Interpretation in Ásbyrgi: Communicating with National Park Visitors in Iceland

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Abstract: Iceland has experienced rapid increases in tourism in recent years. This growth earns economic applause, but can come at considerable environmental cost. As Iceland’s unique environment is a drawcard for many tourists, careful management of destinations to ensure a sustainable environment is critical. The Icelandic Government is aware of the need for effective destination management and planning to ensure a sustainable future for tourism development, and the need to couple this with visitor compliance. It is a development that cannot be divorced from the need for environmental sustainability, and responsibility for this lies with all tourism stakeholders. One management tool to assist with such responsibility and compliance in tourism is interpretation: creating and delivering messages to visitors that enhance not only their satisfaction with an experience but also their understanding of it. This paper is based on an evaluation of visitors’ experiences and managers’ perceptions, as is necessary to ensure visitor satisfaction, while determining how best to maintain a sustainable environment. By observing and interviewing visitors, guides, rangers, and managers at Ásbyrgi in the northernmost part of Vatnajökull National Park, Iceland, we were able to discover what sort of information park visitors want to receive, what park managers want to convey, and the preferred way to deliver that information. Overall, most visitors and guides were satisfied with the interpretation in Ásbyrgi and preferred information provided verbally by guides or rangers over other types, such as on signs or in electronic format. Visitors want information about the unique geology and cultural history, as well as directional instructions for hiking trails. Managers want to create an accessible space in which visitors comply with instructions about safety and environmental sustainability. These findings can assist tourism management in Ásbyrgi, and other nature-based destinations, particularly in terms of sustainability of the natural environment.

Keywords: environmental sustainability; interpretation; tourism; Iceland; Ásbyrgi

1. Introduction

The tourism industry in Iceland is of significant economic importance to the country, and the country’s natural environment is a strong drawcard for tourists [1–3]. For the first time ever, in 2017 tourism in Iceland was responsible for higher foreign exchange earnings (42%) than exports of marine products (16%) [4]. The annual number of international visitors steadily increased from 1.8 million in 2016 to 2.2 million in 2017 and 2.4 million in 2018. This growth came to a sudden halt when the COVID-19 pandemic struck the world. In 2020, the total number of visitor arrivals in Iceland was just under half a million, a 75.8% decrease from 2019, when numbers were around 2 million. However, while international visitation decreased during the COVID-19 pandemic, domestic travel increased [5,6].

The growth of Iceland’s tourism sector has led to some negative social [7] and environmental [8] sustainability impacts, which the country is trying to balance against new economic activities that are more positively viewed [9]. As the Organisation for Economic Cooperation and Development (OECD) identified: “the central challenge for Iceland is...
to maximise the gains from tourism for the population while protecting the assets upon which tourism is built” [10] (p. 191). For Iceland, nature is the key asset and “sustained and rapid tourism growth in Iceland is putting increased pressure on nature” [10] (p. 191).

Corresponding with these increases in tourism growth and associated environmental pressure is the need to effectively manage tourists to ensure safe and responsible experiences that are as socially, economically, and environmentally sustainable as possible [11–13]. This management includes decisions about interpretation—what information to provide for tourists and the most effective way to deliver that information to them. To date, Iceland may appear under-interpreted when compared with larger scale destinations worldwide that have a longer history of organised tourism. This is a legacy of the country’s relatively recent boom in tourism, an economy not initially able to make large financial investments in this type of infrastructure as it recovered from the 2008 global financial crisis [3], a culture that is more traditionally unstated than many of its global contemporaries, and the very practical reality of a climate and geography that can be unsuitable for many traditional types of interpretation.

1.1. Environmental Sustainability and Tourism in Iceland

Research on the impact of tourism on the environment in Iceland has mostly focused on impacts in protected areas which, considering the fragility of Iceland’s vegetation and soils and the important of intact natural sites to the tourism sector, is clearly an important line of research. These studies show that the interaction between this fragility and visitation in those areas is a major cause of concern [14,15]. The Environment Agency of Iceland monitors the condition of protected areas across the country. Their conclusion in 2018, that five areas were in great danger of degradation and 15 locations were threatened due to the impacts of tourism, highlights this fragility [16,17]. Saviolidis et al.’s review of a national indicator set to evaluate environmental sustainability of Iceland’s tourism sector, emphasised the importance of also conducting assessments at a local level [18]. This is important because some issues are likely to be more pronounced in areas that are both fragile and highly popular with visitors, as is the case with our study area—Ásbyrgi.

