THE ROLE OF BIODIVERSITY IN NATIONAL PARKS ON VISITOR EXPERIENCES: A CASE STUDY OF OULANKA NATIONAL PARK IN FINLAND AND GOLDEN GATE HIGHLANDS NATIONAL PARK IN SOUTH AFRICA

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Abstract

Tourism has been utilising global biodiversity for a relatively long time. In many countries, such as Finland and South Africa, biodiversity forms an increasingly important resource for tourism. The mutual and sometimes conflicting relation between biodiversity and tourism is clearly evident in conservation areas. The importance of National Parks, for example, is highlighted by the protection and conservation of biodiversity through ecotourism to retain visitors while increasing experiences: it is apparent that a more diverse and unique destination would have greater appeal to all visitors. However, the increasing interest also creates impacts to environment, visitor's experiences and management needs. This research examines and determines the tangible level of importance of biodiversity in Oulanka National Park in Finland compared to Golden Gate Highlands National Park in South Africa with the added effects on visitor experiences. Apart from the tangible level, this research also examines the affects of biodiversity richness on visitor experiences and perceptions regarding nature management regulations at Oulanka and Golden Gate. This is determined through various biodiversity attributes with visitors specifying the importance regarding the richness of plants, habitats, wildlife, birdlife and unspoilt nature and biodiversity hotspots. More than three quarters of respondents specified that their relationships regarding biodiversity and experiences are strongly connected thereby indicating the role and importance of biodiversity in Oulanka National Park and Golden Gate Highlands National Park. Findings also illustrate respondents' views on nature management regulations of the national parks and together with the known role of biodiversity, suggest the way forward for Oulanka and Golden Gate through ecotourism and a Biodiversity Tourism Management Guidelines (BTMG) framework.

Keywords: Biodiversity, National Parks, Conservation, Ecotourism, Visitor Experiences, Management, Finland, South Africa.

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1 INTRODUCTION

1.1 BACKGROUND

Biodiversity and the level of biodiversity refer to the variety among and between living organisms from all sources of ecosystems, the ecological complexity and diversity of which they are part and therefore indicate the degree and health of any ecosystem (IUCN, 2010; van der Duim and Caalders, 2002:745). The preservation and conservation of biodiversity is nowhere more apparent than in nature conservation areas. National parks, for example, have been developed to protect the environmental integrity and have become increasingly popular as a tourism destination (Manning, 2002:306). According to Juutinen, Mitani, Mäntymaa, Shoji, Siikamäki and Svento (2011), it is apparent that a more diverse and unique destination would have greater appeal to all visitors. This view includes the richness of biodiversity but eludes the actual impact the level of biodiversity has on visitor experiences and the impact visitors have on the ecosystems. The importance of national parks to protect and manage the environment while providing recreational and tourism uses has increased dramatically over the past years. The case study sites, Oulanka National Park (ONP) and Golden Gate Highlands National Park (GGHNP), are no exception (Buscher and Dietz, 2005; Juutinen *et al.,* 2011). The ever present global climate change adds to the changing environment with impacts on national parks around the world (see Hall and Saarinen, 2010:80). The purpose of national parks is to protect and maintain the current splendour and natural integrity, to strive to increase the quality of visitor experiences and deal with environmental change that can only be done by effective management (Manning 2001:94). An important fact is that one of the national parks' greatest values is also its potential threat, namely recreational use. Although from the

biodiversity point of view, the ideal would be to prohibit or strictly limit any human visitation to protect a natural area, however the social and political feasibility and financial issues rule out such an option. In addition, national parks are designed to protect the ecological processes and ecosystem characteristics while providing a foundation for scientific, spiritual, recreational and visitor opportunities and therefore do not share the same purpose, as nature reserves, of conservation (IUCN, 2009).

