences with regard to the challenges faced in building up a MAT business, establishing community networks, and handling conflict.

Such a study could possibly also contribute knowledge toward how an estimate of total seasonal catch should best be generated — nationally, or divided up north and south of latitude 62°N.

8 Conclusions

Using a socio-ecological systems (SES) perspective, and applying a combination of theories for an interdisciplinary analysis — i.e. interactive fisheries governance theory, institutional theory and sustainable tourism concepts — this dissertation has analysed the governance and governability of MAT in Norway. Certain elements of the governance system for MAT in Iceland have been used to highlight aspects of the Norwegian system that require deeper analysis. MAT is one of the few forms of tourism that has great potential for the remote coastal regions of Northern Norway. Therefore, sustainable tourism development should be an environmental, cultural, social, and economic priority. It is a conclusion of this PhD study that MAT is, in fact, governable in Norway; however the current

Figure 41: Steadily increasing confiscations from fish tourists — a smuggling record

Tsjekkere smuglet fisk sydd inn i fisk

Tollerne avslører stadig mer utspekulerte smuglingsforsøk

Nordlys 13.07.13

Figure 42: Czechs smuggled fish sewn inside other fish. Customs uncover steadily more cunning smuggling attempts

system of governance for MAT must be revised. Building in legitimacy, trust, and credibility into the institutional structure, in addition to activating interactions through the participatory roles of the tourists and communities, are key components for a future strategy.

Data collection that led to the analyses used in the published articles for this research project stopped in 2011. Media coverage in 2013 and 2014 (for example Figures 41, 42, 43, and 44) indicates that smuggling by marine angling tourists has escalated, with seizures of fish fillet continuing to break previous records.

This could be due to the fact that the Customs officers are becoming more effective in catching more of the smugglers, that smuggling itself is on the increase, and/or some combination. What is known for sure is that the tonnages of confiscated fillet are on the increase, and the inventive ways tourists are finding to smuggle the fish are also increasing.


NYHET 9

STORFANGST

« NÅR DU HAR MED DEG FIRE ÅR MED FISKEMIDDAG ER DET

IKKE TIL EGET BRUK

Nordlys 07.07.14

Photo: Directorate of Customs

Text: Knut Eirik Lindblad

Figure 43: When you have four years of fish dinners with you, it is not for personal consumption

Using the regulation that one trophy fish can be exported whole, in one smuggling attempt, tourists filled large trophy fish with fillet and sewed them up again (Figure 42). Newspaper articles report that fish is being hidden in extra spaces under the vehicles, or is dumped at the side of the road prior to reaching border control to be picked up later, when the border control facilities have closed.

Customs authorities continue to report through the media that smuggling of fish has reached the scale of organized crime, and that we are only seeing the tip of the iceberg. By law, the confiscated fillet must be thrown away.

In July 2013 and July 2014, Customs reported a record number of seizures at the borders (Figure 44), just as in all prior years since 2009. The sensational headlines continue.

If looked at on a national scale, the problem is admittedly too large for the Norwegian government to control effectively simply by enacting changes in regulations, and/or increasing border patrol efforts. The coastline of Norway is twice the circumference of the earth when all the islands and fjords are taken into account. Non-compliance is a noted stressor to the institution of MAT as an SES, and therefore it is recommended that governance should be handled in a different way. If governance is broken down into its component parts, as this dissertation has attempted to do, smaller, more workable segments emerge — segments whose dynamics can be analysed and understood more clearly. With greater understanding comes the possibility for finding solutions to the problem of how to more effectively govern MAT in Norway, while at the same time prioritizing stewardship for the fish stocks, such that the tourists will return and recommend.

Due to the geography and size of Iceland, the system of governance in Iceland is more than likely not transferrable to Norway. However, there are several


22 NYHET

I fjor tok tollerne fem tonn med smuglerfisk.
Dette hadde fire polakker i bagasjen i går.

SMUGLET FISK:

FISHY BUSINESS

Nordlys 10.07.14
Photo: Directorate of Customs
Text: Torgeir P. Krokfjord

Figure 44: Fishy business — Last year Customs seized five tonnes of smuggled fish. This was in the baggage of four Polish tourists yesterday

elements in the Icelandic system that deserve closer evaluation, and that highlight possible consideration for inclusion in a modified governance strategy for Norway.

Many institutions attempting to conserve resources have failed (Acheson 2006). It is not a conclusion of this dissertation that the current system in Norway has failed as such, but there are warning signs that the institutional structure of MAT must be reviewed and adaptations made.

Acheson (2006) makes the point that a general cause for resource depletion is that people may not recognize that resources are being depleted, or even that they are under stress, particularly in the first stages of overexploitation. Data from this study suggest this may be the case for MAT in Northern Norway. It is predicted that leaving the institution of MAT functioning in its current state will lead to serious, negative, and unpredictable consequences for all stakeholders.

For the broader picture of consumptive wildlife tourism, this dissertation highlights a number of actions that could be put into place to improve understanding of how the inter-dynamics of each element of these complex SESs affect and are affected by the overall functionality of the system. Although each individual case of consumptive wildlife tourism has its own unique dimensions and differences — for example with regard to the resource being consumed and the geographic location, certain generalities such as institutional structure may apply.

Using elements from the Icelandic system — a governance strategy firmly based on prioritizing natural resource management — one might conclude that Norway has a tourism-centric, open strategy with regard to the governance of MAT; or that, in fact, no actual strategy exists or is needed. For MAT in Norway, it may be a general perception that the risks to the fish stocks are too low to warrant the extra costs for monitoring, sanctioning, community involvement, and activating the tourists' participatory role. Or, that it is of no dire consequence to essentially

leave the institutional governance functioning as it does now — status quo. The analyses from this dissertation, however, lead to the conclusion that if nothing is done to modify the current approach to the governance of MAT, a series of interconnected, unpredictable, and unwanted consequences will arise that will not be in line with long-term sustainable tourism development of MAT.

Figure 45: Enjoying the beauty of the midnight sun. Photo taken by Morten Willumsen and used with permission

9 REFERENCES

Aas, Øystein. 2002. The next chapter: Multicultural and cross-disciplinary progress in evaluating recreational fisheries. In *Recreational Fisheries - Ecological, Economic and Social Evaluation*, eds. Tony J. Pitcher, and Charles E. Hollingworth, 252-261. Fish and Aquatic Resources, vol. 8. Oxford: Blackwell.

Aas, Øystein, Carol E. Thailing, and Robert B. Ditton. 2002. Controversy over catch-and-release recreational fishing in Europe. In *Recreational Fisheries - Ecological, Economic and Social Evaluation*, eds. T.J. Pitcher, and C. Hollingworth, 95-106. Oxford: Blackwell.

Acheson, James M. 2006. Institutional Failure in Resource Management. *Annual Review of Anthropology* 35:117-134. doi:10.2307/25064917.

