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Interpretation and Environmental Education associated with National Park Visitor Centres: Framework, Development and Design

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Nature-based Tourism

Preface

This thesis represents the final product of two years master's study in nature-based tourism, in the Faculty of Environmental Sciences and Natural Resource Management (MINA) at the Norwegian University of Life Sciences (NMBU).

It has been an interesting, demanding and rewarding process that has given me self-esteem and taught me how to work independently.

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Abstract

Tourism, especially nature-based tourism, is considered one of the world's fastest growing industries. Popular tourism destinations include protected areas such as national parks, and do often include a visitor centre. National park visitor centres play a significant role in conveying information such as characteristics and values of national parks. Environmental education plays an important role at visitor centres, and nature conservation, biodiversity and climate are some of the topics that are given a lot of attention.

Communication at visitor centres is done through different interpretive products such as exhibitions, brochures, videos and personal communication. Interpretation is an important tool for developing good and meaningful content. It can also enhance the visitor experience. Interpretation has been described as a mission-based approach which aims at provoking meaning and personal connections with things, places, people, and concepts.

The overall goal of this thesis is to examine how environmental education and interpretation are rooted at national and local levels in association with national park visitor centres. The study looks into how interpretation and environmental education are reflected in framework, management, development and design. A case study focuses on the Norwegian Mountain Centre (Norsk Fjellsenter) and the Climate Park in Lom (Norway) and key points within framework, management and development are compared with the Aoraki/Mount Cook Visitor Centre (New Zealand). The following research objectives have been addressed:

- 1. Identify some key elements of framework, management, development and design.*
- 2. Examine how interpretation can be used as a tool to foster environmental education.*

Interviews were the method chosen for this study and informants were from both Norway and New Zealand. The results show that the Norwegian term 'nature guiding' ('naturveiledning') should change or be updated in order to include various aspects of interpretation. The use of nature guiding in the Norwegian context can be linked to how strategies and policies have developed over a period of time. Interpretation plays a significant role in changing people's knowledge, attitudes and beliefs. The visitor centres stress how they work with topics such as climate change through interpretive products such as role-plays and exhibitions. This is an example of how interpretation can be used as tool to foster environmental education.

Sammendrag

Turisme, særlig naturbasert turisme, regnes å være en av verdens raskest voksende industrier. Populære turistdestinasjoner omfatter verneområder slik som nasjonalparker som ofte også har et besøkssenter. Nasjonalparkenes besøkssentre spiller en viktig rolle ved å formidle informasjon slik som kjennetegn og verdier som nasjonalparkene står for. Miljølære blir sett på som et viktig område og blir implementert hos nasjonalparkenes besøkssentre. Naturvern, biodiversitet og klima er noen av temaene som får mye oppmerksomhet.

Kommunikasjon på besøkssentrene blir utført via ulike interpretasjonsprodukter slik som utstillinger, brosjyrer, videoer og personlig kommunikasjon. Interpretasjon er et viktig hjelpemiddel for å kunne skape godt og meningsfullt innhold. Det kan også bidra til å forbedre besøksopplevelsen. Interpretasjon har blitt fremhevet som en formålsbasert tilnærming som har som hensikt å skape mening og personlige forhold til ting, steder, mennesker og konsepter.

Målet i denne masteroppgaven er å undersøke hvordan miljølære og interpretasjon er forankret på nasjonalt og lokalt nivå i forbindelse med nasjonalparkenes besøkssentre. Studien ser på hvordan interpretasjon og miljølære er reflektert i rammeverk, ledelse, utvikling og design. Et casestudie fokuserer på Norsk Fjellsenter og Klimaparken i Lom (Norge) og legger vekt på noen sentrale punkter innenfor forvaltningens rammeverk, ledelse og utvikling fra Aoraki/Mount Cook besøkssenter (New Zealand). Følgende forskningsspørsmål har blitt utformet: *1. Identifiser noen sentrale elementer i rammeverk, ledelse, utvikling og design. 2. Undersøk hvordan interpretasjon kan bli brukt som et verktøy for å fremme miljølære.*

Intervjuer er valgt som metode for denne studien og inkluderer informanter fra både Norge og New Zealand. Resultatene viser at det norske faguttrykket 'naturveiledning' burde endres eller bli oppdatert for å inkludere flere aspekter av interpretasjon. Bruken av naturveiledning i norsk sammenheng kan bli forbundet med hvordan strategier og politikk har blitt utviklet over tid. Interpretasjon spiller en viktig rolle i å endre folks kunnskap, holdninger og tro. Besøkssentrene understreker hvordan de jobber med temaer slik som klimaendringer ved bruk av interpretasjonsprodukter som rollespill og utstillinger. Dette er et eksempel på hvordan interpretasjon kan bli brukt til å fremme miljølære.

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1.0 Introduction

In 2012, the number of international tourist arrivals worldwide surpassed the 1 billion mark for the first time and, in 2015, the number reached a total of 1.184 billion (UNWTO, 2016). Tourism, and especially nature-based tourism, can today be considered one of the fastest growing industries. With continuing growth in travel, there is increasing recognition amongst both travel professionals and consumers of the importance of nature-based tourism and nature-based activities (ATDI, 2015). Protected areas such as national parks are popular tourism destinations because of their outstanding natural and cultural values (Haukeland et al., 2010). National park visitor centres have been established in parks all over the world in order to inform and educate people about these unique areas.

It was not long ago that Norwegian visitor centres were referred to as ‘nature information centres’ (‘naturinformasjonssentre’). In 2015, a new visitor and branding strategy for Norwegian national parks was launched. As a result, nature information centres (‘naturinformasjonssentre’) changed their names to ‘visitor centres’ (‘besøksentre’). The purpose of this change was to focus on the visitor experience. Visitor centres have evolved to become a meeting point where people can have positive experiences whilst learning about nature and culture. Visitor centres all over the world appear as great architectural works and some have become popular destinations in their own right.

The contribution towards conservation and the stimulation of knowledge gain are some of the most important goals for national park visitor centres. A significant role for the visitor centres is to work towards an overall understanding so that people can appreciate the natural and cultural values an area has to offer. Communication is done through ‘interpretation’. It can be anything from exhibitions, signs, videos or personal communication. Interpretation is used as a tool to convey information and should lead to meaning and appreciation. Freeman Tilden summarizes this by saying; “Through interpretation, understanding; through understanding, appreciation; through appreciation, protection” Tilden, 1977. Elements of knowledge and appreciation are also to be found within environmental education. An increasing trend in ecotourism and nature-based tourism, shows that people are interested in learning more about the environment (Perkins & Brown, 2012). Tourists tend to seek out places where they can obtain knowledge about nature and culture (TIES, 2015). Visitor centres are, therefore,

natural destinations for tourists and play a significant role in offering education and information.

In 2016 I was lucky to be able to spend one semester abroad in New Zealand. During my stay I visited several national park visitor centres and they all had excellent interpretation. The level of communication through interpretive products (exhibitions, signs, brochures, personal communication etc.) was some of the best I had ever experienced. This made me curious about how interpretation is implemented in Norwegian national park visitor centres. New Zealand and Norway share a lot of the same characteristics: similar climates, popular nature-based tourism destinations, and several national park visitor centres. However, the two countries have dissimilar approaches in terms of management and organization. Therefore, I wanted to see how interpretation and environmental education was rooted into framework such as policies and strategies. I was also keen to look at things like development and design.

The overall goal was to examine how environmental education and interpretation was rooted, at both national and local levels, in association with national park visitor centres. The study looks into how these elements are reflected in framework, management, development and design. A case study focuses on the Norwegian Mountain Centre (Norsk Fjellsenter) and the Climate Park 2469 (Klimaparken) in Lom (Norway) and emphasizes some key points from Aoraki Mount Cook Visitor Centre (New Zealand).

2.0 Theoretical Framework

2.1 Interpretation defined

‘Interpretation’ can be used in many different contexts, such as the acts of explaining and reframing, or otherwise showing your own understanding of something. Although, there are several definitions of interpretation, they all build on the same idea of transferring information. Thus, interpretation related to tourism can, for example, be found in books, brochures, signs, exhibitions or be performed by a guide. There are many different definitions regarding interpretation, however this thesis will focus on interpretation in relationship to tourism and environmental education. Specifically, interpretation within the tourism industry is about strategic communication.

One of the first people to define interpretation was Freeman Tilden in 1957. He described interpretation as “...an educational activity which aims to reveal meanings and relationships through the use of original objects, by first hand experience, and by illustrative media, rather than simply to communicate factual information” (Tilden, 1977). This description is still valid, however, people and organisations have later used this as a foundation to create their own explanations. Sam H. Ham defined interpretation as “...a mission-based approach to communication aimed at provoking in audiences the discovery of personal meaning and the forging of personal connections with things, places, people, and concepts” (Ham, 2013). Ham focussed on provocation and connection-making. The Department of Conservation (2005) explained interpretation as “...an explanation of the natural, cultural or historic values attached to places. It enables visitors to gain insight and understanding about the reasons for conservation and ongoing protection of our heritage”. It is suggested here that interpretation has the possibility to turn factual information into something more meaningful. By using strategic information, interpretation can provoke people to think and wonder, which potentially can lead to a greater understanding of not only the environment but also to the world around us (Department of Conservation, 2005). According to (Moscardo et al., 2004) interpretation can be referred to as “...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”. It can be used as a tool to both enhance the visitor experience and to develop and create installations or be guided tours which foster understanding and education (Marschall et al., 2017).

According to Roberts et al. (2014) interpretation can be divided into two main categories: (1) personal and (2) non-personal. Ham (2013) builds on this and suggests that interpretation has to be done differently depending on the type of audience involved. People act according to the environment or situation they are in. It is therefore necessary to customize interpretation to different environments or situations on the basis of delivery techniques (Ham, 2013). It is possible to divide the people who receive the message or information into captive or non-captive audiences. A captive audience is often associated with guided interpretive programmes that have been developed and structured on the basis of a guide or interpreter having direct contact with the audience. This is dissimilar to non-captive audiences, which are more independent, and do not have interactions with a guide or an interpreter (Ham, 2013 and Roberts et al., 2014). Interpretation for non-captive audiences can be done through signs, brochures, information boards etc.

2.2 Principles of interpretation

Freeman Tilden is considered to be the father of the profession of interpretation and was one of the first people to write about interpretation in the period between the late 19th century and the early 20th century (National Park Service, 2003). Tilden worked with the US National Park Service, analysing interpretation within various parks. He travelled for years observing guided tours, talks and other types of interpretation. In 1957, Tilden wrote “Interpreting our Heritage”, the first book to define interpretation as a profession. The book has become an essential sourcebook for those who are involved with interpretive planning (Hall & McArthur, 1996). The book focuses on effective methods of interpretation, including Tilden’s six principles of interpretation:

1. Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile.
2. Information, as such, is not Interpretation. Interpretation is revelation based upon information. But they are entirely different things. However, all interpretation includes information.
3. Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical or architectural. Any art is in some degree teachable.
4. The chief aim of interpretation is not instruction, but provocation.
5. Interpretation should aim to present a whole rather than a part, and must address itself to the whole man rather than any phase.

6. Interpretation addressed to children (say up to the age of twelve) should not be a dilution of the presentation to adults, but should follow a fundamentally different approach. To be at its best it will require a separate program.

Tilden's principles have been the foundation and inspiration for other people to create a new and more modern form of the principles for interpretation. Beck and Cable published a book in 2011 with the title "The Gifts of Interpretation". The book presents fifteen guiding principles for interpreting nature and culture. Tilden's principles are included but have been re-worded to better reflect and fit into a modern context, see appendix 1 (Beck & Cable, 2011). However, the additional nine principles put interpretation into a greater context. They stress, inter alia, the importance of conveying history, as well as the use of new technology, as being appealing for the audience. Further, the principles describe how interpretation can lead to greater experience in a set location or at a destination. Lastly, the principles explain how basic communication skills focus on the interpreter's own work and passion and how they are essential for obtaining good interpretation.

According to Beck and Cable (2011) interpretation philosophy is constantly changing and is in line with the way that society and the world are changing. Thus, today's forms of interpretation are likely to continue to develop new types of philosophies, structures, methods and designs in order to have an optimal effect on audiences.

2.3 Thematic interpretation (TORE)

Thematic interpretation is a method for interpretive planning developed by Sam H. Ham. He is one of today's leading researchers within this field of study and his famous book "Interpretation - making a difference on purpose" was published in 2013. The book focuses on the importance of interpretation and gives a carefully detailed introduction of the TORE model. The thematic interpretation model has become more developed over the last few decades and is now often used as a standard approach of both natural and cultural interpretive programmes all over the world (Powell & Ham, 2008). According to Ham (2013), any form of theme or message can be delivered in a way that the audience not only receive it, but also understand, think and wonder about it. Interpretive communication refers to communicating a moral rather than presenting individual facts and figures. The thematic approach consists of four core values: (1) T-theme, (2) O-organized, (3) R-relevant and (4) E-enjoyable. Together they form TORE.

All thematic interpretations need to have a theme. The theme is the main thought or the major point the interpreter wants to communicate (Ham, 2013). A theme in mind will make it easier to choose what to focus on, emphasise, and exclude when creating the remaining ORE in the TORE model for the interpretive product. A theme is not the same as a topic. A topic is the subject matter and can, for example, be 'plants'. Thus, a theme for this specific topic could be 'a number of plants have healing effects and can be used to prevent illness'. This is what the interpreter wants the audience to think about. A theme also makes it easier for the audience to link the given information together in a meaningful way (Ham, 2013).

Interpretation is organized when it is presented in a way that it is easy to follow (Ham, 2013). Good interpretation needs to be presented in a concrete, simple and orderly way. To be able to maintain the audience's attention, it is important not to overwhelm people with too much information. According to Ham (2013), people get confused and lose concentration when too much information is given. In the worst case, the audience can totally lose interest and not pay any attention. This is especially critical for non-captive audiences where this can happen in a matter of seconds (Ham, 2013). In order to prevent this from happening, Ham (2013) stresses that the number of main points should not exceed four.

Making interpretation relevant to the audience means that the information should be made meaningful and personal (Ham, 2013). Creating meaningful context also makes sense as we can usually relate to something we are familiar with. Interpretation can be made relevant through using examples, analogies, contrasts, similes and metaphors (Ham, 2013). By linking unfamiliar themes to everyday situations or events, the information is more readily understood, retained, and is also more relevant. Creating interpretation with elements the audience can relate to makes it personal. This is often underpinned by universal concepts that are intangible or with symbolic connections of significant interest for humans (Ham, 2013). It includes emotions such as love, hate, sorrow and fundamental biological elements such as hunger and death. Universal concepts have the potential to make a personal connection between themes and humans where there was no connection from before.