Today high visitation results in substantial financial income to protect the biodiversity of national parks but this impact greatly on the environment while affecting the quality of visitor experiences (Manning, 2001:94). On the other hand, fewer visitors reduce the impact on the biodiversity and increases visitor satisfaction but provide less financial support in managing the biodiversity of the national parks. Therefore to manage the balance between visitor numbers and visitors' experiences, the protection of biodiversity is the key. Therefore national parks need an adequate number of visitors to be able to sustain and protect the environment for future generations. The wealth of biodiversity is a national park's greatest asset and in order to protect it, the management of visitor's experiences are equally important. Without understanding visitor perceptions and preferences while meeting their needs and exceeding the quality of their experiences, the national park may deteriorate and even cease to exist in the future (Chin, Moore, Wallington and Dowling, 2000:21).

Previous researchers have developed many models: such as the LAC (Limits of Acceptable Change), VERP (Visitor Experience and Resource Protection) (Manning's 2001:94) and the Protected Area Visitor Impact Management (PAVIM) framework (Farrell and Marion 2002:35; Puhakka, 2011). These models focus on the management of visitor impacts, experiences and satisfaction while protecting the biodiversity and natural integrity of an area (Chin *et al.,* 2000; Hof and Lime, 1997). Although these models differ in terms of strategy and steps followed, and in terms of context and time frame, the validity in combining previous research provides a foundation for new biodiversity management guidelines that addresses visitor perceptions and satisfaction in National Parks. Even though little research has been done regarding visitor perceptions and impacts in terms of the level of biodiversity, a substantial amount of research on the management between sustainability, conservation, biodiversity and tourism has been conducted (Ballantyne,

Packer and Hughes, 2008A/B; Heino, Ilmonen, Kotanen, Mykrä, Paasivirta and Reed, 2008; Lindenmayer, Margules and Botkin, 2000). Consequently the need remains to determine the relationship between visitors; perceptions and biodiversity in order to manage the national parks effectively using the newly developed Biodiversity Tourism Management Guidelines (BTMG) framework.

1.2 PROBLEM STATEMENT

The main problem of the study is to determine the role biodiversity in national parks has on visitor experiences. Apart from visitor experiences, the study focuses on how visitors perceive a national park should function in terms of management. The empirical case areas are Oulanka National Park in Finland and Golden Gate Highlands National Park in South Africa. The knowledge gaps represent the important issue concerning visitor perceptions regarding national park management and biodiversity with the added issue of Southern Africa being less intensely studied compared to the global north. Fulfilling the knowledge gaps possibly provides a solution for management of Oulanka and the Golden Gate Highlands National Park. With all the elements taken into account, suggestions and recommendations for the management and development of Biodiversity Tourism Management Guidelines for both national parks are examined.

1.3 PURPOSE STATEMENT

The main purpose of this study is to determine whether the level of biodiversity impacts on visitor experiences; to examine the perceptions of the functioning of a national park; and to provide suggestions and recommendations for management in the form of Biodiversity Tourism Management Guidelines.

1.4 RESEARCH OBJECTIVES

The following research objectives will guide the study:

- To determine the level of importance of biodiversity for visitors in Oulanka and Golden Gate Highlands National Parks.

- To investigate whether the biodiversity level and richness of Oulanka and Golden Gate Highlands National Park affect the quality of visitor experiences.
- To determine visitors perceptions regarding the management of Oulanka and Golden Gate Highlands National Parks.
- To compare the results of Oulanka and Golden Gate Highlands National Parks.
- To provide suggestions and recommendations for the development and management of Biodiversity Tourism Management Guidelines.

The context and units of analysis in the study are spread over two countries, Finland and South Africa. In all of the above objectives, the units of analysis are the visitors to the National Parks in both countries. The Oulanka National Park and the Golden Gate highlands National Park represent the sampling units. An interesting and potentially valuable comparison will be drawn in terms of the biodiversity visitor experience relationship between the heavily studied global north and less intensively studied south i.e. South Africa. Due to the fact that both national parks are very different in various ways and similar in some with the added fact of location and the limited research done expands the existing research field and provides a basis to build upon within the same field of the biodiversity-visitor experience nexus. The comparison paves the way for best practises from both national parks that are made readily available for other national park to capitalise upon.