Arlinghaus, Robert. 2005. A conceptual framework to identify and understand conflicts in recreational fisheries systems, with implications for sustainable management. *Aquatic Resources, Culture and Development* 1 (2):145-174.

Arlinghaus, Robert. 2006. Understanding recreational angling participation in Germany: Preparing for demographic change. *Human Dimensions of Wildlife* 11 (229-240).

Arlinghaus, Robert. 2008. The challenge of ethical angling: the case of C&R and its relation to fish welfare (Chapter 11.5). In *Global challenges in recreational fisheries*, ed. Øystein Aas. Blackwell publishing.

Arlinghaus, Robert, Steven J. Cooke, Jon Lyman, David Policansky, Alexander Schwab, Cory Suski, Stephen G. Sutton, and Eva B. Thorstad. 2007. Understanding the Complexity of Catch-and-Release in Recreational Fishing: An Integrative Synthesis of Global Knowledge from Historical, Ethical, Social, and Biological Perspectives. *Reviews in Fisheries Science* 15 (1-2):75-167. doi:10.1080/10641260601149432.

Arlinghaus, Robert, Steven J. Cooke, and W. Potts. 2013. Towards resilient recreational fisheries on a global scale through improved understanding of fish and fisher behaviour. *Fisheries Management and Ecology* 20 (2-3):91-98. doi:10.1111/fme.12027.

Ballantyne, Roy, Jan Packer, and John Falk. 2011(a). Visitors' learning for environmental sustainability: Testing short- and long-term impacts of wildlife tourism experiences using structural equation modelling. *Tourism Management* 32 (6):1243-1252. doi:http://dx.doi.org/10.1016/j.tourman.2010.11.003.

Ballantyne, Roy, Jan Packer, and Karen Hughes. 2009. Tourists' support for conservation messages and sustainable management practices in wildlife tourism experiences. *Tourism Management* 30 (5):658-664. doi:10.1016/j.tourman.2008.11.003.

Ballantyne, Roy, Jan Packer, and Lucy A. Sutherland. 2011(b). Visitors' memories of wildlife tourism: Implications for the design of powerful interpretive experiences. *Tourism Management* 32 (4):770-779. doi:http://dx.doi.org/10.1016/j.tourman.2010.06.012.

Bauer, Johannes, and Alexander Herr. 2004. Hunting and fishing tourism - chapter 4. In *Wildlife Tourism: Impacts, Management and Planning*, ed. Karen Higginbottom. Altona Vic: Common Ground Publishing Pty Ltd.

Bavinck, Maarten, Ratana Chuenpagdee, M. Diallo, P. van der Heijden, Jan Kooiman, Robin Mahon, and S. Williams. 2005. *Interactive fisheries governance*. Delft: Eburon Publishers.

Bavinck, Maarten, Ratana Chuenpagdee, Svein Jentoft, and Jan Kooiman. 2013. Governability of Fisheries and Aquaculture: Theory and Applications: Springer.

Bechtel, Robert B., Victor Corral-Verdugo, Masaaki Asai, and Alvaro Gonzalez Riesle. 2006. A cross-cultural study of environmental belief structures in USA, Japan, Mexico, and Peru. *International Journal of Psychology* 41:145-151. doi:10.1080/00207590500345401.

Berkes, Fikret. 2010. Shifting perspectives on resource management: Resilience and the reconceptualization of 'Natural Resources' and 'Management'. *MAST* 9 (1):13-40.

Berkes, Fikret. 2011. Restoring Unity: The concept of marine social-ecological systems. In *World Fisheries: A social-ecological analysis*, eds. Rosemary E. Ommer, R. Ian Perry, Kevern Cochrane, and Philippe Cury. Oxford, UK: Wiley-Blackwell.

Berkes, Fikret, Johan Colding, and Carl Folke. 2003. Navigating social-ecological systems - building resilience for complexity and change. Cambridge, UK: Cambridge University Press.

Berkes, Fikret, and Carl Folke. 1998. Linking social and ecological systems for resilience and sustainability. In *Linking Social and Ecological Systems - Management practices and social mechanisms for building resilience*, eds. Fikret Berkes, and Carl Folke. Cambridge: Cambridge University Press.

Borch, Trude. 2004. Sustainable Management of Marine Fishing Tourism. Some Lessons from Norway. *Tourism in Marine Environments* 1 (1):49-57.

Borch, Trude. 2009. Contested coastal commercialisation: Marine fishing tourism in Norway. *MAST* 8 (1):33-51.

Borch, Trude, Øystein Aas, and D. Policansky. 2008. International fishing tourism. Past, present and future. In *Global Challenges in Recreational Fisheries*, ed. Øystein Aas, 364 pp. Oxford: Blackwell Publishing.

Borch, Trude, May-Britt Ellingsen, and Mette Ravn Midtgard. 2000. Fisketurisme i Nord-Norge - Bedriftsutvikling og Kompetanseheving: NORUT Samfunnsforskning.

Borch, Trude, Mikko Moilanen, and Frank Olsen. 2011. Sjøfisketurisme i Norge - Debatter, Regulering, Struktur og Ringvirkninger: NORUT.

Bramwell, Bill. 2011. Governance, the state and sustainable tourism: a political economy approach. *Journal of Sustainable Tourism* 19 (4-5):459-477. doi:10.1080/09669582.2011.576765.

Bramwell, Bill, Ian Henry, Guy Jackson, Ana Goytia Prat, Greg Richards, and Jan van der Straaten. 1998. Sustainable Tourism Management: Principles and Practice. The Netherlands: Tilburg University Press.

Bramwell, Bill, and Bernard Lane. 2011. Critical research on the governance of tourism and sustainability. *Journal of Sustainable Tourism* 19 (4-5):411-421. doi:10.1080/09669582.2011.580586.

Brewer, T.D., and K. Moon. 2015. Towards a functional typology of small-scale fisheries co-management informed by stakeholder perceptions: A coral reef case study. *Marine Policy* 51:48-56. doi:http://dx.doi.org/10.1016/j.marpol.2014.07.020.

Briassoulis, Helen. 2002. Sustainable tourism and the question of the commons. *Annals of Tourism Research* 29 (4):1065-1085. doi:10.1016/s0160-7383(02)00021-x.

Briassoulis, Helen, and J. van der Straaten. 1992. Tourism and the environment: regional, economic and policy issues. Dordrecht, Netherlands: Kluwer Academic Publishers.

Buanes, Arild, Svein Jentoft, Anita Maurstad, Siri U. Søreng, and Geir Runar Karlsen. 2005. Stakeholder participation in Norwegian coastal zone planning. *Ocean & Coastal Management* 48 (9–10):658-669. doi:http://dx.doi.org/10.1016/j.ocecoaman.2005.05.005.

Buanes, Arild, Svein Jentoft, Geir Runar Karlsen, Anita Maurstad, and Siri Søreng. 2004. In whose interest? An exploratory analysis of stakeholders in Norwegian coastal zone planning. *Ocean & Coastal Management* 47 (5–6):207-223. doi:http://dx.doi.org/10.1016/j.ocecoaman.2004.04.006.