To achieve the full effect of thematic interpretation, it must be enjoyable. Enjoyable can also be referred to as engaging and entertaining, depending on the circumstances. For example, interpretation at a historic memorial site can be enjoyable, engaging or entertaining but in a different way from that of interpretation done for an exhibition about tropical fish. Ham (2013) stresses that successful interpretation should provide mentally pleasing information

that engages and entertains the audience. In other words, the audience is more likely to pay attention to an interpretive product if it is enjoyable, entertaining or engaging.

2.4 Environmental education defined

Environmental education is defined as “...the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter-relatedness among humans, their culture and biophysical surroundings. Environmental education also entails practice in decision-making and self-formulation of a code of behaviours about issues concerning environmental quality” (IUCN, 2003). According to Agenda 21 created by the United Nations, is environmental education critical for promoting sustainable development and for increasing the capacity for people to address environmental and development issues (United Nations, 1992). It is also critical for achieving environmental and ethical awareness, values and attitudes. Furthermore, it is of importance for creating skills and behaviour consistent with sustainable development for effective public participation in decision-making.

The different objectives of environmental education are as follows: awareness, knowledge, attitude, skills, evaluation ability and participation (United Nations, 1992 and Sahay et al., 2006). Awareness can be described as helping individuals and social groups to acquire basic awareness of and sensitivity towards the environment and its related problems (United Nations, 1992). Environmental education is about helping people and social groups acquire a basic understanding of the environment and its associated problems, and to realise their responsible role in the betterment of the environment (Fien et al., 2010 and Sahay et al., 2006). To do this, it is significant to that people’s knowledge increases. Changes in attitude can help individuals and social groups to acquire social values and strong feelings for the environment, and to become motivated about being able to actively participate in its protection and contribute to improvement (Sahay et al., 2006). By developing skills, people can be helped to obtain the right skills for solving environmental problems in different situations. Evaluation ability consists of helping people and different social groups to understand how they can evaluate environmental measures and education programmes from ecological, political and economic perspectives (Sahay et al., 2006).

There are different reasons why environmental education is of certain importance and significance. In 1977, UNESCO held an intergovernmental conference on environmental education. It was stated that the most important element of environmental education is to

enlighten individuals and social groups so that they can take part in and be aware of their surroundings and related issues (UNESCO, 1977). This can be seen as promoting the fact that it is important to encourage people to become actively involved in working towards solving environmental problems. Further, environmental education for children and adults is said to be essential for self-fulfilment and social development, for understanding the different food chains and nature's ecological balance and for promoting culture (United Nations, 1992). Environmental education spans a wide range of fields and influence in several areas. It can therefore be considered as one of the most fundamental and essential learning areas.

2.5 Goals, outcomes and benefits of interpretation

As described in previous chapters, interpretation is about making a difference on purpose. Research suggests that when interpreters follow the TORE model, they are able to strongly influence their audience in terms of how they think, feel and sometimes how they behave, with respect to the topic or theme being interpreted (Powell & Ham, 2008). Roberts et al. (2014) have described four main goals of interpretation: (1) to satisfy visitors, (2) to instil knowledge gain, (3) to achieve attitude change and, consequently, (4) to achieve behavioural change. They also stress that good management and performance is necessary to be able to implement these goals.

In relation to interpretive products, making the products enjoyable or entertaining is often the main goal (Ham, 2013 and Roberts et al., 2014). This is often linked to visitors' satisfaction and the overall experience. A research project done at the Imperial War Museum in Manchester, England found that by engaging and interpreting history in an accessible way, it would enhance the visitor experience and also visitor satisfaction (Powell & Kokkranikal, 2014). Furthermore, Huang et al. (2015) found that interpretation, done in terms of guided tours for Chinese tourists in Sovereign Hill in Australia, contributed to overall tourist satisfaction.

Interpretation can help people to understand and reveal the world from new perspectives and ideas (Ham, 2013 and Roberts et al., 2014). By learning and gaining information, people are able to increase their knowledge about a specific topic. Powell and Ham (2008) did a research project in the Galapagos National Park where they examined the effect that interpretation had on tourists in terms of knowledge gain and conservation. The research outcomes suggest that interpretation can educate and motivate tourists to be more responsible in terms of

environmental conservation (Powell & Ham, 2008). Knowledge is closely linked to attitudes and behavioural change. The theory of planned behaviour is based on the concept that if we plan to do something we are more likely to do it. This can also be traced back to theories of thematic interpretation (Ajzen, 1991 and Munro et al., 2008). This means that interpretation is strategic communication that can promote a certain behaviour determined by the interpreter or interpretive product. The theory of planned behaviour can therefore explain why we do what we do and act the way we act.

According to the theory of planned behaviour, there are three different predictors of behaviour that affect our intentions: attitudes towards the act or behaviour, subjective norms and perceived behavioural control (see figure 1) (Ajzen, 1991 and Ajzen, 2011). An example of planned behaviour can be illustrated by the planning of a hiking trip. What influences the decisions that need to be made in planning such a trip? The first prediction is attitudes. Attitudes towards behaviour describe how a person thinks and feels about certain behaviours. These feelings are generally positive or negative (Ajzen, 1991). They can, for example, be the evaluations of ideas, events, objects or people. In this case, you would consider if going on a hiking trip made sense to you or not or which hike would make sense for you to choose.

The next prediction is subjective norms, which focuses on everything around the individual. It relates to the support given or not given by significant others such as family or friends, cultural norms, the individual's social network, group beliefs and so on. Norms, such as attitudes and behaviours, can be considered as normal, typical or average. People often form an opinion based on what others will think of them. In the hiking trip example, you would try to imagine what people would think of you when evaluating the different hiking trips. This again would influence your decision.

Finally, prediction is perceived control of behaviour, which refers to the amount of control individuals have over the environment (Ajzen, 1991). Prediction is essential to see if a person has what he or she needs to be able to overcome potential barriers and challenges. Perceived control of behaviour concerns considering whether the task will be easy or difficult to accomplish. In the hiking trip example, you might go to a visitor centre to look at maps, get inspiration, talk to the staff about different hikes, and form an opinion on how easy or hard it would be to undertake each hike. What the theory suggests is that a positive attitude towards the act or behaviour, favourable social norms, and a high level of perceived behavioural

control, are the best predictors for forming a behavioural intention and in return lead to a displayed behaviour or act (Ajzen, 1991). The more that all these three predictors of behaviour are affected, the more likely a person's intentions will be affected, which in turn will lead to a certain behaviour (Ajzen, 2011).

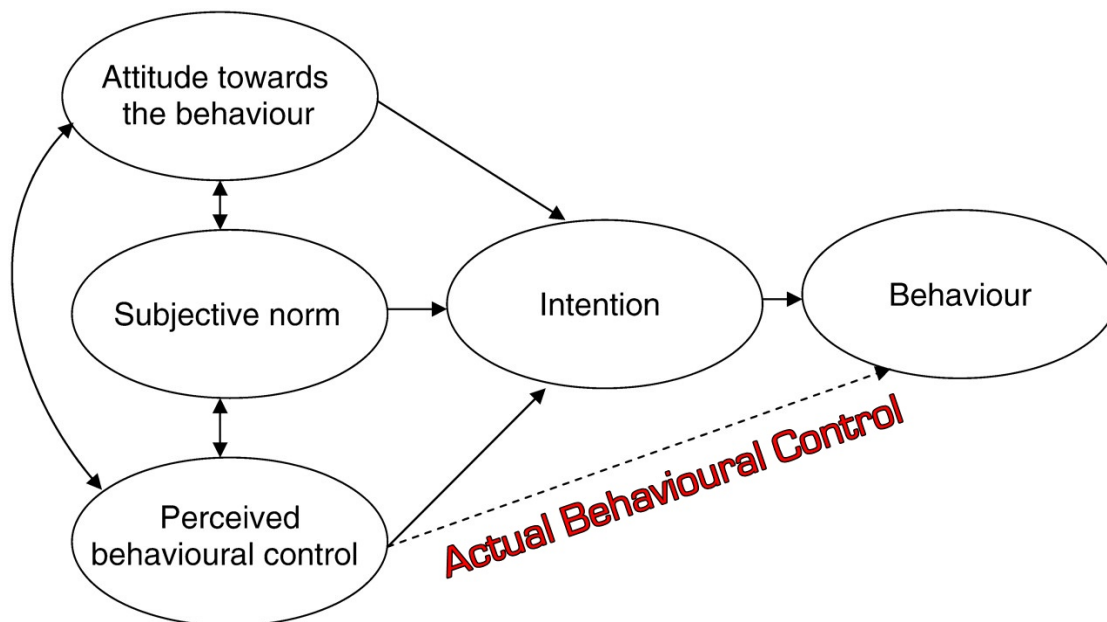


Figure 1: Theory of planned behaviour, Ajzen (1991). Illustration: Communication Strategies, 2012.

A research project done on a seal-watching site in Iceland recorded the effect of interpretive signage on visitor behaviour. The study revealed that signs that included instructions and explanations had the highest impact on visitor behaviour (Marschall et al., 2017). This highlights how interpretive signs can lead to changes in attitudes and intentions and also changes in behaviour as described in the theory of planned behaviour.

Freeman Tilden saw, early on, the connection between knowledge gain, attitudes and behavioural changes; *“Through interpretation, understanding; through understanding, appreciation; through appreciation, protection”* (Tilden, 1977). His famous quote reflects the assumption that interpretation leads to understanding. Increased understanding enhances the visitor’s experience, which will lead to appreciation of the area that is being interpreted. In the end, this might lead to changes in behaviour, which promote the protection of the field of study. Further, Powell and Ham (2008) found that interpretation can enhance positive behavioural changes within environmental conservation and social improvements - both on

site and at home. According to the environmental interpretation manual for protected areas, interpretation can lead to motivation of the public to take actions to protect the environment in a logical and responsible way (MBRS, 2005).

2.6 Study context

Aspects of nature-based tourism

There is no clear definition of nature-based tourism, however contemporary literature often associates it with recreation and adventure (Laarman & Durst, 1987), excursions to national parks and wilderness areas (Kuenzi & McNeely, 2008), spending time in nature away from home (Fredman et al., 2009) and perceptions of undisturbed nature (Valentine, 1992). This illustrates that nature is a central element, however there are many explanations of how it is used and utilized.

Adventure tourism has increased significantly in popularity in recent years. Numbers show that adventure tourism was valued at approximately 263 billion USD and had an estimated growth of 65 per cent between 2009 and 2012 (ATDI, 2016). To meet the definition of adventure tourism, the traveller has to be away from home for at least 24 hours and it has to include a minimum of two of the following three experiences: participation in a physical activity, a visit to a natural environment, and a culturally immersive experience (ATDI, 2016). There is a wide range of different activities related to adventure tourism, and these activities are usually found in the outdoors or in natural areas such as national parks. Hiking, joining a research expedition or safari, kayaking, visiting a historic site, skiing, and bird watching are examples of such activities. In 2016, ATDI ranked the top ten countries for adventure travel. Both New Zealand and Norway were on the list and ranked 3rd and 4th respectively among developing countries. This indicates that both countries are popular adventure tourism destinations.

Ecotourism has been described as environmentally and socially responsible tourism, where the traveller has the primary goals of taking part in nature-based experiences and participating in environmental learning (Perkins & Brown, 2012). The International Ecotourism Society (TIES) states that ecotourism: is responsible travel to natural areas that conserve the environment, sustains the well-being of the local people, and involves interpretation and

education (TIES, 2015). Ecotourism has, by any definition, been characterised as one of the fastest growing sectors within the global tourism industry (Perkins & Brown, 2012). It generates billions of dollars annually and is rapidly expanding in line with the promise and wish of a greener consumer. In many areas of the world, and especially in the developed nations, the focus on green living has received a great deal of attention in both media and politics. In correlation with contemporary issues such as global warming and decreasing biodiversity, a higher number of consumers have realised the importance of responsible travel (CREST, 2013). Responsible travel is defined as minimizing negative impacts, bringing economic benefits to host communities, and preserving the cultural and natural resources of the destination (CREST, 2013).

Protected areas, national parks and tourism

Protected areas can be found all over the globe. A protected area is defined as “*An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means*” (IUCN, 2007). According to the Protected Planet report (UNEP, 2014), 15.4 per cent of the world’s terrestrial surface has protected areas. Most countries have established national parks to preserve and protect these areas. IUCN has developed a system to classify and divide the different types of protected areas. National parks are defined as a Category II protected areas. These include large natural areas managed mainly for ecosystem and biodiversity protection and the parks promote education and recreation (IUCN, 2007).

The term and role of national parks varies from country to country. In Norway, national parks have been defined through the Nature Diversity Act;

“Large areas of natural habitat that contain distinctive or representative ecosystems or landscapes and where there is no major infrastructure development, may be protected as national parks. (...) Pedestrian access or passage in accordance with the provisions of the Outdoor Recreation Act is permitted. Such access or passage may only be limited or prohibited in delimited areas of a national park, and only if necessary in order to protect plants or animals, cultural monuments or geological features.” (Government.no, 2009).

Norway has 39 national parks on the mainland and 7 on Svalbard. Approximately 10 per cent of the Norwegian mainland is protected as national parks.

New Zealand has 13 national parks, 3 on the North Island and 10 on the South Island.

National parks in New Zealand were defined in 1980 through the National Parks Act:

“(They) shall have effect for the purpose of preserving in perpetuity as national parks, for their intrinsic worth and for the benefit, use, and enjoyment of the public, areas of New Zealand that contain scenery of such distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest” (New Zealand Legislation, 2016).

In both Norway and New Zealand, national parks play important roles in the tourism industry and especially for nature-based tourism because of their natural environments. As a result of a higher demand for more nature-based experiences, national parks have become popular tourism destinations (Haukeland et al., 2010). However, in Norway, this has not always been the case. Previous national park management was highly focussed on protection only. It was not until 2015 that Norwegian environmental authorities decided to launch a new branding and visitor strategy for the national parks. It was a shared strategy for all national parks, visitor centres, other protected areas, and national park villages (‘nasjonalparklandsbyer’). The aim is to make these areas more recognizable and accessible by covering them with the same visual identity. Norwegian authorities hope to attract more visitors with the new slogan; “Welcome inside” (‘Velkommen inn’) and by using a design manual created by the Snøhetta architecture firm to develop the same visual language. In contrast, New Zealand has a long tradition of including visitors in the parks. The National Parks Act from 1980 stresses that the parks shall exist, inter alia, “...*for the benefit, use, and enjoyment of the public*” (New Zealand Legislation, 2016).