Iceland’s Road Map for Tourism 2015–2020 emphasised seven core issues to address for the future sustainable development of tourism [19]. Effective interpretation is a vital component of at least two of these: ensuring positive visitor experiences and promoting nature conservation. The latest policy framework for Icelandic tourism, valid until 2030, further stresses the importance of sustainable tourism development [20]. Effective visitor management at popular tourist sites, delivering quality experiences, and ensuring visitor safety are some of the highlighted measures towards Iceland’s goal of being a leading country in sustainable tourism development [20].

1.2. Effective Interpretation

Weiler et al. state that “Tourism in national parks is essentially about providing memorable nature-based experiences for visitors”, and needs to also offer opportunities to educate and guide appropriate visitor behaviour [21] (p. 122). Without tourism assisting to protect the nature that visitors come to experience, the experience risks being lost or degraded, like the environment, as visitation numbers increase. That memorable experience, education and guidance comes through interpretation: often conveyed via guides, books, shows, brochures, and signs, with online opportunities such as websites and apps a more recent addition to that list.

Common to most definitions of interpretation are concepts of education and meaning; “Interpretation is an educational activity that aims to reveal meanings about our cultural and natural resources” [22] (p. 17). In the context of tourism, “Interpretation broadly refers to educational activities used in places like zoos, museums, heritage sites and national parks, to tell visitors about the significance or meaning of what they are experiencing” [23] (p. 231). Interpretation is about communicating information and is used as a tool to both enhance visitor experience and manage their behaviour [24]. Roberts et al. describe the
goals of interpretation as, to (1) ensure visitor satisfaction, (2) increase visitor knowledge, (3) achieve attitude change, and consequently, (4) achieve behavioural change [25].

To be effective, interpretation should simultaneously “stimulate interest, promote learning, guide visitors in appropriate behaviour for sustainable tourism and encourage enjoyment and satisfaction” [23] (p. 231). As such, it is a balanced combination of experience, education and persuasion that can lead to visitor engagement with conservation issues [23]. Effective interpretation should help the visitor to understand why the environment they are experiencing is important, thus resulting in better-informed visitors. When delivering conservation messages, particularly ones that encourage desired behaviour, even if the visitor does not agree with the message being conveyed, it should at least encourage them to better understand the situation.

1.3. Using Interpretation as a Management Tool to Enhance Both Visitor Satisfaction and Environmental Sustainability in Iceland

Many visitors to natural areas are eager to support and follow behavioural guidelines and some studies have shown that visitors like, or even expect, to receive information during their nature-based experience [26]. Thus, providing information about ecology and defining appropriate visitor behaviour could fulfil visitor expectations and thereby increase their satisfaction with the experience [27,28]. Support for, and compliance with, guidelines, however, also depends on their design: wording, message content and the manner of conveying information [23,29,30].

Icelandic tourism authorities have launched various projects in recent years to enhance internal destination management and better accommodate the increasing number of visitors. Most notable of these are the National Infrastructure Plan and the Tourist Site Protection Fund, which both aim to improve infrastructure at popular tourist sites [31]. Through these initiatives, paths have been improved, viewing platforms built, and further signs erected. Most recently, a new project called Sites of Merit was launched [32]. This project emphasises a wholistic approach to destination management with the aim to protect natural and cultural resources, and to offer high-quality visitor experiences in agreement with residents and other stakeholders in the region. However, no management projects yet focus directly on interpretation in Iceland’s tourism industry.

Use of interpretation for visitors to Iceland’s natural areas has also not yet been the subject of much investigation. Consequently, little is known about visitor satisfaction with the available interpretation or their desires for, and receptiveness towards, alternative types of information transfer. A study of signs at a seal watching site revealed that tourists are open to receiving messages that are ontological in nature—providing information about animal behaviour and characteristics that encourages positive human behaviour [33]. However, projects like this are rare. The few that exist provide us with some local data with which to commence, but much greater knowledge is needed about the wants of tourists and their satisfaction with the interpretation currently available in Iceland.