Budowski, Gerardo. 1976. Tourism and Environmental Conservation: Conflict, Coexistence, or Symbiosis? *Environmental Conservation* 3 (01):27-31. doi:10.1017/S0376892900017707.

Burns, Georgette Leah, and Peter Howard. 2003. When wildlife tourism goes wrong: a case study of stakeholder and management issues regarding Dingoes on Fraser Island, Australia. *Tourism Management* 24 (6):699-712. doi:http://dx.doi.org/10.1016/S0261-5177(03)00146-8.

Butler, Richard W. 1974. The social implications of tourist developments. *Annals of Tourism Research* 2 (2):100-111.
Butler, Richard W. 1991. Tourism, Environment, and Sustainable Development. *Environmental Conservation* 18 (3):201-209.
Butler, Richard W. 1999. Sustainable tourism: A state of the art review. *Tourism Geographies* 1 (1):7-25. doi:10.1080/14616689908721291.
Butler, Richard W. 2011. Sustainable tourism and the changing rural scene in Europe. In *Sustainable Tourism in Rural Europe - Approaches to development*, eds. Donald V. L. Macleod, and Steven A. Gillespie. Routledge Advances in Tourism, vol. 21. London: Routledge - Taylor and Francis Group.
Cap, Gemini, Ernst, and Young. 2003. Vurdering av turistfiske some inntektskilde i Norge (Economic impact from marine fishing tourism in Norway). Trondheim: Cap Gemini Ernst and Young.
Cohen, Erik. 1978. The impact of tourism on the physical environment. *Annals of Tourism Research* 5 (2):215-237.
Coser, Lewis 1956. *The Functions of Social Conflict*. New York: The Free Press.
Craik, Jennifer. 1995. Are there cultural limits to tourism? *Journal of Sustainable Tourism* 3 (2):87-98.
Czaja, Ronald, and Johnny Blair. 2005. *Designing surveys - a guide to decisions and procedures. Second edition*. London: Sage Publications.
Decrop, Alain. 1999. Triangulation in qualitative tourism research. *Tourism Management* 20 (1):157-161. doi:http://dx.doi.org/10.1016/S0261-5177(98)00102-2.
Denzin, N.K. 1978. *The Research Act - 2nd edition*. New York: McGraw Hill.
Dewey, John. 1958 (1925). *Experience and Nature*. Mineola, New York: Dover Publications.
Donaldson, T., and L.E. Preston. 1995. The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *Academy of Management Review* 20:65-91.
Dunlap, Riley E., and Kent D. Van Liere. 1978. The "new environmental paradigm" : A proposed measuring instrument and preliminary results *Journal of Environmental Education* 9:10-19.
Dunlap, Riley E., Kent D. Van Liere, Angela G. Mertig, and Robert Emmet Jones. 2000. Measuring Endorsement of the New Ecological Paradigm: A Revised NEP Scale. *Journal of Social Issues* 56 (3):425-442.
Erkuş-Öztürk, Hilal, and Ayda Eraydın. 2010. Environmental governance for sustainable tourism development: Collaborative networks and organisation building in the Antalya tourism region. *Tourism Management* 31 (1):113-124. doi:10.1016/j.tourman.2009.01.002.
Farrell, B.H., and D. Runyan. 1991. Ecology and tourism. *Annals of Tourism Research* 18 (1):26-40. doi:10.1016/0160-7383(91)90037-c.
Farrell, B.H., and L. Twining-Ward. 2004. Reconceptualizing tourism. *Annals of Tourism Research* 31 (2):274-295. doi:10.1016/j.annals.2003.12.002.
Farrell, B.H., and L. Twining-Ward. 2005. Seven steps toward sustainability: Tourism in the context of new knowledge. *Journal of Sustainable Tourism* 13 (2):109-122.
Fennell, D.A., and R.W. Butler. 2003. A human ecological approach to tourism interactions. *International Journal of Tourism Research* 5 (3):197-210. doi:10.1002/jtr.428.
Ferter, K., Trude Borch, J. Kolding, and J.H. Vølstad. 2013. Angler behaviour and implications for management - catch-and-release among marine angling tourists in Norway. *Fisheries Management and Ecology* 20 (2-3):137-147. doi:10.1111/j.1365-2400.2012.00862.x.
Ferter, Keno. 2011. Marine Angling Tourism in Norway: The interactions between behavior, management, and catch. University of Bergen, Bergen.
Fevolden, S.E., and G.H. Pogson. 1997. Genetic divergence at the synaptophysin (Syp I) locus among Norwegian coastal and north-east Arctic populations of Atlantic cod. *Journal of Fish Biology* 51 (5):895-908. doi:10.1111/j.1095-8649.1997.tb01529.x.

Fiskistofa. 2010. Aflahefti Fiskistofu - Fiskveiðiárið 1 sept 2009 - 31 aug 2010. Reykjavik, Fiskistofa - Directorate of Fisheries: 12 pp. Reykjavik: Fiskistofa.
Fiskistofa. 2011. Aflahefti Fiskistofu - Fiskveiðiárið 1 sept 2010 - 31 aug 2011. Reykjavik, Fiskistofa - Directorate of Fisheries: 12 pp. Reykjavik: Fiskistofa.
Fiskistofa. 2012. Aflahefti Fiskistofu - Fiskveiðiárið 1 sept 2011 - 31 aug 2012. Reykjavik, Fiskistofa - Directorate of Fisheries: 12 pp. Reykjavik: Fiskistofa.
Fiskistofa. 2013. Aflahefti Fiskistofu - Fiskveiðiárið 1 sept 2012 - 31 aug 2013. Reykjavik, Fiskistofa - Directorate of Fisheries: 12 pp.
Folke, Carl, S.R. Carpenter, B. Walker, M. Scheffer, T. Chapin, and J. Rockström. 2010. Resilience thinking: integrating resilience, adaptability and transformability. *Ecology and Society* 15 (4).
Freeman, R.E. 1984. *Strategic Management: A stakeholder approach*. New York: Pitman Publishing.
Getz, Donald, and Seldjan Timur. 2005. Stakeholder involvement in sustainable tourism: Balancing the voices In *Global tourism - third edition*, ed. Willian F. Theobald, 592. Elsevier Inc.
Gunderson, L., and C.S. Holling. 2002. Panarchy: Understanding transformations in human and natural systems. Washington DC: Island Press.
Gössling, Stefan. 2002(a). Human–environmental relations with tourism. *Annals of Tourism Research* 29 (2):539-556. doi:10.1016/s0160-7383(01)00069-x.
Gössling, Stefan. 2002(b). Global environmental consequences of tourism. *Global Environmental Change* 12 (4):283-302.
Gössling, Stefan. 2003. Market integration and ecosystem degradation: Is sustainable tourism development in rural communities a contradiction in terms. *Environment, Development and Sustainability* 5 (3-4):383-400.
Gössling, Stefan, and C. Michael Hall. 2006(a). An introduction to tourism and global environmental change. In *Tourism and global environmental change. Ecological, social, economic and political interrelationships*, eds. Stefan Gössling, and C. Michael Hall, 323. Contemporary Geographies of Leisure, Tourism and Mobility. New York: Routledge, Taylor and Francis Group.
Gössling, Stefan, and C. Michael Hall. 2006(b). Conclusion - Wake up...this is serious. In *Tourism and global environmental change. Ecological, social, economic and political interrelationships*, eds. Stefan Gössling, and C. Michael Hall. Contemporary Geographies of Leisure, Tourism and Mobility. New York: Routledge Taylor and Francis Group.
Gössling, Stefan, C. Michael Hall, Bernard Lane, and David Weaver. 2008. The Helsingborg Statement on Sustainable Tourism. *Journal of Sustainable Tourism* 16 (1):122-124. doi:10.2167/09669580809411813.
Hall, C. Michael. 2001. Trends in ocean and coastal tourism: the end of the last frontier? *Ocean & Coastal Management* 44:601-618.
Hall, C. Michael. 2008. *Tourism planning. Policies, processes and relationships*. Harlow: Pearson.
Hall, D., M. Smith, and B. Marciszweska. 2006. Tourism in the New Europe: The Challenges and Opportunities of EU Enlargement. Wallingford: CABI.
Hall, Derek, and Greg Richards. 2000. Tourism and sustainable community development. Abingdon, Oxon: Routledge.
Hall, Richard. 1972. *Organizations: Strucutres, Process, and Outcomes*. Englewood-Cliffs: Prentice Hall
Hallenstvedt, Abraham, and Ivar Wulff. 2001. Fisk som Agn. Utenlandsk Turistfiske i Norge (Fish as Bait. Foreign tourist fishing in Norway). Rapport fra et fellesprosjekt Norges Fiskarlag og Norges Turistråd. Tromsø: Norges Fiskerihøgskole/Universitetet i Tromsø.
Hardin, Garrett. 1968. The Tragedy of the Commons. *Science* 162 (3859):1243-1248.