Culture, legislation and management

It is argued that nature and outdoor experiences are essential for Nordic, and especially Norwegian, culture (Beery, 2013). This is known as ‘friluftsliv’ (outdoor living) and has long historical traditions. ‘Friluftsliv’ can be explained as outdoor recreation, however it is argued that these two terms overlap rather than being equivalent terms. ‘Friluftsliv’ fuses ideas of outdoor recreation, nature experiences, philosophy and lifestyle (Beery, 2013). The Right of

Public Access (‘Allemannsretten’) is defined and explained in the Outdoor Recreation Act from 1957. This law gives everyone free access to so-called uncultivated land (‘utmark’) that includes protected areas such as national parks, although regulations can be made in areas that need specific protection. Thus, Norwegian legislation and management policies have been driven by nature conservation for a long period of time and have been the main focus for Norwegian national parks (Higham et al., 2016).

In contrast, New Zealand’s national parks have been consciously designed and developed for tourism purposes and to create regional economic growth (Higham et al., 2016). This is referred to as the ‘dual mandate’ which both prioritizes the planning of nature conservation as well as visitor management. In 1901, New Zealand became the first country in the world to establish a national destination marketing organization; the Department of Tourism and Publicity that later became Tourism New Zealand (TNZ) (Higham et al., 2016).

Thus, two different designs of various environmental legislation and management policies evolved for Norway and New Zealand. Table 1 shows how this historically has been expressed in various policies and planning documents.

Table 1: Key acts of environmental legislation and conservation management policies in Norway and New Zealand (Higham et al., 2016).

	Norway	New Zealand
Environmental legislation	<i>Outdoor Recreation Act</i> (1957) <i>Nature Conservation Act</i> (1970) (recently replaced by the <i>Nature Diversity Act</i> (2009))	<i>National Parks Act</i> (1952) (replaced by the <i>National Parks Act</i> (1980)) <i>Conservation Act</i> (1987)
Conservation management policies	Nature Protection policy (<i>Lov om naturvern</i>) (1954) Mountain Text (<i>Fjellteksten</i>) (2003) Action plan for tourism industries (2005) Norway tourism strategy (Nærings- og handelsdepartementet, 2007) Norwegian Environment Agency (<i>Miljødirektoratet</i>) (2013)	Visitor Strategy (1996) General Policy for National Parks (2005) Conservation General Policy (2005)
Visitor management strategies and plans	<i>Outdoor Recreation Act</i> (1957) Management Handbook (Direktoratet for Naturforvaltning, 2010a) Management plans for national parks (Directorate for Nature Management; now the Norwegian Environment Agency) The launching of the Norwegian Environment Agency’s branding and visitor management strategy for national parks (2015)	ROS VAMPVAMS

It is important to make mention of the differences in regulation and quality assurance for nature-based tourism businesses within the Norwegian and New Zealand national parks. In

New Zealand, the Department of Conservation (DOC) provides a label for operators within the parks. The label shows that the business fulfils DOC’s requirements regarding protected areas and environmental and safety standards and function as a certification standard. It is of importance that businesses follow DOC’s vision:

“New Zealand’s natural and historic heritage is protected; people enjoy it and are involved with the Department in its conservation” (Department of Conservation, 2005)

Businesses in these areas include interpretive activities such as guided tours and the label works as a certification. To be allowed to operate within the national parks and use the facilities, private businesses have to pay a fee. It is used as a concession system. The income is used for the operation and maintenance of the park. In contrast, as a result of the Norwegian Public Right of Access, there are no rules or certification needed for businesses to be allowed to operate and use the facilities in Norwegian national parks. The approach of interpretation and environmental education in relation to visitor centres varies between the two countries, see Table 2. It shows that New Zealand has a detailed framework regarding interpretive methods and implementation such as DOC’s interpretation handbook and standard and the LEOTC programme. Norway focuses on nature guiding as a part of interpretation.

Table 2: Examples of framework that includes interpretation and environmental education in association with visitor centres in Norway and New Zealand.

Country	Interpretation	Environmental Education
Norway	- National Authorization Requirements for Visitor Centres in National Parks. Described as nature guiding (naturveiledning)	- Parliamentary Report (Meld.St.14), Norwegian Plan of Action for Biodiversity, The Ministry of Climate and Environment (2015)
	- Instructions for Visitor Management in Norwegian Protected Areas, Norwegian Environment Agency (2015)	- Parliamentary Report (Meld.St.18) Outdoor life (friluftsliv), The Ministry of Climate and Environment (2016) Includes both environmental education and dissemination (formidling)
	- Design Manual for Norwegian National Parks, Snøhetta (2015)	
	- Policy for Naturveiledning (nature guiding), Directorate for Nature Management, SNO (2010)	

New Zealand	- DOC Visitor Centre Network Long Term Strategic Plan (2015-2025)	- National Strategy for Environmental Education for Sustainability, Department of Conservation
	- Section 4.2.9 of the Aoraki/Mount Cook National Park Management Plan "Information and Interpretation", Department of Conservation (2004)	- National Education Strategy 2010-2030, Department of Conservation
	- Interpretation Handbook and standard, Department of Conservation (2005)	- LEOTC (Learning Experience Outside the Classroom), Ministry Of Education

A short history of interpretation and visitor centres in New Zealand and Norway

Interpretation related to nature-based tourism areas such as national parks have existed for a long period of time. In 1919, the US National Park service began to develop guided activities for visitors and the interest continued to grow as a result of the parks' accessibility through railway expansions (Department of Conservation, 2005 and Roberts et al. 2014). However, it was not until the 1960s that interpretation began to develop in national parks in New Zealand. It started out with a summer nature programme and by the early 1980s, summer nature programmes became common for most national parks in the country (Department of Conservation, 2005). As a result, interpretation became natural to include in trainee programmes for rangers and other employees, as well as a part of the management plans. Inspired and influenced by the US National Park Service, visitor centres began to appear in most national parks in New Zealand. By the end of the 1980s, most parks in New Zealand had their own visitor centres (Department of Conservation, 2005). In 2016, DOC registered a national network of over 27 visitor and information centres (Department of Conservation, 2016). All visitor centres were and are operated by employees of the Department of Conservation and often include a park ranger.

Both nature and storytelling have been important parts of Norwegian culture for centuries. Fairy tales and legends have been told colloquially over several generations. Norwegians have long traditions with the use of the outdoors whether through farming, hunting or via recreational purposes. Usually old traditions and stories were passed down from generation to generation. However, even though the communication of information has had a long tradition in Norway, it was not until the late 1980s that the government began to focus on interpretation

as an element of outdoor activities and nature management in Norwegian policies (Naturitas, 2008). One of the main tasks for visitor centres in Norwegian national parks is to convey information about nature and culture through the use of various interpretation products. In the period between 1989 and 1994, the government initiated a pilot project focussing on interpretation. Overall, nine visitor centres were involved in the project where dissemination methodology was a key factor (Naturitas, 2008). Today, Norway has a total of 15 national park visitors centres. They often focus on a special theme or habitat that can be found in the surrounding areas such as the Norwegian Mountain Centre in Jotunheimen National Park (Direktoratet for Naturforvaltning, 2005).

The Norwegian Nature Inspectorate ('Statens naturoppsyn, SNO') is part of the Norwegian Environment Agency - the public regulatory authority for all protected areas in Norway. The Nature Inspectorate performs multiple tasks within management and regulation. One of the tasks is to convey information and to work as environmental interpreters, also known as 'nature guides' ('naturveiledere'). An important part of the Inspectorate's role is to create responsible attitudes towards nature and environmental protection among the population (Direktoratet for Naturforvaltning, 2010). A central goal for nature guiding is to increase interest in the outdoors and to inspire a healthy and sustainable lifestyle. The Nature Inspectorate develops nature guidance as a field in Norway through cooperation with colleges and universities. It also has its own training and education programmes, which are developed in cooperation with the national park visitor centres. However, The Norwegian Ministry of Climate and Environment has announced that nature guiding, under the auspices of the Nature Inspectorate, shall be wound up between 2017 and 2018. It remains to be seen whether the visitor centres will become more active within this field as a result.

3.0 Case Description

In the following section, the case descriptions are presented. The first part includes an introduction and presentation of Lom, the Norwegian Mountain Centre and the Climate Park. The second part focuses on Aoraki Mount Cook Visitor Centre and Aoraki Mount Cook National Park. This section is included to provide the reader with necessary background information.

3.1 A short profile of Lom, the Norwegian Mountain Centre and Mímisbrunnr Climate Park 2469

Lom

The Norwegian Mountain Centre and the Climate Park are located in Lom Municipality in Oppland County, Norway. In 2008, Lom was designated a National Park Village (*‘Nasjonalt parklandsby’*). The aim was to strengthen local value creation based on the Jotunheimen, Reinheimen and Breheimen National Parks (Miljødirektoratet a, 2013). A National Park Village is a place where information can be found about national parks and guiding and is a place where you can purchase necessary equipment for natural experiences in and around the national parks. However, Lom Municipality also became a National Park Municipality (*‘Nasjonalt parkkommune’*) in the same year that it became a National Park Village. To become a National Park Municipality, the municipality’s area has to include a larger area of a National Park. Other criteria are that the municipality has to focus on information, facilitation and tourism in these areas or have an authorised National Park Visitor Centre. A reason for Lom getting this new status was because approximately 90 per cent of the municipality consist of glaciers and mountains, with Galdhøpiggen and Glittertind as notable landmarks (Miljødirektoratet a, 2013). Galdhøpiggen is Norway’s highest mountain at 2469 meters above sea level and is a popular destination among visitors (Visit Jotunheimen, 2016).

The Norwegian Mountain Centre

The Norwegian Mountain Museum was founded in 1991 and put into operation in 1994. It is a visitor centre for the following national parks: Jotunheimen, Reinheimen and Breheimen. The centre is authorized by the Environment Agency for the distribution of information about the national parks. In 2015, the museum started a renovation project. The visitor centre had to

make a variety of changes in order to implement the new branding and visitor strategy for Norwegian national parks as all national parks and visitor centres in Norway have to follow Snøhetta's design manual. The manual describes everything from colours, fonts, logos, flag, staff clothing etc. In order to follow the manual's requirements, the Norwegian Mountain Centre created a new public space as well as a new facade and entrance. These were all completed in 2016 (see figure 2). Furthermore, 2016 was the year when the Norwegian Mountain Museum ('Norsk Fjellmuseum') changed its name to the Norwegian Mountain Centre ('Norsk Fjellsenter').



Figure 2: Results of the renovation project. Old entrance (top), new entrance and facade for the Norwegian Mountain Centre (bottom). Photo: The Norwegian Mountain Centre.

The main goals for the Norwegian Mountain Centre have been described as follows:

The visitor centre shall (Norsk Fjellmuseum, 2015):

- Inspire and inform people to visit the national parks and the surrounding mountains.
- Provide knowledge about the interaction between man, nature and culture in the mountains.
- Be the most creative and exciting mountain centre in Norway.
- Strengthen a development-orientated environment related to management, research and dissemination of mountain history, resources and qualities.
- Play a national and international role.
- Be an attraction.

The visitor centre has several additional functions and houses a visitor centre for the national parks, the office for the national manager and coordinator for the Norwegian national park municipality and village, and a nature surveillance office (Norsk Fjellsenter, 2016).

Mímisbrunnr Climate Park 2469

The Mímisbrunnr Climate Park 2469 (Mímisbrunnr Klimapark 2469) has strong cooperative ties with the Norwegian Mountain Centre. The two visitor centres have a shared administration and work closely in terms of booking and marketing. The park is situated in Lom, at the foot of Galdhøpiggen in Jotunheimen National Park, which is 1850 meters above sea level. The area at the foot of Galdhøpiggen offers a unique insight into the cultural history of the area and offers visitors the opportunity to enjoy the area's pristine nature. Close by are the 2000 year-old remains of capture traps for wild reindeer and over 700 archaeological items have been discovered under the melted ice (Sparebankstiftelsen DNB, 2013). The area offers unique types of habitats and biodiversity such as glaciers, wild reindeers and alpine botany (Sparebankstiftelsen DNB, 2013). According to Norse mythology, Mímisbrunnr was the source of knowledge and wisdom. Therefore, research, dissemination of information, and interpretation are core values for the park (Sparebankstiftelsen DNB, 2013). Today, climate research is being conducted in this area. Through Mímisbrunnr Climate Park, the results and findings are presented to the public. The park plays a significant role in terms of science, interpretation, education, resource management, and tourism development. This is reflected in the main aim for the park that says that the Mímisbrunnr Climate Park shall:

“...through attractions developed in collaboration with professional contributors and aimed at a wide audience, communicate interactive experiences of, and insight into, current climate processes and the interaction between nature and humans seen in a long-term perspective. The purpose of such communication and experiences is to promote interest as well as understanding in terms of thematics, and to create increased levels of value and innovation. Main arenas are the park at Juvflye by the foot of Galdhøpiggen, and the Norwegian Mountain Centre” (Vistad et al., 2016).

The Climate Park offers guided tours over the Juvflye Plateau. Visitors can be guided through thousands of years of climate history and hunting and gathering areas as they walk through an ice tunnel that is 60 metres deep (see figure 3) (Mímisbrunnr Klimapark 2469, 2016). The tunnel itself leads into a network of passages and halls and was an ice art project designed by artist Peder Istad.



Figure 3: Inside the ice tunnel, Mímisbrunnr Climate Park. Photo: Johan Wildhagen.

A short profile of the surrounding national parks associated with Lom

As already pointed out in the previous section, the Norwegian Mountain Centre is a visitor centre for three national parks: Jotunheimen, Breheimen and Reinheimen. Nature-based tourism is becoming more popular among Norwegian and foreign tourists and more people travel to national parks (Haukeland et al., 2010). Many seek out these types of natural destinations because of the unique offer of culture and nature experiences. However, there are no official statistics that showing the numbers of visitors to Norwegian national parks. On the other hand, several surveys have been conducted inside and in the surrounding areas of the aforementioned parks. With Jotunheimen as a starting point, it is possible to see some trends. In the period between 1992 and 2010, the amount of different nationalities increased from 27 to 47. In addition, there was a positive trend in the number of short day trips among visitors registered (Fylkesmannen, 2012). According to the survey, the most popular activity was hiking (88 per cent), but activities such as skiing, fishing and climbing were also represented (Fylkesmannen, 2012).