Globally, investigation of interpretation in the context of tourism has been vast, and has been covered by many authors in a wide range of contexts over a lengthy period of time. Tilden [34] established a firm foundation with six principles of interpretation but many others, including Mills [35], had written about interpretation in natural settings previously, and recognition of the importance of effective interpretation burgeoned into many more fields from the 1960s. In the tourism context, for example, work by Weiler et al. demonstrates that interpretation is positively related to desired tourism outcomes [36]. Their study provides useful insight on the effects of cultural background, and of applying specific interpretive principles to elicit specific tourism outcomes, on visitor impact management. Similarly, use of interpretation as a visitor management tool in environmentally sensitive destinations has been investigated for several decades [26,37,38] and the success of interpretation in assisting environmental sustainability has been demonstrated in numerous empirical investigations [39,40]. This comprehensive body of literature provides a solid foundation upon which Iceland can build its own environmentally and culturally relevant strategy.
1.4. Aim, Contribution and Structure

The aim of this research was to discover how to enhance sustainability of the natural environment in Æsbyrgi, as an example of a protected area in Iceland, through onsite communication (interpretation) with visitors. This involved determining the information visitors want to receive, and the information managers want to convey, and preferred ways to deliver that information. To address this aim, we observed visitor behaviour in the park and interviewed visitors and guides, as well as park rangers and managers.

Results from the study provide information for managers in Æsbyrgi about how to provide interpretation that includes messages visitors want to receive and are delivered in ways visitors most want to receive them, but the research contribution extends beyond this single context. We hope it starts a dialogue about effective interpretation in Iceland that to date has been largely absent from the tourism literature. Having visitors be receptive to interpretive messages is more likely to have positive outcomes in terms of compliance with desired behaviour, and thus contribute to environmental protection in destinations.

The remainder of the paper describes the study location before exploring the data collection process—through observations and interviews. Presentation of the results follows the three parts of the research aim, commencing with a visitor profile before discussing their satisfaction, the type of information to convey and how best to convey it.

2. Materials and Methods

This study focuses on one nature-based tourism destination to begin to answer some critical questions about using interpretation as a management tool in Iceland. A mixed method approach was used to collect both qualitative and quantitative data in two stages during August 2018, the year Iceland recorded its highest number of international visitors. In stage one, observational fieldwork was conducted at Æsbyrgi. This enabled the researchers to determine what interpretive material was already available, and in what form, at the site. It also provided data on how visitors use the site, and the material, by observing their behaviour (for example, time spent reading signs). In stage two, interviews were conducted with a range of stakeholders to understand their perceptions of, and satisfaction with, the existing interpretation and what other, if any, content and forms they would prefer.

2.1. Study Location

Æsbyrgi is located northeast of the township of Húsavík, in the northern section of Iceland’s Vatnajökull National Park. Vatnajökull National Park (VNP), which was established in June 2008, is approximately 13,500 km² in size, covers about 13% of the surface area of Iceland, and is the largest national park in Europe [41] (p. 3). The park balances two key objectives of conserving natural and cultural features and enabling visitors to experience and enjoy the area [41] (p. 3).

Within VNP, Æsbyrgi is situated in the northern part of Jökulsárgljúfur Canyon, where the key attraction is a horseshoe-shaped glacial canyon, 3.5 km long and over one km wide, with sheer cliff faces up to 100 m high. The canyon was formed by two glacial bursts from the northern part of the Vatnajökull ice cap that resulted in catastrophic floods, one between eight and ten thousand years ago and a second approximately three thousand years ago. According to Icelandic cultural history, the canyon is shaped like a horseshoe because Sleipnir, the Norse god Odin’s eight-legged horse, placed one of his hooves on the ground here as Odin rode past [42].

At the innermost, southern end of the canyon lies Botnstjörn, a small pond abutting the cliff face and surrounded by vegetation. The area is covered in woodland consisting mainly of birch, willow, and mountain ash, though more recently planted pines also grow in the area. Eyjan (‘the island’), a distinctive rock formation, rises 25 m high and 250 m wide from the centre of Æsbyrgi. In addition to the remarkable geological features and hiking trails, bird life also attracts visitors to the area. Arctic fulmar nest on the steep cliffs,
with many other birds frequenting the pond (e.g., Barrow’s Goldeneye and Tufted Duck), woods, and meadows (e.g., Eurasian Wren and Meadow Pipit) in summer [42,43].