Hardy, A.L., and R.J.S. Beeton. 2001. Sustainable Tourism or Maintainable Tourism: Managing Resources for More Than Average Outcomes. *Journal of Sustainable Tourism* 9 (3):168-192. doi:10.1080/09669580108667397.

Healy, Robert G. 1994. The "common pool" problem in tourism landscapes. *Annals of Tourism Research* 21 (3):596-611. doi:10.1016/0160-7383(94)90122-8.

Higham, James, and Anna Carr. 2002. Ecotourism Visitor Experiences in Aotearoa/New Zealand: Challenging the Environmental Values of Visitors in Pursuit of Pro-environmental Behaviour. *Journal of Sustainable Tourism* 10 (4):277-294. doi:10.1080/09669580208667168.

Hines, J.M., H.R. Hungerford, and A.N. Tomera. 1986. Analysis and synthesis of research on responsible environmental behavior: a meta-analysis. *Journal of Environmental Education* 18:1-8.

Holling, C.S. 2001. Understanding the complexity of economic, ecological and social systems. *Ecosystems* 4:390-405.

Hunter, Colin. 1995. On the need to Re-Conceptualise Sustainable Tourism Development. *Journal of Sustainable Tourism* 3 (3):155-165.

Hunter, Colin. 1997. Sustainable tourism as an adaptive paradigm. *Annals of Tourism Research* 24 (4):850-867. doi:10.1016/s0160-7383(97)00036-4.

Hunter, Colin. 2002(a). Aspects of the sustainable tourism debate from a natural resource perspective. In *Sustainable Tourism: A Global Perspective*, eds. Rob Harris, Tony Griffin, and Peter Williams. Oxford: Elsevier - Butterworth-Heinemann.

Hunter, Colin. 2002(b). Sustainabile tourism and the touristic ecological footprint. *Environment, Development and Sustainability* 4:7-20.

Hunter, Colin, and Howard Green. 1995. The environmental impacts of tourism. In *Tourism and the environment: A sustainable relationship?*, eds. Colin Hunter, and Howard (eds.) Green, 10-51. London: Routledge.

ICES. 2010. Report of the Arctic Fisheries Working Group (AFWG). ICES CM 2010/ACOM: 05. 664 pp. Copenhagen: ICES Headquarters.

ICES. 2013. Report of the Arctic Fisheries Working Group (AFWG). ICES CM 2013/ACOM:05. 726 pp. Copenhagen: ICES Headquarters.

IMR. 2014. Havforkningsrapporten 2014. Bergen, Norway: Institute of Marine Research.

Jentoft, Svein. 1985. Models of fishery development: The cooperative approach. *Marine Policy* 9 (4):322-331. doi:http://dx.doi.org/10.1016/0308-597X(85)90040-5.

Jentoft, Svein. 2000. The community: a missing link of fisheries management. *Marine Policy* 24 (1):53-60. doi:10.1016/s0308-597x(99)00009-3.

Jentoft, Svein. 2004. Institutions in fisheries: what they are, what they do, and how they change. *Marine Policy* 28 (2):137-149. doi:http://dx.doi.org/10.1016/S0308-597X(03)00085-X.

Jentoft, Svein. 2007. Limits of governability: Institutional implications for fisheries and coastal governance. *Marine Policy* 31 (4):360-370. doi:10.1016/j.marpol.2006.11.003.

Jentoft, Svein. 2011(a). Roots and Wings - the need for community in the age of globalization becomes apparent when we employ the double vision of interdisciplinarity to the governance of fisheries. *Samudra Report* 60 (November):17-22.

Jentoft, Svein. 2011(b). Fisheries development as freedom. *World Small-Scale Fisheries*:367 - 379.

Jentoft, Svein, and Arild Buanes. 2005. Challenges and Myths in Norwegian Coastal Zone Management. *Coastal Management* 33 (2):151-165. doi:10.1080/08920750590.

Jentoft, Svein, Ratana Chuenpagdee, Alida Bundy, and Robin Mahon. 2010. Pyramids and roses: Alternative images for the governance of fisheries systems. *Marine Policy* 34 (6):1315-1321. doi:10.1016/j.marpol.2010.06.004.

Jentoft, Svein, Bonnie J. McCay, and Douglas C. Wilson. 1998. Social theory and fisheries co-management. *Marine Policy* 22 (4–5):423-436. doi:http://dx.doi.org/10.1016/S0308-597X(97)00040-7.

Jick, Todd D. 1979. Mixing Qualitative and Quantitative Methods: Triangulation in Action. *Administrative Science Quarterly* 24 (4):602-611.

Johnsen, Jahn Petter. 2014. Is fisheries governance possible? *Fish and Fisheries* 15 (3):428-444. doi:10.1111/faf.12024.

Johnsen, Jahn Petter, and Søren Eliasen. 2011. Solving complex fisheries management problems: What the EU can learn from the Nordic experiences of reduction of discards. *Marine Policy* 35 (2):130-139. doi:http://dx.doi.org/10.1016/j.marpol.2010.08.011.

