

Master's thesis



Motivations of marine fishing tourists in the Westfjords, Iceland

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Ísafjörður, May 2014

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

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

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Printing: Háskólaprent, Reykjavík, May 2014

Declaration

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

Student's name

Abstract

The reasons why people go fishing, as for any other form of outdoor recreation, are vast. With fishing becoming an important part of global tourism, knowledge on the motivations of fishing tourists is essential for the future development of this nature-based tourism form. This thesis analysed the motivations among marine fishing tourists in the Westfjords, Iceland. A questionnaire survey was conducted to assess the general background, angling experience, motivations, satisfaction and awareness of management strategies of marine fishing tourists visiting the Westfjords from July to September 2013 (n=165). Most respondents were male (92%), experienced anglers (51%) and from Germany (70%). Even though most anglers fished for “relaxing” (74%) and “being outdoors” (70%), the main reason for choosing the Westfjords as a fishing destination was “big fish” (84%). Anglers are discerning about their catches and the size of fish was the most important catch related attribute. The importance of the natural environment was shown for both the general fishing experience and the fishing experience in the Westfjords, which might indicate that the anglers also want to experience a different type of nature. Satisfaction levels for all of the provided aspects were generally high (“Very satisfied”). Most anglers were aware of existing management regulations and even though they considered them when choosing a fishing holiday destination, other attributes such as environmental qualities or infrastructure/services seemed more important. Despite this, motivational aspects should be included in resource management and development to better match anglers’ motivations and secure compliance to regulations.

Úrdráttur

Ástæðurnar fyrir því að fólk stundar stangveiðar eða einhverja aðra útiveru eru margþættar. Þessi ritgerð rannsakar ástæður þess að sjóstangveiði menn velji Vestfirði til að veiða. Könnun var gerð til að ákvarða almennan bakgrunn, veiðireynslu, ástæðu fyrir að veiða, hversu ánægðir þeir voru og hvort þeir vissu um umhverfis reglur. Könnunin fór fram á meðal stjóstangveiðimanna á Vestfjörðum í júlí til september 2013 (n = 165). Flestir svaendur voru karlkyns (92%), vanir veiðimenn (51%) og frá Þýskalandi (70%). Þótt flestir veiddu til að slaka á (74%), og til að vera úti í náttúrunni (70%) þá var aðal ástæðan sú að þeir vildu veiða stóran fisk (84%). Veiðimennirnir reyndust vandlátir hvað varðar bráð sína og skipti þar stærðin mestu máli. Mikilvægi náttúrunnar reyndist nokkur fyrir bæði veiði almennt og veiðireynslu á Vestfjörðum sem gæti gefið til kynna að veiðimenn vilja líka upplifa aðra gerð af náttúru en heima. Almennt voru veiðimenn mjög ánægðir. Flestir veiðimenn vissu að til voru reglugerðir um veiði og þótt þeir kynntu sér þær þegar þeir völdu sér stað til að fara og veiða þá voru aðrir þættir eins og náttúra og þjónusta sem skiptu meira máli. Þrátt fyrir þetta ætti að taka tillit til ástæðna veiðimanna til að veiða við stjórnun og þróun ferðaiðnaðar og tryggja að reglugerðum sé fylgt.

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Acknowledgements

Foremost, I would like to thank my advisor, Trude Borch, for all the time, work, patience and good vibes she put into making this thesis as good as possible. Secondly, I would like to thank the people involved in the marine fishing tourism industry in the Westfjords for their cooperation and kind assistance. I really enjoyed doing this survey and it greatly thanks to you. A special thanks to Henri Karier for taking me fishing and teaching me how to catch a wolffish. Of course, thank you also to all the anglers that filled in my questionnaires as without them none of this would have been possible in the first place. My gratitude also goes to my reader, Guðrún Þóra Gunnarsdóttir, for her recommendations and interest in this thesis.

My sincere thanks as well go to Dagný Arnarsdóttir and Albertína Friðbjörg Elíasdóttir, for all the help and optimism they provided from near and far away. Your input, initial- and final push for this thesis were invaluable. I would also like to acknowledge all the other staff at the University Center, Gunna Sigga Matthíasdóttir, Kristín Ósk Jónasdóttir, Pernilla Rein, Ingi Björn Guðnason and Peter Weiss for always being there for me for both school related and non-school related issues. The program was an amazingly enriching experience in every possible way and I'll always remember you all very fondly. To the people of the Westfjords, it is said that people make a place, so thank you for making this the warmest place in Iceland. In terms of this project, I want to thank Kári Johansson for always being there for me when I need to know anything about fish or the Westfjords.

My gratitude also goes to Vaxtarsamnings Vestfjarða (VaxVest) and Shiran Þórisson for giving me the opportunity to conduct my research and supporting this project through their generous research grant.

Last, but not least, I would like to thank all my fellow classmates for accompanying me in this adventure, it was an honor, and my family and friends back home, for putting up with me no matter what. My mum and my sister were more than just a support group for me as they have always encouraged me go for what I want, which brings me back to my journey to the Westfjords and the origin of this thesis.

1. Introduction

Fishing is the act of catching fish. From the early need to provide food, fishing, much like hunting, evolved into a pastime conducted for recreational purposes (Gilbey, 1998). Recreational fishing is an activity that involves a variety of motivations aside from catching fish (Bryan, 1977; Ditton & Fedler, 1994). Presently, the complexity of a fishing experience is widely acknowledged, but much is still to be learned about the myriad of motivations for recreational fishers (Ditton & Fedler, 1994).

The Industrial Revolution resulted in improved working conditions such as higher salaries, the possibility for taking holidays and increased mobility due to better transportation systems that allowed more people in developed countries to travel for leisure, including for fishing purposes. The expansion of urbanization and agriculture also led to a decline of natural resources and resulted in anglers having to travel further away in search of their quarry (Bauer & Herr, 2004). Over time fishing tourism increased in popularity (Borch et al., 2008).

Despite the history of fishing tourism being closely related to the development of tourism in general, fishing tourism has received little attention from tourism research. A lot of leisure studies have focused on different aspects of recreational fishing that are of relevance for fishing tourism, but there is limited research on recreational fishing as tourism (Borch et al., 2008). So, whilst an amazing range of products and experiences have been developed in international fishing tourism (Bauer & Herr, 2004; Borch et al., 2008; Gilbey, 1998), there is a lack of knowledge about e.g. what anglers are searching for in this type of holiday (Chen et al., 2003).

Fishing tourism in Iceland is not a new phenomenon. British lords already visited the country to fish in its rivers for salmon in the late 19th century and fishing tourism in Iceland has until recently focused specifically on salmon fishing, for which the country offers good fishing opportunities (Kolbeinsson & Guðjónsdóttir, 1989, cited by Sigurðsson, 2012). Despite Iceland's strong fishing tradition and the presence of rich fishing grounds (Icelandic Fisheries, 2014), a marine fishing tourism industry was developed just under a

decade ago (Bechtloff, 2008). The industry has evolved and is currently well-established in some remote coastal communities in the region of the Westfjords, a region characterized by a traditional connection to commercial fishing, although its local importance is now in decline (Bechtloff, 2008; Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013).

Knowledge about angler motivation forms an important foundation for assessing impacts from the recreational fishing sector, both on economies and fish stocks, and for the development of it as a sustainable industry. Hence, the knowledge on the motivations of the fishing tourists is very important information for natural resource managers, policy-makers and tourism operators. Better understanding of these issues can guide fisheries managers in their efforts in protecting fish stocks while increasing economic impacts, as well as assist tourism enterprises to better satisfy anglers' expectations, improve marketing strategies and plan development (Ditton & Fedler, 1994).

This thesis aims at determining motivational aspects of marine fishing tourism through applying data from the Westfjords in Iceland. In doing so the thesis focuses the following research question:

"What are the motivations among marine fishing tourists in the Westfjords, regarding their

- a) general interest for participating in recreational fishing, and
- b) choice of the Westfjords as their fishing destination?"

The objective of this thesis is to provide a knowledge base that can inform the future development and management of marine fishing tourism in the region, as well as establish a baseline to assist further research on this form of nature-based tourism in Iceland and elsewhere. The thesis ends by pointing to future research needs and management implications of the findings.

2. Theoretical overview

2.1 Marine fishing tourism: Some definitions

According to the World Tourism Organization (WTO) “tourism comprises the activities of persons traveling to and staying in places outside of their usual environment for not more than one consecutive year for leisure, business and other purposes not related to an activity remunerated from within the place visited” (Goeldner & Ritchie, 2005, p. 7). In simple terms, tourism involves a person traveling away from home for the purpose of leisure and stays away overnight. The WTO also differentiates between “domestic tourists” that travel within the boundaries of their country of permanent residence and “outbound tourists” that travel outside of their country of permanent residence.

Nature-based tourism is a term that is used for tourism that takes place in a natural environment and is therefore widely applied. As there seems to be a great request for activity and outdoor recreation in the tourism market, there is a growing demand for nature-based tourism on global level (Orams, 1999).

The term wildlife tourism overlaps with nature-based tourism as the core element of this form of tourism is the interaction of the tourist with wild (non-domesticated) animals (Higgenbotton, 2004; Lovelock, 2007; Reynolds & Braithwaite, 2001). It has been suggested that this form of tourism represents an opportunity for urban people to get back in touch with nature and if managed adequately can serve as an economic alternative to rural communities as well as foster conservation (Higgenbotton, 2004). Historically, wildlife tourism has been divided into non-consumptive wildlife tourism (wildlife viewing) and consumptive wildlife tourism (Higgenbotton, 2004, Lovelock, 2007). Consumptive wildlife tourism involves an animal being removed (killed) from the environment (Higgenbotton, 2004). If not a total catch and release fishing, recreational fishing as tourism or fishing tourism is often considered as a consumptive form of tourism (Bauer & Herr, 2004).

Recreational fishing is defined by the FAO Code of Practice for Recreational Fisheries (2008) as: “fishing for aquatic animals that do not constitute the individual’s primary resource to meet basic nutritional needs and are not generally sold or otherwise traded on

export, domestic or black market”. Not all recreational fishing is tourism but much is included if it involves traveling to and from a dwelling or first-home location to stay overnight to engage in recreational fishing (Bauer & Herr, 2004). Recreational fishing in this form is, as mentioned above, becoming an important component of the global tourism industry (Borch et al., 2008; Ditton et al., 2002). The term “fishing tourism” is used for the activity involving a person travelling away from home to take part in recreational fishing and purchasing services from a tourism industry. This definition includes “foreign tourists” as well as “domestic tourists” (Borch et al., 2008). Fishing tourism can be carried out in freshwater, coastal- as well as marine habitats (Bauer & Herr, 2004; Gilbey, 1998).

Marine fishing tourism takes place in different marine environments, which includes a large variety of habitats in tide influenced, saline waters (Orams, 1999). Marine fishing tourism may be conducted from the shore or from a boat in coastal, offshore and deep waters (Borch et al., 2008). The targeted animals can be marine/estuarine fish, mollusks and crustaceans. The gears used can be spears, hand-held tackle, nets, and traps, among others (Bauer & Herr, 2004).

As all fishing by marine fishing tourists presented in this case study is carried out with a hand held tackle (rod and line), the terms “fishing” and “angling”, which refers to “line fishing using the hooking method” (EAA, 2004, Def. a), are used interchangeably and if not specified otherwise will refer to the act of recreational fishing. Marine fishing tourists will throughout the thesis also sometimes just be referred to as anglers or sea-anglers.

2.2 Sustainability in fishing tourism

The goal of sustainability in tourism is widely recognized (Higgenbotton, 2004), but the lack of systematic information on marine fishing tourism makes it difficult to determine adequate management strategies and guide towards sustainability (Borch, 2004). Marine tourism such as marine fishing tourism can have an impact on the marine environment and the social, cultural and economic aspects of tourism destinations (Orams, 1999). Marine fishing tourism often introduces new interest groups to coastal areas that have many users, generating conflicts and adding more pressure on coastal and marine resources (Borch, 2004).

Sustainable tourism has been defined as “tourism which is in a form that can maintain its viability in an area for an indefinite period of time” (Butler, 1993, p. 29). This one sector approach has as a focus of the perpetuation of activity, without taking into account other sectors (Wahab & Pigram, 2004). This definition contrasts with the multi-sector approach in which sustainability in tourism has been interpreted as “tourism which is developed and maintained in an area in such a manner and at such a scale that it remains viable over an indefinite period and does not degrade or alter the environment (human and physical) in which it exists to such a degree that it prohibits the successful development and well-being of other activities and processes” (Butler, 1993, p. 29). The practical application of the multiple-sector approach in tourism development is difficult (Weaver & Lawton, 1999), but it can be of importance in planning and policy making (Higgenbottom, 2004).

From an ecological point of view, the focus of sustainability regarding marine fishing tourism has been on the removal biomass (Borch, 2004), which relies on the principals of wildlife harvesting (Bauer & Herr, 2004). Specific physiological and population characteristics of exploited fish stocks are important elements when contemplating sustainability issues as some fish populations might be more susceptible to overharvesting through the activity than others (Borch, 2004). As the basis of the marine fishing tourism is the sustainable utilization of marine resources (including economic sustainability), many types of knowledge are required for proper management and policy making related to fishing tourism (Borch et al., 2011).

Some authors have suggested that economic and social information are just as relevant as biological data for achieving sustainability regarding fishing tourism, as they provide essential data for resource management and tourism development (Borch, 2004; Churchill et al., 2002; Radomski et al., 2001). The impact on regional and local economies of marine fishing tourism can help political decision making regarding the allocation of resources and development planning (Borch, 2011). Studies of social aspects, such as participation studies, may provide essential information for tourism markets and managers as they describe the relationship between participation in recreational fishing and demographics variables (Borch et al., 2008). Other social data such as the motivation for taking part in recreational fishing among fishing tourists are also of great importance for assessing the removal of biomass as fishing tourists have diverse catch and harvest orientations, as well as different avidity (Borch, 2004).

Borch (2004) argues that while most sustainability debate concerning marine fishing tourism focuses on ecological and economic issues, there is a growing need for understanding social dimensions involved to guide management towards sustainability. When a new type of nature-based tourism develops in a geographical location, it takes some time and resources to establish a sound knowledge base to guide the development of the activity (Borch, 2009). This thesis uses a one sector approach to provide knowledge foundation on angler motivations to assist the sustainable development and management of marine fishing tourism in the Westfjords.

2.3 Motivation studies

As mentioned above, there is a growing awareness in leisure research for the importance of not only studying the environmental and economic aspects of recreational fishing but also the social or human dimensions involved (Ditton, 2004). The theoretical overview aims that is laid out below represents the framework for the study of angler motivation, which is presented in this thesis.

Angler motivation is the outcome that an angler desires from a fishing experience. Why people fish has been a subject of interest for centuries. Early studies of angler motivation highlighted mainly psychological and physiological aspects, while the experience of catching fish for consumption was almost absent (Fedler & Ditton, 1994). Since then, motivational studies in recreational fisheries research have shown that people fish for a wide range of reasons or motivations, both catch related and non-catch related (Bryan, 1977; Fedler & Ditton, 1994), and that the average angler does not exist (Shafer, 1969; Bryan, 1977). Motivations and behavior can differ among different nationalities, gender, ethnic groups, mode of fishing and fishing experience (Bryan, 1977; Ferter, 2011; Hunt & Ditton, 1997; Hunt & Ditton, 2002; Hutt & Jackson, 2008).

The different motives for taking part in recreational fishing can be broadly divided in two categories: 1) Non-fishing or non-catch related motivations (also called activity-general motivations), that is general motives for recreational activities: leisure, socializing with friends or family, experiencing nature and/or to be outdoors and 2) Fishing- or catch related motivations (also called activity-specific motivations), are elements specific to the fishing activity like targeted species, size of fish, number of fish, type of fish, type of

fishing gear, preferred fishing habitat and the degree of retention (e.g. catch and release or catch and keep) (Fedler, 1984; Fedler & Ditton, 1986, 1994; Fisher, 1997). When traveling away from home to fish other motives like experiencing a new country adds to the motivations of recreational fishers like seeing new places or experiencing new landscapes (Chen et al., 2003).

In relation to fisheries management “fishing-related motivators” often receive the most focus. Previous motivation research has concluded that people go fishing for various reasons other than catching fish and that non-catch related aspects are often more important to anglers than catch related aspects (Fedler & Ditton, 1994; Ditton, 2004). These findings have however been questioned and evidence has been found that catch related aspects might be more important for the fishing experience than indicated by previous studies (Arlinghaus, 2006; Radomski, 1984).

The importance of motivational research is presently widely recognized as angler motivation is often the point of departure for studying angler behavior (Fedler & Ditton, 1994) and its relation to a sustainable development of fishing tourism (Borch et al., 2008). Knowledge on angler motivation can help predict how changes in regulations will affect the participation, economic behavior, the harvest pattern of recreational fishers (Beardmore et al., 2001; Johnston et al., 2010; Radomski et al., 2001) as well as their fishing effort (Steinback et al., 2009). Research has concluded that both catch rates, average size of fish caught, maximum size of fish caught, minimum-size limit regulations and license costs affect anglers’ decisions about participating in a fishery (Hunt, 2005).

2.4 Angling specialization

Motivational studies carried out over an extended period of time have shown that motivational changes can take place within a group of anglers (Frijlink & Lyle, 2010; Siemer & Brown, 1994). These shifts in motives have been attributed by some to “degree of angling specialization”, or “recreational specialization” as used in general recreational research, which was first described by Bryan (1977).

Bryan (1977) segmented fly fishermen fishing for trout in Montana into different recreational groups according to differences in their motivations and behavior. Based on his findings, Bryan (1977) reported that anglers undergo a developmental process in which

strong initial catch related motivations of the angler diminish with time and experience to give place to other motivations, such as specialization in a certain technique, learning about the fish habits and behavior, experiencing nature, among other non-catch related motives. According to the specialization theory, specialized anglers are less consumptive than non-specialized anglers. Bryan (1977) described angling specialization as a continuum where the angler moves along the continuum as his technique improves and motivations change.

Bryan (1977) concluded that anglers are not a homogenous group and that they approach their leisure activities based on their level of specialization. Through the outcome of his research, Bryan (1977) supported previous findings by Schafer (1969) who argued that outdoor recreationists (in his particular case study campers) do not have the same motivations and needs, concluding that there is no such thing as the average recreationist. Since these early findings, the recreational specialization concept has been used to describe specialization groups in wide range of other activities such as bridge (Godbey & Scott, 1994), scuba diving (Anderson & Loomis, 2008) and hiking (MacLennan & Moore, 2011). In recreational fishing research the specialization concept has found support in some studies, even though it has also been observed that it does not seem to necessarily take place within all groups of anglers (Dawson et al., 1992).

As mentioned above, Bryan (1977) determined the angler specialization of trout fishermen in Montana through a multiple dimension scale, which combined observations on attitudes and the behavior of anglers. Since the early work of Bryan (1977) on the specialization concept a variety of measurement approaches have been developed. These, range from a single dimension approach to multiple dimension measurements. Another method that has been applied is a self-classification approach in which recreationists rate themselves on a specialization scale. This approach has proven to be robust and has the advantage of being cost-effective and not so time consuming (Unger, 2012).

Through knowledge about specialization levels one can better understand angler motivations and effectively address differences in management (Ditton & Fedler, 1994). Hence, the study of angler motivation presented in this thesis does also include a focus on angler experience. As anglers' motivations shift with time and experience, the "angling experience" will be used as an indicator for angling specialization where "experienced

anglers” will be considered more specialized than “occasional anglers” and last than “beginners”. “Experienced anglers” will therefore often be referred to as specialized anglers in this thesis.

2.5 Motivations studies and satisfaction

Angler satisfaction is considered the principal product of participating in recreational fishing (Ditton & Holland, 1992) and is intrinsically linked to expected outcomes or motivations for taking part in the recreational experience (Fedler & Ditton, 1994; Ditton & Holland, 1992). Motivations are the starting point for experiencing satisfaction. However, the existence of motivations does not guarantee their satisfaction nor do they explain what aspects of the recreational experience constrain the angler’s satisfaction. Angler satisfaction is determined by the difference between the desired outcomes (motivations) and their perceived fulfillment (Holland & Ditton, 1992). Even though many studies address motivations and satisfaction aspects of recreational fisheries separately, few studies link motivations with satisfaction (Arlinghaus, 2006; Holland & Ditton, 1992).

Some studies have shown that if there is a dominance of catch related motivations among a sample of anglers the satisfaction will be determined more from catch related aspects than from non-catch related aspects (Arlinghaus, 2006; Connelly & Brown, 2000; Herrmann et al., 2002). Arlinghaus (2006) found that an angler’s year satisfaction is mostly determined by activity-specific or catch related aspects, independently of their degree of catch orientation. This seemingly lack of connection between motivations and satisfaction of anglers that expressed having few consumptive motivations is explained by conceptual differences among motivation and satisfaction. This means, that in the past both concepts have sometimes been confused or used interchangeably, creating confusion. Therefore, it is important to differentiate between the two concepts (Arlinghaus, 2006). Also, some aspects of the fishing experience, such as activity-general or non-catch related, are easier to satisfy (as the angler can control these by choosing where and with whom to fish) than activity-specific or catch related elements (over which the angler has little control). That less catch oriented anglers value activity-general motivation more does not mean that they only value these aspects of the fishing experience (Arlinghaus, 2006). Other studies also suggest that the possibility to catch and keep fish seems to be of importance to every fishing trip (Fedler & Ditton, 1986; Aas & Kalteborn, 1995). In order to explain anglers’ behavior,

having knowledge on anglers' satisfaction might be as important as having knowledge of angler' motivation (Arlinghaus, 2006).

2.6 Fisheries management/regulations

Knowledge about the human dimensions of recreational/tourist fisheries such as anglers' motivations can guide fisheries managers in their efforts on finding a balance between the need to protect fish stocks and the need for maximizing the economic impact from the utilization of these stocks (Borch et al., 2008). Fisheries managers are therefore faced with the challenge of distributing limited resources to produce the highest benefit (Cole & Ward, 1994). Thus, management strategies/regulations are meant to minimize negative and enhance positive impacts of marine tourism activities (Orams, 1999).

There is an increasing awareness that recreational fishing can benefit society in a number of ways. Recreational fishing is as an outdoor nature-based activity provides social, physiological and psychological benefits (Lawrence, 2005). The economic impact of marine fishing tourism, which can be substantial in certain locations, includes direct, indirect and induced effects on local economies (Borch et al., 2008). As a result of all these benefits, fisheries managers, asides from managing fish stocks, also should make sure to maintain and/or increase participation levels in recreational fishing and provide satisfying fishing opportunities for visiting anglers (Ditton & Fedler, 1994; Lawrence, 2005).