Visitors to Ásbyrgi most commonly arrive by private car or by bus on an organised tour. Entry is free and although there is a visitor centre at the junction with the main road many do not stop there. The visitor centre, which opened in 2007, contains a detailed exhibition on the natural and cultural history of Ásbyrgi and the surrounding area. The centre also has maps and information about hiking trails, the park service and recreational opportunities in the region, and an information desk attended by staff able to answer visitor questions. The Ásbyrgi camping ground contains 350 sites with access to toilets, showers and electricity, and many marked hiking trails that range in length from a few minutes of walking to several hours are available in the area. The most popular of these is a short, forested, trail to the pond (Botnstjörn) and viewing platforms from the parking lot. Just outside the park is a small shop where groceries and fuel can be purchased (see Figure 1).

Figure 1. Map showing sites in Ásbyrgi and its location in Iceland. Reproduced with permission from Vatnajökull National Park, Fixlanda ehf, with location markers added by authors.

Visitation to Ásbyrgi shows a growth in numbers roughly parallel with visitation to the country as whole. In 2012 there were 600,000 international arrivals in Iceland and 50,000 visitors in Ásbyrgi. In 2018 there were 2.2 M in Iceland and 114,000 in Ásbyrgi. The parallel stops in 2020 however, when arrivals decreased in Iceland by 75% from the previous year yet only decreased in Ásbyrgi by 30% (from 116,000 to 82,000) [5,6,44]. This appears to show that although international visitation diminished dramatically, Icelandic nationals continued to visit Ásbyrgi and probably in greater numbers than before. This aligns with similar consequences of the COVID-19 pandemic recorded in other countries. For example, Fredman and Margaryan [45] cite increasing visitation to parks in Norway and Sweden, and McGivney [46] notes that bans on international travel stimulated interest in domestic tourism, including visiting natural areas, in the USA.

Thus, although the current pandemic decreased the overall visitor number in Ásbyrgi, the attraction of the area remains and, consequently, impacts on the natural environment still require careful management to ensure sustainability. This is being considered at both national and local levels. In 2015, Icelandic tourism authorities launched the development of Destination Management Plans (DMPs). Iceland is divided into seven different tourist regions, and each region has published a destination management plan accompanied by a
three-year action plan with prioritized projects. The DMP plan for North Iceland prioritizes infrastructure development and the marketing of a tourist route called the Diamond Circle. Ásbyrgi is one of the key destinations along that route [47].

2.2. Observations

Visitor behaviour was observed at three sites in Ásbyrgi during both stages of the research. The sites included the main trail entrance, the pond, and the visitor centre. Interpretive signage about the natural and cultural features of the area exists in all these locations. The main trail entrance is adjacent to the main car park and is marked by three large signs (Figure 2). The pond (Botnstjörn) includes two wooden viewing platforms and a collection of small signs (Figure 3). Small signs are also present throughout the park. The visitor centre includes a large range of interpretive material and displays (Figure 4).

Figure 2. Signs at the main trail entrance. Reproduced with permission from the photographer: G.L. Burns.

Figure 3. The pond (Botnstjörn). Reproduced with permission from the photographer: G.L. Burns.
The time spent by visitors and guides at each of the three observation sites was recorded using a stopwatch. Timing commenced when they arrived at the location and stopped when they left. Group composition was also recorded, in conjunction with activities the group or individual engaged in (for example, taking photographs). Where possible, gender, age and nationality were estimated. In total, 124 groups, ranging in size from one to 30 individuals, were included in the observational data.

2.3. Interviews

Based on the initial observational data collected in stage one, the best approach to data collection in stage two was determined. During the second stage, 120 visitors were interviewed about their experience in the park. In addition, tour guides (n = 7), rangers (n = 4) and park managers (n = 2) (total n = 13) were interviewed about their opinions on the most effective ways to communicate with park visitors and what should be prioritised for communication.

Park visitors were provided with an information sheet about the project and invited to participate in a short interview about their experience in Ásbyrgi. They were informed that the interview would take 3–5 min to complete during which they would be asked a series of questions by a researcher. The visitor-interview framework was designed to ensure a logical flow of questions and to keep the length of each interview under five minutes.