Johnson, R. Burke. 1999. Appendix A: Examining the Validity Structure of Qualitative Research. In *Cases in Qualitative Research: Research Reports for Discussion and Evaluation*, ed. Andrea K. Milinki. Los Angeles: Pyrczak Publishing.

Kaiser, F.G. 1998. A General Measure of Ecological Behavior. *Journal of Applied Social Psychology* 28 (5):395-422. doi:10.1111/j.1559-1816.1998.tb01712.x.

Kaiser, F.G., and Anders Biel. 2000. Assessung General Ecological Behavior: A cross-cultural comparison between Switzerland and Sweden. *European Journal of Psychological Assessment* 16 (1):44-52.

Kaiser, F.G., Michael Ranney, Terry Hartig, and Peter A. Bowler. 1999(a). Ecological behavior, environmental attitude, and feelings of responsibility for the environment. *European Psychologist* 4 (2):59-74. doi:10.1027//1016-9040.4.2.59.

Kaiser, F.G., and Mark Wilson. 2000. Assessing People's General Ecological Behavior: A Cross-Cultural Measure. *Journal of Applied Social Psychology* 30 (5):952-978. doi:10.1111/j.1559-1816.2000.tb02505.x.

Kaiser, F.G., Sybille Wölfing, and Urs Fuhrer. 1999(b). Environmental Attitude and Ecological Behaviour. *Journal of Environmental Psychology* 19 (1):1-19. doi:http://dx.doi.org/10.1006/jevp.1998.0107.

Kooiman, Jan. 2008. Exploring the Concept of Governability. *Journal of Comparative Policy Analysis: Research and Practice* 10 (2):171-190. doi:10.1080/13876980802028107.

Kooiman, Jan, and Maarten Bavinck. 2005. The governance perspective. In *MARE Publicaction Series*, eds. Jan Kooiman, Maarten Bavinck, Svein Jentoft, and Roger Pullin, 427. vol. 3. Amsterdam: Amsterdam University Press.

Kooiman, Jan, and Maarten Bavinck. 2013. Theorizing governability - the interactive governance perspective. In *Governability of Fisheries and Aquaculture - theory and applications*, eds. Maarten Bavinck, Ratana Chuenpagdee, S. Jentoft, and J. Kooiman. Dordrecht: Springer Science and Business.

Kooiman, Jan, Maarten Bavinck, Ratana Chuenpagdee, Robin Mahon, and Roger Pullin. 2008. Interactive governance and governability - an introduction. *The Journal of Transdisciplinary Environmental Studies* 7 (1).

Kooiman, Jan, Maarten Bavinck, Svein Jentoft, and Roger Pullin. 2005. Fish for Life: Interactive Governance for Fisheries. In *MARE Publicaction Series*. Amsterdam: Amsterdam University Press.

Kooiman, Jan, and Svein Jentoft. 2009. Meta-governance: Values, Norms and Principles, and the making of hard choices. *Public Administration* 87 (4):818-836. doi:10.1111/j.1467-9299.2009.01780.x.

Lebel, Louis, John M. Anderies, Bruce Campbell, Carl Folke, Steve Hatfield-Dodds, Terry P. Hughes, and James Wilson. 2006. Governance and the Capacity to Manage Resilience in Regional Social-Ecological Systems. *Ecology and Society* 11 (1).

Levin, Simon A. 1998. Ecosystems and the Biosphere as Complex Adaptive Systems. *Ecosystems* 1 (5):431-436. doi:10.1007/s100219900037.

Levin, Simon A. 2006. Learning to live in a global commons: socioeconomic challenges for a sustainable environment. *Ecological Research* 21 (3):328-333. doi:10.1007/s11284-006-0162-1.

Lovelock, Brent. 2008(a). An introduction to consumptive wildlife tourism. In *Tourism and the consumption of wildlife. Hunting, shooting and sport fishing*, ed. Brent Lovelock, 290 pp. Contemporary geographies of leisure, tourism and mobility. London and New York: Routledge Taylor and Francis Group.

Lovelock, Brent. 2008(b). *Tourism and the consumption of wildlife. Hunting, shooting and sport fishing*. London and New York: Routledge Taylor and Francis Group.

Macleod, Donald V.L., and Steven A. Gillespie. 2011. Sustainable Tourism in Rural Europe. Oxon: Routledge.

Mangel, Marc, Lee M. Talbot, Gary K. Meffe, M. Tundi Agardy, L. Alverson Dayton, Jay Barlow, Daniel B. Botkin et al. 1996. Principles for the Conservation of Wild Living Resources. *Ecological Applications* 6 (2):338-362. doi:10.2307/2269369.

McAlpin, M. 2008. Conservation and community-based development through ecotourism in the temperate rainforest of southern Chile. *Policy Sciences* 41 (1):51-69. doi:10.1007/s11077-007-9053-8.

McCay, Bonnie J. 1995. Social and ecological implications of ITQs: an overview. *Ocean & Coastal Management* 28 (1–3):3-22. doi:http://dx.doi.org/10.1016/0964-5691(96)00002-6.

McCay, Bonnie J., and James M. Acheson. 1987(a). Human ecology of the commons. In *The question of the commons: the culture and ecology of communal resources*, eds. Bonnie J. McCay, and James M. Acheson, 1-34. Tuscon, AZ: University of Arizona Press.

McCay, Bonnie J., and James M. Acheson. 1987(b). The question of the commons: The culture and ecology of communal resources. Tuscon, AZ: The University of Arizona Press.

McKercher, Bob. 1993(b). The unrecognized threat to tourism - Can tourism survive 'sustainability'? *Tourism Management* April:131-136.

Meadowcroft, James. 2007. Who is in Charge here? Governance for Sustainable Development in a Complex World. *Journal of Environmental Policy & Planning* 9 (3-4):299-314. doi:10.1080/15239080701631544.

Mikalsen, Knut H., and Svein Jentoft. 2001. From user-groups to stakeholders? The public interest in fisheries management. *Marine Policy* 25 (4):281-292. doi:http://dx.doi.org/10.1016/S0308-597X(01)00015-X.

Mikalsen, Knut H., and Svein Jentoft. 2008. Participatory practices in fisheries across Europe: Making stakeholders more responsible. *Marine Policy* 32 (2):169-177. doi:http://dx.doi.org/10.1016/j.marpol.2007.09.003.

Miller, G., and L. Twining-Ward. 2005. *Monitoring for a sustainable tourism transition: The challenge of developing and using indicators*. Wallingford, UK: CABI Publishing.

Mitchell, R.K., B.R. Agle, and D.J. Wood. 1997. Towards a theory of stakeholder identification: defining the principle of who and what really counts. *Academy of Management Review* 22 (4):853-886.

Moore, Susan A., and Kate Rodger. 2010. Wildlife tourism as a common pool resource issue: enabling conditions for sustainability governance. *Journal of Sustainable Tourism* 18 (7):831-844.