As the exploitation of fish stocks by recreational fisheries can be significant in certain places, much research has been conducted to control exploitation (Cooke & Schramm, 2007). At fishing destinations there might be different international, national, regional and local management regulations in place. Some management regulations for fishing tourism are implemented to regulate individual anglers (gear limitations, protected areas, protected species, closed periods, fishing licenses, bag limits, obligatory catch reports, catch and release, among others), other regulations are directed at the companies that provide services to anglers (company licenses/concessions, boat regulations/licenses and allocation of fish quotas). The regulations might vary between resident and non-resident anglers, and between domestic and non-domestic anglers (Borch et al., 2008).

As mentioned before, knowledge about angler motivation and behavior form an important foundation for assessing the impacts from recreational/tourist fishing on fish stocks (set up

categories of anglers according to catch effort, avidity, type of fishing gear etc.) and for mapping the economic impacts from the sector (set up categories of anglers according to the economic behavior of different groups; according to degree of recreational specialization, avidity, travel group, etc.) (Borch et al., 2008). In terms of motivations, managers often perceive they have more control over catch-related motivations than over activity general aspects such as involvement with nature, social interactions and relaxation (Ditton, 2004). Hence, having knowledge about catch-related motivations among anglers and how these influence the satisfaction and behavior of anglers is often useful for resource management (Ditton & Fedler, 1994). According to their motivations, anglers tend to agree with some management strategies more than others (Ditton & Hunt, 1996; Lawrence, 2005), and their support of regulations has proven to be vital for the compliance to rules and subsequently for management success (Radomski, 1984).

It is widely assumed that there is a positive relationship between outdoor recreation and environmental concern (Unger, 2012). Bryan (1977) had concluded that the degree of angling specialization influenced the environmental awareness of anglers as the environmental conditions play an important role as a setting and the angler therefore would be more prone to environmental stewardship. Presently, it is believed that specialized anglers are more environmentally aware than less specialized anglers and that they might also be more aware of the associated negative impacts of recreational fishing (Salz & Loomis, 2005).

Even though motivational research can assist management and decision making regarding recreational fishing, motivational results should be used with caution and by taking into account that anglers, even if they are classified into the same segments according to certain characteristics (avidity, gear, species targeted, among others) are not a homogenous group (Ditton & Fedler, 1994). In order to complement the results regarding angler motivation, this thesis also has a focus on the knowledge about and relative importance of management/regulations among surveyed anglers.

3. Description of the case study:

3.1 Fishing tourism in Iceland

Fishing tourism in Iceland started to develop in the 1870's by British anglers who visited the country to participate in salmon fishing (Borch et al., 2008; Kolbeinsson & Guðjónsdóttir, 1989, cited by Sigurðsson, 2012). These recreational fishers were the first in Iceland to fish with rods, a method that was later adopted by the locals (Kolbeinsson & Guðjónsdóttir, 1989, cited by Sigurðsson, 2012). The fishing rights to the rivers were held by the farmers that owned the adjacent land and were first leased for low prices, but with time the competition resulted in a significant increase in prices (Borch et al., 2008). The number of British angler tourists grew until the First World War (Borch et al., 2008; Kolbeinsson & Guðjónsdóttir, 1989, cited by Sigurðsson, 2012), when the number of British fishing tourists declined in all of their previously preferred fishing locations such as Norway, Iceland and Russia (Borch et al., 2008). However, after the Second World War fishing tourism in Iceland slowly recovered (Borch et al., 2008). In the 1960's recreational fishers from the United States started visiting the country. Later the American fishers were followed by anglers from Europe (FishPal, 2013). Today, freshwater recreational fishing is a popular activity in Iceland, among both Icelanders and foreigners (Hagfræðistofnun Háskóla Íslands, 2004 cited by Sigurðsson, 2012; FishPal, 2013). The activity relies mainly on Atlantic salmon (*Salmo salar*), brown trout (*Salmo trutta*) and arctic char (*Salvelinus alpinus*) (Federation of Icelandic River Owners, 2013). Salmon fishing in Iceland is still dominated by foreign fishing tourists, mainly from the United States and Great Britain, and is built around high quality fishing services (high catch rates, exclusivity due to strict regulations, quality lodging and dining, quality guiding) which are offered to an affluent market (Borch et al., 2008).

Even though fishing tourism in freshwater habitats in Iceland dates back all the way to the late 19th century (Kolbeinsson & Guðjónsdóttir, 1989, cited by Sigurðsson, 2012) and traditional small-scale coastal fishing plays an important role for the country's cultural and social identity (Gunnarsdóttir & Halldórsdóttir, 2012), a specialized marine fishing tourism industry in the country did not develop in Iceland before the mid-2000's (Bechtloff, 2008). This new form of tourism is however currently only established in some remote coastal communities in the Westfjords area, a region characterized by numerous fjords and the

availability of large fish (Gunnarsdóttir & Halldórsdóttir, 2012). Presently, Iceland has gained a reputation as a fishing holiday destination for both freshwater and marine fishing (IPT Iceland Pro Travel, 2013; FishPal, 2013).

3.2 Marine fishing tourism in Iceland

At present there is little systematic information available on marine fishing tourism in Iceland. This, along with the relatively recent development of a specialized industry to serve marine anglers visiting the country might be well reflected by the initial sentence of the section on recreational salt water fishing on the website of Federation of Icelandic River Owners (Landssamband veiðifélaga):

“When we consider the rich fishing grounds all around Iceland it may seem strange how this kind of sport fishing is underdeveloped here. Maybe we take salt water fishing too seriously as an industry to be able to think of it as a sport.” (Federation of Icelandic River Owners, 2013, Salt water fishing, para.1)

According to Federation of Icelandic River Owners (2013) recreational anglers can find a boat or two to take them out on the ocean to fish in almost all coastal towns in Iceland. The possibility for renting fishing equipment is also on offer in many of these destinations (Federation of Icelandic River Owners, 2013). People interested in sea-angling can also find an organized half-day sailing excursion that include the possibility for rod fishing and in some cases the preparation of the catch for a culinary experience. These sea-angling services are often combined with whale watching tours (personal observation). The Nordic Adventure Travel’s (NAT) travel guide (2013) provides travelers with information from miscellaneous sources (newspaper articles, magazines, among others) about these services all over the country. This includes information about all fishing opportunities such as river fishing, lake fishing, coastal fishing and ice fishing. The information provided is diverse and ranges from the location of fishing spots and catch rates to products and services offered (angling trips, lodges, fishing packages) (personal observation). Some coastal farm houses that offer “bed and breakfast” through Icelandic Farm Holidays (Ferðaðjónusta bænda) also provide sea-angling opportunities when the weather and the season is favorable (Federation of Icelandic River Owners, 2013). Fishing from the coast or surf fishing is according to the Federation of Icelandic River Owners (2013) only practiced in a

few places, mostly around estuaries, to catch small cod and brown trout, and is not very common.

Although marine fishing services in Iceland, according to the information available on Internet and in tourism brochures (personal observation), now seem to be diverse and widespread this is, as mentioned above, a fairly new industry in Iceland. According to Bechtloff (2008) there was no specialized sector to provide for tourists with a special interest in marine angling or that targeted the specialist segment of the marine angling tourism market before 2005. Before this the only option for tourists that had the an interest in marine recreational fishing was to accompany local boats owners on short fishing trips or go on an organized half-day sailing/fishing excursion. There was however no possibility for renting a boat or buying angling holiday packages that included boat rental (Bechtloff, 2008).

3.3 Development of marine fishing tourism in the Westfjords

Inspired by the success of marine angling tourism in remote coastal communities with similar social and environmental conditions in Norway, a pilot project involving communities, private companies and individuals in the Westfjords was established in April 2005. In this the company Fjord Fishing ehf. set out with a plan to offer one week marine angling holiday packages, including boat rental and accommodation, to German anglers. The marketing, selling and transfer of the tourists were going to be arranged by German tour operators outside of the fishing location (Bechtloff, 2008). From this pilot project a specialized marine fishing tourism industry (in the way of all-inclusive fishing holiday packages including international flights, inland transportation, accommodation, boat rental, fishing quota and personal assistance) started developing in the Westfjords. This region is characterized by a strong historical connection to a commercial fisheries industry which today is in decline (Skaptadóttir 2007; 2000; 2004; cited by Auth, 2012). From this there was a need for innovation that could attract more tourists to the region, lengthen their stay and the tourist season in small towns with low visitor volume. This was the first development of services where boat and accommodation was provided to sea-angling tourists for their own free disposal during their stay. This "Sea-angling pilot project" was set up in the towns of Súðavík and Tálknafjörður in 2006 (Bechtloff, 2008). Sea-angling tourism proved to be successful resulting in an increase in tourist visits (Bechtloff, 2008)

and the services are as a result now being offered in several towns in the Westfjords; Súðavík, Bolungarvík, Flateyri, Suðureyri, and in Tálknafjörður. The services are provided by three enterprises (Iceland Sea Angling hf., Iceland ProFishing hf. and vaXon).

The most targeted fish species among marine angling tourists in Iceland are cod (*Gadus morhua*), Atlantic halibut (*Hippoglossus hippoglossus*), wolffish (*Anarhichas* sp.) and haddock (*Melanogrammus aeglefinus*). Other fish that can be caught in Iceland are monkfish, mackerel, saithe, pollock and ling (IPT Iceland Pro Travel, 2013, Federation of Icelandic River Owners, 2013). The fishing is conducted in the fjords and with the good fishing conditions available in Iceland it is possible for one angler to catch 50 kg of fish in one day as well as catch a world record sized fish (Solstrand, 2013). Sea angling in Iceland has become known not only because of the abundance of certain fish stocks, but also because of the size of the fish that can be caught (IPT Iceland Pro Travel, 2013, Federation of Icelandic River Owners, 2013, Solstrand, 2013).

3.4 Management of marine fishing tourism in Iceland and the Westfjords

When marine fishing tourism started developing in the Westfjords in 2006 there was no legal framework for this tourism activity in Iceland. The boats, that were meant to be for the anglers' free disposal during the holiday, did not fit into any of the existing classification categories and there were no requirements defined for fishing tourists using them (Bechtloff, 2008). As established by the Law on the treatment of exploitable marine stocks (nr. 57/1996), all fish that is caught in a fishing gear or on a boat in Iceland has to be landed and weighed. Marine angling tourism in Iceland is therefore completely consumptive and it is prohibited by law to practice catch and release (C&R). Foreigners in Iceland are only allowed to fish with a hand held tackle and for their own consumption. Because the amounts of fish caught by fishing tourists easily surpassed the amount permitted for personal consumption and the operators were going to sell the catch to the local fish processing plants, marine fishing tourism was made part of the individual transferable quota (ITQ) system developed for commercial fisheries (Bechtloff, 2008; Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013). This system was established in 1990 (nr. 38/1990) and amended in 2006 (nr.116/2006). As such marine fishing tourism was declared subject to national fishing laws and regulations (Bechtloff, 2008;

Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013). The quotas allocated to the marine fishing tourism sector represent a share of the total allowable catch (TAC) for a number of species (Solstrand, 2013). Additional fish for immediate consumption can be landed without the need of a quota for both Icelanders as well as foreigners (Bechtloff, 2008). The institution in charge of the management of marine fishing tourism in Iceland is the Directorate of Fisheries (DF) (Fiskistofa) (Gunnarsdóttir & Halldórsdóttir, 2012). The DF is under the responsibility of the Ministry of Fisheries and Agriculture (IMFA) (Sjávarútvegs- og Landbúnaðarráðuneytið), which holds the responsibility for the implementation of fisheries regulation and the handling of seafood products in Iceland (Fiskistofa, 2012). In order to sell their services, the fishing tourism operators has to acquire a special permit from the DF and be allocated a quota share for each one of their boats (Bechtloff, 2008; Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013).

The early development of the marine angling tourism industry in the Westfjords encountered some difficulties regarding policy making and access to fishing resources. During the 2009 tourist season tourist operators ran out of quota and there was no quota available for trade on the market. However, the angling operations continued fishing and landing their catches through the season without having any quota. After this incident, the IMFA-DF adopted a new law (Law nr. 22/2010 in March of 2010), which reserves 200 tons of fishing quota to the fishing tourism industry at a price which is the average published trading price. In May of that same year this was followed by the implementation of Regulation nr. 404/2010 which divides this quota evenly among the angling season months (May-August). The operators were not content with this regulation as it did not take into account the peak season and sent a complaint to IMFA. IMFA responded the following day with Regulation 526/2010 that allocated more quota for the peak months, as it reserved 50 tons that could be fished as of the 26th of June and 50 tons that could be fished as of the 20th of July (Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013). On the 4th of May 2011 Reg. 466/2011 changed the allocation of the quota to 40 tons for May, 80 tons for June, 40 tons for July and 40 tons for August. Shortly after, reg. 469/2011 specified cod as the species of allocation. The camp owners also turned to the DF because they were losing money when selling the fish caught to the processing plants, as they were paying 320 ISK/kg to purchase quota but were selling the fish at 270-280 ISK kg. As a result of this complaint, the DF created in June of 2010 Law nr.70/201, which increased

the total quota share for recreational fishing to 300 tons and set the price of quotas for the recreational sea-angling operators to 80 % of the market price. After this regulation nr. 643 followed, which allocated 90 tons of fish for July and 90 tons for August (Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013).

Table 1. Summary of laws and regulations on marine angling tourism. From Gunnarsdóttir & Halldórsdóttir (2012)

Date	Number	Purpose
3 rd of June 1996	Law-nr.57/1996 Law on the treatment of exploitable marine stocks	For the sustainable management of fish stocks, it requires to land and weigh all catch that comes into the fishing gear or a fishing boat.
10 th of Aug 2006	Law-nr.116 (nr. 38 1990) Fisheries Management Act	Individual transferable quota (ITQ) system was established for fisheries and subject to vessel catches quotas
25 th of June 2009	Reg. Nr. 549/2009	Special boat permits are needed for tourist fishing permitting sale and profit from the catch
26 th of March 2010	Law 22/2010	Allocates 200 tons specifically for recreational fisheries
11 th of May 2010	Reg. 404/2010	200 tons divided equally between May, June, July and August
25 th of June 2010	Reg. 526/2010	50 tons available as of the 26th of June; 50 tons as of the 20th of July
4 th of May 2011	Reg. 466/2011	Allocation of 40 tons for May, 80 for June, 40 for July, and 40 for August
6 th of May 2011	Reg. 469/2011	Cod specified as the species of allocation
21 th of June 2011	Law 70/2011	Law allocates up to 300 tons specifically for recreational fisheries & Purchase price fish camps have to pay for quota drops to 80% of listed market

1 st of July 2011	Reg. 646/2011	Allocation amended to 90 tons for July, and 90 for August
19 th of Dec 2011	Reg. 1164/2011	Total ban on halibut fishing in effect as of the 1st of January 2012. If a halibut is caught and it remains viable, it must be released.

In 2011 an exception for the ban on C&R was introduced due to decline in Icelandic halibut stocks. Regulation 1164/2011 states that if a caught halibut has the probability for surviving being released it must be released. Marine angling tourists in Iceland do not have the possibility to do the filleting and freezing of the fish caught (like in Norway). All catches have to be unloaded by the tourists and weighed by the camp owner or person in charge as a part of the daily routine. The fish is then sent to the fish processing plants for filleting and freezing and tourists are only allowed to bring back a maximum of 20 kg of fish to their home country. This is not included in the holiday package and must be purchased from the tourism operators. The fish bought will not be the same fish that was caught by the individual angling tourist (Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013).

3.5 Marine fishing tourism in the Westfjords today

The above mentioned sea-angling pilot project in the Westfjords which was led by Fjord Fishing ehf. took place in 2006. The project focused on the towns of Suðavík and Tálknafjörður with a total of 11 rental houses, equipped with one boat each. During that year, 950 sea-anglers visited Suðavík (during 21 weeks from the beginning of May until the end of September) and Tálknafjörður (during 25 weeks from the beginning of April until the end of September). These anglers contributed 5700 guest nights to the region, which represented an increase of 20% in tourism nights stayed by foreign tourists in the Westfjords from 2005 to 2006 (Bechtloff, 2008). The sea-angling pilot project was in other words successful in increasing tourism visitation and resulted in an interest in the potential of this tourism activity in the region. In November 2005 Fjord Fishing ehf. received a recognition for innovation and product development from the Icelandic Tourist Industry Association (Samtök ferðapjónustunna) for the project (Bechtloff, 2008).

The company Fjord Fishing ehf. dissolved before the beginning of the season 2007 and some of the original partners continued on working as Sumarbyggð hf. in the towns Suðavík, Bíldudalur and Tálknafjörður during the 2007 season. That same year, the company Hvíldarkléttur ehf. started bringing angling tourists to the town of Suðureyri, adding a fourth angling destination to the Westfjords (Bechtloff, 2008). Sumarbyggð hf. offered three boats in Bíldudalur during the angling seasons of 2007 and 2008, while renting houses from Eagle Fjord ehf. In 2009 Sumarbyggð hf. began offering angling packages in Bolungarvík and in 2010 the company adopted its current name Iceland Sea Angling hf. (F. Jónsson, personal communication, January 24, 2014). The company Hvíldarklétture hf. changed in 2012 to its current name Iceland Pro Fishing hf. (S. B. Kristjánsson, personal communication, February 22, 2014).

The companies and partners involved in fishing tourism development have changed and evolved since the early beginnings of specialized marine fishing tourism in the Westfjords to the present situation. There are presently three specialized sea-angling operators who are active in the region. These companies provide specialized angling packages, mostly distributed to European anglers through foreign tour operators. Some of these enterprises are currently also offering half-day fishing trips (when there are boats available) through local tourism operators. The marine tourism companies (listed in alphabetical order) that currently offering complete sea-angling tourism packages in the Westfjords are the following:

- Iceland Sea Angling hf.: This operator works in the towns of Bolungarvík, Suðavík and Tálknafjörður with 22 boats in total (the boats are moved between the locations according to need). The number of tourism beds available is 44 in Bolungarvík, 54 in Suðavík and 35 in Tálknafjörður. There is the possibility for renting equipment such as rod, reel and floating suits. The accommodations available are fully equipped flats with kitchen, bathroom and living room, including tv and internet (F. Jónsson, personal communication, February 10, 2014).
- Iceland Pro Fishing hf.: This company works in the towns of Flateyri and Suðureyri, and has 14 and 8 boats respectively in each town. The number of tourism beds available are 54 in Flateyri and 26 in Suðureyri. There is the possibility for renting equipment such as rod, reel and floating suits. The accommodations available are fully equipped houses with kitchen, bathroom, tv and

internet. There is also the possibility of renting other houses with different facilities (S. B. Kristjánsson, personal communication, February 22, 2014).

- VaXon: This company operates in the town of Bolungarvík¹ and it operates with 6 boats and one passenger ferry (maximum of 24 people). There is the possibility for renting equipment such as rod, reel and floating suits (H. Vagnsson, personal communication, October 11, 2013). VaXon is a tourism company that also offers other services such as whale watching, passenger transfer to the Hornstrandir Nature Reserve and other excursions in the vicinity of Bolungarvík. The company offers different types of accommodation in their privately operated hotel/guesthouse (vaXon, 2014).

In 2011 there were 48 boats divided among the three fishing enterprises (Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013). According the information provided during the field research of this study in 2013, there were 50 boats and one 1 passenger ferry operating among the three enterprises. The total number of sea-anglers that visited the Westfjords in 2013 was approximately 1856 and they contributed approximately 15376 tourism nights to the region (F. Jónsson, personal communication, October 2, 2013; S. B. Kristjánsson, October 16, 2013; and H. Vagnsson, personal communication, October 11, 2013). The number of foreign tourists in the Westfjords in 2013 has been estimated to be around 55600 (L. Renitsa, personal communication, January 13, 2014) and the number of tourism nights spent in the region was 77461 (Statistics Iceland, 2014). According to this data, marine fishing tourists contributed approximately 20% of the total number of tourism nights spent in the region in 2013.

3.6 Icelandic research on marine fishing tourism

There has been some effort to study different aspects of marine fishing tourism in Iceland and this research has focused specifically on the region of the Westfjords. The conducted research has focused on describing the market segment of the visiting anglers and on the management and governance systems involved in marine angling tourism in Iceland. Angler's motivations have been addressed by Bechtloff (2008) and Viðhorf (2008) as part

¹ Starting the angling season 2014 the company wants operate with one or two boats in the South of the country (outside of the Westfjords). It was not possible to receive any further detail.

of market and tourism research, but seem to absent in management research (personal observation).

Among the few studies of marine fishing tourism in Iceland we find Bechtloff (2008) on the 2006 pilot project on sea-angling tourism in the Westfjords, which closely follows the creation and development of the pilot projects in the towns of Súðavík and Tálknafjörður during that year. The aim of the study by Bechtloff (2008) was to describe the pilot project, analyze the cooperation between the involved parties and assess the resulting product and market strategy. The research also included a preliminary survey on the demographics and expectations/motivations and the satisfaction received of the marine angling tourists visiting the sea-angling pilot project during 2006 in Súðavík.

From the angling tourists that participated in the Bechtloff survey most of the respondents were male, German, from the region of Bavaria, between the age of 46 and 60 years old, with an low educational level², working as craftsmen or in a craft-related employment³ and were mostly traveling with friends in groups with an average of 5 people. The satisfaction with the services and infrastructure, as well as with the overall holiday experience, was generally high and met the expectations of the visiting anglers.

Bechtloff (2008) concluded that even though the pilot project encountered some difficulties during the sea-angling season, the project was overall successful as it resulted in high guest satisfaction and in increased tourist visits. From her results, Bechtloff (2008) provided recommendations on how to improve the sea-angling product in the area such as creating more angling destinations to establish a clientele, to offer the possibility of a longer stay, to enhance mobility at the location, to use inland flights instead of a bus transfer, to increase the selection of products available (in the grocery shop, the souvenir shop and restaurants) and to avoid providing wrong information due to miscommunication among the partners. According to Bechtloff (2008) further development and expansion of marine fishing tourism in Iceland relies on increased local involvement and on improvement of the angling services. She points out that the future development should also take place in accordance with the framework of the national fisheries management system (to avoid conflicts with other sectors like the commercial fisheries sector), and that

² The results were presented according to the International Standard Classification of Education (ISCED).

³ The results were presented according to the International Standard Classification of Occupation (ISCO).

one should choose locations in need of economic enterprises and employment opportunities. Overall, Bechtloff (2008) concludes that marine fishing tourism in Iceland has the potential to grow and expand, and that if developed in a responsible way it can represent an economic alternative for regions in need for development like the Westfjords.

Besides the analysis of the sea-angling pilot project by Bechtloff (2008), a market research document was elaborated for the company Sumarbyggð hf. by Viðhorf (2008).