In correlation with the design manual, which was developed in 2015, Snøhetta designed new individual logos for all national parks (see figure 4)

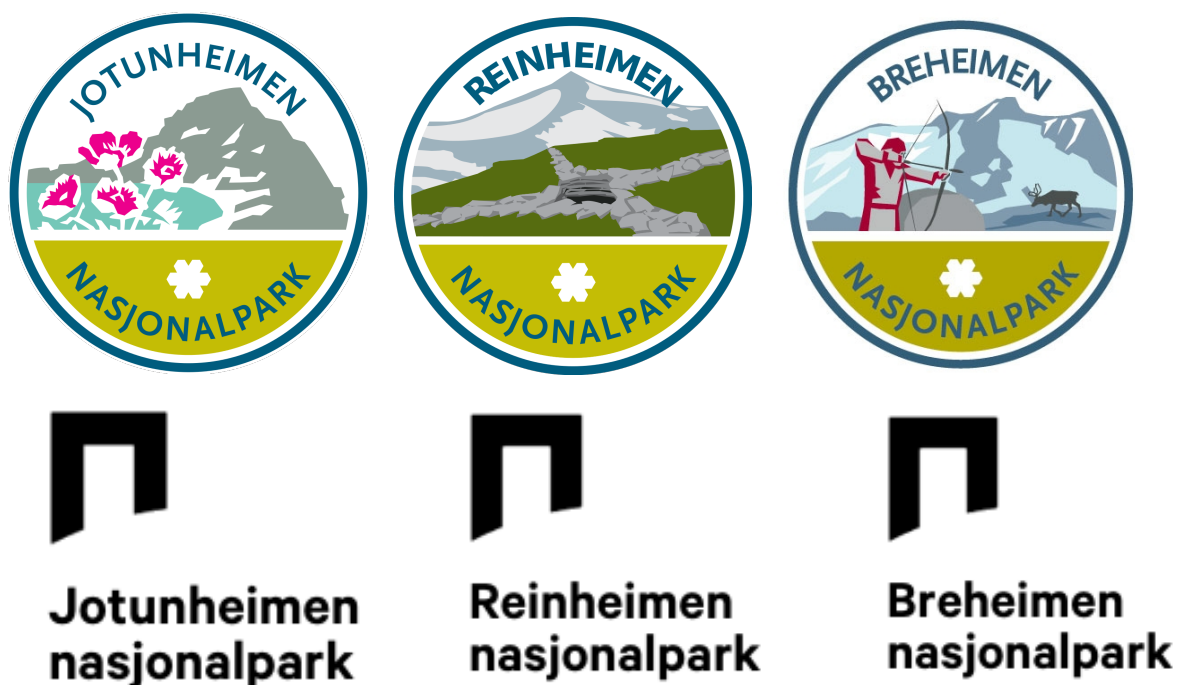


Figure 4: Old logos (top) for Jotunheimen, Reinheimen and Breheimen national park. New logos (bottom) designed by Snøhetta under the auspices of Norwegian Environment Agency.

Jotunheimen

Jotunheimen National Park was first given protection status in 1980 and covers an area of 1151 km². The park includes glaciers, mountains and u-shaped valleys, which are a result of glaciers retreating and expanding over thousands of years (Miljødirektoratet a, 2015). Several places in the park consist of calcareous bedrock. This has created a foundation for the many rare species of plants and animals that live there. The highest mountain, Galdhøpiggen, is also to be found in this national park. Since the early 1800s, Jotunheimen has been one of the most popular areas for outdoor recreation and hiking. As a result, over 300 kilometres of tracks can be found in the park (Miljødirektoratet a, 2015).

Breheimen

Breheimen National Park was established in 2009 and is located between Reinheimen in the north and Jotunheimen in the south. The park is also known as the 'home of the glaciers' and covers an area over 1691 km². Many glaciers can be found there including Norway's largest glacier, Jostedalbreen. Other characteristics are mountain ranges that are over 2000 metres high, pristine lakes and lush valleys. Hiking, fishing and hunting are popular activities in this area. Herds of wild reindeer, as well as deer, moose, wolverine, and a range of other wildlife species can be found in the region (Miljødirektoratet b, 2013). The last ice age led to an abundance of rare plant species in the park such as the Lady's Slipper Orchid, which is registered on the IUCN red list for threatened species (IUCN, 2014).

Reinheimen

Reinheimen is located in the second largest wilderness area in southern Norway. The park extends beyond an area of 1969 km². Characteristics of the park fall within the fields of geology, zoology, botany and cultural history. The park also has a highly productive herd of wild reindeer and this was one of the reasons why the park was established in 2006 (Miljødirektoratet c, 2013). Reinheimen offers a range of outdoor experiences, however, since large sections of the park are classified as wilderness areas, outdoor activities are seldom encouraged in these parts. It is, however, possible to go fishing, hunting and hiking in western parts of the park where facilities are more developed.

3.2 A short profile of Aoraki Mount Cook

Aoraki Mount Cook National Park Visitor Centre

Aoraki Mount Cook National Park is situated in the region of the Southern Alps on the South Island in the region of Canterbury, New Zealand. The visitor centre is located in Aoraki Village that is located within the park, and approximately 150 people live there all year round. The village was mainly developed to sustain and facilitate tourism in the area. A vision has been developed for Aoraki Mount Cook:

"(It) has the potential to become New Zealand's best known visitor destination. It should exhibit an exemplary level of environmental quality and visitor experience. It should reflect a distinctive New Zealand natural and mountain character in relation to its site planning, design and architecture" (Ministry for the Environment, 2004).

The visitor centre building serves multiple functions: it is a public information desk, it displays audio-visual programmes, it is an office, and is a rescue operation base and radio communication base. The DOC staff is responsible for the dissemination of information and guidance, as well as for the management and operation of the visitor centre.



Figure 5: Aoraki seen from the Aoraki Mount Cook Visitor Centre. Photo: Jenni Svartor.

Aoraki Mount Cook National Park

Aoraki Mount Cook National Park was established in 1885 and covers an area of 707.28 km². Aoraki, 3 754 meters above sea level, is New Zealand’s highest mountain and is found in the park together with several other peaks that are over 3000 meters high. The Tasman Glacier, New Zealand’s largest glacier, is also found there. The name ‘Aoraki’ is an indigenous Maori word and it originated from an old legend. The mountain is considered as sacred and, therefore, indigenous people strongly associate with this area. However, Aoraki was not added to the name of the park’s name until 1998.

Climate factors such as wind, rain, snow, and variations in temperature have led to the formation of unique habitats. In 1989, Aoraki Mount Cook National Park was included in the list of UNESCO’s world heritage sites due to its “outstanding natural values” (UNESCO, 2015). The park has a great variety of biodiversity. Over 300 species of plants and 40 species of birds can be found in the park (Department of Conservation, 2015). Among them is the kaki (black stilt), one of New Zealand’s rarest birds. The park is a popular tourist destination amongst New Zealand and foreign travellers. Many people travel to the park to go hiking or climbing or to pursue other outdoor and recreational activities. According to the Department of Conservation (2010), visitor numbers to the park are estimated to be approximately 300 000 annually.

The Norwegian Mountain Centre, the Climate Park and Aoraki Mount Cook Visitor Centre have similar approaches and work within the same field. They all focus on creating information about cultural and natural values and have similar goal in terms of delivering information and education to the visitors. See table 3 for more detailed information.

Table 3: A brief summary of the selected visitor centres. Source: personal communication with staff members.

	The Norwegian Mountain Centre	The Climate Park	Aoraki/Mount Cook Visitor Centre
Annual visitor number	30 000	3500	190 000
Target groups	- International and domestic tourists - School groups	- International and domestic tourists - School groups	- International and domestic tourists - School groups

Main values being emphasised	- Discover, learn and be inspired	- Natural assets - Wild reindeer, permafrost, lichen and climate change	- Conservation, connection with nature and education - History and natural history
Goals	- To be a meeting point where visitors can get positive experiences and information - Educate visitors about the national parks, their nature and history	- To be an educational park which operates with educational tourism - To have entertainment and attraction value	- Satisfy visitors need for information - Connect people with conservation - Facilitate safe participation in recreation - Contribute towards achieving positive outcomes for DOC
Interpretive products	- Exhibitions - Brochures - Guided tours - Books/library - Visitor centre shop	- An ice tunnel - Nature walk - Guided tours - Posters	- Exhibitions - Brochures - Ranger Talks - Books and other retail goods - Education Programme
New technology	- Interactive installations - Maps on digital table tops	- Interactive installation	- Interactive installations - Touch screens
Offers various activities to different age groups	Yes	Yes	Yes
A fixed competency and development plan for staff working with interpretation	No	No	Individuals on a permanent contract have their own Development Plan
Future plans, goals or development	- Implement the new visitor and brand strategy - New main exhibition ready in 2018 - Create an app - Meeting room and space for our research network	- Create an app - Develop a new communication concept - Develop new parts inside the ice tunnel	Described in the long-term strategic plan – not available

3.3 Research objectives

Interpretation as a field of study seems to be given little attention in the Norwegian context. At the same time, there seems to be little research directed primarily towards visitor centres in conjunction with interpretation, especially in relation to environmental education. In that regard, it is interesting to examine how the visitor centres manage interpretation and how it can be used in correlation with environmental education. Other countries, such as New Zealand, show a high degree of implementation. It is therefore interesting to include New Zealand in order to see how key elements are carried out in two different countries. The following overall goal and research objectives have been designed for this study.

Overall goal

The overall goal is to examine how environmental education and interpretation is rooted at a national and local level in association with national park visitor centres. The study looks into how interpretation and environmental education are reflected in framework, management, development and design. A case study will focus on the Norwegian Mountain Centre (Norsk Fjellsenter) and Mímisbrunnr Climate Park 2469 (Klimaparken) in Lom (Norway). The study will emphasize some key points within framework, management and development from Aoraki/Mount Cook Visitor Centre (New Zealand).

Research objectives

1. Identify some key elements of framework, management, development and design.
2. Examine how interpretation can be used as a tool to foster environmental education.

4.0 Methodology

4.1 Research design

Explanatory, Descriptive and Exploratory Research Methods

According to Yin (2009), case studies are used as a preferred strategy when ‘how’ or ‘why’ questions are posed, when the researcher has little control over events or when the focus is on a contemporary real-life context. These are so-called explanatory case studies and can be complemented by descriptive and exploratory research methods depending on the research question. This research project mainly takes a descriptive approach. Information about interpretation and environmental education in association with visitor centres are investigated and described for both countries to illuminate the research question. Background information about both Norway and New Zealand is significant to include. It is included to create a broader understanding of the topic as well as to develop a comprehensive understanding of the case. Some parts have an explanatory approach in order to discuss “*how interpretation can be used as a tool to foster environmental education*”.

Extensive or Intensive Research Design

Another important factor is to determine if the study should be extensive or intensive giving the choice to go wide or deep when creating the research design (Jacobsen, 2005). This study has an intensive (deep) research design because it only focuses on a limited number of visitor centres. Information is collected from three main visitor centres: the Norwegian Mountain Centre, The Climate Park and Aoraki Mount Cook Visitor Centre. The goal is to provide, as far as possible, detailed information and descriptions about interpretation and environmental education in association with the selected visitor centres.

Comparative Research Design

It is common to choose a case study when conducting an intensive research design. It allows you to get the in-depth information that you are searching for on a specific area, situation or topic. The term ‘case’ originates from the word ‘casus’ which in Latin emphasizes the meaning of a single case (Jacobsen, 2005). A case study can be defined as:

“A method that enables the researcher to closely examine the data within a specific context. In most cases, a case study method selects a small geographical area or a very limited number of individuals as the subjects of the study” (Zainal, 2007).

A study can consist of more than one single case. According to Yin (2009) a study with multiple case studies are called ‘multiple case design’. Information gathered from more than one case will usually provide a better foundation for a more powerful conclusion or statement. This study focuses on two cases; visitor centres in Lom and Aoraki Mount Cook Visitor Centre. A comparison of the main elements is an effective method used to analyse some key differences and similarities. However, it is important to emphasise that the main focus in this study is on the Norwegian visitor centres. The overall goal is to create a comprehensive understanding of the phenomenon being studied.

4.2 Case selection

In 2016 I went to New Zealand to do a semester abroad. I was lucky to be able to explore a wide range of wonderful and unique places the country had to offer. However, it was not until a visit to Aoraki Mount Cook National Park that I knew what my thesis would be about. I was fascinated about how organized and well-presented the visitor centre was. My interest for interpretation was inspired through a course I had right before I left for New Zealand. I saw the opportunity to combine these two elements and decided to do a study on visitor centres in New Zealand and Norway with regard to the relationship to interpretation and environmental education. Besides my own observations, New Zealand was also selected because the country had more experience in the field of interpretation than Norway. I chose the Norwegian Mountain Centre and the Climate Park in Lom because they were closely located to Jotunheimen National Park. Jotunheimen is reminiscent of Aoraki Mount Cook National Park with similar types of nature and environments. According to Jacobsen (2005) there are three different types of comparative case design:

1. Compare different cases
2. Compare similar cases
3. Compare cases as unequal as possible

My study will be of type 2, where similar cases are compared. I selected visitor centres in similar locations to make the cases as similar as possible. The visitor centres in these two

locations are more likely to face some of the same challenges. This is mainly because both areas are popular tourist destinations, but is also because the national parks consist primarily of mountains and alpine surroundings.

4.3 Data sampling and collection of data

Data collection consists of both primary and secondary data. My primary data consists of interviews while secondary data are chiefly document reviews.

The main methodology in this study was interviews. According to Yin (2009) interviews can be one of the most important sources of information in a case study and can be used as a 'reality check'. I chose to conduct semi-structured in-depth interviews. In-depth interviews were best suited for this study because I was only going to do a limited selection of interviews. By doing this I could potentially get the type and right amount of information I needed. This method was also a cheap alternative in terms of collecting data that was not available through secondary data. I used public documents such as reports and strategies related to interpretation and environmental education relevant to the research questions. Most documents were open to the public and available online. However, it is important to stress that these were only supplementary sources. Data from the interviews have been processed and analysed and are the main sources of information in this study.

In order to obtain the best possible response to my research question, I chose to interview people working in management or administration at either national or local level. My supervisor, Jan Vidar Haukeland, and previous professor at Lincoln University, Stephen Espiner, helped me with suggestions for possible informants. These two people were a natural choice because both of them knew of people within this field of study and had written several articles regarding tourism and recreation in protected areas. I chose to use the term 'informants' rather than 'respondents' because, according to Yin (2009), a respondent can be more of an informant if you have contact over a longer period of time and can help in finding other informants or additional sources. In this case, I had contact with the informants over an extended period of time. Everyone was contacted via email. I asked if they wanted to set up an interview or if they had other suggestions for possible informants.

Depending on the informant's role, almost everyone was, to some degree, familiar with the chosen visitor centres or national parks. The informants that did not have direct contact with the national parks or visitor centres were chosen because of their experience and knowledge in relation to interpretation. It turned out to be difficult to get in contact with the preferred informants. I had to search for a while to get in contact with enough people with the right background or knowledge. It would have been ideal to interview more people at a national level, however, I did not manage to make contact with people currently working with visitor centres at a higher level. However, I managed to get in contact with two Norwegian informants that could represent national level. They could assist due to their relevant experience and applicable knowledge, and they ended up providing a lot of useful information regarding the research questions. A selection of eight key informants from Norway and New Zealand were chosen. Basic information about the informants is listed in table 4.

Table 4: A short description of the informants.