MSFD. 2008. Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive).

Murray, Grant. 2011. Social-Ecological Restructuring and Implications for Social Values. In *World Fisheries*, 247-264. Wiley-Blackwell.

Ommer, Rosemary E., and R. Ian Perry. 2011. Social-ecological systems in fisheries - introduction. In *World Fisheries - A social-ecological analysis*, 1-8. Wiley-Blackwell.

Ommer, Rosemary E., R. Ian Perry, Kevern Cochrane, and Philippe Cury. 2011. World Fisheries - A social-ecological analysis, ed. Tony J. Pitcher. West Sussex, UK: Wiley-Blackwell Publishing.

Oppermann, Martin. 2000. Triangulation — a methodological discussion. *International Journal of Tourism Research* 2 (2):141-145. doi:10.1002/(SICI)1522-1970(200003/04)2:2<141::AID-JTR217>3.0.CO;2-U.

Orams, Mark B. 1995. Towards a more desirable form of ecotourism. *Tourism Management* 16 (1):3-8. doi:http://dx.doi.org/10.1016/0261-5177(94)00001-Q.

Orams, Mark B. 1999. Impacts of marine tourism. In *Marine tourism: Development, Impacts and Management*, ed. M.B. Orams, 56-70. London: Routledge.

Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.

Ostrom, Elinor. 2009. A General Framework for Analyzing Sustainability of Social-Ecological Systems. *Science* 325 (24 July 2009). doi:10.1126/science.1172133.

Ostrom, Elinor, J. Burger, C.B. Field, R. Norgaard, and D. Policansky. 1999. Revisiting the commons: Local lessons, global challenges. *Science* 284:278-282.

Pálsson, Gísli, and Agnar Helgason. 1995. Figuring fish and measuring men: the individual transferable quota system in the Icelandic cod fishery. *Ocean & Coastal Management* 28 (1–3):117-146. doi:http://dx.doi.org/10.1016/0964-5691(95)00041-0.

Pascual-Fernandez, Jose J., Svein Jentoft, Jan Kooiman, and Abbie Trinidad. 2005. Institutions for fisheries governance - Institutional Linkages. In *Fish for Life - Interactive Governance for Fisheries*, eds. Jan Kooiman, Maarten Bavinck, Svein Jentoft, and Roger Pullin, 217-238. Amsterdam: Amsterdam University Press.

Pawson, M.G., H. Glenn, and G. Padda. 2008. The definition of marine recreational fishing in Europe. *Marine Policy* 32:339-350.

Pitcher, Tony J., and Charles E. Hollingworth. 2002. Fishing for Fun: Where's the Catch? In *Recreational Fisheries - Ecological, Economic and Social Evaluation*, eds. T.J. Pitcher, and C. Hollingworth, 1-16. Fish and Aquatic Resources Series, vol. 8. Oxford: Blackwell.

Pitcher, Tony J., D. Kalikoski, and G. Pramod. 2006. Evaluations of compliance with the UN code of conduct for responsible fisheries: Fisheries Centre research reports.

Pitcher, Tony J., Daniela Kalikoski, Katherine Short, Divya Varkey, and Ganapathiraju Pramod. 2009. An evaluation of progress in implementing ecosystem-based management of fisheries in 33 countries. *Marine Policy* 33 (2):223-232. doi:http://dx.doi.org/10.1016/j.marpol.2008.06.002.

Plummer, Ryan, and David A. Fennell. 2009. Managing protected areas for sustainable tourism: prospects for adaptive co-management. *Journal of Sustainable Tourism* 17 (2):149-168. doi:10.1080/09669580802359301

Pogson, Grant H., and Svein-Erik Fevolden. 2003. Natural selection and the genetic differentiation of coastal and Arctic populations of the Atlantic cod in northern Norway: a test involving nucleotide sequence variation at the pantophysin (PanI) locus. *Molecular Ecology* 12 (1):63-74. doi:10.1046/j.1365-294X.2003.01713.x.

Pruitt, Dean G. 1998. Social conflict. In *The Handbook of Social Psychology - fourth edition*, eds. Daniel T. Gilbert, Susan T. Fiske, and Gardner Lindzey. McGraw-Hill.

Puhakka, Riikka, Simo Sarkki, Stuart P. Cottrell, and Pirkko SiikamÃ¤ki. 2009. Local discourses and international initiatives: sociocultural sustainability of tourism in Oulanka National Park, Finland. *Journal of Sustainable Tourism* 17 (5):529 - 549.

Reed, Mark S., Anil Graves, Norman Dandy, Helena Posthumus, Klaus Hubacek, Joe Morris, Christina Prell, Claire H. Quinn, and Lindsay C. Stringer. 2009. Who's in and why? A typology of stakeholder analysis methods for natural resource management. *Journal of Environmental Management* 90 (5):1933-1949. doi:http://dx.doi.org/10.1016/j.jenvman.2009.01.001.

Richards, Greg. 1998. Sustainable tourism management education: Educational, environmental and industry perspectives. In *Sustainable Tourism Management: Principles and Practice* eds. Bill Bramwell, Ian Henry, Guy Jackson, Ana Goytia Prat, Greg Richards, and Jan van der Straaten. Tilburg: Tilburg University Press.

Ris, Mats. 1993. Conflicting Cultural Values: Whale Tourism in Northern Norway. *Arctic* 46 (2):156-163. doi:10.2307/40511507.

Robinson, Mike. 1999. Cultural conflicts in tourism: Inevitability and inequality. In *Tourism and cultural conflicts*, eds. Mike Robinson, and Priscilla Boniface, 314. Oxfordshire: CABI International.

Robinson, Mike, and Priscilla Boniface. 1999. Tourism and cultural conflicts. Oxfordshire, UK: CABI Publishing.

Robson, Jane, and Ian Robson. 1996. From shareholders to stakeholders: critical issues for tourism marketers. *Tourism Management* 17 (7):533-540. doi:http://dx.doi.org/10.1016/S0261-5177(96)00070-2.

Rohner, Ronald P. 1977. Advantages of the comparative method of anthropology. *Behavior Science Research* 12:117-144.

Sautter, Elise Truly, and Brigit Leisen. 1999. Managing stakeholders - A Tourism Planning Model. *Annals of Tourism Research* 26 (2):312-328. doi:http://dx.doi.org/10.1016/S0160-7383(98)00097-8.

Scott, W. Richard. 1995. *Institutions and organizations*. London: Sage Publications.

Scott, W. Richard. 2001. *Institutions and organizations - 2nd edition*. Thousand Oaks, CA: Sage.

Scott, W. Richard. 2008(a). Approaching adulthood: the maturing of institutional theory. *Theory and Society* (37):427-442.

Scott, W. Richard. 2008(b). *Institutions and Organizations: Ideas and Interests (3rd edition)*. Thousand Oaks, CA: Sage.