The aim of this was to evaluate their market segment of visiting anglers that visited the towns of Súðavík, Bíldudalur and Tálknafjörður during the tourism season 2008. The report from this study provides a description of the sea-angling tourists, their expectations and satisfaction with the different services and the travel/fishing experience. The results from this study have also been used to develop the research which is presented in this thesis. The majority of respondents in the marked study were male, from Germany, between 40 and 59 years old, which were traveling in groups of 4 to 5 people. The results show a general satisfaction with the infrastructure and the provided services, also in regard to the expectations that the respondents had beforehand.

Other relevant research for understanding the development of marine angling tourism in Iceland has focused on its management and governance system. These studies have focused on the comparison with Norway and have shown that even though marine angling tourism represents a growing industry in remote coastal regions of similar environmental and social conditions in both countries, their management systems for marine angling tourism in these two countries are very different and that this difference in governance has played an important role in conflict resolution (Gunnarsdóttir & Halldórsdóttir; 2012; Solstrand, 2013).

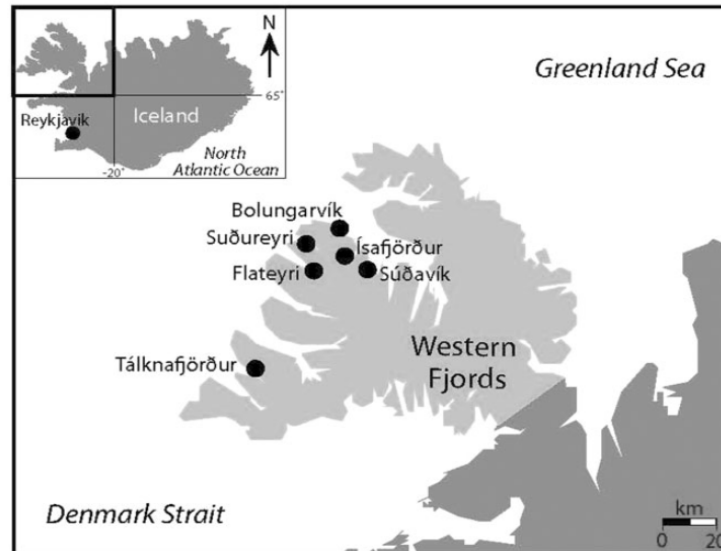
The governance studies mentioned point out that even though the Iceland's marine fishing tourism management system subject to the national ITQ/TAC system could be considered restrictive for the development of the industry, it has balanced this by using interactive governance mechanisms to address emerging conflicts (Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013). The conflicts encountered in Iceland by the marine angling tourism industry have been mostly around access to fish by fish camp owners. These problems were addressed through active stakeholder participations and a timely response by the governance system. The fishing tourism management system in Iceland is therefore

characterized by frequent changes in laws and by a focus on quantifying the activity (Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013). Marine angling tourism in Norway on the other hand has only been loosely controlled and there is hardly any monitoring systems in place for recording the number of fishing tourism enterprises, tourists or, of fish caught, and harvested (Borch, 2009; Borch et al., 2011; Ferter, 2011). Borch (2009) argues that the regulatory measurements taken in Norway have been more a result of a struggle between stakeholders than a sound knowledge base on the activity. According to Solstrand (2013), the Icelandic management system has demonstrated how interactive governance can work in practice through fostering stakeholder participation and feedback loops, contrasting with the command and control mechanisms of the pyramid top-down approach that has been used in Norway. These studies have concluded that interactive tourism governance can play an important role in conflict mitigation and foster the sustainable development of marine angling tourism in these remote coastal communities and can serve as an example to improve the management of the activity in other regions, such as Norway (Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013).

The previously mentioned studies have emphasized positive aspects of the Icelandic management system of marine fishing tourism in the Westfjords, especially stakeholder participation in the development of management strategies. Even though there have been studies that address fishing tourists' motivations in the Westfjords, this knowledge has been mostly viewed separately from management strategies. In Norway, management measures regarding marine angling tourism were taken without the knowledge of different aspects of the activity, including anglers' motivations, resulting in inadequate management measures (Borch, 2009). Iceland has previously fostered interactive governance regarding marine angling tourism and for this governance system to be complete and effective it is necessary to include knowledge about the motivations of fishing tourists. As stated many times before in this thesis, knowledge about angler's motivations and behavior are an important foundation for assessing the impacts on fish stocks and can guide fisheries managers in their efforts on finding a balance between the use of fish stocks and the associated economic benefits (Borch et al., 2008).

3.7 Study area: The region of the Westfjords

The region of Westfjords (Vestfirðir) is a large peninsula that lies in the north-west of Iceland and is considered by many as “the most remote place in Iceland” (The Westfjords Marketing Office, 2013). The regions topography is mountainous and its coastline is irregularly carved by a large number of fjords which are surrounded by steep hills (University Center of the Westfjords Tourism Group, 2009). These create the unique landscapes that distinguish the Westfjords from other parts of Iceland. The region’s particular geography also contributes with a relatively small area to one third of Iceland’s coastline (Westfjords Marketing Office, 2013). There is a lack of lowlands suitable for agriculture and the economy of the region has historically developed around the rich fishing grounds (University Center of the Westfjords Tourism Group, 2009). The Westfjords is only sparsely populated with a little around 6972 (1. January 2014) inhabitants or 3% of Iceland’s population and has suffered from a depopulation trend over the last three decades (Statistics Iceland, 2014). This depopulation phenomenon has been greatly attributed to the loss of fishing quotas within the region that have weakened these rural coastal communities, even though there are other contributing factors (University Center of the Westfjords Tourism Group, 2009). The Westfjords has also not benefited as much from the blossoming tourism as the rest of the country due to diverse factors such as remoteness and difficult transportation (Elliott, 2012). The ring road, the main road that circles Iceland, does not pass through the Westfjords and the region is accessible through the road 60 and/or 61 (currently mostly paved), and by plane twice daily all year round (The Westfjords Marketing Office, 2013).



Picture 1. Location of the fish camps in the Westfjords, Iceland. From Solstrand (2013)

The capital of the Westfjords is Ísafjörður with a population of 2527 inhabitants (1. January 2014) (Statistics Iceland, 2014). Ísafjörður is located in the municipality of Ísafjarðabær and serves as the center for administration, commerce and transport for the whole region (The Westfjords Marketing Office, 2013). There are other 9 municipalities in the Westfjords.

The marine fishing tourism camps are located in four of these municipalities Bolungarvíkurkaupstaður, Ísafjarðabær, Súðavíkhreppur, and Tálknafjarðahreppur; all located in the western part of the peninsula, mostly in the North around the capital of Ísafjörður, with the exception of Tálknafjarðahreppur that is located in the south-west.

4. Research Methods

The main goal of this study was to assess the motivations of the marine fishing tourists visiting the Westfjords. In order to view these motivations in context, this thesis also aims to determine the angling experience, the satisfaction and the attitudes towards fisheries management/regulations of the visiting sea-anglers.

Data were collected during the months of July, August and September in 2013. In order to achieve this thesis' goal a sea-angler survey was conducted through the use of questionnaires. This instrument was selected as the most suitable due to time and resource constraints. The survey only addressed non-resident sea-anglers that visited Iceland specifically to do sea-angling holidays in terms of an all-inclusive angling holiday package that included plane flight, inland transportation, accommodation, boat rental and purchasing a fishing quota.

A total of 169 sea-anglers filled out the questionnaire between the 30th of July and the 11th of September. From the sample of 169 questionnaires, 4 questionnaires were removed because the respondents were under the age of 18 and the remaining 165 questionnaires were used for the analysis for an 88% response rate.

The method chosen to conduct the survey was convenience sampling. The questionnaires were handed out to the respondents on the last day of their stay in the Westfjords while waiting for their inland flight to Reykjavik. The researcher was able to coordinate these encounters through the assistance of the angling operators and was able to sample 10 groups on 9 sampling days (two groups on the 20/08/2013).

Table 2. Summary of the conducted survey

Date	Location	No. of surveyed sea-anglers	No. of anglers at the airport that did not participate	Accommodation
30/07/2013	Ísafjörður airport	44	3	Bolungarvík, Súðavík, Suðureyri,
06/08/2013	Ísafjörður airport	9	-	Bolungarvík, Súðavík

13/08/2013	Ísafjörður airport	9	1	Bolungarvík
20/08/2013	Tálknafjörður airport	8	9	Tálknafjörður
20/08/2013	Ísafjörður airport	11	-	Bolungarvík, Súðavík
27/08/2013	Ísafjörður airport	36	-	Bolungarvík, Súðavík
28/08/2013	Ísafjörður airport	12	1	Flateyri, Suðureyri
04/09/2013	Ísafjörður airport	12	1	Flateyri, Suðureyri
06/09/2013	Ísafjörður airport	12	6	Bolungarvík, Súðavík
11/09/2013	Ísafjörður airport	12	1	Flateyri, Suðureyri

The sample consists mainly of sea-anglers visiting the towns Súðavík, Bolungarvík, Flateyri and Suðureyri, departing from the Ísafjörður airport, as this airport was easily accessible to the researcher. The sea-anglers visiting the town Tálknafjörður did not leave from this airport and the researcher only had one possibility to travel to and hand out questionnaires at the Tálknafjörður airport (20th of August 2013). From this visit to the Tálknafjörður airport only 8 questionnaires were filled in. These questionnaires were also included in the analysis.

Most questionnaires were obtained from sea-anglers that arrived in the Westfjords during the months of August (91 questionnaires or 55% of the sample) and July (62 questionnaires or 38% of the sample). Fewer questionnaires (12 questionnaires or 7% of the sample) were obtained from sea-anglers that arrived in the Westfjords during the month of September due to several reasons (fewer sea-anglers in the region, people leaving at different times or dates than planned due to weather conditions, amongst other factors).

All the questionnaires were treated as one group for the analysis, without taking into consideration the angling tourism operators that the anglers purchased their trip from or the destination they had visited.

The total number of fishing tourists visiting the Westfjords during the 2013 angling tourism season was approximately 1856 and the sample therefore represents a 9 % of the total population. As the sampling group was a specified group of people, the results are presented as representative for the fishing tourism population in the Westfjords.

The questions in the questionnaire were formulated according to the aim of the study and therefore focused on the four following topics: angler experience, angling motivations, satisfaction during the sea-angling holiday and attitudes towards management/regulations. The motivations and the satisfaction of the visiting sea-anglers were addressed through catch-related and non catch-related aspects (services, infrastructure and management strategies).

The questionnaire included a combination of close-ended questions and multiple choice responses, and was partly based on the questionnaire developed by Herrmann et al., (2002) for the study “German Participation in Alaska Sport Fisheries in 1998”, as well as on the questionnaire elaborated by Bechtloff (2008) for her thesis on the 2006 pilot project on sea-angling tourism in the Westfjords. The close-ended questions included Likert-type scales to determine the level of importance or satisfaction according to a selected number of aspects related to the sea-angling. The questions were categorized under different headings for organizational purposes. The information asked in the questionnaire (in accordance to the name of each heading) was the following: background information, angling experience, angling motivation/preferences, about this holiday (satisfaction with both catch and non-catch related aspects), other activities and fisheries management/regulations (Appendix 1).

Questions 20-23 were removed from the analyses due to wrong structure of the question, which made it difficult to quantify. Changes were also made in the analysis of question 24 as most of the respondents did not list the fish species properly in order of preference as requested. If the respondent had numerated the fish species as asked, the first three choices were considered as his/her target species, without taking into consideration the order in which they were listed. If the respondent had numerated or only marked three or less than

three fish species, these were categorized as the target species. If the respondent had marked more than four species, the answer was not used for the analysis. The researcher decided upon this use of the data after seeing how the question was overall being answered to.

The questionnaire was translated into three languages: English, German and Dutch (Appendix 1-3). Before handing out the questionnaire the sea-angler was asked what language he/she preferred. Frequency distributions were determined to describe the angler sample and presented as graphs. Mean value and mode were determined for the motivational factors and the satisfaction scores, and also presented as graphs. Pearson correlation was applied to analyze the relationship between different variables in R studio. Non-numerical answers were assigned a numerical value if they obeyed to an ordinal scale (e.g. angler experience).

4.1 Limitations of the study

- The study has a site sampling and seasonal bias, as the survey mostly addressed anglers that visited the northern part of the Westfjords and only during the second half of the angling season.
- The findings were based on response frequencies and mean ranks, and even though the underlying heterogeneity was acknowledged, the angling population was mostly treated as a homogenous group in order to present the results. The operators and locations the surveyed anglers had stayed with were also not taken into account.
- 36 respondents belonged to one Dutch organized excursion group, which might have influenced the results.
- The comparison with other motivations studies might have some bias due to different question wording and response formats.
- The survey was conducted in three different languages (including one that the researched does not speak), which might have influenced the results. The same applies for cultural differences.
- As the study was carried out at the end of the tourists' holiday, the motivational results might have some bias due to specific conditions encountered during the stay.

4.2 Strengths of the study

- The survey had a high response rate, probably due to the support of the operators, the presence of the researcher when handing out the questionnaire and the setting in which the survey took place (while tourists were waiting for the inland flight at the local airport).
- The presence of the researcher during the survey also made it possible to assist respondents in the case of a question and through this achieve the completion of most of the questions provided.

5. Results

5.1 General Background

The surveyed anglers visited from 5 different countries. Most respondents were from Germany, followed by the Netherlands (Figure 1).

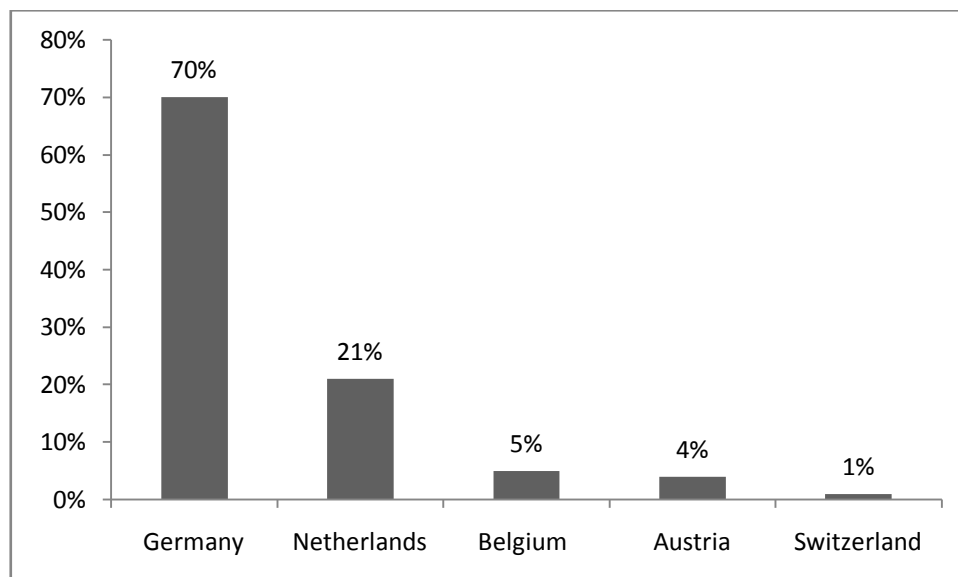


Figure 1. Nationality of the surveyed anglers (n=164)

The strong German participation reflects the principal market segment of marine angling tourism in the Westfjords (Bechtloff, 2008). Most of the Dutch anglers surveyed in this study belonged to the same traveling group (part of an organized Dutch fishing excursion).

Of the people that provided gender information in the questionnaire (n=164), the majority (92%) was male. Only 13 of the respondents were female.

Most of the respondents were between 50-59 years, followed by a group that was between 40-49 years and a group that was between 60-69 years (Figure 2). One respondent had to be removed from this analysis due to a printing mistake in the questionnaire, but he was included in the rest of the analysis because he clearly specified being over the age of 18.

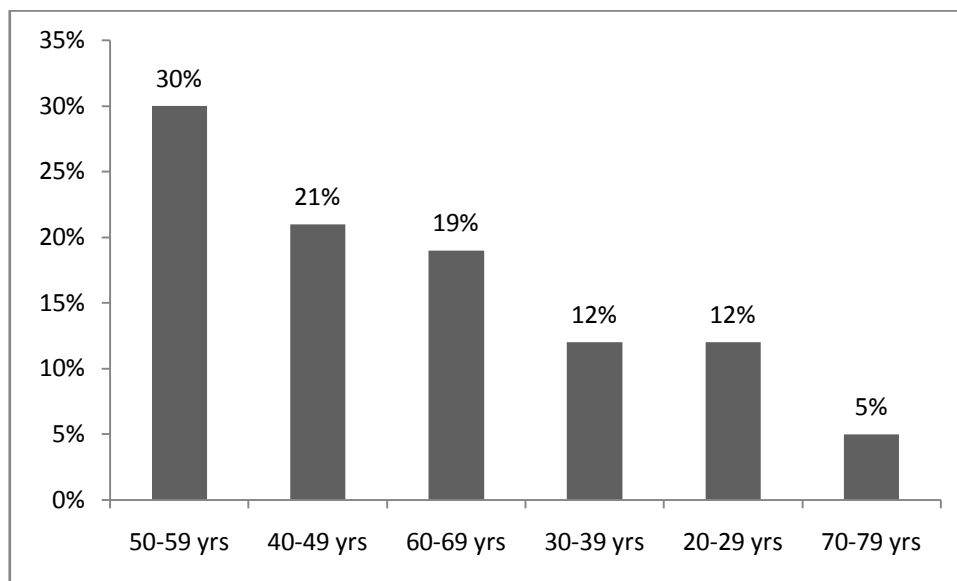


Figure 2. Age groups of the respondents (n=164)

The high male proportion and the average age found among the surveyed anglers are characteristic of marine angling tourists (Killion, 2007, Orams, 1999) and have been previously described for the Westfjords by Bechthloff (2008) and Viðhorf (2008).

5.2 Angling experience

Most respondents classified themselves as experienced anglers, specialized in certain techniques (Figure 3).

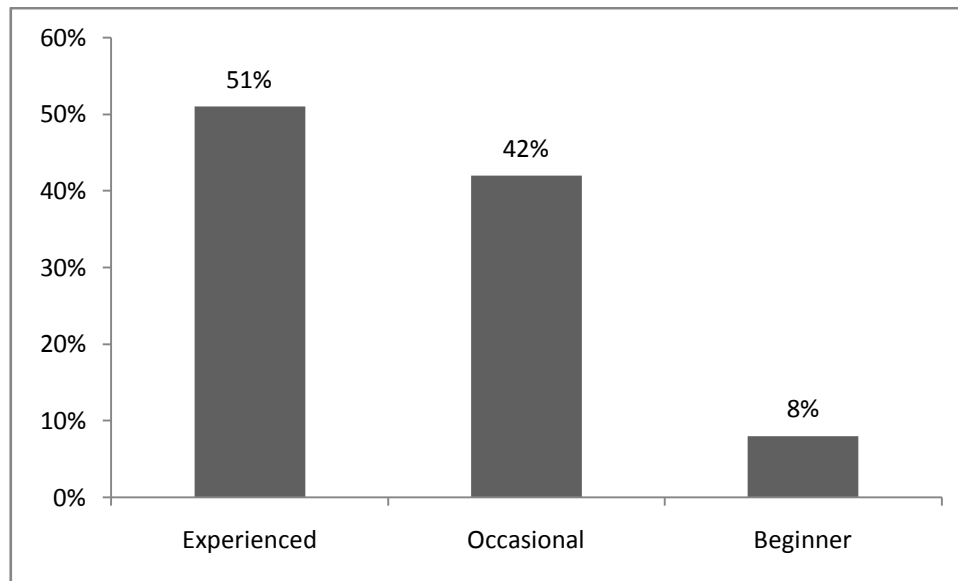


Figure 3. Angling experience stated by the respondents (n=159)

Even though the results indicate that the majority of the sample is on the higher end of the specialization spectrum (“experienced anglers”-51%), the large number of occasional anglers shows that there is variety in the sample. Heterogeneity is also most likely to be present within the three experience groups.

When asked to state their degree of experience related to the rest of the travel group most anglers stated that they were “Not the most experienced angler” in their angling party (Figure 4).

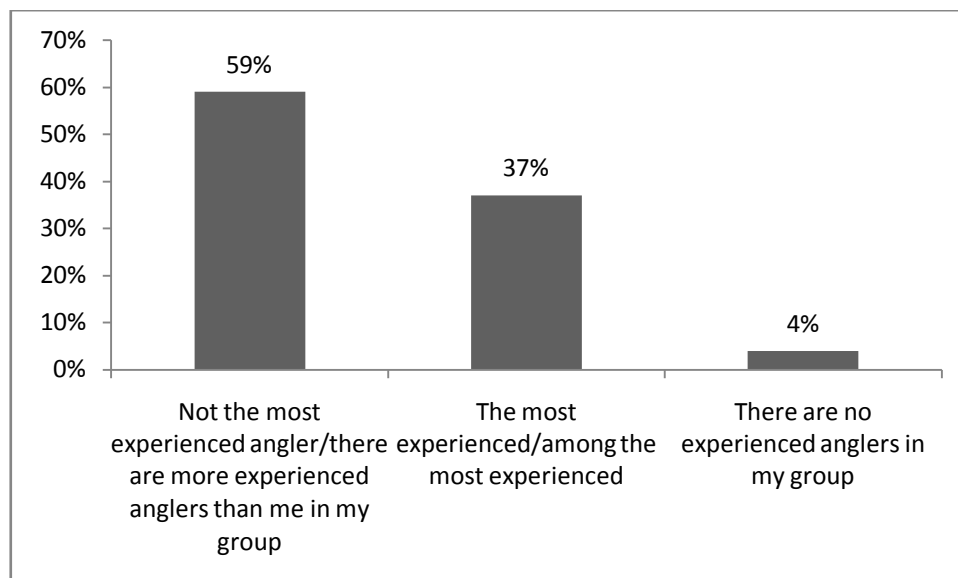


Figure 4. Angling experience within the angling party (n=155)

As very few of the respondents in the Westfjords stated that they had inexperienced anglers in their groups the tourism industry should aim their marketing towards experienced anglers when seeking to attract angling parties to the Westfjords.

51% of the respondents (n=165) held membership in an angling club, while 30% indicated that they participated in angling tournaments/fishing competitions (n=164).

These participation levels for both membership in an angling club and participation in angling tournaments/fishing competitions are high compared to other studies (Herrmann, 2002) and could be used to identify subpopulations within the sample.

Most respondents ranked fishing as only one of many outdoor activities that they enjoy, followed by respondents that ranked fishing as their most important outdoor activity (Figure 5).