Visitors were asked questions based on three broad subject areas corresponding to our stated objectives. To determine their opinions on the current information available to them about the site they were visiting, they were asked where they searched for information before journeying to the site (e.g., websites, friends, guidebooks), what they expected during their experience, and if those expectations were met. They were also asked what type of information they would like to know about the site and the available experiences. To understand the best options for how information could be presented, visitors were prompted to state their preference for a range of options including hard-copy signs at the destination, an app available on an electronic device, a real-life guide, or hard-copy
brochures. They were also asked to describe an example of interpretation that they had experienced in another location and considered best practice.

Of the 120 visitors interviewed, ten had visited the park on a bus tour and were either interviewed on the bus on the return journey or when they disembarked from the bus in Akureyri. Nine visitors were interviewed at the camp site in Ásbyrgi and two at the visitor centre. The remainder (n = 99) were interviewed as they exited the main trail and returned to the car park. In terms of response rates, 19 declined to take part in the interviews: ten refusals were based on the potential respondent lacking confidence to reply in either of the two languages offered (English and Icelandic) and nine were based on the potential respondent being unwilling to spend the time required.

Semistructured interviews were conducted with six park employees: two who held management positions and four rangers. These interviews varied in length from 20 to 45 min. The employee-interview framework was designed to ensure a logical flow of questions organized into six sections corresponding to our stated objectives; however, they were also invited to elaborate on points they considered especially important for the park’s management.

Tour guides interviews were shorter, with most less than ten minutes. Seven guides were asked a series of questions similar to those asked of visitors, about both their own opinions of the existing and possible future interpretation as well as about what they thought their customers, as visitors to Ásbyrgi, wanted.

When the data was collected, the diurnal temperature in the park ranged from 6–9 °C. It rained for at least part of every day and there were periods of very strong wind. When the rain and wind eased, small biting midges were abundant. These conditions are likely to have influenced comfort levels of interviewees and thus possibly their responses.

Combined, the results from the data collected reveal who visits Ásbyrgi and what activities they engage in whilst there, as well as the perspectives of a range of stakeholders on current and potential future interpretation strategies. This multimethod and multi-stakeholder approach was considered the most valuable for determining the best way forward for the park management’s dual goal of satisfying visitors whilst protecting the natural environment.

3. Results and Discussion

This section is structured to follow the three aims of the study. It first presents findings on the visitors and their satisfaction with the existing interpretation in Ásbyrgi (Section 3.1), before discussing what type of further information should be conveyed, from both the perspective of the park users (visitors and guides) and employees (managers and rangers (Section 3.2). How those messages could best be presented is reviewed in the final section (Section 3.3).

3.1. Visitor Profile and Satisfaction with Interpretation

This section first provides a profile of the visitors who were observed and interviewed, and establishes how satisfied visitors and guides were with the information available in Ásbyrgi at the time of the study. It then presents results revealing what further information these stakeholders would like to know about the destination.

3.1.1. Visitor Profile

Of the 120 visitors interviewed, approximately one quarter were from either Austria or Germany and just over half were from other countries in Europe, totalling 75% from European countries. Visitors from Canada and North America made up 18% of the sample, with just 7% from the rest of the world. In this 7% were two visitors from Asia, four from the Middle East and four from Oceania. This is reflective of national statistics as most visitors to Iceland come from Europe [4].
Very few children were observed during the study, despite it being school holidays in Iceland. Most visitors were aged between 20 and 60, with younger people more likely to be travelling by car and older people by tour bus.

A popular reason people gave for visiting Ásbyrgi was, as expected, due to the unique natural features of the area—particularly the geology—and access to hiking trails: “Essentially for the nature and hiking areas” (male, mid-30s, Canadian). However, most stated that they visited because they were following an itinerary suggested by a travel agent, or because they were on a bus tour that included a stop in Ásbyrgi. Many had learnt about the location from a guidebook and/or online source. Wanting to visit somewhere that was different, or a location less known about than the more commonly visited sites in Iceland, was also a popular reason for being in Ásbyrgi.

3.1.2. Satisfaction with Current Information

The visitors (n = 120) we interviewed were overwhelmingly positive about the existing interpretation in Ásbyrgi, with 86% saying they were satisfied with it (e.g., “information here is very good”, couple, mid-50s, German) and just 8% indicating they were not. The remain 6% were undecided or chose not to respond.