1.5 ACADEMIC VALUE AND CONTRIBUTION OF THE STUDY

The data gathered regarding visitor's perceptions and attitudes towards biodiversity and functioning of a national park, along with the impact it may have on visitor's experiences are both academically and practically valuable. The biodiversity-visitor experience nexus is an extremely important issue for any national park as well as with the growing industry of ecotourism and the challenges associated with it. The main contribution towards both national parks is to further expand and understand the link towards visitor experiences and biodiversity thus benefiting ecotourism within both parks. Ecotourism per se in both national parks is sought-after and the research done may provide interesting results. Enabling management to better understand and manage biodiversity and visitor experiences. The fact that it has not been extensively studied, especially in Southern

Africa, adds to the academic and practical value, thus broadening the field of existing literature. Apart from expanding the literature, supplying both national parks with important empirical information is of practical value.

The data presents the opportunity to provide suggestions and recommendations concerning Biodiversity Tourism Management Guidelines for national parks. The management guidelines, with the emphasis on future sustainability may add value, both practically in terms of improved management in national parks, and academically as a model for future research regarding the relationship between biodiversity in natural areas and the management of visitor experiences. The value in terms of the comparison between the two national parks may provide valuable information due to the fact that Northern Europe has been more extensively studied when compared to Southern Africa. With any study undertaken, certain delimitations are present and discussed in the next section. Apart from the delimitations, key terms and abbreviations are defined relevant to the study. The literature sections of the research proposal focuses on two main aspects, biodiversity and tourism and the management thereof in a sustainable manner. Various relevant and important aspects are discussed in the literature review and culminate in the development of recommendations and suggestions for both National Parks in the form of Biodiversity Tourism Management Guidelines.

2 DELIMITATIONS AND ASSUMPTIONS

2.1 DELIMITATIONS

In the study, there are various delimitations consisting of the context, target population and relationships. The study is limited to the context of geographical area in terms of national parks in different countries. The target population will only consist of visitors to those two national parks in the different countries (i.e. Finland and South Africa) and not other national parks within the countries. The study is focused on whether the biodiversity has an impact on visitor satisfaction to the national parks with the limitation of experience per se. Another limitation is that Oulanka National Park is viewed as one of Finland’s most

popular parks. Golden Gate is less popular that limits the amount of visitors, including international tourists.

In terms of the sample sizes, the difference between Oulanka and Golden Gate is substantial. Oulanka produced 613 respondents whilst Golden Gate accumulated 113 respondents. The time difference of when the data was collected is also a limitation. Data was collected over a longer period at Oulanka during 2010, while a shorter timeframe was used to collect data in Golden Gate during 2011. The data being collected a year apart from each other by different fieldworkers under different circumstances is thus also a limitation. Due to the sampling and time differences in data collection a direct comparison is not possible between the sites. The needed relativity of the National Parks in terms of size and activities for a worthwhile study acts as a limitation. This is due to the fact that Golden Gate is less popular with a lack of big game which represents an attraction for foreigners. The study aims to measure only the experience and knowledge in relation to the perceived level of biodiversity and not the actual level of biodiversity within the national parks.

2.2 ASSUMPTIONS

In any study there are certain assumptions regarding various aspects depending on the type of research. According to Leedy & Ormrod (2005:5), an assumption is “a condition that is taken for granted, without which the research project would be pointless.” Here the assumptions are understood as guidelines that direct the study and empirical data collection. Several basic assumptions underlie the research study, such as that:

- biodiversity has an impact on visitor motivation in both national parks;
- visitors to national parks are environmentally conscious and care about the environment;
- visitors are knowledgeable regarding biodiversity and environmental protection
- visitors from two different national parks and contexts view biodiversity in similar ways; and
- a worthwhile comparison in terms of biodiversity and management regulations can be drawn between the two national parks.

3 DEFINITION OF KEY TERMS

Some key terms have been used in the study and are defined below:

Biodiversity:

Biodiversity refers to the variability among living organisms from all sources of ecosystems, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part. This includes the diversity within species, between species and of ecosystems which ultimately indicates the degree and health of any ecosystem (IUCN, 2010; van der Duim and Caalders, 2002:745).