Scott, W. Richard. 2014. *Institutions and organizations - Ideas, Interests and Identities - 4th Edition*. Thousand Oaks, CA: Sage Publications Inc.

Scott, W. Richard, and Gerald F. Davis. 2014. *Organizations and Organizing Rational, Natural and Open Systems Perspectives*. Essex, UK: Pearson.

Sharpley, Richard. 2000. Tourism and Sustainable Development: Exploring the Theoretical Divide. *Journal of Sustainable Tourism* 8 (1):1 - 19.

Smith, H.W. 1975. *Strategies of Social Research: The methodological imagination*. Englewood Cliffs, NJ: Prentitce Hall.

Smith, J.A., P. Flowers, and M. Larkin. 2009. *Interpretative Phenomenological Analysis - Theory, Method and Research*. Londoin: Sage.

Solstrand, Maria-Victoria. 2013. Marine angling tourism in Norway and Iceland: Finding balance in management policy for sustainability. *Natural Resources Forum* 37 (2):113-126. doi:10.1111/1477-8947.12006.

Solstrand, Maria-Victoria, and Thomas Gressnes. 2014. Marine angling tourist behavior, non-compliance, and implications for natural resource management. *Tourism Management* 45:59-70. doi:http://dx.doi.org/10.1016/j.tourman.2014.03.014.

Swarbrooke, John. 1999. *Sustainable Tourism Management*. Oxfordshire: CABI Publishing.

UNEP, and UNWTO. 2005. Making Tourism More Sustainable - A Guide for Policy Makers: United Nations Environment Programme and World Tourism Organization. ISBN: 92-807-2507-6; 92-844-0821-0.

UNWTO. 2007. Policies, strategies and tools for the sustainable development of tourism. ISBN: 978-92-844-1224-1. http://www.e-unwto.org/content/Q78U17.

UNWTO. 2009(a). Global Sustainable Tourism Criteria. http://www.unwto.org/sdt/news/en/news_det.php?id=3051. Accessed November 2009.

UNWTO. 2009(b). World Tourism Organization. http://www.unwto.org/sustainable/concepts.htm.
UNWTO. 2010. Joining Forces - Collaborative processes for sustainable and competitive tourism. ISBN: 978-92-844-1334-8. http://www.e-unwto.org/content/U01642.
UNWTO. 2014. Why Tourism? Tourism - an economic and social phenomenon. Accessed 26 March 2014.
Vølstad, J.H., K. Ferter, M. Hauge, K. Nedreaas, and M. Nilsen. 2011(a). Hva betyr fisketurismen for de lokale fiskebestandene langs kysten? In *Havforskningsrapporten*, 58-61. vol. Fisken og havet 1-2011: Havforskningsinstituttet.
Vølstad, J.H., K. Korsbrekke, K.H. Nedreaas, M. Nilsen, G.N. Nilsson, M. Pennington, S. Subbey, and R. Wienerroither. 2011(b). Probability-based surveying using self-sampling to estimate catch and effort in Norway's coastal tourist fishery. *ICES Journal of Marine Science: Journal du Conseil* 68 (8):1785-1791. doi:10.1093/icesjms/fsr077.
Waligo, Victoria M., Jackie Clarke, and Rebecca Hawkins. 2013. Implementing sustainable tourism: A multi-stakeholder involvement management framework. *Tourism Management* 36 (0):342-353. doi:http://dx.doi.org/10.1016/j.tourman.2012.10.008.
Walker, B., C.S. Holling, S.R. Carpenter, and A. Kinzig. 2004. Resilience, adaptability and transformability in social–ecological systems. *Ecology and Society* 9 (2).
Walker, B., and D. Salt. 2006. *Resilience Thinking: Sustaining Ecosystems and People in a Changing World* Washington, DC: Island Press.
Walle, Alf H. 1997. Quantitative versus qualitative tourism research. *Annals of Tourism Research* 24 (3):524-536.
WCED. 1987. Our Common Future - Report of the World Commission on Environment and Development. Annex to A/42/427 - Development and International Cooperation: Environment. Oxford: Oxford University Press.
Wesley, Anthea, and Christof Pforr. 2010. The governance of coastal tourism: unravelling the layers of complexity at Smiths Beach, Western Australia. *Journal of Sustainable Tourism* 18 (6):773-792. doi:10.1080/09669581003721273.
Wilson, Clevo, and Clem Tisdell. 2001. Sea turtles as a non-consumptive tourism resource especially in Australia. *Tourism Management* 22 (3):279-288. doi:http://dx.doi.org/10.1016/S0261-5177(00)00059-5.
Wilson, James A., James M. Acheson, Mark Metcalfe, and Peter Kleban. 1994. Chaos, complexity and community management of fisheries. *Marine Policy* 18 (4):291-305. doi:http://dx.doi.org/10.1016/0308-597X(94)90044-2.
Yang, Jingjing, Chris Ryan, and Lingyun Zhang. 2013. Social conflict in communities impacted by tourism. *Tourism Management* 35:82-93. doi:http://dx.doi.org/10.1016/j.tourman.2012.06.002.
Yin, Robert K. 1981. The Case Study Crisis: Some Answers. *Administrative Science Quarterly* 26 (1):58-65.
Yin, Robert K. 2009. *Case Study Research Design and Methods - Fourth Edition*. Applied Social Research Methods Series. Los Angeles, London: Sage.
Young, E.H. 1999. Balancing conservation with development in small-scale fisheries: Is ecotourism an empty promise? *Human Ecology* 27 (4):581-620.
Zanotti, L., and J. Chernela. 2008. Conflicting Cultures of Nature: Ecotourism, Education and the Kayapo of the Brazilian Amazon. In *Annual Conference of the Association-for-Tourism-and-Leisure-and-Global-Change*. Lodz, POLAND: Routledge Journals, Taylor & Francis Ltd.

10 Appendicies

Appendices 1-3

Article 1

Marine angling tourism in Norway and Iceland: Finding balance in management policy for sustainability

A United Nations Sustainable Development Journal

Special issue on sustainable tourism

Natural Resources Forum
37 (2013) 113-126

Article 2

Marine angling tourist behaviour, non-compliance, and implications for natural resource management

Tourism Management, 45 (2014) 59-70

Article 3

Institutional challenges for effective governance of consumptive wildlife tourism - Case studies of marine angling tourism in Iceland and Norway

Manuscript submitted to Maritime Studies, July 2014

APPENDIX 4

QUESTIONNAIRE USED FOR THE QUANTITATIVE PORTION OF THE DATA COLLECTION - ENGLISH VERSION

Location: _____ Questionnaire number: _____

Date distributed: _____ Språk: English/Engelsk

FISH TOURIST QUESTIONNAIRE

1. Age: _____ **2.** Gender: ❑ Male ❑ Female

3. Which country are you from? _____

4. How many days is your holiday in Northern Norway? _____

5. How many days will you spend **fishing on this holiday in total**? _____

6. How did you travel to the fishing camp?

❑ Car ❑ Camper Wagon ❑ Bus ❑ Airplane & ground transport ❑ Boat

7. How many times have you been to Northern Norway **to fish**?

❑ This is my first time ❑ 1-3 times ❑ 4-6 times ❑ Too many to count

8. How many people are travelling with you? _____

❑ Family ❑ Group (NOT through an agent) ❑ Organized tour (through an agent)