The guides on tour buses (n = 7) also like the interpretation in Ásbyrgi (100%) and their perception was that the visitors they transported were also satisfied. They emphasised that the information was minimal; however, thought that was appropriate for visitors on organised tours. Tour guides provided their customers with extra information before arriving at the park and also while at the site.

Observations of visitors and guides at the three sites (n = 124) revealed that the time spent viewing signs could depend on many factors, but the three most important were the presence of other visitors, the weather conditions and the time the visitor had available. At the main trail entrance, 72 groups were observed over a period of 218 min. Eleven of the groups spent no time looking at the signs, and three groups each spent more than three minutes. Most groups (n = 22) spent between one and two minutes (Figure 5). At the pond, 20 groups were observed over a period of 96 min. Two of the groups spent less than two minutes on the viewing platform, and two groups spent more than ten minutes. The most popular times to spend there were between two and four minutes and between six and eight minutes (both n = 5) (Figure 6). Observations of groups at the visitor centre (n = 22) took place over 138 min and revealed that visitors generally spent more time in this location than they did at either of the other observational sites in the park.

![Figure 5. Time visitors spent looking at the main trail entry signs (N = 72).](image-url)
If visitors perceived crowding at the signs and they had to wait to view them, then they were less likely to spend time reading the signs. If the weather made standing still uncomfortable (rain in Ásbyrgi during August is common), then they were likely to spend less time reading the signs, even if there were no other people present. Visitors who arrived by private car and/or were camping nearby usually had more time to spend than those who were on a tour bus; thus, they were likely to devote some of that time to more thoroughly reading the signs. For example, the longest time spent at the trail entrance was six minutes and fifty seconds. This was made by a group of two, a male and a female, both approximately thirty years of age, as they were leaving park. In comparison with other times observed, this was abnormally long and thus an outlier in the data. For example, a group of eight who entered the park with a guide who translated the signs for them into another language were only there for two minutes and forty seconds.

Visitors spent more time looking at signs at the pond than at the main trail entrance. This could be because there were seats on the pond platform and people felt more comfortable to stop there. It may also be because at the entrance they were keen to start the walk without delay, whereas at the pond they were already part way through the walk.

These results suggest that managing the arrival of crowds so that congestion is minimized, for example, by staggering the arrival of large bus groups, may encourage reading of signs. Signs being under shelter may also encourage visitors to spend longer reading the information on them. This is supported by the observation that visitors spent most time engaging with the displays in the visitor centre, where they were comfortable and dry even in adverse weather conditions.

3.2. The Type of Information to Convey

Responses to the question about what interpretation visitors wanted was mixed. Although most respondents were satisfied with the current information on the signs in Ásbyrgi and at the visitor centre, some said they would like more. Popular topics for further information were related to the geology; for example, “about the earth” (Family, The Netherlands), and the cultural history, or “about the hidden people” (male, early 20s, Germany) who are said to live in the face of the cliff. A fairly common theme was the perceived need for more signs relating to practical guidance of where to go, rather than information about the area’s features, on all hiking trails in Ásbyrgi.

Guides concurred with this finding, stating that more information about the length and difficulty of hiking trails would be beneficial. In the opinion of most guides, parts of the park are lacking signs, particularly good signs in English. They noted that the signs by the pond are small and specific to birds that may not be present at the same time as
the visitor. Some guides suggested that general signs about Ásbyrgi be erected on the platforms by the pond—especially the platform which had the least existing signage.

Park managers and rangers were also asked for their views on what content should be interpreted for visitors. Responses across these six employee respondents were broadly in agreement with each other, but also with what guides and visitors want. The geology and nature of the area, along with cultural heritage and mythology, were in the foreground, followed by safety. In terms of desired compliance from visitors, the staff in Ásbyrgi face issues similar to those in National Parks all over the world. They want visitors to: “camp in campsites, use the toilets, don’t drive off-road” (Manager 1).