Informant	Gender	Age	Previous Background	Current Position
NL1	Male	30-40	- Bachelor degree in outdoor education - Nature and educational tourism - Nature guide (naturveileder), Nature Inspectorate (SNO)	- Interpreter /guide at visitor centre - Responsible for dissemination and practical work
NL2	Female	50-60	- Pedagogical education - Some background in history and business administration	- General manager, national park visitor centre
NL3	Female	30-40	- Bachelor degree in Tourism - Master degree in nature-based tourism	- Business manager and coordinator, National village
NN1	Male	60-70	- Nature manager - Head of nature guiding, Nature Inspectorate (SNO) - Established and operated a visitor centre	- World Heritage coordinator
NN2	Male	40-50	- Social science - Instructional Design, Master degree - Human Ecology, Master degree	- Secretariat Director, Norwegian Park Association - Coordinator for Interpret Europe

NZL1	Female		- Bachelor of Horticultural Science - Programme Manager, National Park Visitor Centre	- Community Relations including Media, Concessions and Education, Department of Conservation (DOC)
NZL2	Female		- Admin/ Operations Manager for private companies specialising in guided walks and other activities	- Supervisor, national park visitor centre
NZL3	Male	60-70	- Park ranger, Department of Conservation (DOC)	- Education officer, national park visitor centre

Every informant was treated confidentially. I communicated with them in different ways. All interviews with Norwegian informants were done via Skype and was recorded and later transcribed. I chose Skype because I conducted the interviews from Australia. Skype allowed me to see the informant via a web camera while interviewing them. I figured that this was the best alternative to an in-person conversation. Skype is also a programme many people are familiar with, and the informants did not seem to have any problem using this method. The duration of the interviews varied between 1 to 1.5 hours.

I communicated with the informants from New Zealand through email. Because of the limited amount of time, the informants from New Zealand wished to complete their interviews via email and not Skype. However, they were available via email or phone to answer follow-up questions. As a result, I did not get as much detailed information from New Zealand as I had hoped for. However, I managed to get some key points and other useful information. I found this method of collecting supplementary data from New Zealand through written communications a good alternative, simply because I chose Norway to be the main focus for this study.

I completed one in-depth interview with each of the informants from Norway. However, the same interview guide was used for both countries. I chose in-depth interviews as my technique to be able to get the type of information I wanted. In-depth interviews are often used when interviewing a small number of informants. This technique is powerful when you want to explore personal experiences, processes, operations or outcomes about a specific topic

(Boyce & Neale, 2006). I used a so-called semi-structured interview guide. This was done to be able to give the informants freedom to relay their own stories and experiences. With too much structure, there is a danger that the researcher becomes ‘blind’ (Ryen, 2002). As a result, the interview can feel mechanical between researcher and informant. In the worst case, this can lead to misinterpretation of the questions and mean missing out on important information. According to Johannessen et al. (2011), a semi-structured interview provides the best results because the informant and the researcher together decide what the interview will include. A certain structure can also give a good foundation in terms of analysing data. In this case the interview guide consisted of questions within three main categories:

- (1) Interpretation
- (2) Environmental education
- (3) Visitor centre

Prior to interviews and detailed email correspondence, I made all informants aware of the categories of research as well as what the main goal and scope of the study were. Mainly this was done to emphasize the purpose of the interview, so that they could give me as useful information as possible. A semi-structured interview allowed me to ask follow-up questions if some parts were unclear or needed further explanation. This type of interview, according to Ryen (2002), creates a better flow and feels more like a normal conversation that will lead to a more comfortable situation for the informant. Upon execution of the interviews through Skype, there was certain advice that I tried to follow in order not to impact on the data I was collecting. Ryen (2002) states the following tips: It is important not to impress with your own knowledge, be as natural and calm as possible. Be aware and interested. Also, do not start a discussion even though you do not agree with the informant. Always bear in mind that there is no guarantee that the informant will be completely honest. This may be because they want to match what they think is expected of the informant, they want to be politically correct or respond loyally to its employer.

The questions were individually designed to match the different informants and were conducted in the informants’ first languages (Norwegian or English). The complete interview guide can be found in Appendix 2 and 3. All interviews via Skype were recorded and transcribed. I chose this strategy because I was mainly pursuing detailed information and not just facts. During the transcribing process, some parts of the recording became unclear

because of poor internet connection. To avoid errors in the transcripts, I contacted the informants and let them fill out the missing parts or gaps in the transcripts. I did the same with unclear and incomplete answers from New Zealand.

4.4 Analysis of data

Transcription of the interviews, as well as written communication, made it possible to have easy access to all data in text form. However, the depth and extent of qualitative data can turn the analysis into a time-consuming project. The analysis of a case study has been described as one of the least developed and most difficult aspects of doing case studies (Yin, 2009). Thus, the analysis consisted of reading through the interview responses and looking for themes or patterns among the informants. During this process, I noticed that similar themes and topics emerged from the interviews. This is a sign that a sufficient sampling size has been reached (Boyce & Neale, 2006). All communication with informants was cited with the use of an individual code. The code consisted of three elements, for example: NZL1. First letters represent a country code, N for Norway and NZ for New Zealand. The second element describes if the informant was from a local (L) or national (N) level. Finally, a number separated informants within the same category. I organized the data into three main categories, the same as in the interview guide (interpretation, environmental education and visitor centre). These categories were divided into several subcategories such as framework, management, challenges, and design, inter alia.

Data from Norway and New Zealand were kept separate in order to be able to easily separate key findings. Eventually, relevant responses were picked out to use as citations. The findings are presented in the results section. Public documents were used to supplement some information from the interviews and to evaluate whether the data was trustworthy.

4.5 Validity and reliability

Validity says something about the extent to which the results of a study are valid and how relevant the data are (Johannessen et al., 2011). It is common to divide validity into two main categories: internal and external. Internal validity explains the extent to which the results are valid for the selection and phenomenon that are being studied (Bloor & Wood, 2006).

External validity says something about the extent to which the results can be transferred to other committees and situations (Bloor & Wood, 2006). In this case, the question was if my

results from the study done at the Norwegian Mountain Centre and the Climate Park could be transferred to other visitor centres in Norway. My study of interpretation as a tool to foster environmental education was put in a broad perspective, but with a link to how this was being done at the visitor centres. This could potentially be transferred since goals or missions in association with environmental education might be the same for other visitor centres. National park visitor centres, such as the Norwegian Mountain Centre, have similar approaches in terms of management and framework. In contrast, each visitor centre is unique and has different areas or themes they focus on. However, some elements from this study could potentially be transferred to similar management agencies because they might face some of the same challenges, follow the same national framework and serve as a place where people can get information. On the other hand, extensive interviews with key informants should be included to recognize individual elements such as development, design and management and to create a comprehensive understanding of needs and challenges for each visitor centre.

Reliability assesses the extent to which a study can be verified and how reliable the data are. In other words, how likely is it that the same data will appear in a similar study using the same approach or method (Johannessen et al., 2011)? Interviews are difficult to copy because every single interview is controlled by the conversations and not a structured data-collecting technique. The conversations and data are hard to recreate because every researcher is different and interprets data differently. However, I tried to increase reliability by describing the method in as much detail as possible. I also tried to follow the interview guide to make sure the interviews were as similar as possible. Nevertheless, not every interview consists of the exact same questions. There were times I had to follow up with other questions to be able to get the right information, or because I wanted to know more specific information about the topic we were talking about. Qualitative data can be used as an analytic approach. The method is to some extent generalizing and can form a basis for similar studies (Yin, 2009). This approach can be used within multiple case studies, however every case should develop individual research design to get the best results. Based on these points, it gives reason to believe that some of the same data will appear if a similar research was conducted.

Overall, my conceptual understanding and perception of reality nevertheless affects how I interpret and analyse the interviews. Therefore, I included context and relevant background information about both Norway and New Zealand. My aim is to inform readers and create a similar approach to my conceptual understanding. The latter was also done to increase the

external validity. Case study designs are often criticized for providing little means of external validity or generalization (Yin, 2009). I tried to avoid this by placing the Norwegian Mountain Centre and the Climate Park into a larger context by, for example, looking at relevant research and literature of other visitor centres.

5.0 Results and Analysis

This chapter presents findings and analysis from the eight interviews. The first section focuses on terminology as well as perception, function, and understanding of the various concepts.

The second section looks further into the connection between interpretation and environmental education. This part also looks at what roles visitor centres play. Finally, the last section highlights elements of framework, management, development and design in relation to interpretation and environmental education at the visitor centres.

5.1 Perception and function

Interpretation

The term ‘interpretation’ seems to be frequently used within literature and documents mentioned by the informants from New Zealand. All informants expressed ‘interpretation’ as having a strong correlation to elements such as storytelling and education and in association with natural and cultural environments. Interpretation was also associated as a tool to enhance the visitor experience.

“Interpreting the natural and cultural landscapes to enhance visitor experience and understanding of the natural world and the environment around them” NZL1.

“Challenging visitors to learn about the landscape and natural history of the park to gain understanding and provide an opportunity to enhance their visit” NZL3.

When interviewing the Norwegian informants it appeared to be difficult to find a good translation of interpretation into Norwegian.

“Yes, you are right. A good Norwegian term does not exist” NL2.

“Interpretation is well-covered by the English definitions” NL1

“Swede, Svenn Hultmann, created a basic report at the end of the 80’s (...) he translated interpretation to dissemination (‘formidling’). That might be the closest, we might understand that term, however to do that I think we need to understand a little bit more as well” NN1.

It was therefore necessary to begin this part of the interview with a discussion of the term, 'interpretation'. However, all informants agreed that interpretation could be associated with a selection of different elements such as guiding, communication, exhibition, activities and so on. Many of the Norwegian informants associated interpretation with the Norwegian term 'naturveiledning' (nature guiding) as well as the act of conveying information or dissemination.

"The first I think of is 'naturveiledning' (nature guiding), but as a version of interpretation since this is what I have been working with as a tool to implement environmental policy" NN1

"We use 'dissemination' ('formidling') as the Norwegian term, however 'interpretation' was used when we were employing nature guides for the national parks" NL2

Nature guiding does not seem to reflect, however, the same elements as the English term of interpretation. Nature guiding as a definition created by the Norwegian Environmental Agency and the Norwegian Nature Inspectorate, focuses on dissemination of knowledge, respect and care for natural and cultural environments. The definition is also limited to the involvement of communication performed by a nature guide. It appears, among some of the informants, that this definition is out of date and that it needs an upgrade. One of the informants said that an update could help Norwegian interpretation to fit in on an international level. It was suggested that the term 'nature guiding' should be replaced with another term such as, 'heritage interpretation' which could combine areas within both nature and culture interpretation.

"(...) Nature guiding ('naturveiledning') has been the Nordic term in this context for many years. However, it is slightly changing" NN1.

"I am a proponent of a somewhat broad definition such as heritage interpretation as nature and culture dissemination ('natur og kultur formidling') - where you can plan, you can be a guide and do a variety of things associated with this term" NN2.

Informal learning

It is stated that information given through interpretation can be used as a process to make a connection to people's feelings, which can enhance the overall experience. Interpretation differs from other ways of delivering information to the extent that the information is often given in an informal setting which focuses on elements such as emotions, senses and personal relations rather than facts. The visitor centres look at interpretation as being an important tool for imparting knowledge in an interesting way. In face-to-face situations, the focus lies on engaging the audience. This is done by encouraging people to ask questions, creating conversations, and by simply entertaining the audience.

“Interpretation and dissemination is a communication process which is focussed on emotions and phenomena, not facts. (...) interpretation is aimed at those who come by chance, those who are out with their family that randomly find a park, or those in a national park that want to go for a walk, it is more suitable for informal learning or informal communication and will also create good visitor experiences” NN2.

“Our goal is to make the dissemination of knowledge as interesting as possible. The point is that as a commercial player, we must also entertain the audience. Create good content, but also make it interesting with humour and other measures. We would also like those who are on the tour to be active so there is no one-way communication. They can ask questions and start conversations. Also, we work actively to get the guests to feel and touch, and of course let them see so they know what exactly we are talking about in the Climate Park. Activation of the senses is important. We jump, smell, taste and feel things” NL1.

Strategic communication

Several of the informants, from both Norway and New Zealand, highlighted their focus on interpretation as a way of strategic communication. Many stressed the importance of having a goal or main message for the audience. Being aware of the main message makes it easier to develop an alternative strategy or method to be able to convey information about the main message rather than just imparting factual information and hoping that the main message comes through. Interpretation as strategic communication seems to be particularly relevant in terms of how to perform guiding and during face-to-face communication. This form of communication also seems to be aimed at informal situations.

“Strategic communication is important when you are conducting guiding or dissemination. It is important because you have to be concerned about the audience and you must be able to fulfil what you want to convey. Therefore, you must have a strategic mindset, think about how you emphasize and are conducting things” NL2.

“Interpretation is a form of strategic communication, especially aimed at informal settings” NN2.

Some informants also believed that people learnt more through active communication rather than through reading a text or other information.

“I believe that if you can activate the people you want to convey information to, they will learn quicker compared to having basic information dissemination” NL3.

“We focus on making the information we want to emphasize - not through screens or brochures – but through meeting people. It is more important. We have exhibitions and brochures that people can use themselves, however we do also offer guides because we have discovered that the audience get more out of personal dissemination” NL2.

Environmental education

Environmental education is largely linked to school and education systems. However, at the visitor centres in this study, information associated with environmental education is also communicated to visitors. The purpose is to create some sort of understanding or knowledge about environmental topics to the general public as well as to school groups. Through the different visitor centres, environmental education largely focuses on creating awareness of conservation, understanding the context of environmental issues, and creating personal connections to nature and the environment. However, the visitor centres do also present other topics related to nature and the environment such as climate, biology and human influences. Humans have long traditions with the use of nature. Human culture and history - in relation to nature - can be seen as a part of environmental education, which is an important part of cultural heritage. Through the interviews it is important to highlight that the term, ‘environmental education’, covers a range of different areas.

“Environmental education is about educating the public and the student about the environment, the effects on the environment, how they can affect the environment and what they can do about some of the effects. It is also about history, geology, geography, biology, human use and climate” NZL1.

“We use a lot of time to look at small relationships in nature, see how one factor can affect another factor so that people do not get caught up by a single factor. We are doing this to be able to understand that when the climate changes it will affect a whole set of different factors that are interrelated” NL1.

5.2 Interpretation in association with environmental education

Mission-based

The use of interpretation can help people to understand complex topics such as climate and the environment. These elements are also the main topics emphasized at the visitor centres. Another highlighted factor is that interpretation can lead to a deeper understanding of the themes being implemented and that this could potentially lead to a change in people's attitudes. In relation to nature and culture, interpretation is used because the goal is to achieve something deliberately, such as caring for nature or the importance of preserving cultural heritage.