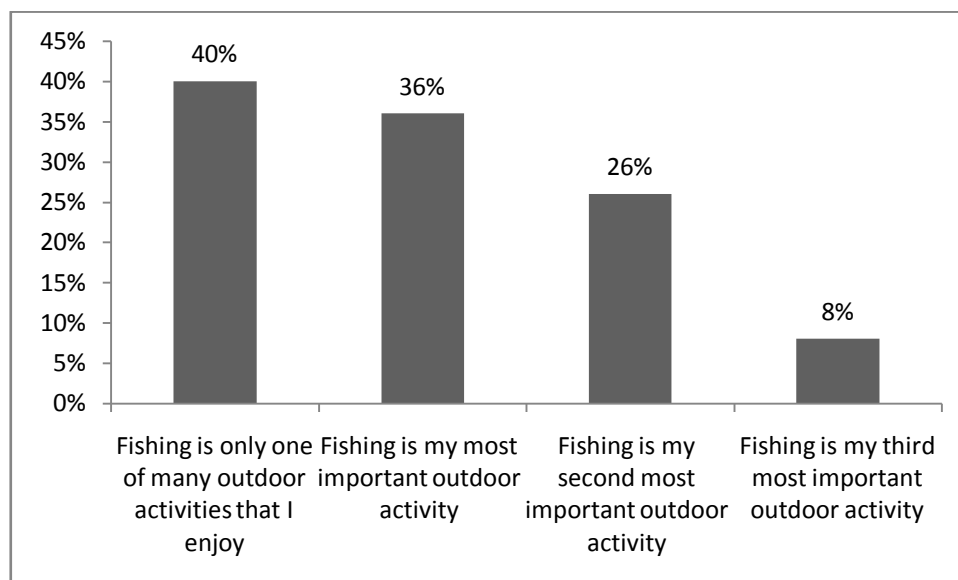


Figure 5. Importance of recreational fishing compared to other outdoor activities for the anglers (n=161)

A strong positive correlation ($cor=0,09$; $p<0,001^{***}$) was found between angling experience and the importance of recreational fishing compared to other outdoor activities. In other words, fishing seems to be more central in the outdoor recreational lives of the experienced anglers.

That most of the surveyed anglers stated that fishing is only one of many of their many outdoor activities that they enjoy might suggest that a large proportion of the angling population are active recreationists and participate in a variety of different types of outdoor recreation.

5.3 Angling motivations/preferences

When asked about the overall motivations for participating in recreational fishing the option “Relaxation” was chosen by the highest number of respondents, followed by “to be outdoors” (Figure 6).

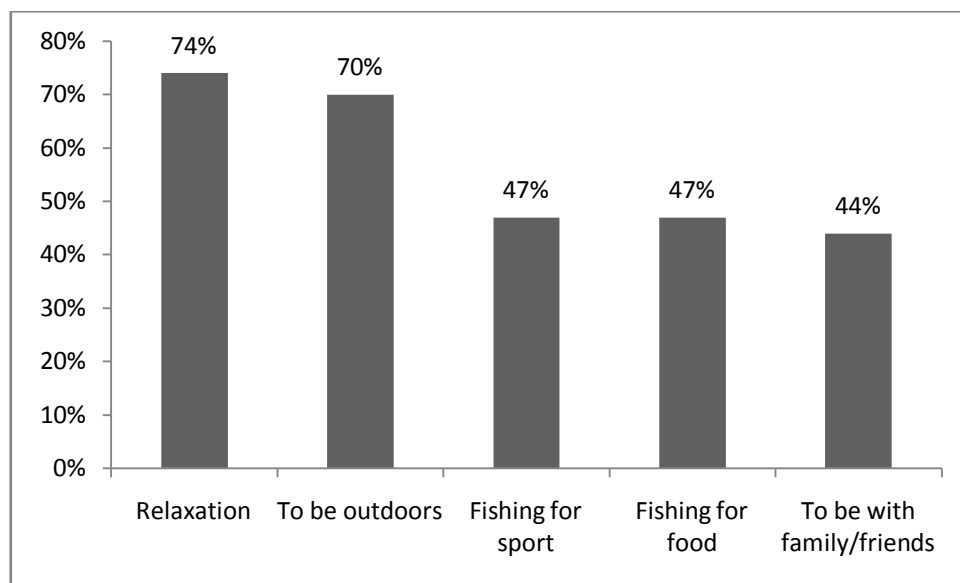


Figure 6. Motivation for fishing (n=160). Answers to the question “What is it that you look for in a fishing experience?” More than one motivational factor could be selected.

The non-catch related items “relaxation” and to be outdoors” were provided by the highest number of respondents. Even though the individual catch related items “for sports” and “for food” were chosen by fewer anglers, combined results showed that nearly half of the anglers that reported that they fished “for sports” also fished “for food” (48%), which would prove the importance of catch related aspects for 71% of the sample.

The motivational factor that received the highest mean value of importance for angling participation was “natural environment” (n=164), followed by “size of fish” (n=163) and

“services and infrastructure” (n=161). “Natural environment” also obtained the highest mode value (Figure 7).

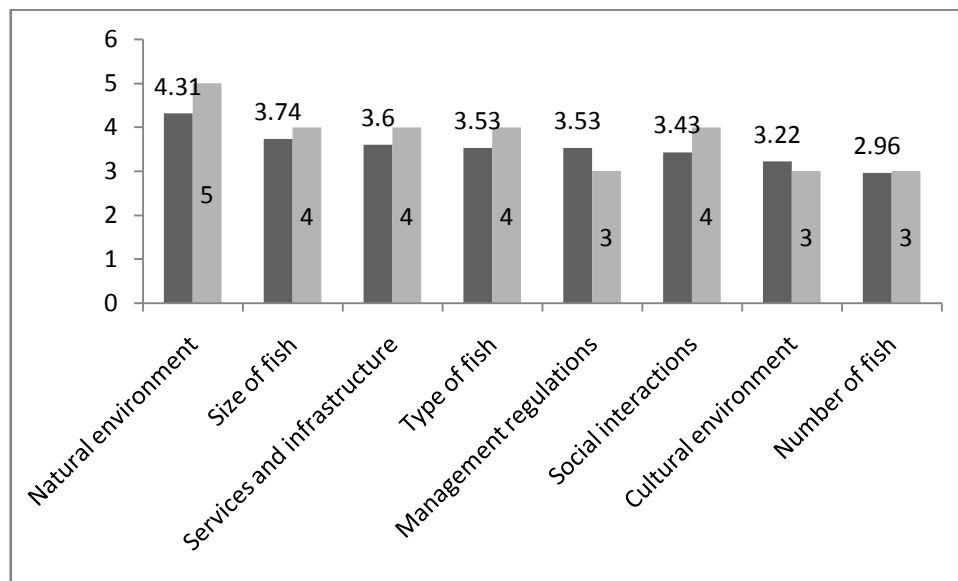


Figure 7. Importance of provided attributes when going fishing. Mean value and mode of for the question “Please rate the following aspects on importance for you when you go fishing?”

A positive correlation ($\text{cor}=0,24$; $p=0,003205$; $p<0,01^{**}$) was found between angling experience and “Type of fish”, as well as between importance of angling compared to other outdoor activities and “Type of fish” ($\text{cor}=0,22$; $p=0,0056$). A negative correlation was found between age of the respondents and “Size of fish” ($\text{cor}= -0,23$; $p=0,003037$; $p<0,01^{**}$). A marginal negative correlation was found between age of the respondent and “Type of fish” ($\text{cor}=-0,15$; $p=0,06278$).

The results show that the size and type of fish was more important for the fishing experience of younger anglers. Also, the type of fish was more important to experienced anglers and to anglers where fishing is a central aspect of their outdoor recreation life. These findings support the developmental process of the angling specialization concept (Bryan, 1977) and should be included in future planning and decision making.

5.4 About the angling holiday

2/3 of the surveyed sea-anglers had been on a several prior fishing holidays to another country (Figure 8).

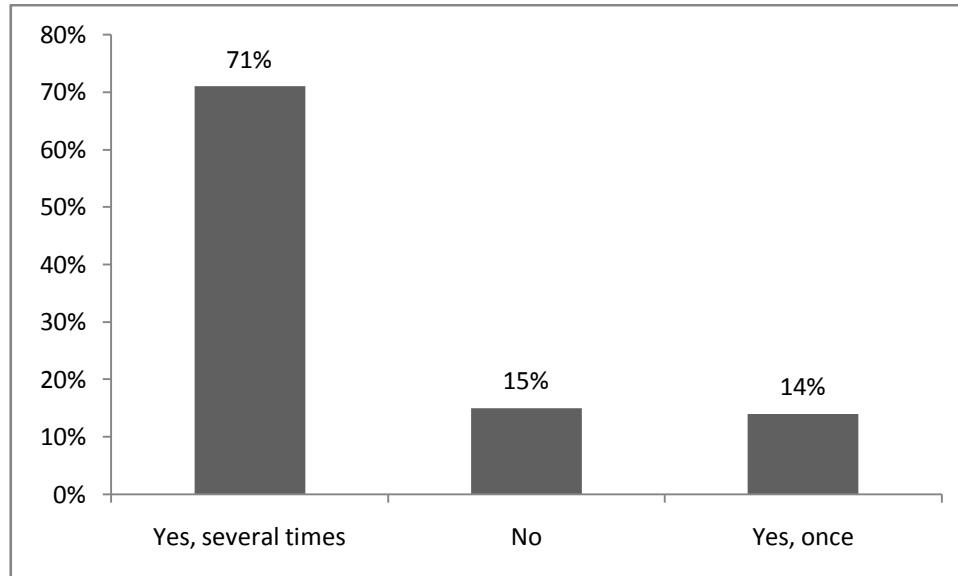


Figure 8. Previous fishing holidays in another country (n=161).

A strong positive correlation ($cor=0,31$; $p<0,001^{***}$) was found between angling experience and the participation in previous angling holidays. A marginal positive correlation was found between age of the respondent and the participation in previous angling holidays ($cor= 0,15$; $p=0,05903$).

These results support, as already demonstrated before, that angling tourists are often specialized anglers. With age an angler might also have had more opportunity to travel than younger anglers because of more availability of time and chance to acquire the necessary financial resources.

The sea-anglers that answered to the question about which country they had visited on a previous fishing holiday had visited a total of 36 different countries on 6 continents. The mean of countries visited was 1,92 and the mode was 1 country, with a minimum of 1 and a maximum of 7 countries. The 3 countries that most tourists had visited on fishing holidays were Norway, Denmark and Ireland (Table 3).

Table 3. Countries visited on prior fishing holidays by the marine fishing tourists (n=125)

Country	% of the anglers
Norway	82%
Denmark	27%
Ireland	20%
Sweden	10%
U.S.A.	6%
Austria	4%
England, France, Germany, Spain	3%
Canada, Finland, The Netherlands, Belgium	2%
Curaçao, Poland	2%
Australia, Canary Islands, Costa Rica, Cyprus, Egypt, Geursey, Greece, Hungary, Italy, Kenia, Cuba, Mauritania, Mexico, Morocco, New Zealand, Switzerland, South Africa, Thailand, Venezuela	1%

The results indicate that a large proportion of anglers seem to be regular angling tourist. They visit countries all over the world, however with Norway being their favorite or most visited angling destination by as previously also shown by Bechtloff (2008).

40 % of the respondents had been on prior fishing holidays in the Westfjords (Figure 9).

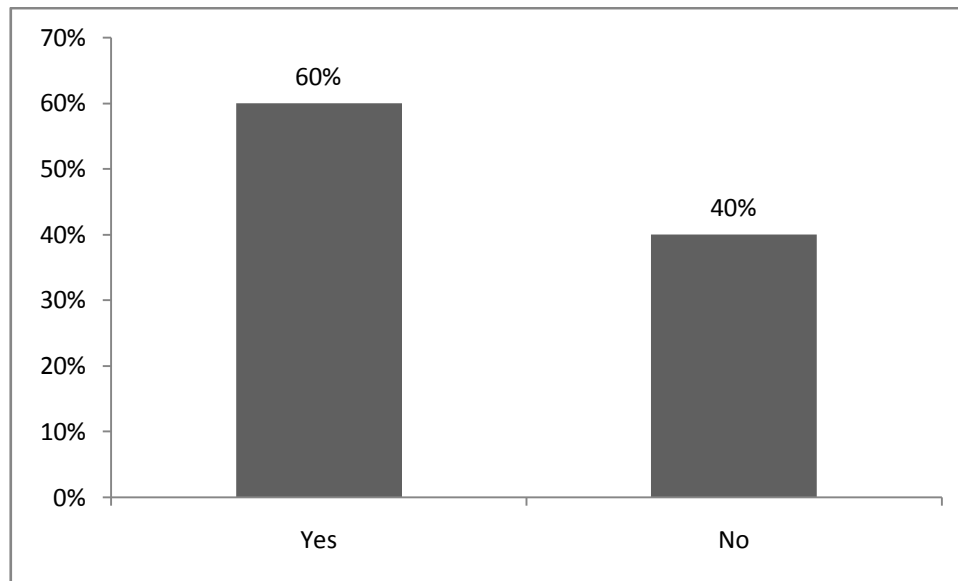


Figure 9. Percentage of anglers that were fishing for the first time to the Westfjords (n=161).

The average of times that respondents (n=65) had been in the Westfjords before was 2,6 with a mode value of 2 times. The highest number of times that an angler had visited the Westfjords was 13 times and the lowest number was once.

Of the anglers that provided information on where they had spent prior angling holidays in the Westfjords (n=59), 30 had only stayed at the same angling location, while 29 had stayed at other locations also. According to the provided locations, there were some anglers that seemed to have stayed with different companies during prior holidays.

The results show that the marine angling industry in the Westfjords has since its relatively recent development established a clientele. One angler in the sample seems to have come more than once a year to fish in the Westfjords since the establishment of the activity.

Most of the respondents that provided information about the composition of their traveling group chose only one of the provided categories (81%), followed by respondents that chose two and three of the provided categories to describe their angling party. No respondent chose the category angling club by itself. From the 5 categories offered on the questionnaire, the respondents stated 10 combinations with two of the provided categories and 2 combinations with three of the provided categories.

Of the 5 provided categories, the category “Friends” was chosen by a majority of respondents (Figure 10).

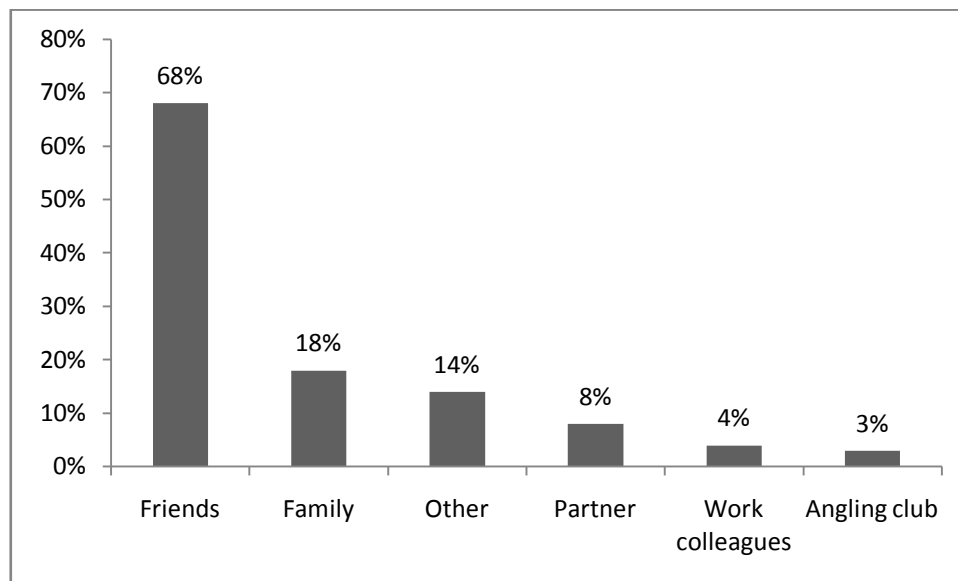


Figure 10. Percentage of individual categories chosen to describe the traveling group (n=164). More than one option could be selected.

The findings are consistent with those of Bechtloff (2008) and Viðhorf (2008) that also indicate that most visiting anglers travel in the company of friends.

Of the surveyed anglers that specified which town they had visited during their holiday 51 anglers had stayed in Súðavík, 57 anglers in Bolungarvík, 28 anglers in Flateyri, 19 anglers in Suðureyri and 8 anglers in Tálknafjörður (Figure 11).

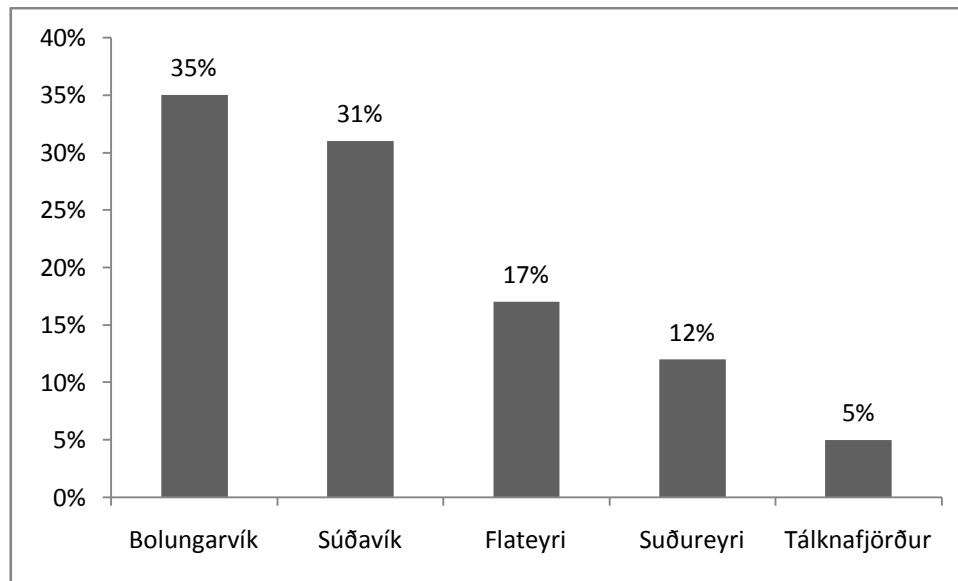


Figure 11. Percentage of the surveyed anglers that stayed at the different angler destinations (n=163).

The average nights stayed for the sample was 10,3 nights with a mode of 7 nights. By looking at the results it seems that many respondents might not have gotten the number of nights stayed right, as the anglers usually came for a one- or a two week holiday, with departure and arrival dates on a particular day of the week. There were some exceptions to this, mainly towards the end of the sea-angling season (September). It was not possible to check the exact dates and hence there is probably some bias in this section.

The mean size of a traveling group was 6,8 people per group and the mode was 4 people per group, with a minimum of 2 people and a maximum of 36 people in the group (n=164). The mode is probably a better indicator for the group size due to the presence of the organized angling group with 36 people and is also more consistent with the group number provided by Bechtloff (2008) and by Viðhorf (2008) of 4-5 people.

Of the anglers that filled out their main motivations for choosing the Westfjords as their angling destination the highest number of respondents chose “big fish”, followed by “beautiful landscape” and “abundance of fish” (Figure 9).

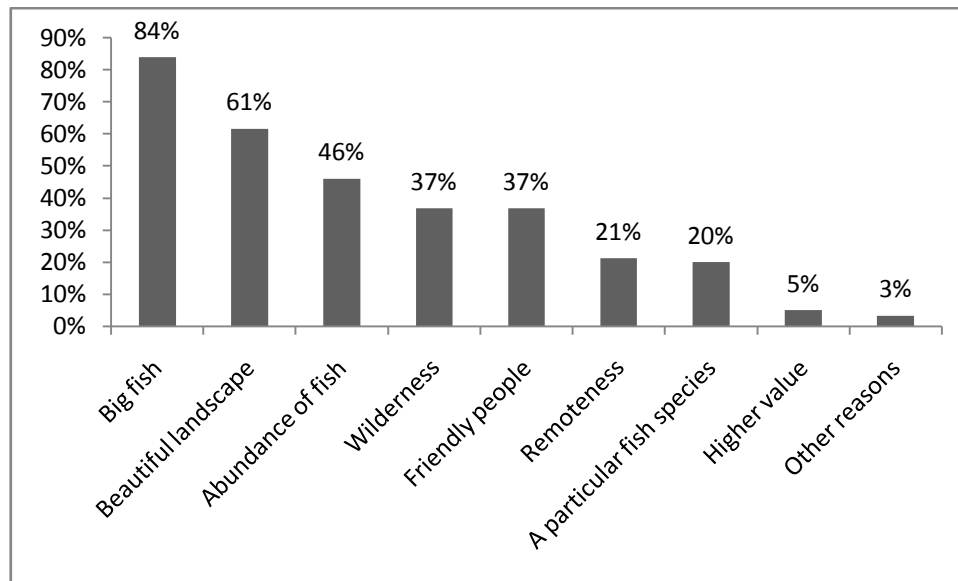


Figure 12. Main motivational factors for choosing the Westfjords as an angling destination (n=161). Answers to the question “What was your main reason for choosing the Westfjords as a sea-angling holiday destination?” More than one option could be provided.

Even though the natural environment received the highest score as to why anglers participate in recreational fishing, the main motivation of anglers for choosing the Westfjords as their fishing destination is the possibility of catching large fish (“big fish” 84%). This has been empirical knowledge among people involved in the industry and also the focus of the marketing strategies (Solstrand, 2013). These results suggest that marine fishing tourism in the Westfjords is the result of a quality fishery in the area followed by “beautiful landscape” (61%).

Most anglers (58%) had been out fishing every complete day spent in the Westfjords (n=160). It was not asked what the reason for not going out every day was.

5.5 Satisfaction during the holiday

The favorite fish species to target was “Cod”, “Wolffish” and “Halibut” (Figure 13). Under the category of “Other” the following fish species were listed: Atlantic redfish, sea devil and mackerel.

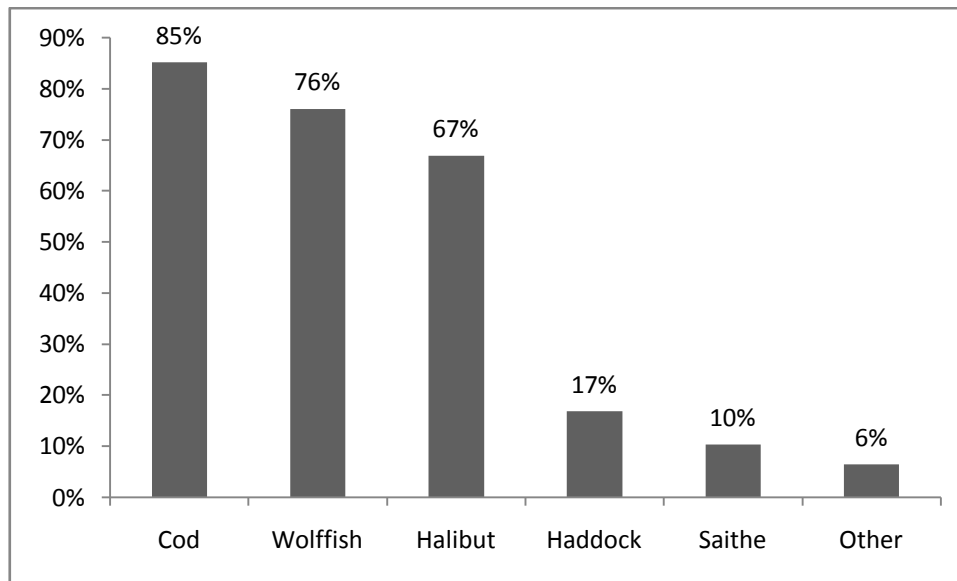


Figure 13. Preferred species to catch during the holiday (n=154). More than one option could be selected.