Managers, rangers, and guides expressed concern that visitors do not always behave appropriately. Signs requesting visitors to not use drones and to stay on designated paths, for example, were being ignored. Drones disturb wildlife in Ásbyrgi, which is an important nesting site for migratory birds. Visitors straying from paths can also disturb wildlife and impact greatly on vegetation, which tends to be slow-growing in Iceland’s climate and thus highly susceptible to adverse long-term effects from trampling [48]. Staff were keen to find ways to overcome this and thus ensure maintenance of a sustainable environment for the flora and fauna, and for the visitors.

Whilst managerial staff responses were largely concerned with strategic planning, such as developing ranger programs and safety rules and information, rangers were more able to share their experience from the field and communication with visitors. They elaborated on how the majority of visitors followed parks rules, and expressed desire to provide visitors with positive messages about behaviour and cleanliness. Both managerial staff and rangers expressed their commitment to the nature in Ásbyrgi and their eagerness to teach guests to respect and experience it—to “be in the present” (Ranger 1) while visiting there is how one ranger described it.

3.3. How the Information Should Be Presented

Responses about what the visitors wanted from interpretation in Ásbyrgi was mixed. Although most were satisfied with the amount of signage and the content of the signs, some said they wanted more, and a few said they would be happy with less. Most were receptive to face-to-face interpretation, and few were receptive to obtaining information through increased handheld technology.

The majority of visitors (66%) shared the opinion that the park should not contain more signs (unless as directions on long trails). Reasons given for this often related to a perception of signs being intrusive on the natural environment and a distraction from the beauty of it, with many respondents sharing the perception that signs were inappropriate for interpretation in a natural area: “avoid unnatural intervention . . . no more signs” (couple, mid-50s, Germany).

Over a quarter of the visitors (29%) said the park would benefit from more signs. As stated above, much of this was related to the desire for directional markers on tracks rather than signs containing information specifically about the history and context of the location. Most visitors thought the existing signs were valuable (e.g., “I like signs”, male, early 30s, Italy), though there were a small few for whom the signs held no interest (e.g., “didn’t read the signs”, female, early 20s, Germany).

Inquiring about preferred other ways to receive information in Ásbyrgi, we prompted visitors to think about electronic methods of communication, such as a downloadable app. While some were receptive to the idea (e.g., “the way to go”, male, mid-50s, USA), most were not. When asked if they would use an app on their phone, 35% said yes and 43% said no. The number who were undecided was high (22%) in response to this question. Having limited access to data due to the remote location was a key reason that interpretation available on a handheld electronic device lacked appeal. The perception of wanting to appreciate the nature without interference of technology was a further key factor for many.

Again, findings from the interviews with guides matched those of the visitors. Most guides were not keen on the use of apps or other electronical equipment in Ásbyrgi, though
several suggested QR codes on signs as an option for visitors who prefer information delivered in an electronic format.

Asked about how information should be presented, both managers and rangers spoke positively about the continued and expanded use of signs. However, they expressed caution about using signs that might negatively affect the visitor experience, such as very large signs or signs overloaded with text that would likely be ignored. This stakeholder group considered vocal messages, through ranger led information sessions or roving interpretation, an effective way to communicate with visitors. However, they also stressed the importance of rangers (and other visitors) respecting those visitors who do not want this type of interference and just want to “enjoy the sounds of nature” (Ranger 2) as part of their experience. Funding limitations for providing face-to-face interpretation was also a consideration.

None of the staff were enthusiastic about using smartphone apps or similar technology for interpretation of the nature and history in Æsbyrgi. However, some emphasised that certain information needed to be collated and communicated to visitors on a national level. For this purpose, apps or other smartphone solutions were considered a practical option.

From the interviews, it was obvious that managers and rangers in Æsbyrgi are cognisant that “Tourism in national parks is essentially about providing memorable nature-based experiences for visitors” [21] and want to provide those experiences without disturbing the plant and animal life in the park. When visitor numbers were small this was relatively easy to achieve. As visitor numbers have grown, achieving this goal has become a greater challenge. The managers are keen to implement interpretation that stimulates visitor interest and promotes learning. They want to guide visitors in appropriate behaviour that will assist with sustaining the natural environment in Æsbyrgi. This follows recognition in the Northeast Iceland Strategic Tourism Plan (2009–2014) that “The development of appropriate infrastructure and signage for safe and secure visitation to properly manage the thousands of visitors that visit these sites annually is needed” [49] (p. 19).