“Interpretation can assist to mould perception around big issues such as environmental degradation and climate change” NZL3

“(...)you use interpretation because you want to achieve something and you should preferably achieve consciousness thinking which is important to be able to take care of nature and preserve cultural heritage. It is not only about enjoyment and the experience, but it should also lead to something - in the minds of people” NNI.

A need to educate people about the environment and nature

Environmental education can be shifted from a formal to an informal setting. School groups often have a specific target or mission-based goals that they have to fulfil to satisfy school curricula or education directives. The visitors' centres help to achieve these goals through exhibitions, activities, talks and so on. However, environmental education can also be as simple as creating an interest in nature or the environment. It is stressed that this connection is important to maintain because more people live in cities. One informant highlighted the need for city dwellers to learn about the environment to be able to understand the importance of having protected areas such as national parks. Visitor centres play a significant role in presenting and educating visitors about the characteristics and values of national parks.

"(...) more people live in big cities and do not see how things are linked together. Some basic knowledge disappears because people do not get close to nature or natural environments" NL3.

"(...) we can get a form for environmental education simply by creating an interest and inspiration among people" NL2.

Visitor centres operate as both interpretive and education centres

The visitor centres in both Norway and New Zealand seem to have a similar approach and have a number of different roles. They serve as general information centres as well as a place where visitors can have good experiences and learn something about the surrounding areas.

"The Aoraki Visitor Centre is both an interpretive centre and an education centre. They go hand in hand really, and it was designed with this principle in mind. So the downstairs section was designed with school groups in mind, and there are displays there directly associated with school curriculum. The "red room" is designed for school groups and presentations. There is an activity sheet that both primary and secondary students use to guide them around the centre, looking for certain information" NZL1.

As already highlighted by the informants, environmental education can relate to changing people's attitudes. This can be done by enhancing people's knowledge and increasing understanding about topics in relation to nature and the environment. One informant points

out that knowledge is the key to understanding the consequences of one's actions and attitudes and that understanding can be obtained through interpretation.

“(...) without knowledge the chance to obtain the right attitudes and actions are very small. So knowledge must at least be the foundation and knowledge are developed through interpretation” NL3.

At the visitor centres, the staff organizes different activities and programmes aimed at educating people about nature and the environment. In New Zealand, the visitor centre and Department of Conservation work with a programme funded by the Ministry of Education called LEOTC (Learning Experience Outside the Classroom). One of the activities is to search for answers within the displays. Another programme called ‘Kiwi Ranger’ is aimed at children but can also be completed by adults. It is an interactive programme, which aims to encourage exploration and learning about ecology, culture and history through activities such as scavenger hunts and by completing journal entries.

The Norwegian Mountain Centre and the Climate Park offer special programmes created for school groups. As an example, at the Norwegian Mountain Centre they offer an activity that is similar to a role-play. They use environmental education in practice to help young students to understand how development can lead to increased pressure on areas where wild reindeer live. Observations done by the staff say that this activity is well-received among the students.

“We are very obsessed with our own selfishness that leads to destruction of the environment. However, this activity leads to great enthusiasm among the students” NL2.

5.3 Framework, management and development

Norwegian Branding and Visitor Strategy

The Norwegian Mountain Centre has gone through a big transformation in an effort to meet the criteria for the new branding and visitor strategy. The centre has created a new entrance, changed logo, signs and other visual elements in order to fulfil the requirements in the design

manual created by the Norwegian architect firm, Snøhetta. All national park visitor centres are required to follow this design and layout.

“It is very important that we follow the design manual. There are absolute requirements regarding how logos, flags, maps, brochures, images should look. All operators within the branding strategy are required to familiarize themselves with this branding strategy” NL2.

It was highlighted that the terminology of interpretation is not as well-established in Norwegian framework and development as it might be in other countries. It was pointed out that Norway has a lot to learn in terms of interpretation design and dissemination. In saying that, Snøhetta’s new design manual for Norwegian national parks is a step in the right direction, but there is still a lot to learn.

“How we communicate with people in Norway has so far been influenced by a bureaucratic language with a lot of text controlled largely by the environmental authorities (...), but through the Snøhetta design process, they converted this into more simple text and created a more positive approach in their writing style. However, I see that there are many who have much to learn from this on a general basis in Norway” NL3.

The new visual profile appears minimalistic, simple and nice to look at. However, the identity of each national park and what they stand for might seem to become less visible to the public with the new park logos.

“I think it creates a uniformity for all the national parks, I do not think the characteristics of each park is being expressed well enough. If you look at the logos of the national parks in the previous visual profile, you can see that they highlighted particular features of the parks” NN2.

There are other elements of the design manual that face some criticism. It appears to be a challenge to create a suitable website, not only for the Norwegian Mountain Centre, but also for the national park visitor centres in general. This is primarily due to a lack of funds.

“(...)Snøhetta has made a template describing how a website can look, however it is up to each operator if they want to do something with the template or not. Suddenly we will have

thousands of different webpages, perhaps with some similar templates, but still no common platform for the national parks as they have, for example, in New Zealand” NL3.

“We got an offer from Snøhetta to create a website for us, but it was very expensive, 75 000 NOK (approximately 8800 USD), and we do not have the funding to cover that” NL2.

Representatives at the local level, including staff from the visitor centres, were invited to take part in the development process of the design manual. However, the manual was mainly developed by architects and not interpretive planners or people with professional backgrounds within interpretation. There seems to be a wish for better cooperation between architects, designers and people with expertise in the field of interpretation to be able to develop the best way of conveying information.

“(…) the sign looks good, however you have to stand very close to be able to read it. (...) sometimes I wonder if they have checked with the Public Roads Administration to find out what the standard font requirements are. They have thought about design, and that it should look like such and such. They might not have always thought about the practical consequences of doing that” NL3.

“It is often architects who are involved in the exhibit planning and other development for the visitor centres. It would been a great advantage if there had been an interpretive planner who first did some work to think through issues, goals, what media do we need, what is the objective of interpretation, who is it that comes to our visitor centres, who are the target audience and so on. (...) Cooperation between interpretive planners and architects is a very exciting collaboration, for they are supposed to do something in the physical form that an interpretive planner or designer has thought out some concepts for” NN2.

Managing Interpretation

It was highlighted that people with expertise within nature and dissemination, such as the Nature Inspectorate, are needed and should be included in future tourism management and development. Some informants say that positive visitor experiences are enhanced through good interpretive planning and they stress the need for more interpretative planning at visitor centres in relation to national parks. One informant also suggested that interpretive planning could be included in visitor planning and development.

“Interpretation can be a soft strategy in visitor management in relation to steering people to where they should have good visitor experiences, therefore this field of study is really important” NN2.

Staff training in relation to interpretation methods and development varies between the two countries. At the Norwegian visitor centres, it is specified that employees who work with direct visitor contact, especially guides, get trained before and then regularly whilst working. The Climate Park has a high staff turnover.

“We try to help in different situations and discuss how and what we are going to talk about with regard to the various topics. (...) they get a course beforehand and it is mostly students who working on masters’ theses or have one to two years left to finish a degree. (...) So there are a lot of staff changes. It might have been different if we had had the same people every year” NLI.

For the rest of the staff, much of the responsibility for training within interpretive fields lies with each employee.

“It can be anything from a writing course to being able to convey information in text form, creating information suitable for our website or brochures. So it is up to each individual to evaluate what they need” NL2.

In New Zealand, permanent staff that work with interpretation and environmental education get specialised training and their own development plan. The Department of Conservation seems to play a significant role in this training.

“Each individual on a permanent contract has their own Development Plan where personal skills and other development are highlighted based on what training is available through the Department of Conservation” NZL2.

Development and Funding

There are criteria, strategies and development plans for visitor centres in Norway, especially for national park visitor centres. Every fifth year each centre has to ensure that they are

compliant with a list of specialized authorization requirements. However, there appears to be a problem with fulfilling the requirements because of a lack of financial support from the government.

“Financially the Environmental Agency and the Ministry of Climate and Environment have not been able to give us as much operational support to be able to fulfil the authorization requirements. We only get operational support once a year, and a few years ago it used to be 350 000 NOK (approximately 41 000 USD) but that is literally nothing. From 2017 it increased to 1 million NOK (approximately 117 000 USD) but it is still not enough to be able to meet the requirements” NL2.

Findings from the interviews suggest that much of the operation and development of the visitor centres is left to local initiatives, largely due to high operation costs.

“(…) whether there will be a visitor centre or not is largely left to local initiatives. (...) some people might have seen a political document that says ‘we want a national park visitor centre’. Then someone has taken hold - either locally or regionally - and said, that's okay, then they try to develop it and hope that they will manage to get funding and get the operation going. Today the government subsidy is about 1 million NOK (approximately 117 000 USD) a year, but everyone has greater costs linked to staff, facilities, and activities” NNI.

Exhibition Design and Planning

Much of the communication and information is delivered to visitors through the use of different interpretive products such as exhibitions, nature walks, signs etc. At the Norwegian Mountain Centre, the exhibitions seem to be one of the interpretive products that are given a lot of attention in terms of development. A range of people with different expertise are involved in the process of designing and making exhibitions: a reference group including professional networks, local managers, a multidisciplinary research network, an exhibition designer and a scenographer. Findings indicate that it is a democratic process.

“It is a long process and we have a large extent of democracy here, almost too much sometimes. Pretty much everyone who works here is involved (...). We look at each issue in the reference group, but it's a project team that eventually decides the theme for the exhibition. This is then approved by a steering committee for The Norwegian Mountain

Centre and the Climate Park. In the end, the reference group helps to refine the theme and topics” NL2.

In the Climate Park, an ice tunnel is used as its main exhibition. It was inspired by Norse mythology. The tunnel was developed and designed by artist Peder Istad.

“Peder Istad is responsible for the artistic design of the ice tunnel and he had an overall plan for it all. However, it is clear that we make suggestions and we play a lot on Norse elements. It is an educational strategy that we use stories from Norse mythology. By getting their view of the world, Yggdrasil (mythical tree of life in Norse Mythology) is placed in the ice tunnel and we use it to talk about Norse mythology and such things are an important part of the communication there. (...) there is clearly a link between things that are done in the ice, against the elements, from the Viking Age and with ecology and nature” NL1.

6.0 Discussion

6.1 Framework and management

Nature guiding ('naturveiledning') has, for a long period of time, been used to disseminate natural and cultural information. It has also been a means of providing environmental education dissemination ('formidling'). It appears, through the interviews conducted, that these are some of the core elements being implemented at the visitor centres in Norway. However, when discussing nature guiding with the Norwegian informants, it appears that the English term 'interpretation' is better suited to explain different variations and aspects in comparison with dissemination. Furthermore, interpretation as a term, faces some challenges in the Norwegian context simply because some of the informants believe that people are not used to this term. This could be explained by the fact that the term 'nature guiding' has been a key part of the Norwegian framework via policies, strategies and so on, rather than 'interpretation'. Some informants point out that nature guiding is used in order to explain elements within nature and culture dissemination at the visitor centres. When interviewed, many of the informants were familiar with the term 'interpretation', but it seemed as if most of them would rather chose to use 'nature guiding' when discussing different topics during the interviews.

Nature guiding is, to some extent, interpretation, however the literature shows that interpretation is so much more. Recent definitions describe interpretation as not only being about provocation and connection, as is the case in the Norwegian definition for nature guiding (Direktoratet for Naturforvaltning, 2010). Interpretation is described as a tool for developing installations and guided tours in an effort to foster understanding and education, and to enhance the visitor experience (Ham, 2013 and Marschall et al., 2017). Findings from the interviews show that nature guiding at the visitor centres has a strong focus on communication between people and is only, to a small extent, included in different aspects of interpretation or other forms of communication. One informant stresses the importance of the need for a broad Norwegian term and suggests that the term 'nature guiding' should be updated. Further, the informant justifies this on the basis that Norway should be able to 'compete' in the field of interpretation at an international level. It may seem as if the informant is slightly displeased because Norway does not follow international trends and development within this field of study. What the informant might be signalling is that it is

important to emphasize that interpretation can be used in various situations and be developed for different interpretive products for both captive and non-captive audience. This can be traced back to Ham's (2013) statement that interpretation has to be done differently depending on the type of audience. It is understood that it is important to include interpretive methods and strategies for different interpretive products throughout the visitor centres. Similar ideas can also be found in Beck and Cable's (2011) principles of interpretation, which explain how interpreting nature and culture requires skills within a variety of different levels and areas. They describe the importance of elements such as interpretive writing, presentation, and design, in order to create the best experience for both non-captive and captive audiences.

The Norwegian Nature Inspectorate has been, for a long period of time, in charge of nature guiding in Norway. It has played a significant role within development and management and appears to be an important link between interpretation and environmental education at local and national levels. The Nature Inspectorate could perhaps be considered similar to the staff in the Department of Conservation in New Zealand as they both work with dissemination and communication, and both have significant roles in conveying information. That the government wants more focus to be put on the dissemination of information through visitor centres is seen by the informants as a positive development. Informants from both the Norwegian Mountain Centre and the Climate Park seem passionate about their work. They are eager to create good visitor experiences and to inform people about natural and cultural values. One informant stresses that they work actively to engage people and show them exactly what they are talking about through the use of different senses. Beck and Cable (2011) mention passion as the final principle for interpreting nature and culture. Passion is a powerful and essential ingredient for developing effective interpretation. It is evident that the visitor centres take their roles seriously and that they have a strong wish to make education and information entertaining. The importance of this is highlighted in the parliamentary report, 'Outdoor life' ('Friluftsliv') from 2106 (Klima- og Miljødepartementet, 2016). The report states that the government will further develop the dissemination of knowledge regarding nature, cultural heritage, and world heritage at the centres. Further, it is stressed that to increase the quality of communication, interdisciplinary cooperation between those who are dealing with disclosure should be developed. This will include institutions such as museums, nature guides, natural and cultural heritage management, and educational institutions (Klima- og Miljødepartementet, 2016). It is highlighted in the report that a number of the Norwegian

national park visitor centres have sufficient staff, including nature guides, and that their work is of significant importance in terms of guidance and information in protected areas.

However, it is mentioned that, between 2017 and 2018, nature guiding by the Nature Inspectorate will be discontinued. Findings from the interviews indicate that this measure could lead to an important part of Norwegian expertise (within the field of interpretation) becoming less visible. It may also seem as if several of the informants think it is strange that the government would want to reduce the Nature Inspectorate's role, especially when it is of such importance within nature guiding, information and communication. Another informant believes that this new focus on visitor centres could potentially provide an opportunity to introduce new interpretive terms into Norwegian framework and management, such as, for example, nature and culture dissemination ('natur- og kulturformidling'). This is because, through the visitor centres, there is a greater chance that a variety of different interpretive products will be used rather than only nature guiding performed by nature guides.