The species mainly caught were “Cod”, “Haddock” and “Wolffish” (Figure 14).

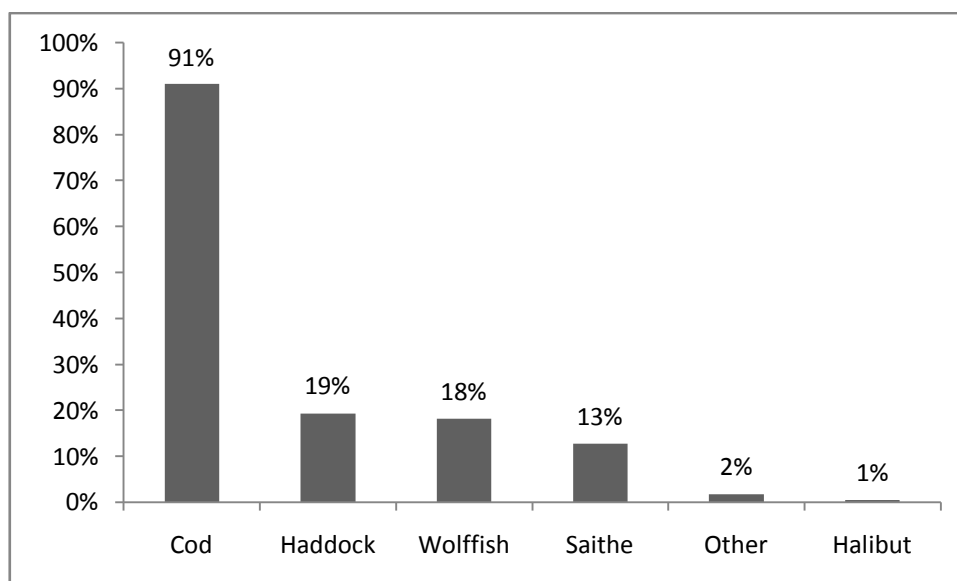


Figure 14. Most commonly caught species during the holiday (n=153). More than one option could be selected.

The far most commonly caught species of fish was also the favorite to target, while other fish species were only caught by a considerably lower number of anglers. Even though the desire to catch wolffish and halibut was expressed by a high proportion of the respondents, only a small proportion, in the case of halibut only one angler, specified having caught

these species of fish. This might be because the season for catching wolffish was coming to its end around the time of the year that the survey was conducted and because of the dwindling state of the halibut stocks in Iceland (Marine Research Institute, 2014). It could also be the result of lack of experience in catching these fish. It was not asked if the respondents knew about the state of the Icelandic halibut stocks and the current ban on fishing for this species.

The mean satisfaction with all the aspects, both catch related and non-catch related, of the marine angling holiday was high (“Very satisfied”-4). The mode was also 4 for all aspects, except for the satisfaction with the boats where it was 5 (“Extremely satisfied”-5) (Figure 15).

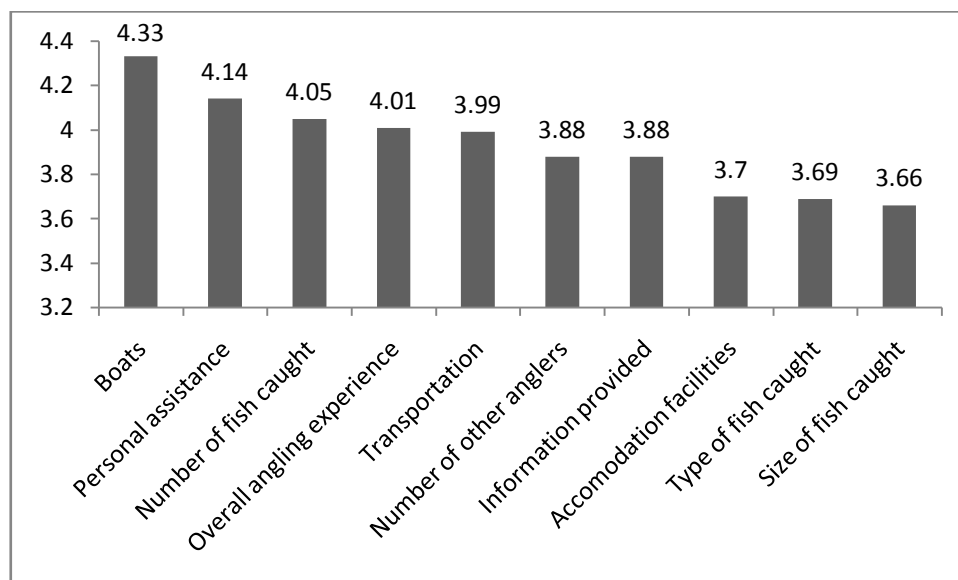


Table 15. Mean level of satisfaction of the respondents during the angling holiday

The high satisfaction with the boats could reflect the high satisfaction for piloting the boat themselves described by Bechtloff (2008). The importance of having personal assistance has also been previously shown (Bechtloff, 2008) and the results demonstrate a good performance by current staff. In contrast to the results of Bechtloff (2008), the satisfaction with the transportation was higher than the satisfaction with the accommodation. Presently, tourists are flying from Reykjavik instead of taking a bus. This improvement in transport conditions seems to have increased the satisfaction regarding the transportation. As the anglers were treated as one group, independently of the operator they came with or the location/type of accommodation they stayed at, it is not possible to relate the results, but

they do indicate that there might be room for improvement regarding this aspect for one or more locations. Even though the anglers were ‘Very satisfied’ with two most important catch related aspects (“size of fish” and “type of fish”) these aspects received the lowest means of satisfaction compared to other attributes.

A marginal negative correlation was found between the angling experience and the satisfaction with the number of other anglers in the destination ($\text{cor}=-0,16$; $p=0,05207$). A negative correlation was found between the importance of angling compared to other outdoor activities and the satisfaction with the number of other anglers ($\text{cor}=-0,18$; $p=0,02449$).

Experienced anglers and anglers for whom fishing is their most important outdoor activity seem to be less satisfied with the number of other anglers encountered during the holidays. The phrasing of the question makes it impossible to establish if the number was too high or too low. As the general satisfaction with the number of other anglers was generally high there does not seem to be a problem regarding this aspect. No clear conclusions can be drawn from these results but future research should address this matter further as these results might assist decision making regarding the development of marine angling tourism of the region.

Most respondents brought their own equipment (87%) for their angling holiday ($n=163$). The mean value for the satisfaction of the remaining respondents that rented equipment was 3,86 and the mode was 4. The preference of German anglers for bringing their own equipment when going on a fishing holiday has been previously described by Herrmann et al. (2002). In this particular case it might reflect the possibility of bringing the equipment as part of the in the price included luggage.

When asked about their satisfaction with the value received in terms of money spent during the angling holiday most of the surveyed anglers said it was “Good” (Figure 16).

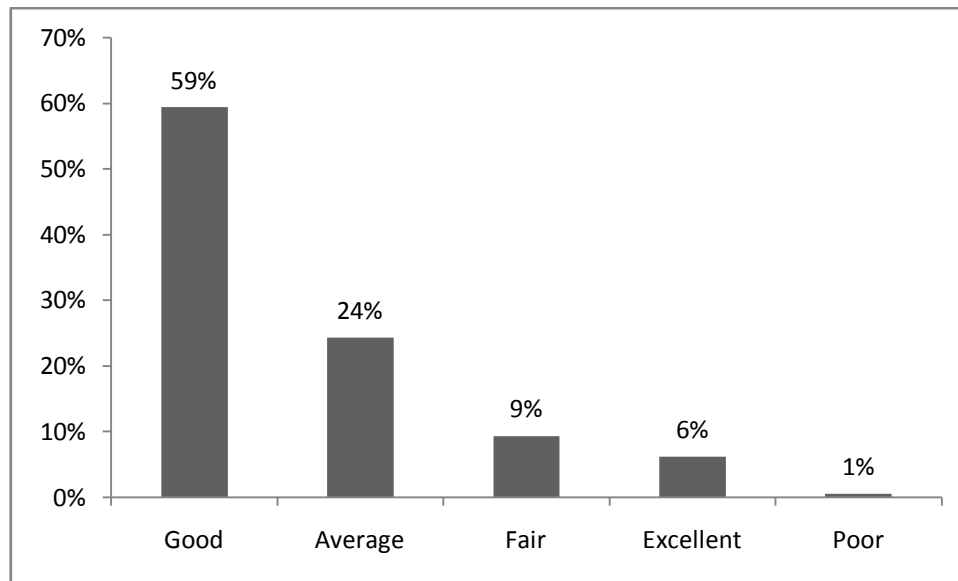


Figure 16. Satisfaction with the value received in terms of money spent on this trip (n=160)

There are sometimes special price offers and prices also differ among accommodations. It was not inquired about these aspects.

A positive correlation ($cor=0,19$; $p=0,018$) was found between the importance of angling compared to other outdoor activities and the satisfaction with the value received in terms of money spent on the angling trip.

The result indicates that anglers for whom fishing plays a more central role in their lives were more satisfied with the deal they received. This may be related to this very experienced group being adjusted to the price level of fishing tourism services.

Of the people that responded to the question about plans for a return visit to the Westfjords for sea-angling purposes the majority answered “Yes” (Figure 17).

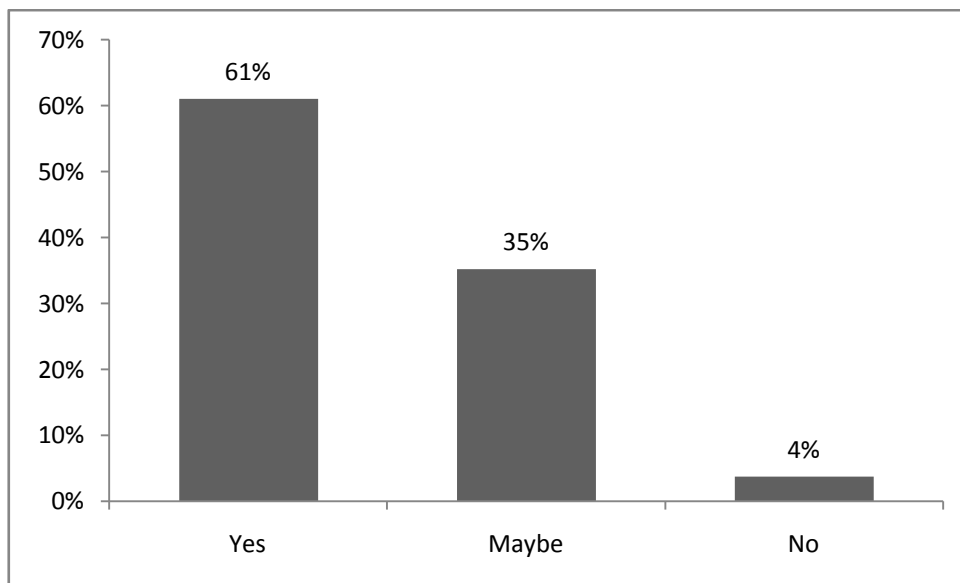


Figure 17. Response to the question about a return visit to the Westfjords for sea-angling purposes (n=159)

The majority of respondents that stated how soon they would like to return to the Westfjords for the purpose of sea-angling said “Within 1-2 years”, followed by people that said “Within 5 years” (Figure 18).

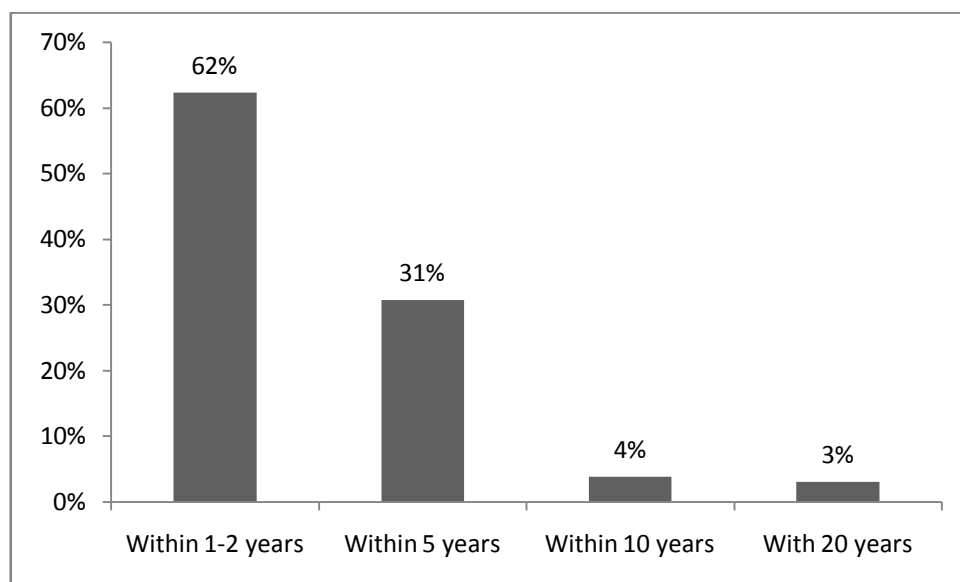


Figure 18. How soon anglers would like to return to fish to the Westfjords (n=130)

These results seem to reflect the high satisfaction previously found in this study among surveyed anglers.

A strong negative correlation ($\text{cor}=-0,30$; $p<0,001^{***}$) was found between the age of the respondents and how soon they would like to return to the Westfjord for sea-angling purposes.

The main market segment of marine angling tourism in the Westfjords is men of middle age, which is clearly reflected in the results.

When asked if they would recommend others to visit the Westfjords on a fishing holiday the majority of respondents said “Yes”, followed by respondents that said “No” (Figure 19). 2 respondents answered this question with “Maybe”.

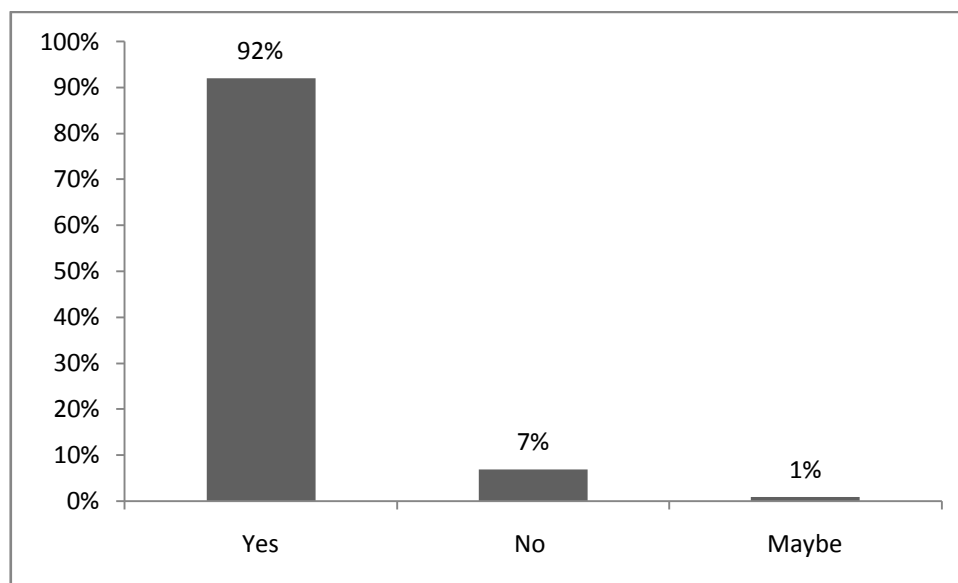


Figure 19. Response to the question if they would recommend coming to the Westfjords to fish (n=161)

The results indicate that even if some respondent do not want to return to the Westfjords or is not sure about it, the large majority of the sample would recommend it to other.

A positive correlation ($\text{cor}= 0,16$; $p=0,04077$; $p<0,05^{*}$) was found between the age of the respondents and the likeliness that they would recommend others to visit the Westfjords for sea-angling purposes, which further supports market strategies targeting anglers of advanced age.

5.6 Other activities

Of the respondents answered the question about having taking part in other outdoor activities (than fishing) while in the Westfjords the majority said that they had not taken part in any other outdoor activities other than angling during their stay (Figure 20).

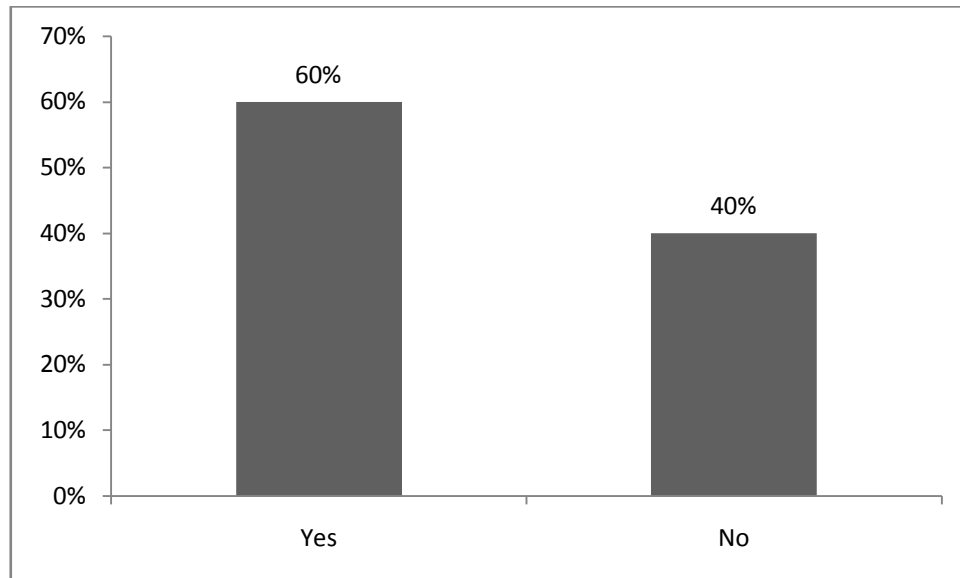


Figure 20. Participation in other outdoor activities during the holiday in the Westfjords (n=159)

From the respondents that specified that they had not done any other outdoor activities other than angling while in the Westfjords the majority answered the question whether they would have liked to with “Maybe”, followed by the respondents that said “No” and finally a group of respondents that said “Yes” (Figure 21).

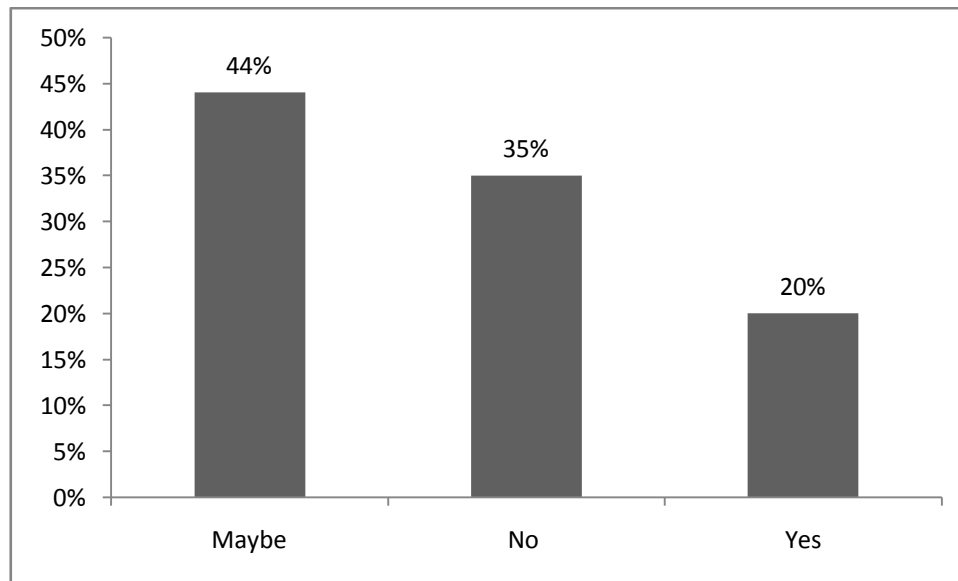


Figure 21. Response to question if the angler would have liked to do any other outdoor activity while in the Westfjords (n=88)

The results indicate that most marine angling tourists do not engage in other outdoor activities while in the Westfjords and also that many of them do not want to either. Besides from the anglers that did engage in other outdoor activities, a large proportion of the sample specified that they would maybe like to or that they would like to participate in other outdoor activities. This indicates that there is a possible demand among visiting tourists for participating in other outdoor activities while in the Westfjords. Bechtloff (2008) already stated the need to provide visiting anglers with information on other activities within the region as an alternative for bad weather or just for doing something else, adding to the experience in the destination.

The majority of respondents went to the “Supermarket”, followed by “Restaurant/Bar” and “Swimming-pool” (Figure 22). Under the option “Other” the following places/activities were indicated: “Waterfall”, “Dynjandi”, “Nature”, “Hot pot”, “Látrabjarg”, “Tackle shop”, “Bolafjall”, “Heydalur”, “Glacier” and “Picking mushrooms”.

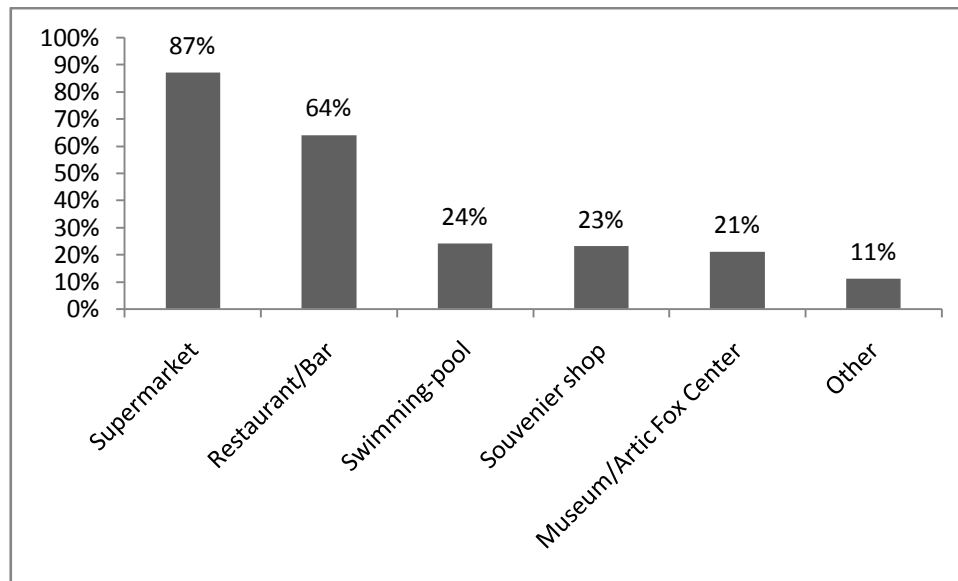


Figure 22. Places visited by the surveyed anglers during the stay. More than one option could be selected.