Ecological health:

Ecosystem health refers to a method in evaluating certain ecosystem characteristics associated with human health under the framework of ecology being the physical condition or degree of wellbeing regarding any ecosystem as well as the rehabilitation of the area (Fennell & Weaver, 2005:374,383; Jian, Yanglin, Jiansheng, and Yuqing, 2007:4877).

Ecosystem:

Ecosystems are a combination of assemblages of various living organisms. It's the physical environment where the organisms live and an array of interactions between organisms. Ecosystems can vary from large scale to miniature environments (Tyler and Dangerfield, 1999:149; van der Duim and Caalders, 2002:745).

Ecotourism:

Ecotourism involves purposeful travel to relatively undisturbed or uncontaminated natural areas which conserves the environment and improves the welfare of local people with the objectives such as wildlife, heritage, health, culture, adventure, environmental education, admiring, and enjoyment without altering the natural integrity of the ecosystem (Atree, 2006:5; Ceballos-Lascurain, 1991:25; Fennell, 2001:416; Törn, Siikamäki, Tolvanen, Kauppila, and Rämet, 2007; Western 1992).

Sustainable development:

Sustainable development represents development that meets the economic, institutional and ecological needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development respects the limited capacity of an ecosystem to absorb the impact of human activities (Golusin, & Ivanovic, 2009:67; UNESCO, 2002).

Table 1: Abbreviations used in this document

Abbreviation	Meaning
BTMG	Biodiversity Tourism Management Guidelines
CC	Carrying Capacity
GGHNP	Golden Gate Highlands National Park
IUCN	International Union for Conservation of Nature
ICDP	Integrated Conservation-Development Projects
LAC	Limits of Acceptable Change
NEP	New Environmental Paradigm
ONP	Oulanka National Park
PANParks	Protected Area Network Parks
PAVIM	Protected Area Visitor Impact Management
ROZ	Recreational Opportunities Zoning
SANParks	South African National Parks
SAM	Strategic Adaptive Management
TQM	Total Quality Management
VAMP	Visitor Activities and Management Process
VERP	Visitor Experience and Resource Protection
VIM	Visitor Impact Management
WTP	Willingness To Pay

4 LITERATURE REVIEW

4.1 BIODIVERSITY AND ECOTOURISM

The tourism industry has been identified as one of the fastest growing sectors worldwide. Apart from the tremendous growth in tourism, ecotourism has optimistically further been recognised as the fastest growing within the tourism sector (Fennell, 2002; Malhotra, 2011; Menzies, 2002). Optimistically in terms of the fact that from all the tourism sectors, ecotourism's main focus reflects tourism that does not impact negatively on resources for future generations. With the global movement towards minimum impact on every aspect of the environment, the importance of protecting the biodiversity of natural areas is more evident than ever. Although the reality is somewhat different in terms of the complex, fragile, demanding and ever changing relationship between biodiversity and tourism.

Biodiversity is complex with many definitions developed in various contexts. Possibly one of the most fitting definitions regarding the relationship between tourism refers to biological diversity as the variety among living organism within all sources of terrestrial, marine and any other aquatic ecosystem, which is appropriate for tourism in terms of visitor's preference for more diversity within species, between species and the ecosystems itself (van der Duim and Caalders, 2002:745). The complexity of the relationship stems from the different objectives of biodiversity and tourism, such as the protection versus utilisation of the natural resources. In order to balance these objectives between tourism and biodiversity, conservation was established in order not only to conserve the natural environment but also to practise sustainable use (van der Duim and Caalders, 2002:745). Although conservation aims to improve sustainability, the direct or indirect impacts on biodiversity are highly intricate with loss of biodiversity continuously occurring.