9. What is your education level? ❑ Primary ❑ Secondary ❑ University

10. How would you rank your salary level?

❑ Low ❑ Low to Middle ❑ Middle to High ❑ High

11. What is your occupation? ❑ Construction/Engineering ❑ Electric/plumbing/mechanics/repairs ❑ Sales ❑ Healthcare ❑ Arts/media/sports ❑ Business/financial/legal ❑ Administrative support ❑ Production/Transportation ❑ Management ❑ Education/research sciences ❑ Self employed ❑ Computer sciences/IT ❑ Community and social services/police/security ❑ Cleaning/maintenance

12. What are your **preferred species** to catch - **Order top 5** using assigned letters

Highest		for example: K	**T**	Cod **T**orsk(N); Dorsch (D)	
↓		L	**K**	Halibut **K**veite(N); Heilbutt (D)	
		ST	**ST**	Wolffish **ST**einbit (N); Katfisch (D)	
		T	**SE**	Saithe **SE**i (N); Seelachs (D)	
Lowest		HY	**U**	Red Fish **U**er (N); Rotbarsch (D)	
			L	Salmon **L**aks (N); Lachs (D)	
			HY	Haddock **HY**se (N); Schellfisch (D)	

Or:

❑ It does not matter to me which species of fish I catch

YOUR FISHING EXPERIENCE AND MOTIVATIONS

13. Skill level at fishing? ❑ Beginner ❑ Medium ❑ Very good ❑ Expert

14. What is the **MAIN reason** for your visit to Northern Norway?
❑ **Sea** fishing ❑ **Fresh water** fishing ❑ Both ❑ Other _____

What is important to you on your holiday here in Northern Norway?
Circle number that applies.

		Not at all Important		**Neutral**		**Very Important**
15.	Peace/Relaxation	1.	2.	3.	4.	5.
16.	Unpolluted nature	1.	2.	3.	4.	5.
17.	Challenging/Extreme sport fishing	1.	2.	3.	4.	5.
18.	Dramatic scenic landscape	1.	2.	3.	4.	5.
19.	Companionship with family / friends	1.	2.	3.	4.	5.
20.	Several large fish species to catch	1.	2.	3.	4.	5.
21.	Catch fish in the sea	1.	2.	3.	4.	5.
22.	Cook and eat my fish during my holiday	1.	2.	3.	4.	5.
23.	Come home with a trophy fish	1.	2.	3.	4.	5.
24.	Seeing wildlife in their natural habitats	1.	2.	3.	4.	5.
25.	Midnight sun	1.	2.	3.	4.	5.
26.	Many different tourist activities	1.	2.	3.	4.	5.
27.	Learn about the cultural history of Northern Norway	1.	2.	3.	4.	5.
28.	Bring fish back home	1.	2.	3.	4.	5.
29.	See other tourists show respect for nature	1.	2.	3.	4.	5.
30.	See other tourists show respect in sport fishing	1.	2.	3.	4.	5.

FISHING ACTIVITIES

31. Have you been to other countries (examples: USA, South Africa, Thailand)
other than Norway to fish in the sea? ❑ Yes ❑ No
If yes, which ones: _____ _____ _____
_____ _____ _____ _____

How much do you agree with the following statements? Circle number that applies.

		Do Not Agree		Neutral		Strongly Agree
32.	15 kg of fish fillet is enough to bring home	1.	2.	3.	4.	5.
33.	I would bring home **more than** 15 kg of fish, if allowed	1.	2.	3.	4.	5.
34.	I am satisfied with my knowledge on catch and release	1.	2.	3.	4.	5.
35.	Owners of fish camps should make sure that tourists take home no more than 15kg fish	1.	2.	3.	4.	5.
36.	Fishing camps are the best way for me to fish in Norwegian waters	1.	2.	3.	4.	5.
37.	A catch report should be mandatory	1.	2.	3.	4.	5.
38.	I am satisfied with my fishing experience at this fish camp	1.	2.	3.	4.	5.

GENERAL ENVIRONMENTAL ACTIVITIES

In your daily life, how do you describe yourself regarding environmental activities?

		Does not describe me at all				Describes me perfectly
	In my daily life….					
39.	I pay attention to how my actions affect the environment	1.	2.	3.	4.	5.
40.	I want to experience undisturbed, unpolluted nature whenever I can	1.	2.	3.	4.	5.
41.	I recycle household waste	1.	2.	3.	4.	5.
42.	I conserve on water usage	1.	2.	3.	4.	5.
43.	I conserve on energy usage	1.	2.	3.	4.	5.
44.	I regularly buy organic foods	1.	2.	3.	4.	5.
45.	I pick up other peoples' trash	1.	2.	3.	4.	5.
46.	I volunteer in work that helps the environment	1.	2.	3.	4.	5.
47.	I donate money to programs and organizations that help the environment	1.	2.	3.	4.	5.

over →

REGULATIONS FOR SEA FISHING IN NORWAY

Have you been informed of Norway's current regulations on sea fishing?
Circle number that applies.

		I knew already	I was informed at the camp	I do not know this
48.	Regulation on minimum size (new in 2010)	1.	2.	3.
49.	Regulation on 15kg export quota for foreigners	1.	2.	3.
50.	Regulation which states that foreign tourists may only use handheld tackle when sea fishing. Nets, pots, traps, lines etc. are not permitted.	1.	2.	3.
51.	Regulation that freshwater fish such as salmon, trout and char are exempt from the 15 kg export quota limit.	1.	2.	3.
52.	Regulation that you must be a distance of more than 100 metres from the closest fish farm when sea fishing.	1.	2.	3.

MANAGEMENT

What is your opinion on your participation in possible future management programs? Circle number that applies.

		YES	NO	No Opinion
53.	Would you be willing to take a course to get a **Norwegian sea fishing license**?	1.	2.	3.
54.	Would you come to Northern Norway to fish if there was a daily **bag limit**?	1.	2.	3.
55.	Would you be willing to fill out a **daily catch report**, if required by regulations?	1.	2.	3.
56.	If regulations required that you only catch and release, would you return to Northern Norway to fish?	1.	2.	3.
	Do you want more information on…			
57.	How to correctly catch and release for different species	1.	2.	3.
58.	How much fish you may take home	1.	2.	3.
59.	How fish stocks are doing in Norwegian waters	1.	2.	3.
60.	Boat safety and/or use of GPS	1.	2.	3.
61.	How to take home a trophy fish	1.	2.	3.

62. I will come back to Northern Norway to fish. ❑ Yes ❑ No ❑ Not Sure

63. I will recommend Northern Norway to others. ❑ Yes ❑ No ❑ Not Sure