An informant from New Zealand explains how individual training and development plans can help staff to improve and achieve their goals, increase the quality of the visitor centre, and enhance the visitor experience. Development and planning for the employees is also an area, which seems to get a lot of attention at Aoraki Mount Cook Visitor Centre. According to Beck & Cable (2011) the staff is an important cornerstone in creating good visitor experiences, especially in situations where they function as guides or deliver information through face-to-face communication. Beck and Cable (2011) also stress the importance of having basic communication skills and being able to work with continuous development. Throughout the interviews with the Norwegian informants, it may seem that a large part of their job is being left to each individual visitor centre. Norway has no strict, binding regulations or rules for how staff working with interpretation should be trained. However, informants from the Norwegian Mountain Centre and the Climate Park do highlight that they are working on the development of communication, skills training and so on. Planning for and development of employees seems to be of high importance. At the same time, some appear to believe that management and development have the potential to become better, especially if the Norwegian government could prioritise interpretation framework, such as strategies and legislation. This could indicate a need as well as a wish to become even better within this area.

Literature describes how New Zealand has, historically and to a much greater extent, focussed on visitors and experiences inside the national parks through the ‘dual mandate’. The dual mandate refers to how national parks in New Zealand have been consciously designed and developed for tourism and regional economic growth (Higham et al., 2016). It prioritizes the planning of nature conservation as well as visitor management. This is very different from the traditional Norwegian use and conservation of protected areas. However, this is changing slightly due to the introduction of a new visitor and branding strategy in 2015. It seems as if the informants are positive and hope that the strategy will contribute to the increased tourism and the use of Norwegian national parks. This can be seen in the context of previous studies that show that the quest for nature-based tourism experiences is increasing (Haukeland et al., 2010). National parks are pointed out as popular tourism destinations, which means that the Norwegian Mountain Centre and the Climate Park may expect an increase in visitor numbers. The informants stress that the visitor centres play an important role in presenting, educating and informing visitors about the characteristics and values of the national parks. Ecotourism is increasing in popularity, and travellers often search for nature-based experiences and participation in environmental learning (Perkins & Brown, 2012). The Climate Park is a good example of where visitors can meet both needs. They get a nature-based experience by exploring the surrounding area as well as a walk through the ice tunnel. At the same time, the tour guides actively engage people in environmental learning by presenting topics such as climate change or wild reindeer. Overall, the Norwegian Mountain Centre plays a significant role in inspiring visitors to use the national parks. Staff members at the Norwegian Mountain Centre say that their most important goals are to be able to help people to see the beauty of nature and to be actively involved in contributing to positive nature-based experiences.

6.2 Development

Tourism is one of the fastest growing sectors in the world, with adventure and nature-based tourism being some of the most popular areas (ATDI, 2016 and UNWTO, 2016).

Nevertheless, some areas within the tourism sector seem to be given low priority and this can be linked to why the Norwegian Mountain Centre struggles with financial support. Through the interviews, one informant explains how every Norwegian national park visitor centre has individual authorization requirements that they are required to follow and work towards.

However, it is also evident that lack of financial support is the main reason for why the Norwegian Mountain Centre struggles to fulfil the list of requirements. Development of the new branding and visitor strategy may indicate that tourism in protected areas is something

that the government will continue to focus on. This could be linked to the fact that Norway is among the world's most popular adventure tourism destinations (ATDI, 2016). Nevertheless, findings indicate that national park visitor centres seem to be given low priority.

Parliamentary financial support, which is provided to cover operational costs, management, and authorization requirements, is minimal. Most of the Norwegian informants expressed some frustration and despair over the low subsidies. This would appear to cause some challenges for the visitor centres, especially for the Norwegian Mountain Centre. Several examples were highlighted. For example, it is too expensive for the Norwegian Mountain Centre to hire Snøhetta to design a website in order to be in line with the new visual profile. Instead, they have had to create their own website by using the design manual as a guide. Snøhetta has provided descriptions regarding design and layouts through the design manual. However, it is said that this could potentially lead to a number of different websites when the visitor centres are not able to afford professional help. Instead, each visitor centre will create its own website that might have some similarities to other centres, but there will be no general uniformity. Thus, some of the informants appear to think that the new visual profile might be less effective in some areas in creating a clear brand for all national parks.

It is stated in Norwegian strategies and parliamentary reports that visitor centres play a significant role in creating good visitor experiences and that they should educate and inform people (Klima- og Miljødepartementet, 2016 and Miljødirektoratet b, 2015). Interviews also revealed that the national park visitor centres are important places for visitors to meet and gain new information. It seems as if the new branding and visitor strategy has helped the Norwegian Mountain Centre to form an overall profile when compared with its old profile and visual identity. The informants explain that a lot of work has been done, and still remains to be done, with regard to implementing a whole new image. Despite a lot of changes and hard work, it seems as if the employees at the visitor centres are pleased with the new brand. It is clear that the attention the national park visitor centres have received through the branding and visitor strategy is much appreciated. For example, the Norwegian Mountain Centre received additional funding to develop a new entrance and facade. The changes that were made led to a building that today appears modern and welcoming (see figure 2).

The informants from the visitor centres also explain how they work with new and creative solutions in order to keep up with trends and changes in society. Findings in this study indicate that the visitor centres are aware of societal change. They are constantly working

with development in order to keep up with trends such as new technology. For instance, the Norwegian Mountain Centre is looking into creating an app to improve communication and make information available in various languages. This can be linked to Beck and Cable (2011) who highlight the need to always develop and improve interpretive design, methods, strategies and structures in order to have optimal effect on the audience.

6.3 Design and process

An informant thought that the design manual tended to make characteristics of the national parks less visible and more anonymous. This is evidenced by comparing the old and new national park logos (see figure 4). According to the informant, the new logos look identical and communicate nothing but a symbol for a national park. What this could mean is that the national park visitor centres might have to work even harder to accentuate their unique characteristics as all Norwegian national park and national park visitor centres logos are almost identical. It was suggested that from a tourist's or visitor's point of view, it might be confusing when every national park and visitor centre they visit have almost identical logos. Will people be able to separate the different national parks? Will they remember the values and characteristics of Jotunheimen or the Norwegian Mountain Centre just by looking at the logo? It is hard to come up with an answer without any research. However, the logo is very much a definition of what the national park and visitor centre want to communicate. In this case, the portal in the logo stands for 'Welcome inside'. One of the informants says that it is nice to feel welcome, but it would be even better if the logo showed what lay behind the portal. A logo can be considered to be an interpretive product and a part of the overall image. The informant says that the logo should symbolize the values or characteristics about the national park or protected area that it stands for. Based on this, it suggests that interpretive products should follow interpretive methods. This can, for example, be elements from Ham's TORE model of thematic interpretation or interpretive strategies and development processes described in DOC's interpretive handbook.

Most of the interpretive design and planning of the national parks is being left to each individual visitor centre to manage. Furthermore, the Norwegian Mountain Centre appears to include a range of people with different expertise, especially when creating new exhibitions. A reference group would suggest that a variety of ideas and contributions have the opportunity to be heard throughout the process. It is also interesting that the Norwegian Mountain centre use both an exhibition designer and a scenographer when developing

exhibitions. This example shows that by actively including representatives from different backgrounds, it could help the visitor centre to achieve the four main goals of interpretation; visitor satisfaction, knowledge gain, attitude achievement, and behavioural change (Roberts et al., 2014). These goals require knowledge within different fields and are important for the visitor centre to work as a whole as well as being important for each single interpretive product. The range of people with diverse backgrounds might increase the chances of creating an interpretive product of high quality. On the other hand, one informant says that there can sometimes be too much democracy as a result of the number of people involved in the process. This can be linked to the fact that development and creation of new interpretive products is a complex process, which requires a lot of planning in order to produce the best result (Ham, 2013).

As mentioned, the Climate Park used the Norwegian artist, Peder Istad, to develop and design rooms inside the ice tunnel. Through the interviews, it seems that Istad created elements inside the tunnel to symbolize topics or themes that were communicated to him by the staff. This example emphasizes one of Tilden's principles of interpretation; that interpretation is an art that combines many arts and can be linked to the use of architecture, history and materials (Tilden, 1977). Beck & Cable (2011) explain this by saying that the presentation should be designed as a story that informs, entertains and enlightens. Without any research, it is hard to tell if the ice tunnel actually meets these suggestions. However, through the descriptions given by the informants and by looking at photos, it is reasonable to believe that Istad gave the interpretive design a lot of attention. The ice tunnel looks well organized and appears to convey and present information and history in an enjoyable way.

6.4 How can interpretation be used as a tool to foster environmental education?

The informants seem to agree that interpretation and environmental education are similar in terms of being mission-based in approach, and include either a goal or message to pass on to the audience. This is evidenced through descriptions on how the visitor centres actively work with environmental education through the use of interpretive products. According to Ham (2013), interpretation about making a difference is deliberate. Similarly, basic mindsets support the idea of environmental education being carried out to reinforce people's attitudes, beliefs and visions towards the environment (United Nations, 1992 and IUCN, 2003). In other

words, interpretation and environmental education are carried out to enlighten and increase knowledge amongst people. This is also stressed through goals and visions at the visitor centres. However, some of the informants point out differences between the two approaches with regard to how the information is conveyed. This can be traced back to the fact that environmental education is often found to be rooted in the national framework and is perhaps best described in relation to educational systems.

A number of the informants say that they primarily associate environmental education with schools or in relation to other educational contexts. However, the visitor centres explain how they offer a range of different educational programmes - for school groups as well as for other visitors - in conjunction with environmental education. This is where interpretation may play a significant role in fostering environmental education. Through the results, it may seem as if the visitor centres can be considered to be alternative learning platforms. This is because the forums for communication are described as rather informal, especially when compared with how environmental education happens in a traditional classroom. Elements of environmental education, such as natural and cultural values, are included in the visitor centres' goals and main focus areas (see Table 3). Findings show that interpretive planning, strategies, techniques, and methods are the tools being used to create creative solutions which convey these themes in an interesting way.

Furthermore, the visitor centres develop alternative education programmes like LEOTC that is being offered at the Aoraki Mount Cook Visitor Centre. The Norwegian informants also purport that the alternative school programmes have a positive effect in terms of engaging the audience. In the Climate Park, a lot of the education and dissemination of information is through personal communication. This seems to be significant in creating interest and engagement in natural and cultural values. It is possible to see a link between Tilden's famous quote and the work that is being done at the visitor centres. "Through interpretation, understanding; through understanding, appreciation; through appreciation, protection" (Freeman Tilden, 1977).

Results from the interviews suggest that visitor centres function as both interpretive and educational centres. A range of different programmes, activities, and a variety of interpretive products are offered to both school groups and visitors. By using visitor centres as alternative classrooms, the information and knowledge the student or visitor gains, might come more

naturally. For example, as several of the informants explained, the use of an activity or exercise, such as a role-play, can create knowledge in an untraditional way. This also seems to make a situation become more informal and fun. The way that the informants explain the different activities suggests that this way of conveying information is popular with and entertaining for the visitors. According to Ham (2013), entertainment and enjoyable experiences play a significant role in creating functional interpretation. On the other hand, it is hard to tell how activities or other types of interpretive products affect environmental attitudes and beliefs in the long term. The informants explain how hard it can be to educate or inform people about complex topics such as climate change. However, to solve this problem, the visitor centres focus on specific topics and use alternative communication methods in order to create interest. For example, the Climate Park has a strong focus on getting people to understand small relationships in nature in order to create an overall understanding of climate change. The guides can help people to create enjoyable and positive experiences by introducing them to new aspects of nature.

The results show that visitor centres aim to deliver environmental education through knowledge, information and understanding by using different interpretive products. A specific need to educate people about natural and cultural values is a priority, according to the interviews with the informants. One informant expressed the urgent need to create interest among city dwellers because basic knowledge about nature seems to be disappearing. The literature suggests that interpretive products can help to complete goals, and influence desirable behaviour, beliefs or attitudes. Interpretation and environmental education are mission-based approaches and can therefore be linked to the theory of planned behaviour (Ajzen, 1991 and Munro et al., 2008). This becomes crucial for the visitor centres in conveying information to all types of visitors including city dwellers. Because interpretation is described as strategic communication, one would think that the use of interpretation could potentially promote certain behaviours. Environmental education through interpretation can therefore be used in order to change people's attitudes and beliefs. It is said that without knowledge, the chances of getting the right attitudes and actions is very small. It is also emphasized that one of the main reasons for why visitor centres are established is to preserve natural and cultural values. Similarly, environmental education is described as a process which can improve people's perceptions of the environment and associated issues (IUCN, 2003). Interpretive products at the Norwegian Mountain Centre, such as the role-play focusing on wild reindeer and their vulnerability to development, can lead to greater

understanding and might influence people's beliefs and attitudes. This can be linked to how interpretation can provide meaning, engagement and education for visitors (Marschall et al., 2017).

7.0 Conclusion

The goal of this study has been to examine how environmental education and interpretation is rooted at a national and local level in association with national park visitor centres. This study primarily focussed on two visitor centres in Norway: the Norwegian Mountain Centre and the Climate Park. Further, the study included a selection of key elements of framework, management and development from Aoraki Mount Cook Visitor Centre in New Zealand. Overall, the study examined different aspects of framework, management, development and design, and how interpretation can be used as a tool to foster environmental education.

The results show that ‘nature guiding’ (‘naturveiledning’), as a term, should not be considered the same as ‘interpretation’. It appears that Norway should change or update this definition in order to include various aspects of interpretation. Most of the interpretation that is being performed at the visitor centres in Norway is done in relation to the dissemination of information about nature and culture. A number of different interpretive products are being used to convey information to visitors at visitor centres. It is therefore desirable that the Norwegian framework starts using a term that can reflect several aspects of interpretation. It is reasonable to believe that using a term that includes multiple areas, such as nature and culture dissemination (‘natur- og kulturformidling’), may help to promote this field of study. Findings indicate that interpretive development and management is significant in ensuring good visitor experiences. In context, this is important in creating a successful visitor centre. Interpretation does play a significant role in changing people’s knowledge, attitudes and beliefs. This is illustrated by looking at interpretation as a tool for environmental education. Visitor centres are used as interpretive and educational centres and are considered as places for informal learning. Both interpretation and environmental education are mission-based approaches and can therefore be used together to fulfil goals for the visitor centres.

Findings show that Norway and New Zealand have different approaches in terms of tourism management and development in protected areas such as national parks. Much of what is done is reflected through framework and policies, especially with regard to interpretation. New Zealand shows much more experience and confidence in managing, structuring and implementing interpretation. However, this is most likely linked to New Zealand’s national park history as well as to the government’s prioritized areas. The new Norwegian branding and visitor strategy has led to a number of changes for the visitor centres in Norway. It

appears as if the new visual profile has strengths and weaknesses when it comes to creating a clear overall identity. Although, it turns out that the creators of the new branding and visitor strategy may have thought more about design rather than interpretive design. The results show that expertise within different disciplines is crucial for developing functional visitor centres as well as interpretive products. Lack of financial support is a major weakness for the Norwegian visitor centres in being able to complete goals and national requirements.