4. Conclusions

Overall, most visitors and guides were satisfied with the existing interpretation at Æsbyrgi and thought the current amount of signage containing general information about the area was sufficient. Suggestions for more signage was most often related to directional signs on the hiking trails. However, as tourism pressure increases, a small number of signs that are difficult to read under adverse weather and crowding conditions might not be the best way to proceed.

As visitors spend more time at the pond than at the signs at the main trail entrance, this may be a better location for increased interpretation in the future. As visitors were highly appreciative of information communicated verbally by guides and rangers, this interpretation option is worthy of further exploration. If visitors receive information in ways they prefer, then they are likely to have an enhanced understanding about both the park’s features and of appropriate behaviour to protect the environment.

Some visitors and guides were receptive to the idea of an app or other method of enhanced technology to obtain information about Æsbyrgi, but most were not. Lack of access to data and not wanting the technology to disturb their experience of the natural environment were key reasons cited for this, with a common theme in comments being that the visitors wanted to look at the nature not look at their phones. It would be useful to explore whether this sentiment is common in other nature-based tourism settings or is linked to the uniqueness of Iceland, its sense of remoteness for most visitors [50], and their desire for this natural experience. An interactive app on a handheld device is perhaps more appropriate for an urban setting, and settings in which access to data is cheaper and more readily available.

The Æsbyrgi visitor centre is underutilized. Many visitors pass it on their way into the park and do not stop there. A requirement stop at the centre as visitors enter the park would enable managers to provide them with information before they commence their
in situ experience. A downloadable app could be offered, using the centre’s Wi-Fi, so visitors can access it later while they are in the park. Encouraging visitors to engage with interpretive displays in the centre to learn more, and hopefully understand more, about the need to care for the fragile environment before experiencing it, could also assist with sustainability outcomes.

Moving forward, if visitation returns to pre-COVID-19 numbers and continues to grow, then pressure on the natural environment will remain of concern, regardless of the efficacy of interpretation. Managers could consider limiting numbers in Ásbyrgi at any one time. This strategy matches the 2015 Road Map for Icelandic Tourism which states that restricting access to certain sites may be necessary to protect nature [19]. Requiring visitors to stop first at the visitor centre could also be used as a tool to stagger visitor entry.

From this study we learnt that park visitors, and those charged with providing the visitor experience whilst also protecting the environment, want similar things: a safe and accessible space in which nature can be experienced, enjoyed, and appreciated. Interpretation is welcomed in this space but should not distract from its natural beauty. One option to meet this objective would be to not increase signage in Ásbyrgi (other than trail makers for safety) but to make information available prior to entry, ensuring visitors access the visitor centre and can find there the information they want to receive and the messages park staff want to convey. A second option is to increase ranger presence in Ásbyrgi, not just to enforce compliance with appropriate behaviour but also to inform and demonstrate the important of these behaviours for long-term sustainability in a face-to-face context.

This research in Ásbyrgi contributes to knowledge about what visitors do in national parks in Iceland and their desired experiences. The collected data was used to assess satisfaction with the current information provided for visitors, which aims to promote environmental sustainability in Ásbyrgi through appropriate visitor behaviour. To date, research on interpretation for visitors to natural sites in Iceland has been limited. This work is positioned to begin to address this gap. The results can assist park managers with plans for future delivery of this information at this site, but are also applicable to other nature-based tourism sites in this country and further afield.

Limitations and Further Research

Framing of messages is important, as demonstrated in the seal-tourism study by Marschall et al. [33]. This study did not analyse the text on the signs. It noted the general topic of the text so that the researchers were familiar with the content visitors were exposed to (e.g., about the geology of the park), but did not focus on how that text was written. This would be a useful follow up study, to ensure messages are conveyed in such a way as to obtain maximum value for the visitor but also for the educational wishes of the managers.

Interviews with visitors in this study were only offered in English and Icelandic, and 10 of the 139 people approached to be interviewed declined based on their lack of proficiency in those languages. Having a greater capacity to collect data in more languages would be useful in further studies.

The study took place during the month of August, which is toward the end of the peak summer tourist season in Iceland. There are likely to be more visitors in July and less in October, for example. Expanding observations to other months, when the origin of visitors and experience of crowding may differ, could add to the depth of understanding about perceptions and satisfaction.

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