The local establishments that received the highest visitation among the sea-angling tourists are both involved in providing food and beverages, which might support the findings of Bechtloff (2008) that this is one of the main aspects on which visiting anglers spend money in the region.

5.7 Fisheries management and regulations

Of the anglers that responded the question if they were aware that sea-angling tourism in Iceland is subject to the national fishing quota system according to the explanation provided the large majority said “Yes” (Figure 23).

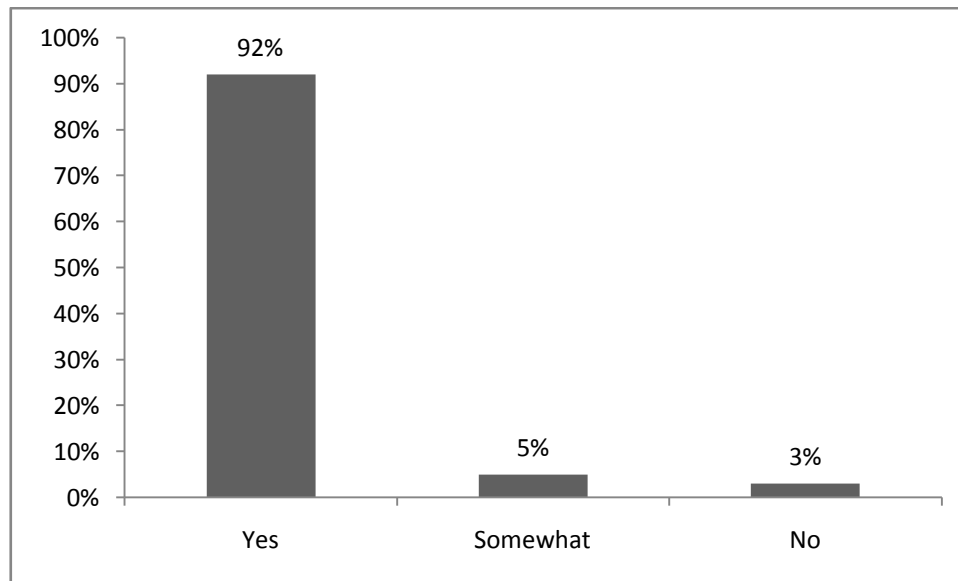


Figure 23. Awareness about marine fishing tourism in Iceland being subject to the national fishing quota system (n=160). Answers to the question “Are you aware that sea-angling tourism in Iceland is subject to the national fishing quota system (according to which all fish caught has to be landed and weighed against the quota share of the boat)”?

That the large majority of the respondents had knowledge of the Icelandic ITQ system is most likely the result of the instructions provided by the operators and of the strict daily routine that they must follow during the holiday (unloading catch for weighing at a certain hour of the day).

Most of the respondents that specified if they considered fisheries management and regulations when choosing an angling holiday destination answered “Always”, followed by a group of anglers that said “Most of the time” (Figure 24).

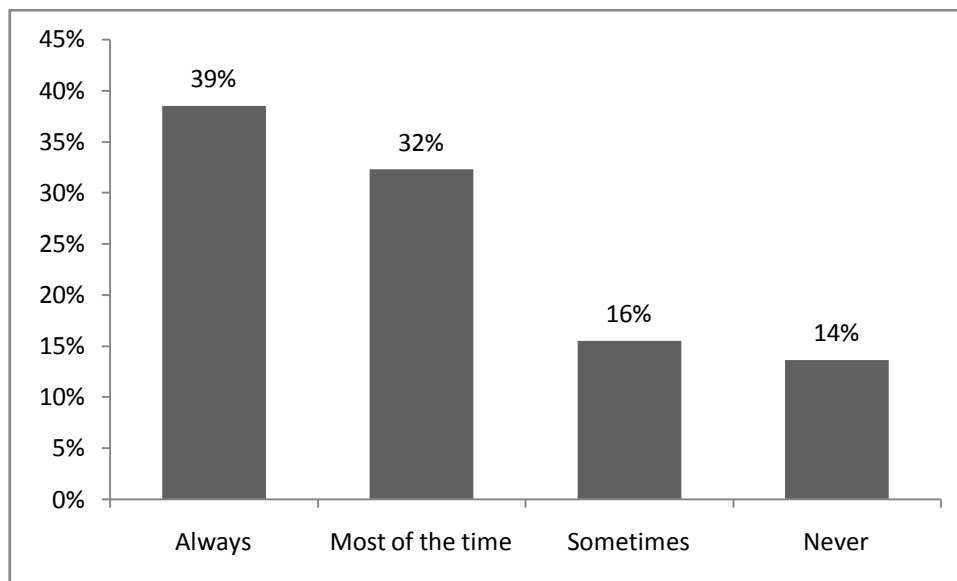


Figure 24. How much the visiting anglers consider management strategies and fisheries regulations when choosing an angling holiday location (n=161)

Of the anglers that ranked how important healthy/sustainably managed fish stocks are to them the majority said “Highly important” (Figure 25).

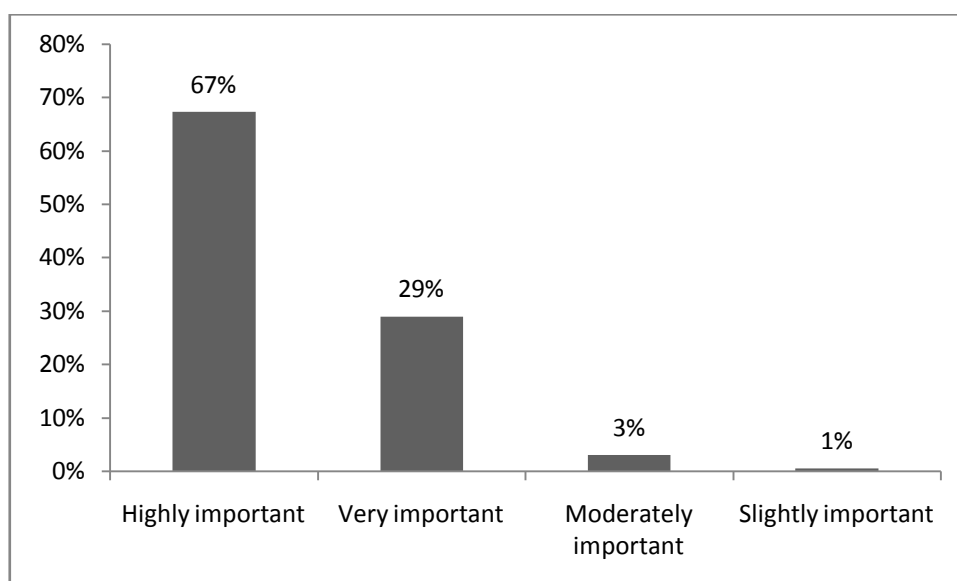


Table 25. Importance of healthy/sustainably managed fish stocks to the surveyed anglers (n=162)

Compliance to the Icelandic management system and acceptance of it as suitable management for fishing tourism was not addressed in the questionnaire. Some respondents provided comments like “Young fish were put back with care” and, “Don’t understand

why you have to kill all fish if smaller fish in good conditions could be put back”. This indicated that there is both disagreement with as well as lack of compliance to the ban on catch and release.

6. Discussion

That most anglers search for non-catch related motivations, such as “relaxation” and “to be outdoors” (Figure 6), supports the findings of previous motivations studies that have demonstrated that natural environment-related motives (such as being outdoors and experiencing natural settings) are of importance to most anglers (Driver & Knopf, 1976; Fedler & Ditton, 1994; Frijlink & Lyle, 2010). The importance of natural environment is also highlighted by the fact that it represents the motive that received the highest score of importance for a fishing experience of all the attributes provided (Figure 7). Herrmann et al. (2002) found very similar results, with the natural environment being the attribute that was of importance among the highest number of respondents (84.8%; almost the exact same percentage as found in this study). An environmental-related motive, such as “beautiful landscape” also featured as the second most provided motivation for a fishing holiday in the Westfjords (Figure 12). Such results suggest that operators and managers should acknowledge the importance of the natural environment and meet the angler needs regarding environmental qualities. The relationship between fisheries and the protection of the natural environment has also been previously acknowledged in other studies (Fedler & Ditton, 1994; Schramm et al., 2003). These results also strongly supports the inclusion of fishing tourism in nature based tourism research and literature, as nature is important as the core element or as part of the surroundings of the core element of the tourism experience (Orams, 1999).

More than half of the respondents did not choose the motivational attribute of fishing “for food”, which might indicate a large non-consumptive attitude within the sample (Figure 6). The results for fishing “for sport”, also a catch related motivation, were also similar (Figure 6). Although the general results suggest that individual catch related aspects might second on importance for the fishing experience of over half of the visiting anglers, combined data show that the relevance of catch-related aspects is actually higher. Some authors have warned that such findings (that catch related attributes are second on importance for the fishing experience of anglers) might be misleading and not reflect reality (Arlinghaus, 2006). This also seems to apply well for this particular case, in which certain catch-related (such as the possibility of catching big fish) seems to play a central role for the fishing experience in the Westfjords of the surveyed anglers (Figure 12). It is

important to note, that some anglers within the sample fish for several or all the reasons, and that there might also be anglers that only fish for one of the reasons.

It has also been previously shown in other motivational studies, that social motives rank lower compared to other motives (Figure 6) and this has been attributed to the fact that generally most anglers want to get away from people in their fishing experience (Fedler & Ditton, 1994). However, this can vary with demographic characteristics such as gender (Hunt & Ditton, 1997). Previous research has also noted that many angler groups show different preferences for being with family or with friends (Fedler & Ditton, 1994) which might also have influenced this result as the two categories were combined into one group (“to be with family/friends”). As most of the respondents indicated that they were traveling with friends, it seems that even though the social element might not be considered a primary motive for the fishing experience it may still be an important element. The product currently offered in the Westfjords is also not very suitable for anglers seeking solitude, which might also influence the results.

The size of fish (“big fish”), a catch-related attribute, was the main motive for the sea-anglers to come on a fishing holiday in the Westfjords (Figure 12). The importance of having the possibility of catching fish of large size during a fishing experience has also been found in previous studies (Chizinsk et al., 2014; Lawrence, 2005). This motivation to catch “big game” and the relatively high importance of catch related attributes has also been described before among other salt water anglers (Ditton & Fedler, 1994). The “size of fish” is an attribute that is also strongly sought in a general fishing experience (Figure 7), and not just during the holiday in the Westfjords. This proves that the surveyed anglers are discerning about what they want to catch and could indicate that they visit the Westfjords because there are “big fish” available to catch.

To recapitulate, the surveyed anglers mostly fish for psychological and physiological motivations such as “relaxation” and “being outdoors”, with the natural environment being of high importance. These motivations are activity general or non-catch related. They are the overall reason for the anglers to participate in recreational fishing and the anglers can achieve them themselves through taking part in this recreational activity (Schramm et al., 2003). When traveling away from home and becoming a fishing tourist, these anglers seem to search for the attributes that they would like to have in a fishing experience but are

maybe not easily obtainable at home or that they cannot obtain simply by taking part in recreational fishing such as “big fish”. Chen et al. (2003) states that there is a demand for diversity in fishing tourism which is reflected by the desire for a change of location as well as by desired changes in the quality of fishing, such as in the size, the species and the number of fish. In this particular case it seems that what the tourists want besides from a change in fishing location is an increase in the size of fish available to them at home. As it was shown that the surveyed anglers participate in recreational fishing to experience nature and be outdoors, and the ‘beautiful landscape’ of the region played an important role for choosing the Westfjords as an angling destination, it also seems like fishing tourists in the Westfjords want to experience a different type of nature than they at home.

The results show that the most important catch related motivation is the “size of the fish”, followed by the “type of fish” and last by the “number of fish” (Figure 7). The “number of fish” was actually the motivation that received the lowest mean value of importance of all the attributes provided (catch- and non-catch related). This clearly stated a preference over catching big fish than different type of fish or many fish, which coincides with the results of other studies (Lawrence, 2005). The results also demonstrate a similar pattern as found among sea-anglers in South West England. Although the results of the study varied among species, the increase in the size of fish seemed to have an overall greater impact (highest willingness to pay - WTP) on the angling experience than increasing catch levels. Catching the favorite species was the second most important attribute, until a point at which the angler seemed to become satiated (Lawrence, 2005). Bechtloff (2008) also found that the highest expectation for the holiday was catch-related (“angling successes” translated from the German “Angelerfolge”), even though she did not determine in what way.

The general profile of the surveyed anglers seems to better fit the profile of the “sport angler” (from the Norwegian “sportfiskere”) than the profile of the “food angler” (from the Norwegian “matfiskere”), which are two of the three categories used by Hallenstvedt & Wulff (2001, 2002) to describe foreign marine angling tourists visiting Norway according to their main motive of travel. According to Hallenstvedt & Wulff (2000, 2002), the “sport angler” is a specialized angler that targets large sized fish and often participates in tournaments that have this as a finality (similar as in big game fishing). The “food angler”, on the other hand, is more concerned with catching large number of fish to take home for consumption (Hallenstvedt & Wulff, 2001, 2002). Bechtloff (2008) had previously

assumed that anglers visiting the Westfjords belonged to both categories, which is not really consistent with these results, as the number of fish did not appear among the main motivations of the anglers (Figure 7). Aggregated data or the context could of course be hiding the presence of “food anglers” within the sample. In terms of context, this classification might also not really be applicable for anglers visiting the Westfjords, as they can only take 20 kg of fish home⁴, independently of how much fish they catch. This could result in this type of angler not choosing the Westfjords as a holiday destination or in them changing motivations towards catching large fish, for example. That said, it is important to point out that this survey was conducted at the end of the anglers’ stay and the motivation results might be influenced by the specific fishing conditions encountered during the holiday. As the amount of fish that an angler can take home is already fixed and the catch rates are satisfying (as shown by the results), the number of fish might not have ranked as such an important motivation. Hence, the motivations specified at the end of the holiday might differ from the initial motivations due to specific conditions encountered, which could have also influenced the whole outcome of this research project.

The results were mostly shown as aggregated data and are likely to mask underlying heterogeneity (Ditton & Felder, 1994; Frijlink & Lyle, 2010). What may appear as a main motivation for the angler sample is not necessarily the main motivation of any individual angler, but some general patterns found could provide further understanding. Catching large fish and a particular fish species (both catch related motivations) was more important to the younger participants, which is consistent with the results of other studies (Lawrence, 2005). The “type of fish” was also more important to experienced anglers and to angler for whom fishing is a central aspect of their lives. These results could be attributed to a developmental process as described by the angling specialization concept of Bryan (1977). Still, there was no correlation between the “size of fish” and the degree of specialization, which seems to indicate that the size of fish was important within all angling specialization categories. It is not possible to determine whether with size of fish respondents mean trophy-sized fish, which might appeal to more specialized anglers (Bryan, 1977), or just fish of large size. The results also showed that specialization was not limited to the older age groups. The categories provided to determine the degree of experience of anglers for

⁴ The before mentioned classification categories for foreign marine fishing tourists in the Norway (Hallenstvedt & Wulff, 2001, 2002) were defined before the export limit of 15 kg of fish filets per person was put in place on the 1st of June 2006 (The Norwegian Ministry of Trade, Industry and Fisheries, 2014).

this survey was simple (simple terms, easy to understand and fill in) and meant to provide a general picture of the degree of specialization of the anglers rather than to serve as a precise measure of angling specialization for this particular case study. Hence, it is very likely that anglers within the same specialization category do not actually have the same degree of specialization and there might be an infinite number of specialization levels. As the method used was self-classification, there might also be some bias due to subjectivity. Further targeted research could provide a better picture of the specialization levels of marine angling tourists in the Westfjords and their respective motivations.

In general, the satisfaction levels found were quite high (Figure 15), which might indicate that the product offered is of high quality, as presently demanded by the international tourism market (Borch et al., 2008). This is enforced by the desire of the large majority of the respondents to return (Figure 17). The surveyed anglers were “very satisfied” with all of the attributes in question. Even though the levels of satisfaction were generally high, the most important catch related motive for the fishing experience (“size of fish”) scored last of all of the attributes given (both catch and non catch related); followed by “type of fish” (Figure 7). Arlinghaus (2006) found that the satisfaction with catch related motivations was usually lower than for non-catch related aspects and concluded that this might be because catch related motives were harder to control, which might be a possible explanation for this outcome. This seems to be in contrast with the “number of fish”, element for which the motivation was the lowest (Figure 7) but the satisfaction was the highest (Figure 15). With extensive promotion for catching big fish in the Westfjords, the expectations might be very high and in turn hard to meet. It is important to note that the results do not indicate that the motivation regarding the “size of fish” and “type of fish” were not met, even though many anglers did not catch the species of fish that they wanted to (Figure 13 and 14). However, they do show the satisfaction with the overall angling experience was quite high (Figure 15) and it is not possible to determine in this thesis to what extent this influenced the overall satisfaction during the holiday.

Management regulations seem to very important for the majority of surveyed anglers (Figure 7) and most respondents “always” or “most of the time” considered them when choosing an angling holiday location (Figure 24), other attributes such as the natural environment, the characteristics of the fish that can be caught and the accommodation facilities seem to be more important for the general fishing experience than management

regulations in place (Figure 7). No correlation was found between the degree of experience and the importance of healthy/sustainably managed fish stocks of the surveyed anglers, not supporting that specialized anglers are more environmentally aware than non-specialized anglers (Bryan, 1977; Unger, 2012). As environmental awareness was only addressed through one aspect, further research is necessary to get a better picture and determine differences related to environmental attitudes of visiting anglers. Further research should address environmental attitudes relevant to the fishing holiday in Westfjords and relate these to management strategies and regulations.

7. Conclusions and recommendations

Most marine fishing tourists in the Westfjords are experienced anglers and they are of importance for bringing angling parties to the region. They are also more likely to travel for fishing purposes and are therefore the most important segment to target as clientele. The survey showed some aspects that might be of higher importance to more experienced anglers, such as the type of fish. This knowledge could be used to foster return visits through e.g. motivating anglers to participate in competitions about catching the largest number of species within a certain time span. Even though the majority of the surveyed anglers seem to be on the higher end of the angling specialization spectrum, there is variety present. More research should address this underlying heterogeneity for further understanding as this knowledge is vital for providing satisfying fishing experiences to all anglers.

The most important motivations for participation in recreational fishing for the surveyed anglers were “relaxation” and to “be outdoors”, even though aggregated data showed that catch related aspects were also of significance. The value of the natural environment for the anglers was highlighted throughout the survey and the Westfjords’ “beautiful landscape” also seems to play an important role for anglers choosing it as an angling destination. Most respondents seem to be active outdoor recreationists and there is demand for other outdoor activities among the visiting anglers. As Bechtloff (2008) had recommended previously, operators should look into this aspect further and provide anglers with information on outdoor activities if desired or as an alternative for bad weather.

The anglers visiting the Westfjords are discerning about what they want to catch and their main motive for travel is “big fish”, independently of their level of experience or age. It has previously been acknowledged that for the development of a recreational tourism activity such as marine fishing tourism, Iceland’s fisheries management system could be considered too restrictive (Gunnarsdóttir & Halldórsdóttir, 2012; Solstrand, 2013). It is not recommended to suggest oversimplified management implications from motivational studies (Arlinghaus, 2006), but some patterns might be interpreted from the results in this thesis. Catch related aspects play a central role for the angling holiday. From an angler motivation perspective, it seems that it is more important to the majority of visiting

fishermen to catch fish with specific characteristics than many fish or any fish that bites. It might even be possible that some of the visiting anglers are not interested in harvesting any fish at all and just want to catch a big fish “for the picture”. More research is needed to determine this, but the findings of this thesis clearly indicate that catch related aspects are of importance for visiting the Westfjords on for a fishing holiday and that there is an order in preference for catch related elements (in decreasing order of importance size, type and number of fish), in which catch rates appear last. Anecdotal information also shows that some angler might not comply with the current ban on catch and release and/or be discontent with this regulation. This seems to indicate that the current development and management system might not match anglers’ motivations. As management regulations are not among the top most important aspects of a fishing experience there is no indication that anglers might stop or avoid traveling to locations because of them as long as other more important motivations such as a beautiful landscape, good fishing quality in terms of size of fish and accommodation/service demands are being met. Despite this, management strategies could be shaped to better meet the anglers’ needs and through compliance foster their success.

Operators and managers could try to close the “gap” between the relative importance of “catching large fish” and the relative satisfaction related to this motivation e.g. providing a guide that can help anglers locate and catch the desired fish. This could improve the fishing experience as well as the fishing product offered, while generating employment. Targeting the desired fish as directly as possible could also reduce catching and killing fish that does not meet the anglers’ motivations and through this protect fish stocks from unnecessary exploitation. New fishing products could even be developed in such a manner that they would also be appealing to tourism markets in other countries (e.g. United States of America). Also, in order to not create expectations that are difficult to meet, the anglers should also be well informed about current fishing conditions (such as dwindling halibut stocks, for example). As mentioned above, most clients are specialized anglers and might be more interested in developing skills and exploring new fishing opportunities. This could be an important aspect for the operators and guides to work on in order to be able to offer satisfying experiences to even the most experienced anglers among their clients. Future research should focus on monitoring motivations to maintain the participation and satisfactions levels of all clients, while promoting the protection of fish stocks.

Managers should aim research towards the possibility of shaping present management strategies governing marine fishing tourism in the Westfjords to be more suitable in meeting anglers' desires. Further research should evaluate the harvest orientation of the visiting anglers to get a better picture of what these expect in terms of harvestings. The relationship between catching and keeping fish is not completely understood (Ditton & Felder, 1994) and such information for the Westfjords would be essential when contemplating future management strategies and fostering compliance to regulations. As "healthy/sustainably managed fish stocks" were of importance to the large majority of the respondents, it would be very valuable to have knowledge on how the visiting anglers perceive that marine fishing tourism could be managed to maintain the protection of the exploited fish stocks as presently done by the ITQ system.