Interpretation is a field of study that needs more attention. It should be incorporated into Norwegian development, strategies, and management - especially in relation to national park visitor centres. However, this depends on increased political support, which appears to be changing slightly. Nevertheless, changes will take a long time to implement if development progresses at its current pace.

Due to the discussed limitations, further research should include more informants with management authority in Norway and New Zealand. The results indicate that interpretation may not have been highlighted enough in Norwegian framework, development and design. It would be of particular interest to conduct further research with Norwegian authorities. This is mainly because there is a need for deeper understanding of how interpretation - as well as nature guiding - is understood at a national level. The way that Norwegian strategies and regulations are described today, would make it seem that areas such as interpretation and nature guiding have received little attention and could potentially indicate poor knowledge within this field of study.

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Appendix 1: Beck and Cable’s fifteen guiding principles for interpreting nature and culture. Beck, L. & Cable, T. T. (2011). *The Gifts of Interpretation Fifteen Guiding Principles for Interpreting Nature and Culture*: Sagamore Pub.

1. To spark an interest, interpreters must relate the subject to the lives of the people in their audience.
2. The purpose of interpretation goes beyond providing information to reveal deeper meaning and truth.
3. The interpretive presentation—as a work of art—should be designed as a story that informs, entertains, and enlightens.
4. The purpose of the interpretive story is to inspire and to provoke people to broaden their horizons.
5. Interpretation should present a complete theme or thesis and address the whole person.
6. Interpretation for children, teenagers, and seniors—when these comprise uniform groups—should follow fundamentally different approaches.
7. Every place has a history. Interpreters can bring the past alive to make the present more enjoyable and the future more meaningful.
8. Technology can reveal the world in exciting new ways. However, incorporating this technology into the interpretive program must be done with foresight and thoughtful care.
9. Interpreters must concern themselves with the quantity and quality (selection and accuracy) of information presented. Focused, well-researched interpretation will be more powerful than a longer discourse.
10. Before applying the arts in interpretation, the interpreter must be familiar with basic communication techniques. Quality interpretation depends on the interpreter’s knowledge and skills, which must be continually developed over time.
11. Interpretive writing should address what readers would like to know, with the authority of wisdom and its accompanying humility and care.
12. The overall interpretive program must be capable of attracting support—financial, volunteer, political, administrative—whatever support is needed for the program to flourish.
13. Interpretation should instill in people the ability, and the desire, to sense the beauty in their surroundings—to provide spiritual uplift and to encourage resource preservation.
14. Interpreters can promote optimal experiences through intentional and thoughtful program and facility design.
15. Passion is the essential ingredient for powerful and effective interpretation— passion for the resource and for those people who come to be inspired by it.

Appendix 2: English interview guide

Give a brief introduction of goals and research objectives

N = National level

L = Local level

Briefly about yourself

Gender:

Age:

(N/L) Who are you and what do you work with?

(N/L) What background do you have?

(L) What role do you have at the visitor centre?

Interpretation

(N/L) What comes to mind when you hear the word interpretation?

(N/L) Interpretation can be associated with many terms such as guiding, exhibitions, activities, environmental interpretation, communication etc. However, in this interview interpretation will be associated with nature and the environment. The correct term to use would may be considered 'environmental interpretation', but I am going to use 'interpretation' only to cover more areas.

Do you agree that interpretation is a form of strategic communication?

- (N/L) What do you think is the most important function of having interpretation is? (For example information, entertainment, education etc.)
- (N/L) Moreover, how can your work be linked to interpretation?

(N/L) Is interpretation described in national frameworks, management, strategies etc.?

- (N/L) Where can such descriptions be found?

(N/L) How important are interpretation strategies and management for development of visitor centres?

- (N/L) Why?

(N/L) Would you be interested in learning more about interpretation methods and strategies?

- (N/L) Why?

(N/L) How much focus is there on the future development of interpretation?

- (N/L) Is there any budget for research on interpretation related to national parks? (for example; the effects and understanding among visitors)

(N/L) Is there anything you would like to add?

Environmental education

(N/L) What comes to mind when you hear the word environmental education?

(N/L) Environmental education can be associated with teaching, knowledge gain, information about the environment, biodiversity and so on. What do you think is the most important function of having environmental education?

- Why?

(N/L) What is the main purpose of having environmental education?

(N/L) Is environmental education described in association with interpretation in any national frameworks, strategies etc?

- (N/L) Where can such descriptions be found?

(N/L) Do you think interpretation can foster environmental education?

- (N/L) How?
- (L) Do you have any examples from the visitor centres?

(N/L) What do you think are the biggest challenges in terms of environmental education linked to interpretation? (For example; ensuring access to skilled staff that can convey information in a good way, engage people in topics that might not be of special interest or make exhibitions suitable for different types of visitors)

(N/L) Is there anything you would like to add?

Visitor centre

(L) How many visitors do have each year?

(L) What are the main values that are being emphasised at this visitor centre?

(N/L) What are the goals for this visitor centre / visitor centres in New Zealand?

(N/L) Who are the target group/groups for this visitor centre / visitor centres in New Zealand?

(L) What different types of interpretive products are being offered at the visitor centre (guiding, exhibition, brochures etc.)?

(L) What activities are offered to different age groups in terms of environmental education?

(L) What background does the staff who work at the visitor centre have?

- (L) Do they get any specific training in interpretative methods?
- (L) Is there any form of organization or strategic plan? For example; a competency and development plan for the staff working with interpretation and environmental education?

(N/L) What strategies for interpretation have been used for developing this visitor centre / visitor centres in New Zealand?

- (N) Are any forms, strategies or framework of interpretation used more frequently than others?
- (N) Why?

(N/L) What type of understanding of interpretation is applied for the development of the visitor centre? (For example based on research or different types of models etc.)

(L) Does the visitor centre use forms of new technology to communicate (app, touch screens etc.)?

- (L) If yes, please provide examples?

(L) What areas of the visitor centre have potential for improvements in terms of conveying information?

- (L) Please provide examples?

(L) Are there any interpretive products (parts of exhibitions, guiding, activities etc.) for the visitor centres that work better than others?

- (L) Please provide examples of these and their impact?

(N/L) How much of the budget is allocated to create and develop new exhibitions?

- (L) How often is a new exhibition developed?
- (L) Please describe the process of developing exhibitions? (who decides what the exhibition should include, types of materials, design etc.)
- (L) What type of consultants are included in this process?

(N/L) How are effects of the visitor centre measured over time? For example; do you get feedback from visitors, conduct surveys etc.

(N/L) What are the future plans, goals or development for this visitor centre / visitor centres in New Zealand?

(N/L) New Zealand has for a long time included visitors in the national parks in their management plans and strategies. How do you think this may have affected interpretation and environmental education at the visitor centre?

(N/L) Is there anything New Zealand can transfer to other countries in terms of interpretation and environmental education?

- Is there anything you think is working particularly well (strategies, framework, methods, design etc.)?
- Why?

(N/L) In terms of the whole idea about a visitor centres and what they should include, do you know if New Zealand has been inspired by other countries and their way of doing this?

- What and why?

(N/L) Is there anything you would like to add?

Appendix 3: Norwegian interview guide

Gi en kort introduksjon av mål og forskningsspørsmål

N = Nasjonalt nivå

L = Lokalt nivå

Kort om deg selv

Kjønn:

Alder:

(N/L) Hvem er du og hva jobber du med?

(N/L) Hva slags bakgrunn har du?

(L) Hvilken rolle har du på besøksenteret?

Interpretasjon

(N/L) Hva er det første du tenker på når du hører ordet interpretasjon?

(N/L) I Norge er det ikke noe direkte god oversettelse av 'interpretation'. Men interpretasjon kan bli forbundet med begreper som for eksempel tolkning, guiding, formidling, utstillinger, aktiviteter, naturveiledning, kommunikasjon osv. I denne oppgaven vil jeg bare understreke at interpretasjon vil for det meste være i tilknytning til natur og miljø og derfor blir kanskje den beste oversettelsen 'naturveiledning', men jeg kommer til å bruke interpretasjon for å dekke flere områder.

(N/L) Er du enig at interpretasjon er en form for strategisk kommunikasjon?

- (N/L) Hva synes du er den viktigste funksjonen ved å ha interpretasjon? (For eksempel levere informasjon, lære eller underholde etc.)
- (N/L) Hvordan kan ditt arbeid bli knyttet til interpretasjon?

(N/L) Er interpretasjon beskrevet i nasjonale rammeverk, forvaltning, strategier eller lignende?

- (N/L) Hvor finner man slike beskrivelser?
- (N/L) Vet du ominterpretasjon en del av den nye varemerke- og besøksstrategien for nasjonalparker i Norge?
- Hvordan?

(N/L) Hvor viktig er strategier og forvaltning tilknyttet interpretasjon for utviklingen av besøksentre?

- (N/L) Hvorfor er det viktig?

(N/L) Ville du vært interessert i å lære mer om metoder og strategier innenfor interpretasjon?

- (N/L) Hvorfor?

(N/L) Hvilken fremtidig rolle er det tenkt at SNO spille med tanke på formidling i nasjonalparkene?

- Den nye besøksstrategien vil jo åpne for flere besøkende, er det også da mulighet for at flere private bedrifter kan begynne med interpretasjon slik som for eksempel naturveiledning, guiding eller formidling i disse områdene?

- Er det noen kvalifikasjoner for private bedrifter som ønsker å operere innenfor nasjonalparkene?
Noe form for kvalitetssikring?
- Hvis nei, er dette noe som burde få mer oppmerksomhet, hvorfor?

(N/L) Hvor mye fokus er det på fremtidig utvikling av interpretasjon?

- (N/L) Finnes det noe budsjett for forskning på interpretasjon knyttet til nasjonalparkene? (f.eks. effekter, forståelse blant besøkende)

(N/L) Er det noe du ønsker å legge til?

Miljølære

(N/L) Hva tenker du på når du hører ordet miljølære?

(N/L) Miljølære kan bli assosiert med ulike begreper slik som blant annet læring, øke forståelse, informasjon om miljø, biodiversitet osv. Hva syns du er den viktigste funksjonen knyttet til miljølære?

- Hvorfor?

(N/L) Hva er hovedhensikten ved å ha miljølære?

(N/L) Blir miljølære beskrevet i assosiasjon med interpretasjon i noen nasjonale rammeverk, strategier eller lignende?

- (N/L) Hvor kan slike beskrivelser bli funnet?
- (N/L) Er miljølære en del av den nye besøk- og merkevarestrategien for norske nasjonalparker? På hvilken måte?

(N/L) Tror du interpretasjon kan bidra med å fremme miljølære?

- (N/L) Hvordan?
- (L) Har du kanskje noen eksempler fra besøkssenteret?

(N/L) Hva tror du er de største utfordringene med tanke på miljølære tilknyttet interpretasjon? (F.eks. Få godt nok utdannet fagpersonell som kan overføre informasjon på en bra måte, engasjere publikum i temaer som kanskje ikke er av stor interesse eller lage utstillinger som passer flere ulike typer besøkende)

(N/L) Er det noe du ønsker å legges til?

Besøkssenter

(L) Hvor mange besøkende har dere hvert år?

(L) Hva er de viktigste verdiene som blir vektlagt hos dette besøkssenteret?

(N/L) Hva er hovedmålet eller målene for dette besøkssenteret / besøkssentre i Norge?

(N/L) Hvem er målgruppen/gruppene for dette besøkssenteret / besøkssentre i Norge?

(L) Hva slags ulike typer av interpretasjons produkter kan dere tilby på besøkssenteret? (F.eks. Guiding, utstillinger, brosjyrer)?

(L) Hva slags typer aktiviteter blir tilbudt for ulike aldersgrupper med hensyn til miljølære?

(L) Hva slags bakgrunn har resten av personalet som jobber ved besøkscenteret?

- (L) Får de noen spesiell opplæring tilknyttet metoder for interpretasjon?
- (L) Finnes det noen form for organisering eller strategisk plan?
For eksempel kompetanse- og utviklingsplan for dem som jobber med interpretasjon og miljølære?

(N/L) Vet du hva slags strategier eller rammeverk som har blitt brukt ved utviklingen av dette besøkscenteret / besøkscentre i Norge?

- (N) Er noen strategier eller rammeverk brukt oftere enn andre?
- (N) Hvorfor?

(N/L) Hva slags type forståelse av interpretasjon er blitt for utviklingen av dette besøkscenteret? (Er det for eksempel basert på noe forskning eller/ modeller)

(L) Bruker besøkscenteret noen form for ny teknologi for å kommunisere? (app, touch screens etc.)

- Hvis ja, hva?

(L) Hvilke områder av besøkscenteret har potensiale for forbedring med tanke på å formidle informasjon?

- (L) Hvorfor?

(L) Er det noen interpretasjons produkter (deler av utstillinger, design, guiding, aktiviteter osv.) som fungerer bedre enn andre?

- (L) Hva og hvorfor?

(N/L) Hvor mye av budsjettet er satt av til å utvikle nye utstillinger?

- (L) Hvor ofte blir nye utstillinger laget?
- (L) Hvordan er prosessen når dere utvikler en utstilling? (hvem bestemmer hva utstillingen skal inneholde, typer av materialer, utforming osv.)
- (L) Hva slags fagpersonell er inkludert i denne prosessen?

(N/L) Hvordan er effekter av besøkscenteret målt over tid? F.eks får dere feedback fra besøkende, utfører spørreundersøkelser etc.

(N/L) Hva er målene for fremtidige planer og utvikling for dette besøkscenteret / besøkscentre i Norge?

(L) Tror du Lom sin status som nasjonalparkkommune og nasjonalparklandsby har hatt fordeler for besøkscenteret?

- (L) Hvis ja, hvordan?

(N/L) Norge har over en lang periode fokusert på bevaring og naturvern i nasjonalparkene frem til 2015 da regjeringen lanserte ny besøk- og merkevarestrategien. Hvordan tror du dette vil påvirke interpretasjon og miljølære på norske besøkscentre / fjellsenteret ?

- (L) Hva betyr det for deres aktivitet og prioriteringer?
- (N/L) Hvilke endringer er det blitt enighet om at det skal gjøres på besøkscentrene?

- (N/L) Vet du i hvilken grad er dette implementert?
- (N/L) Har alle sentre/Fjellsenteret måtte endret navn (fra informasjonssenter til besøksenter), nye logoer, skilt, utforminger etc?
- (N/L) Hvor viktig er designmanualen?
I hvilken grad er den tatt i bruk?

(N/L) Med tanke på ideen om besøksentre og hva de står for, vet du om Norge latt seg inspirere av andre land og deres måte å gjøre dette på?

- Hva og hvorfor?

(N/L) Er det noe du ønsker å legge til?



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