In order to catch the desired fish, fishing efforts have to be made. This might result, as previously mentioned, in the unnecessary harvest of fish. According to the previously presented results, there might be the possibility for opening up for the practice catch and release of fish that are neither desirable to the anglers nor as a product on the commercial fish market, e.g. fish of small size. In terms of value, some fish might also be too valuable to only be caught once. The implications of catch and release practices on individual fish and fish populations are not yet completely understood (Cook & Schramm, 2007) and scientific research would be necessary to determine the impact on fish stocks. The input of angler knowledge would also be very valuable to better understand the opportunities and limitations associated to the practice in the Westfjords, as well as animal welfare issues involved. If management should open up to including catch and release measures it would be good to provide a guide on how to handle fish to increase survival after being released. Assessing the economic and political impacts involved in changing management strategies governing the marine fishing tourism industry in the Westfjords would of course also be a necessary prerequisite. It is also important to point out, that motivations expressed in questionnaires do not necessarily correlate with the actual behavior (Ditton & Fedler, 1994). Future research should relate motivation and satisfaction aspects with the harvest orientation of the visiting anglers and assess the implications of current management strategies on holiday satisfaction, willingness to re-visit and behavior. In this context, interviews and on-site observation could contribute to deeper insight into the subject.

This thesis has a fishing tourist perspective and mostly uses a one sector sustainability approach as it focuses on motivational aspects to provide better experiences and data for decision making. The findings should therefore be incorporated in a more holistic view of the activity to guide towards a sustainable development of the marine fishing tourism industry in the Westfjords.

References

Aas, Ø., & Kaltenborn, B. (1995). Consumptive orientation of anglers in Engerdal, Norway. *Environmental Management*, 19, 751-761.

Anderson, N. E., & Loomis, D. K. (2011). SCUBA diver specialization and behavior norms at coral reefs. *Coastal Management*, 39, 478-491.

Arlinghaus, R. (2006). On the Apparently Striking Disconnect between Motivation and Satisfaction in Recreational Fishing: the Case of Catch Orientation of German Anglers. *North American Journal of Fisheries Management*, 26, 592-605.

Auth, K. E. (2012). *Fishing For Common Ground: Broadening the Definition of 'Rights-based' Fisheries Management in Iceland's Westfjords* (Master's thesis). Faculty of Business and Science, University of Akureyri, Ísafjörður, Iceland.

Bauer, J., & Herr, A. (2004). Hunting and Fishing Tourism. In K. Higgenbottom (Ed.), *Wildlife Tourism: Impacts, Management and Planning* (pp. 57-75). Australia: Common Ground Publishing Pty Ltd.

Beardmore, B., Dorowb, M., Haider, W., & Arlinghaus, R. (2001). The elasticity of fishing effort response and harvest outcomes to altered regulatory policies in eel (*Anguilla anguilla*) recreational angling. *Fisheries Research*, 110(1), 136-146.

Bechtloff, N. (2008). *Fjord Fishing- Das Pilot project für den marinen Angeltourismus in den Westfjorden Islands* (Unpublished Master's dissertation). Institut für Geographie und Geologie, Ernst-Moritz-Arndt-Universität Greifswald, Deutschland.

Borch, T. (2004). Sustainable management of marine fishing tourism. Some lessons from Norway. *Tourism in Marine Environments*, 1, 49-57.

Borch, T., Aas, Ø., & Policansky, D. (2008). International fishing tourism. Past, present and future. In Aas, Ø., (Ed.), *Global challenges in recreational fishing* (pp 268-291). Oxford: Blackwell.

Borch, T. (2009). Contested Coastal Commercialization: Marine Fishing Tourism in Norway. *MAST*, 8 (1), 33-51.

- Borch, T., Moilanen, M., & Olsen, F. (2011) Marine Fishing Tourism in Norway: Structure and Economic Effects. *Økonomisk fiskeriforskning*, 21(1), 1-17.
- Brown, T. L., & W. F. Siemer (1991). Toward a comprehensive understanding of angler involvement. In G. A. Vander Stoep (Ed.), *Proceedings of the 1991 Northeastern Recreation Research Symposium* (pp. 149-152), Radnor, Penn.
- Butler, R.W. (1993). Tourism – an evolutionary perspective. In Nelson, J., Butler R. & Wall, G. (Eds.), *Tourism and sustainable development: Monitoring, planning, managing* (27-44). Waterloo: University of Waterloo Heritage Resource Centre.
- Bryan, H. (1977). Leisure value systems and recreational specialization: The case of trout fisherman. *Journal of Leisure Research*, 9, 174-187.
- Chen, R., Hunt, K., & Ditton, R. (2003). Estimating the economic impact of trophy largemouth bass fishery: issues and applications. *North American Journal of Fisheries Management*, 23, 835-844.
- Chizinski, C. J., Martin, D. R., Hurley, K. L., & Pope, K. L. (2014). Self-imposed length limits in recreational fisheries. *Fisheries Research*, 155, 83-89.
- Churchill, T. N., Bettoli, D. C., Peterson, W. C., & Hodge, B. (2002). Angler conflicts in fisheries management: a case study of the striped bass controversy at Norris Reservoir, Tennessee. *Fisheries*, 27(2), 10-19.
- Cole, R. A., & Ward, F. A. (1994). Optimum fisheries management policy: Angler opportunity versus angler benefit, *North American Journal of Fisheries Management*, 14, 22-33.
- Connelly, N., & Brown, T. (2000). Options for Maintaining High Fishing satisfaction in Situations of Declining Catch Rates. *Human Dimensions of Wildlife*, 5, 1, 18-31.
- Connelly, N., Knuth, B., & Brown, T. (2001). An Angler Typology Based on Angler Fishing Preferences. *Transactions of the American Fisheries Society*, 130, 130-137.

- Cook, S. J., & Schramm, H. L. (2007). Catch-and-release science and its application to conservation and management of recreational fisheries. *Fisheries Management and Ecology*, 14, 73-79
- Dawson, C., Buerger, R., & Gratzner, M. (1992). A Reassessment of the angler specialization concept. In G. A. Vander Stoep (Ed.), *Proceedings of the 1991 Northeastern Recreation Research Symposium* (pp. 156-159), Radnor, Penn.
- Ditton, R. B., & Hunt, R. B. (1996). Demographics, participation, attitudes, management preferences, and trip expenditures of Texas black bass anglers. *Human Dimensions of Fisheries Research Laboratory Report HD-607*. College Station, Texxxas: Texas A&M University.
- Ditton, R., Holland, S., & Anderson, D. (2002). Recreational fishing as tourism. *Fisheries*, 27, 3, 17-23.
- Ditton, R. (2004). Human dimensions of fisheries. In Manfredo, M., Vaske, J., Bruyere, B., Field, D., & Brown, P. (Eds.), *Society and natural resources: a summary of knowledge prepared for the 10th International Symposium on Society and Resource Management*. (pp. 199-208). Jefferson city, Missouri: Modern Litho.
- Driver, B. L. & Knopf, R. C. (1976). Temporary escape, One Product of Sports Fisheries Management. *Fisheries* 1(2), 24-29.
- EAA (2004). EEA's definition on recreational angling. *10th General Assembly of the European Angler Alliance*. Belgium: Dinant.
- Elliott, A. (2012). *Economic, environmental and social sustainability in costal rural tourism development: A case study on The Nauteryri Project in the Westfjords of Iceland* (Master's dissertation). Faculty of Business and Science, University of Akureyri, Ísafjörður, Iceland.
- FAO European Inland Fisheries Advisory Commision (2008). Code of conduct for recreational fisheries. EIFAC Code of Practice for Recreational Fishing.

- Fedler, A. J. (1984). Elements of motivation and satisfaction in the marine recreational fishing experience. In R. Stroud (Ed.), *Marine recreational fisheries* (pp. 75-83). Savannah: National Coalition for Marine Conservation.
- Fedler, A. J., & Ditton, R. B. (1986). A Framework for Understanding the Consumptive Orientation of Recreational Fishermen. *Environmental Management*, 10(2), 221-227.
- Fedler, A., & Ditton, R. (1994). Understanding Angler Motivations in Fisheries Management. *Fisheries*, 19, 4, 6-13.
- Ferter, K. (2011). *Marine Angling Tourism in Norway: The Interactions between Behavior, Management and Catch* (Master's dissertation). Department of Biology, University of Bergen, Norway.
- Fisher, M. R. (1997). Segmentation of the Angler Population by Catch Preference, Participation, and Experience: A Management-Oriented Application of Recreational Specialization. *North American Journal of Fisheries Management*, 17, 1-10.
- Frijlink, S., & Lyle, J. (2010). *An evaluation of motivations, attitudes and awareness of Tasmanian recreational fishers*. Hobart, Tasmania: Tasmanian Aquaculture and Fisheries Institute & University of Tasmania.
- Godbey, G., & Scott, D. (1994). Recreation specialization in the social world of contract bridge. *Journal of Leisure Research*, 26, 275-295.
- Goeldner, C. R., & Ritchie, J. R. B. (2005). *Tourism DeVry: Principles, Practices, Philosophies*. United States of America: John Wiley and Sons.
- Gunnarsdóttir, M., & Halldórsdóttir, I. (2012). *Managing marine angling tourism in Norway and Iceland-moving towards resilience*. Retrieved from http://www.academia.edu/1962699/Managing_marine_angling_tourism_in_Norway_and_Iceland_-_moving_toward_resiliency
- Hallenstvedt, A., & Wulff, I. (2001). Fisk som agn: utenlandsk turistfiskei Norge. Rapport fra et fellesprosjekt, Norges Fiskarlag og Norges Turistråd. University of Tromsø, Tromsø, 65.

Hallenstvedt, A., & Wulff, I. (2002). Turistfiske som inntektskilde. Rapport utarbeidet for Norges Turistråd. University of Tromsø, Tromsø, 45.

Herrmann, M., Milner, L., Giraud, K., Skogen M., & Hiser, R. (2002). German Participation in Alaska Sport Fisheries in 1998. *Alaska Fishery Research Bulletin*, 9(1), 27-43.

Higgenbotton, K. (2004). Wildlife Tourism: An Introduction. Chapter 1. In: Higgenbotton, K. (Ed.). *Wildlife Tourism: Impacts, Management and Planning* (pp. 1-11). Australia: Common Ground Publishing Pty Ltd.

Holland, S. M., & Ditton, R. B. (1992). Fishing trip satisfaction: A typology of anglers. *North American Journal of Fisheries Management*, 12, 28-33.

Hunt, K. M., & Ditton, R. B. (1997). The social context of site selection for freshwater fishing. *North American Journal of Fisheries Management*, 17, 331-338.

Hunt, K. M., & Ditton, R. B. (2002). Freshwater fishing participation patterns of racial and ethnic groups in Texas. *North American Journal of Fisheries Management*, 22, 52-65.

Hunt, L. M. (2005). Recreational fishing site choice models: insights and future opportunities. *Human Dimensions of Wildlife*, 10(3), 153-172.

Hutt, C. P., & Jackson, J. R. (2008). Implications of Angler Motivations and Preferences for Urban Fisheries Management. In *American Fisheries Society Symposium 67* (pp.1-14), Oklahome, USA.

Johnston, F. D., Arlinghaus, R., & Dieckmann, U. (2010). Diversity and complexity of angler behavior drive socially optimal input and output regulations in a bioeconomic recreational-fisheries model. *Canadian Journal of Fisheries and Aquatic Sciences*, 67(9), 1507-1531.

Killion, L. (2007). Sport Fishing and Big Game Fishing. In Jennings, G. (Ed.), *Water-Based Tourism. Sport, Leisure and Recreation Experiences* (pp. 112-127). Amsterdam: Elsevier.

- MacLennan, J., & Moore, R. L. (2011). Conflicts between recreation subworlds: The case of Appalachian Trail long-distance hikers. *The Cyber Journal of Applied Leisure and Recreation Research*, 13(1), 1-17.
- Lawrence, K. S. (2005). Assessing the value of recreational sea angling in South West England. *Fisheries Management and Ecology*, 12(6), 369-375.
- Orams, M. (1999). *Marine Tourism. Development, impact and management*. London and New York: Routledge.
- Pawson, M., Glenn, H., & Padda, G. (2008). The definition of marine recreational fishing in Europe. *Marine Policy*, 32, 3, 339-350.
- Pigram, J. J., & Wahab, S. (2004). *Tourism, Development and Growth: The Challenge of Sustainability*. London: Routhledge.
- Radomski, G. C. (1984). Opportunities for urban fishing. In Allen, L. A. (Ed.), *Urban fishing symposium proceedings*, (31-40), American Fisheries Society, Bethesda, Maryland.
- Radomski, P. J., Grant, G. C., Jacobson, P. C., & Cook, M. F. (2001). Visions for recreational fishing regulations. *Fisheries*, 26(5), 7-18.
- Reynolds, P. C. and Braithwaite, D. (2001) Towards a conceptual framework for wildlife tourism. *Tourism Management*, 22(1):31-42.
- Salz, R. J., & Loomis, D. K. (2005). Recreation specialization and anglers' attitudes towards restricted fishing areas. *Human Dimensions of Wildlife*, 10, 187-199.
- Shafer, E. L. (1969). The average camper who does not exist. US Department of Agriculture, US Forest Service. Upper Darby, PA: Northeast Forest Experiment Station.
- Siemer, W., & Brown, T. (1994). Motivations and satisfactions of Lake Ontario boating salmonid anglers. *Journal of Great Lake Research*, 20, 2, 457-470.
- Sigurðsson, S. (2012). Hunting Reindeer in East Iceland: The economic impact (Master's dissertation). School of Business and Science. University of Akureyri. Akureyri, Iceland.

Solstrand, M. (2013). Marine angling tourism in Norway and Iceland: Finding balance in management policy for sustainability. *Natural Resource Forum*, 37, 113-126.

Steinback, S., Wallmo, K., & Clay, P. (2009). Saltwater sport fishing for food or income in the Northeastern US: Statistical estimates and policy implications. *Marine Policy*, 33(1), 49-57.

Unger, J. W. (2012). *Utah Angler Specialization and Its Relationship to Environmental Attitudes and Angler Motivations* (Master's thesis), Utah State University, Utah, USA.

University Center of the Westfjords Tourism Group. (2009). *Towards an Integrated Sustainable Tourism Plan for the Westfjords (ISTPW): Pilot Study of the Western Region of the Westfjords*. Draft Document. Ísafjörður, Iceland, 48.

Viðhorf (September 2008). *Meðalviðskiptavinna Summarbyggða hf. í Súðavík, á Tálknafirði og Bíldudal*, 21.

Weaver, D., & Lawton, L. (1999). *Sustainable Tourism: A Critical Analysis*. Cooperative Research Centre for Sustainable Tourism, Research Report Series. CRC for Sustainable Tourism. Australia: Pty Ltd, Gold Coast.

Internet references

Federation of Icelandic River Owners (2013, February 13). *Salt water fishing*. Retrieved from <http://www.angling.is/en/salt-water-fishing/>

Federation of Icelandic River Owners (2013, February 16). *Salmon fishing*. Retrieved from <http://www.angling.is/en/salmon-fishing/>

FishPal (2013, February 18) *About Icelandic Rivers*. Retrieved from <http://www.fishpal.com/Norse/Iceland/AboutTheRivers.asp?dom=Iceland>

Icelandic farm holidays (2014, February 20). *Activities & day tours: Fishing in Iceland*. Retrieved from http://www.farmholidays.is/Activities/fishing_in_iceland?artID=3544

Icelandic Tourist Board (2013, August 7) *Home*. Retrieved from <http://www.ferdamalastofa.is/en>

IPT Iceland Pro Travel (2013, February 18). *Sea angling in Iceland*. Retrieved from <http://www.fjordfishing.co.uk/>

Nat Nordic Travel (2013, February 16). *Deep Sea angling in Iceland*. Retrieved from <http://www.nat.is/nateng/sjostangaveidi.htm>

Statistics Iceland (2014, April 5). *Statistics: Population*. Retrieved from <http://www.statice.is/Statistics/Population/Municipalities>

The Norwegian Ministry of Trade, Industry and Fisheries (2014, April 6). Resource Management. Setting quotas. Retrieved from http://www.fisheries.no/resource_management/setting_quotas/Fishing_tourism/#.U0Tt-vmSwgs

The Westfjords Marketing Office (2013, February 5). *Home*. Retrieved from <http://www.westfjords.is/>

vaXon (2014, December 2013). *Home*. Retrieved from <http://www.vaxon.is/jom/index.php?lang=en>

Appendix 1: Questionnaire in English

Questionnaire

Sea-angling in the Westfjords, Iceland

This questionnaire is part of a master's thesis in Coastal and Marine Management at the University Center of the Westfjords. Your participation is appreciated and your answers are anonymous. For further information you can contact Claudia Matzdorf: claus1184@hotmail.com.

Background information:

1.) Nationality: _____

2.) Age: Under 18 ☐ 18-19 ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60-69 ☐ 70-79 ☐ 80 and above

3.) Gender: ☐ Male ☐ Female

4.) Date of arrival in the Westfjords: __/__/____

Angling experience

5.) Which of the following statements describe you the best?

☐ Experienced angler: Specialized in certain techniques and try to go fishing as often as possible. ☐ Occasional angler: Enjoy the activity, basic knowledge and go fishing occasionally. ☐ Beginner: Has never taken part in angling before or fished only a couple of times before.

6.) Within your travel group you are: ☐ The most experienced/among the most experienced anglers ☐ Not the most experienced angler/There are more experienced anglers than me in my group ☐ There are no experienced anglers in my group

7.) Do you hold a membership in an angling club? ☐ Yes ☐ No

8.) Do you participate in angling tournaments/fishing competitions? ☐ Yes ☐ No

9.) How important is recreational fishing to you compared to other outdoor activities (such as hiking, golfing, hunting)? ☐ Fishing is my most important outdoor activity ☐ Fishing is my second most important activity ☐ Fishing is my third most important outdoor activity ☐ Fishing is only one of many outdoor activities that I enjoy

Angling motivation/preferences:

10.) What is it that you look for in a fishing experience (mark all that apply)? ☐ Relaxation ☐ To be outdoors ☐ To be with family/friends ☐ Fishing for sport ☐ Fishing for food

11.) Please rate the following aspects on importance for you when you go fishing.

	Extremely important	Very important	Moderately important	Slightly important	Not important
a.) Number of fish	5	4	3	2	1
b.) Size of fish	5	4	3	2	1
c.) Type of fish	5	4	3	2	1
d.) Natural environment	5	4	3	2	1
e.) Social interactions	5	4	3	2	1
f.) Cultural environment	5	4	3	2	1
g.) Services and infrastructure	5	4	3	2	1
h.) Management regulations*	5	4	3	2	1

*Landing regulations, protection for certain species, gear restrictions, marine protected areas and seasonal closures.

About this angling holiday:

12.) Where did you stay: ☐ Súðavík ☐ Bolungarvík ☐ Flateyri ☐ Suðureyri ☐ Bíldudalur
☐ Tálknafjörður

13.) Number of nights that you stayed in the Westfjords: ____ nights

14.) Number of people in your travel group? ____

15.) Who are you traveling with? ☐ Friends ☐ Family ☐ Partner ☐ Work colleagues
☐ Angling Club ☐ Other _____

16.) What was your main reason for choosing the Westfjords as a sea-angling holiday destination (you can mark more than one answer)? ☐ Abundance of fish ☐ A particular fish species ☐ Big fish ☐ Wilderness ☐ Remoteness ☐ Beautiful Landscape/Scenery ☐ Friendly people ☐ Higher value for money than other angling destinations ☐ Other reasons _____

17.) Did you go out fishing every full day you were in the Westfjords? ☐ Yes ☐ No

18.) Have you been on a fishing holiday in another country before? ☐ No ☐ Yes, once in _____
☐ Yes, several times in _____

19.) Is this your first time doing fishing and/or angling in the Westfjords? ☐ Yes ☐ No

If NO, please answer questions 20-23:

20.) How many times have you come to fish the Westfjords? _____

21.) Please state where: ☐ Súðavík ☐ Bolungarvík ☐ Flateyri ☐ Suðureyri
☐ Bíldudalur ☐ Tálknafjörður

22.) What place did you like the best? ☐ Súðavík ☐ Bolungarvík ☐ Flateyri
☐ Suðureyri ☐ Bíldudalur ☐ Tálknafjörður

23.) And why? ☐ Town facilities and amenities ☐ Accommodation ☐ Personal assistance
☐ Beautiful scenery/Nature ☐ Distance to fishing grounds ☐ Variety of fish
☐ Size of fish ☐ Other _____

Satisfaction with the fishing:

24.) What species of fish would you have preferred to catch during this holiday? (Please numerate in order of preference 1 being the most preferred fish)? __Cod __Halibut
__Wolffish __Saithe __Haddock __Other _____

25.) What did you mostly catch? ☐ Cod ☐ Halibut ☐ Wolffish ☐ Saithe ☐ Haddock ☐ Other

26.) Please rate the following aspects according to your experience during your holidays.

	Extremely satisfied	Very satisfied	Moderately satisfied	Slightly satisfied	Not satisfied
a.) Did the number of fish caught fulfill your expectations	5	4	3	2	1
b.) Did the size of fish caught fulfill your expectations	5	4	3	2	1
c.) Did the type of fish caught fulfill your expectations	5	4	3	2	1
d.) With the number of other sea-anglers you encountered	5	4	3	2	1

27.) How satisfied are you with your overall angling experience in the Westfjords?

☐Extremely satisfied ☐Very satisfied ☐Moderately satisfied ☐Slightly satisfied ☐Not satisfied

28.) Would you return to the Westfjords for doing sea-angling? ☐ Yes ☐ No ☐Maybe

29.) *If YES*, how soon? ☐Within 1-2 years ☐Within 5 years ☐Within 10 years ☐Within 20 years

30.) Would you recommend coming to fish in the Westfjords? ☐ Yes ☐ No ☐Maybe

31.) In terms of money spent on this trip, the value you received relative to your satisfaction was: ☐Excellent ☐Good ☐Average ☐Fair ☐Poor

Satisfaction with the services and facilities:

32.) What was your level of satisfaction with the transportation (from Keflavik to your final destination)?

☐Extremely satisfied ☐Very satisfied ☐Moderately satisfied ☐Slightly satisfied ☐Not satisfied

33.) What was your level of satisfaction with the personal assistance?

☐Extremely satisfied ☐Very satisfied ☐Moderately satisfied ☐Slightly satisfied ☐Not satisfied

34.) What was your level of satisfaction with the boats?

☐Extremely satisfied ☐Very satisfied ☐Moderately satisfied ☐Slightly satisfied ☐Not satisfied

35.) What was your level of satisfaction with the angling equipment? ☐**I brought my own equipment**

☐Extremely satisfied ☐Very satisfied ☐Moderately satisfied ☐Slightly satisfied ☐Not satisfied

36.) What was your level of satisfaction with the accommodation facilities?

☐Extremely satisfied ☐Very satisfied ☐Moderately satisfied ☐Slightly satisfied ☐Not satisfied

37.) What was your level of satisfaction with the information of this place that was provided to you beforehand?

☐Extremely satisfied ☐Very satisfied ☐Moderately satisfied ☐Slightly satisfied ☐Not satisfied

Other activities

38.) Did you do any other outdoor activities while you were in the Westfjords that were not angling (such as hiking, sightseeing, kayaking)? ☐ Yes ☐ No

39.) If not, would you have liked to? ☐ Yes ☐ No ☐ Maybe

40.) Which of the following places did you go to during your visit here: ☐ Restaurant/Bar
☐ Museum/Arctic Fox Center ☐ Supermarket ☐ Swimming-pool ☐ Souvenir shop ☐ Other

Fisheries management/regulations:

41.) Are you aware that sea-angling tourism in Iceland is subject to the national fishing quota system (according to which all fish caught has to be landed and weighed against the quota share of the boat)? ☐ Yes ☐ No ☐ Somewhat

42.) Do you consider fisheries management and regulations when choosing an angling destination?

☐ Always ☐ Most of the time ☐ Sometimes ☐ Never

43.) How important are healthy/sustainably managed fish stocks to you?

☐ Extremely important ☐ Very important ☐ Moderately important ☐ Slightly important
☐ Not important

Comments/suggestions: _____

😊 Thank you! 😊

Appendix 2: Questionnaire in German

Fragebogen

Hochsee-angeln in den Westfjorden, Island

Dieser Fragebogen ist Teil meiner Masterarbeit in Kuesten- und Meeresressourcen Management am Universitaets Zentrum der Westfjorde. Fuer Ihre Teilnahme danke ich Ihnen und Ihre Antworten werden anonym behandelt. Fuer weitere Informationen koennen Sie mich (Claudia Matzdorf) gerne kontaktieren: claus1184@hotmail.com.

Hintergrund Informationen:

1.) Staatsangehoerigkeit: _____

2.) Alter: ☐Unter 18 ☐18-19 ☐20-29 ☐30-39 ☐40-49 ☐50-59 ☐60-69 ☐70-79 ☐80 und aelter

3.) Geschlecht: ☐maennlich ☐weiblich

4.) Ankunftsdatum auf den Westfjorden: __/__/____

Anglererfahrung

Welche der folgenden Aussagen beschreibt Sie am Besten:

5.) ☐Erfahrener Angler: Spezialisierter in bestimmten Techniken und geht so oft wie moeglich fischen. ☐Gelegenheits Angler: Geniesst die Taetigkeit, hat Grundkenntnisse und geht gelegentlich fischen. ☐Anfaenger: Hat niemals zuvor geangelt oder nur ein paar mal zuvor gefischt.

6.) In Ihrer Reisegruppe sind Sie: ☐Der Erfahrenste/unter den Erfahrensten Anglern
☐Nicht der Erfahrenste Angler/Es gibt Angler mit mehr Erfahrung als Sie in Ihrer Gruppe
☐Es gibt keine Erfahrenen Angler in meiner Gruppe

7.) Sind Sie Mitglied in einem Anglerverein? ☐Ja ☐Nein

8.) Nehmen Sie an Angler/Fischerwettbewerben teil? ☐Ja ☐Nein

9.) Wie wichtig ist fuer Sie Freizeitfischen verglichen mit anderen Aktivitaeten im Freien (z.B. wandern, Golf spielen, jagen)? ☐Fischen ist meine Wichtigste Aktivitaet im Freien
☐Fischen ist meine zweitwichtigste Aktivitaet im Freien ☐Fischen ist meine drittwichtigste Aktivitaet im Freien ☐Fischen ist nur eine meiner vielen Aktivitaeten im Freien

Angler Motivationen/Vorlieben:

10.) Welche Erfahrung suchen Sie beim Fischen (alle zutreffenden Antworten ankreuzen)?
☐Entspannung ☐An der freien Luft sein ☐Mit Familie/Freunden zusammen sein ☐Fischen als Sport ☐Fischen zum Essen

11.) Bitte schätzen Sie die folgenden Aspekte beim Angeln der Wichtigkeit nach ein.

	Außerst wichtig	Sehr wichtig	Mäßig wichtig	Wenig wichtig	Nicht wichtig
a.) Anzahl der Fische	5	4	3	2	1
b.) Grösse der Fische	5	4	3	2	1
c.) Art der Fische	5	4	3	2	1
d.) Natuerliche Umgebung	5	4	3	2	1
e.) Angeln in der Gruppe	5	4	3	2	1
f.) Kulturelle Erfahrungen	5	4	3	2	1
g.) Service und Infrastrukture	5	4	3	2	1
h.) Management Vorschriften*	5	4	3	2	1

*Bestimmungen für das Anlanden des Fangs, Schutz bestimmter Arten Vorschriften für die Angelsausrüstung, Schutzgebiet und jahreszeitliche Beschränkungen.

Erfahrungen während diesem Angelurlaub:

12.) An welchem Ort sind Sie untergebracht: ☐ Súðavík ☐ Bolungarvík ☐ Flateyri
☐ Suðureyri ☐ Bíldudalur ☐ Tálknafjörður

13.) Anzahl der Nächte in den Westfjorden: ____

14.) Anzahl der Personen in Ihrer Reisegruppe? ____

15.) Mit wem reisen Sie? ☐ Freunde ☐ Familie ☐ Partner/in ☐ Arbeitskollegen
☐ Anglerverein ☐ Andere _____

16.) Was ist der Hauptgrund dafür, dass sie die Westfjorde als Hochseeangel-Urlaubsziel gewählt haben (alle zutreffenden Antworten ankreuzen)? ☐ Anzahl von Fischen ☐ Eine bestimmte Fischart ☐ Grosse Fische ☐ Wildnis ☐ Entlegenheit ☐ Schoene Landschaft
☐ Freundliche Leute ☐ Man bekommt mehr für sein Geld als an anderen Anglerzielen
☐ Andere Gründe _____

17.) Führen Sie jeden Tag (abgesehen von Ankunfts- und Abfuhrtag) zum Angeln während sie auf den Westfjorden waren? ☐ Ja ☐ Nein

18.) Waren Sie vorher in einem anderen Land auf Angelurlaub? ☐Nein ☐Ja, einmal in
 _____ ☐Ja, mehrere Male in

19.) Sind Sie zum ersten Mal angeln auf den Westfjorden? ☐Ja ☐Nein

Wenn nein, beantworten Sie bitte folgende Fragen (20-23):

20.) Wie oft waren Sie schon auf den Westfjorden angeln?_____

21.) Bitte geben Sie an wo: ☐Súðavík ☐Bolungarvík ☐Flateyri ☐Suðureyri
☐Bíldudalur ☐Tálknafjörður

22.) Wo hat es Ihnen am Besten gefallen: ☐Súðavík ☐Bolungarvík ☐Flateyri
☐Suðureyri ☐Bíldudalur ☐Tálknafjörður

23.) Warum? ☐Oertliche Einrichtungen und Unterhaltungsmöglichkeiten
☐Unterkunft ☐Persoenliche Betreuung ☐Schoene Landschaft/Natur ☐Entfernung zu
 den Fischgruenden ☐Diversitaet von Fischen ☐Groesse der Fische
☐Andere_____

Zufriedenheit mit dem Angeln:

24.) Welche Fischarten wurden Sie am liebsten wahrend Ihrem Urlaubs gefangen haben
 (bitte nummerieren Sie je nach Bevorzugung, wobei 1 der am meisten bevorzugte Fisch
 ist? __Dorsch __Heilbutt __Steinbeisser __Seelachs __Schellfisch __ Andere

25.) Was haben sie am hauptsaechlich gefangen? ☐Dorsch ☐Heilbutt ☐Steinbeisser
☐Seelachs ☐Schellfisch ☐Andere_____

26.) Bitte beurteilen Sie die nachsten Aspekte gemaess Ihrer Erfahrung wahrend des
 Urlaubs.

	Aeußerst zufrieden	Sehr zufrieden	Gemaëßig zufrieden	Wenig zufrieden	Nicht zufrieden
a.) Hat die Anzahl der gefangenen Fischen Ihre Erwartungen erfuehlt	5	4	3	2	1
b.) Hat die Groesse der gefangenen Fische Ihre Erwartungen erfuehlt	5	4	3	2	1
c.) Hat die Art der gefangenen Fischen Ihre Erwartungen	5	4	3	2	1

erfüllt					
d.) Mit der Anzahl der anderen Angler die Sie vorgefunden haben	5	4	3	2	1

27.) Wie zufrieden sind Sie mit ihrer gesamten Angelerfahrung auf den Westfjords?

☐ Aeüßerst zufrieden ☐ Sehr zufrieden ☐ Gemaeßig zufrieden ☐ Wenig zufrieden ☐ Nicht zufrieden

28.) Wuerden Sie zum Hochseeangeln auf die Westfjorde zuruckkommen? ☐ Ja ☐ Nein ☐ Vielleicht

29.) Wenn ja, wann? ☐ In 1-2 Jahren ☐ In 5 Jahren ☐ In 10 Jahren ☐ Irgendwann in den nächsten 20 Jahren

30.) Wurden Sie das Angeln in den Westfjorden empfehlen? ☐ Ja ☐ Nein ☐ Vielleicht

31.) Wie war das Preis-Leistungs-Verhältnis: ☐ Exzellent ☐ Gut ☐ Mittelmæssig ☐ Gerecht ☐ Aermlich

Zufriedenheit mit dem Service und den Einrichtungen:

32.) Wie zufrieden waren Sie mit dem Transport (von Keflavik zu Ihrem Zielort)?

☐ Aeüßerst zufrieden ☐ Sehr zufrieden ☐ Gemaeßig zufrieden ☐ Wenig zufrieden ☐ Nicht zufrieden

33.) Wie zufrieden waren Sie mit der persoenlichen Betreuung?

☐ Aeüßerst zufrieden ☐ Sehr zufrieden ☐ Gemaeßig zufrieden ☐ Wenig zufrieden ☐ Nicht zufrieden

34.) Wie zufrieden waren Sie mit den zur Verfuegung gestellten Booten?

☐ Aeüßerst zufrieden ☐ Sehr zufrieden ☐ Gemaeßig zufrieden ☐ Wenig zufrieden ☐ Nicht zufrieden

35.) Wie zufrieden waren Sie mit der Angelausruestung? ☐ **Ich habe meine eigene Ausruestung mitgebracht**

☐ Aeüßerst zufrieden ☐ Sehr zufrieden ☐ Gemaeßig zufrieden ☐ Wenig zufrieden ☐ Nicht zufrieden

36.) Wie zufrieden waren Sie mit der Unterkunft?

☐ Aeüßerst zufrieden ☐ Sehr zufrieden ☐ Gemaeßig zufrieden ☐ Wenig zufrieden ☐ Nicht zufrieden

37.) Wie zufrieden waren Sie mit der Ihnen gegebenen Information ueber Ihren Angelort?

☐Aeußerst zufrieden ☐Sehr zufrieden ☐Gemaäßig zufrieden ☐Wenig zufrieden ☐Nicht zufrieden

Andere Aktivitaeten

38.) Haben Sie irgendwelche andere Aktivitaeten (ausser Angeln) unternommen waehrend Sie auf den Westfjorden waren (wandern, besuchen von Touristenattraktionen, Kayak fahren)? ☐Ja ☐Nein

39.)Wenn nein, hatten Sie es gerne gemacht? ☐Ja ☐Nein ☐Vielleicht

40.) Welche der folgenden Plaetze haben Sie besucht: ☐Restaurant/Bar ☐Museum/Artic Fox Center ☐Supermarket ☐Swimmbad ☐Souvenir Laden ☐Andere_____

Fisherei management/Bestimmungen:

41.) Wissen Sie dass der Hochseeangelntourismus unter das nationale Fischereiquotensystem faellt (demzufolge muss aller gefangener Fisch angelandet und gewogen werden und bei der Quotenberechnung des Bootes beruecksichtigt werden)? ☐Ja ☐Nein ☐Vielleicht

42.) Beruecksichtigen sie Fischereimanagement und-bestimmungen wenn Sie ein Angelziel ausuchen?

☐Immer ☐Meistens ☐Manchmal ☐Nie

43.) Wie wichtig sind gesunde/nachhaltig bewirtschaftete Fischbestaende fuer Sie?

☐Aeußerst wichtig ☐Sehr wichtig ☐Gemaäßig wichtig ☐Wenig wichtig ☐Nicht wichtig

Kommentare/Anregungen:_____

☺ **Vielen Dank!** ☺

Appendix 3: Questionnaire in Dutch

Vragenlijst

Vissen/Hengelsport op Zee in the Westfjorden, IJsland

Deze vragenlijst is een onderdeel van een Masterthesis in Kust en Zee Management van het Universitair Centrum van de Westfjorden. Uw deelname hieraan wordt ten zeerste gewaardeerd. Uw antwoorden worden anoniem verwerkt. Voor meer informatie kan u contact opnemen met Claudia Matzdorf: claus1184@hotmail.com

Achtergrondinformatie:

- 1.) Nationaliteit: _____
- 2.) Leeftijd: Onder 18 ☐ 18-19 ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60-69 ☐ 70-79 ☐ 80 en ouder
- 3.) Geslacht: ☐ Man ☐ Vrouw
- 4.) Dag van aankomst in the Westfjorden __/__/____ __/__/____

Ervaring met vissen:

- 5.) Welke van de volgende stellingen beschrijft uw persoon het best?
- ☐ Ervaren visser: gespecialiseerd in bepaalde technieken en u probeert zo vaak mogelijk te gaan vissen. ☐ Sporadische visser: U houdt ervan, hebt basiskennis en gaat bij gelegenheid vissen. ☐ Beginner: U hebt slechts af en toe of zelfs nooit eerder gevist
- 6.) Binnen de groep waarmee u reist bent u de: ☐ De meest ervaren/ een van de meest ervaren vissers ☐ Niet de meest ervaren/ er zijn meer ervaren vissers in mijn groep ☐ Er zijn geen ervaren vissers in mijn groep
- 7.) Bent u lid van een vissersclub? ☐ Ja ☐ Nee
- 8.) Neemt u deel aan hengeltoernooien/ viswedstrijden? ☐ Ja ☐ Nee
- 9.) Hoe belangrijk is recreatief vissen voor u vergeleken met andere buitenactiviteiten (zoals wandelen/trekken, golfen, jagen)? ☐ Vissen is mijn belangrijkste buitenactiviteit ☐ Vissen is mijn 2de belangrijkste buitenactiviteit ☐ Vissen is mijn 3de belangrijkste buitenactiviteit ☐ Vissen is een van de vele buitenactiviteiten waaraan ik deelneem

Motivatie om te gaan vissen:

- 10.) Waarnaar zoekt u in het beoefenen van de hengelsport ? (meerdere antwoordenmogelijk)? ☐ Ontspanning ☐ Buiten zijn ☐ Met familie/vrienden samenzijn ☐ Sportvissen ☐ Vissen voor voedsel

11.) Geef een score over de belangrijkheid van elk van de volgende aspecten wanneer u gaat vissen. Waarbij:

	Uitermate belangrijk	Zeer belangrijk	Gemiddeld belangrijk	Minder belangrijk	Niet belangrijk
a.) Hoeveelheid vis	5	4	3	2	1
b.) Grootte van de vis	5	4	3	2	1
c.) Soort vissen	5	4	3	2	1
d.) Natuurlijke omgeving /buitenactiviteit	5	4	3	2	1
e.) Sociale omgang	5	4	3	2	1
f.) Culturele omgeving	5	4	3	2	1
g.) Diensten en infrastructuur	5	4	3	2	1
h.) Regels en wetgeving (*)	5	4	3	2	1

** regels over visvangst, bescherming van bepaalde soorten, beperkingen in gebruik van materiaal, beschermde gebieden en seizoenssluitingen.

Over deze hengel-vakantie:

12.) Waar verbleef u: ☐ Súðavík ☐ Bolungarvík ☐ Flateyri ☐ Suðureyri ☐ Bíldudalur ☐ Tálknafjörður

13.) Hoeveel nachten verbleef u in de Westfjorden? _____ nachten

14.) Aantal mensen in uw reisgezelschap? _____

15.) Wie zijn uw reisgezellen? ☐ Vrienden ☐ Familie ☐ Partner ☐ Werkcollega's ☐ Hengelclub ☐ Andere _____

16.) Wat is/zijn uw belangrijkste reden/ redenen om te kiezen voor de Westfjorden als bestemming voor uw hengelvakantie? (meerdere antwoorden mogelijk) ☐ Overvloed aan vis ☐ Een bepaalde vissoort ☐ Grote vissen ☐ Wilde natuur ☐ Afgelegenheid ☐ Mooie landschappen/ omgeving ☐ Vriendelijke mensen ☐ Meer waar voor uw geld in vergelijking met andere bestemmingen ☐ Andere redenen _____

17.) Ging u dagelijks de ganse dag uit vissen terwijl u in de Westfjorden was? ☐ Ja ☐ Nee

18.) Was u al eerder op een vis-vakantie in een andere land?? ☐ Nee ☐ Ja, eenmaal in _____ ☐ Ja, meerdere keren in _____

19.) Is dit de eerste keer dat u uit vissen gaat/hengelsport doet in de Westfjorden?? ☐ Ja ☐ Nee

Indien u net 'Nee' antwoordde, gelieve vragen 20-23 te beantwoorden:

20.) Hoe vaak kwam u al vissen in de Westfjorden?_____

21.) Waar was dat? ☐ Súðavík ☐ Bolungarvík ☐ Flateyri ☐ Suðureyri ☐ Bíldudalur ☐ Tálknafjörður

22.) Welke van deze plaatsen beviel u het meest?☐ Súðavík ☐ Bolungarvík ☐ Flateyri ☐ Suðureyri ☐ Bíldudalur ☐ Tálknafjörður

23.) Wat is de reden daarvan? (meerdere antwoorden mogelijk)☐ Faciliteiten en voorzieningen in de stad ☐ Verblijfplaats ☐ Persoonlijke begeleiding ☐ Mooie landschappen/natuur ☐ Afstand tot de visplaatsen ☐ Verschillende vissoorten ☐ Grootte van de vis ☐ Andere _____

Tevredenheid over het vissen:

24.) Welke vissoort(en) had u het liefst bovengehaald tijdens deze vakantie ?(Gelieve te nummeren in volgorde waarbij '1' de vissoort is die u liefst gevangen had)?

___ Kabeljauw ___ Heilbot ___ Zeewolf ___ Koolvis ___ Schelvis ___Andere_____

25.) Wat heb je meest gevangen? ☐ Kabeljauw ☐ Heilbot ☐ Zeewolf ☐ Koolvis ☐ Schelvis ☐ Andere _____

26.) Geef een score op de volgende aspecten in verband met uw ervaring tijdens deze vakantie. Waarbij:

	Uitermate tevreden	Zeerv tevreden	Redelijk tevreden	Minder tevreden	Niet tevreden
a.) Voldeed het aantal gevangen vissen aan uw verwachtingen?	5	4	3	2	1
b.) Voldeed de grootte van de gevangen vis aan uw verwachtingen?	5	4	3	2	1

c.) Voldeed het aantal gevangen vissoorten aan uw verwachtingen?	5	4	3	2	1
d.) Hoe staat u tegenover het aantal andere zee-hengelaars dat u ontmoette?	5	4	3	2	1

27.) Hoe tevreden bent u met uw globale hengelervaring in de Westfjorden?

☐ Uitermate tevreden ☐ Zeer tevreden ☐ Redelijk tevreden ☐ Minder tevreden ☐ Niet tevreden

28.) Zou u terugkomen naar de Westfjorden voor het zee-vissen? ☐ Ja ☐ Nee ☐ Misschien

29.) Indien 'Ja'. Hoe snel? ☐ binnen 1-2 jaar ☐ binnen 5 jaar ☐ binnen 10 jaar ☐ binnen 20 jaar

30.) Zou u anderen aanraden om te komen vissen in de Westfjorden? ☐ Ja ☐ Nee ☐ Misschien

31.) Wat vindt u over de prijs die u voor deze reis betaalde in verhouding tot de kwaliteit van uw vakantie?: ☐ Excellent ☐ Goed ☐ Gemiddeld ☐ Redelijk ☐ Zwak

Tevredenheid over de diensten en faciliteiten

32.) Hoe tevreden bent u over het vervoer (van Keflavik tot uw eindbestemming)?

☐ Uitermate tevreden ☐ Zeer tevreden ☐ Redelijk tevreden ☐ Minder tevreden ☐ Niet tevreden

33.) Hoe tevreden bent u over de persoonlijke dienstverlening?

☐ Uitermate tevreden ☐ Zeer tevreden ☐ Redelijk tevreden ☐ Minder tevreden ☐ Niet tevreden

34.) Hoe tevreden bent u over de boten?

☐ Uitermate tevreden ☐ Zeer tevreden ☐ Redelijk tevreden ☐ Minder tevreden ☐ Niet tevreden

35.) Hoe tevreden bent u over het hengelgereedschap? ☐ **Ik bracht mijn eigen materiaal mee**

☐ Uitermate tevreden ☐ Zeer tevreden ☐ Redelijk tevreden ☐ Minder tevreden ☐ Niet tevreden

36.) Hoe tevreden bent u over de accommodatie?

☐ Uitermate tevreden ☐ Zeer tevreden ☐ Redelijk tevreden ☐ Minder tevreden ☐ Niet tevreden

37.) Hoe tevreden bent u over de informatie die u van tevoren over deze plaats kreeg?

☐ Uitermate tevreden ☐ Zeer tevreden ☐ Redelijk tevreden ☐ Minder tevreden ☐ Niet tevreden

Andere activiteiten:

38.) Nam u deel aan andere buitenactiviteiten dan hengelen terwijl u in de Westfjorden was? (zoals wandelen, kajakken, sightseeing) ☐ Ja ☐ Nee

39.) Indien niet, had u dat eigenlijk toch willen doen? ☐ Ja ☐ Nee ☐ Misschien

40.) Welke van de volgende plaatsen hebt u bezocht tijdens uw verblijf hier? ☐ Restaurant/Bar ☐ Museum/Arctic Fox Center ☐ Supermarkt ☐ Zwembad ☐ Souvenir shop ☐ Andere _____

Regelgeving over het vissen en visbeheer:

41.) Bent u zich ervan bewust dat vissen op zee, ook als toerist, onderworpen is aan het nationaal visquotum systeem (volgens hetwelk alle gevangen vis aan land gebracht en gewogen moet worden om in het visquotum van de boot opgenomen te worden) ☐ Ja ☐ Nee ☐ Enigszins

42.) Houdt u rekening met de regels over het beheer van en deregulering over het vissen bij het kiezen van een bestemming voor uw hengelsportvakantie? ☐ Altijd ☐ Meestal ☐ Soms ☐ Nooit

43.) Hoe belangrijk zijn gezonde/ duurzaam beheerde visvoorraden voor u?

☐ Uitermate belangrijk ☐ Zeer belangrijk ☐ Redelijk belangrijk ☐ Minder belangrijk ☐ Niet belangrijk

Opmerkingen/suggesties: _____

☺ Thank you! ☺