Due to the ongoing decline in biodiversity in terrestrial, marine and freshwater ecosystems mostly threatened by human and tourism activities, aggressive conservation planning has recently been considered (Heino *et al.,* 2009:1184). In addition, numerous international conferences regarding biodiversity, ecotourism, sustainability, conservation and so forth have been held annually in order to among other, establish various policies in forming a better relationship between biodiversity and tourism. The global awareness on

environmental issues, financial support available due to these conferences and the growing interest and influx of tourists provide the financial means for managing biodiversity and tourism in national parks (Chin *et al., 2000;* van der Duim and Caalders, 2002:755).

4.1.1 The importance of National Parks in conserving the natural environment and promote ecotourism

To prevent the loss of biodiversity, the natural environment, the support of ecological life systems and to promote the enjoyment of natural and cultural heritage, many protected areas such as national parks have been established throughout the world (Farrell and Marion, 2002:32). National parks are therefore critical in protecting the natural integrity of resources and conserving the biodiversity for future generations and have therefore become important tourist attractions (Nyaupane and Poudel, 2011:1344; Puhakka, Sarkki, Cottrell, Siikamäki, 2009:529). The current aim of national parks is to integrate ecological goals of conservation with socio-economic goals with the added responsibility to ensure conservation of the natural environment by implementing sustainable principles (Jian *et al.,* 2007:4877; Siikamäki and Kangas, n.d).

In addition to the principles of conserving the natural environment, national parks have the very important task in the support of education, tourism, recreation and the upliftment and improvement of economic wealth of local communities thus developing ecotourism (Törn *et al.,* 2007). Apart from protecting the environment and contributing positively towards global warming, national parks form a distinct part in all sectors of tourism and are adding greatly to the global and local economies by providing the nature that attracts visitors to freely experience wild areas minimally affected and altered by humans (Alessa, Bennett and Kliskey, 2003:214). The growth in ecotourism along with national parks being more dynamic and innovative with the co-ordination of conservation and the utilisation of nature within the parks are seen as advantages for conservation and regional development, and therefore underline the importance of national parks (Nyaupane and Poudel, 2011:1349; Siikamäki and Kangas, n.d).

According to Törn *et al.* (2007), tourism when well planned, executed and managed can add considerable value towards rural communities in developing countries who largely

depend on the natural resources of the area. This is nowhere more evident than in third world countries where national parks provide the largest part of tourism, due to a lack of infrastructure and already developed tourism ventures. The national parks in third world countries attract visitors which would normally not have travelled to that specific country. An example would be the Bwindi Impenetrable National Park in Uganda and the Virunga National Park in the Democratic Republic of the Congo. The mountain gorillas within these two national parks have become the primary tourism attraction and attract great numbers of tourists each year. Thus, stating the importance of the national parks for economic enhancement and the protection of the natural environment (McNeilage, Plumptre, Brock-Doyle and Vedder, 2001; Wilkie and Carpenter, 1999).

The importance of national parks in third world countries does not stipulate national parks in developed countries to be less important. The fact is that when only focusing on protecting natural resources, it can be argued that the presence of national parks are even more important in developed countries. More important in terms of the amount of natural resources left in developed countries compared to developing countries and the need for protection and conservation at all costs. Therefore the importance and increasing popularity of national parks in both developed and developing countries present an opportunity and a challenge. The challenge lies in protecting the environment due to visitation compared to the opportunity in being able to protect the environment by providing satisfactory and quality visitor experiences (Manning, 2001:94).

Therefore the first and most important objective would be to protect the environment and manage the biodiversity while at the same time striving to increase the biodiverse richness to provide quality visitor experiences. The national parks used as case studies in this research are the Oulanka National Park (ONP) in Finland and the Golden Gate Highlands National Park (GGHNP) in South Africa. The aim is to provide a good basis for the management of biodiversity and visitor experiences.

The similarities in terms of geographical size, biodiversity, activities and wildlife, with both parks bordering another country provide for worthwhile comparison. The strong opposites in terms of the vegetation, landscape, climate, geographical location, the amount of research done in the global north when compared to Southern Africa and the management

practices provide an interesting and informative comparison (Heino *et al.,* 2009:1180; Juutinen *et al.,* 2011; Ruka, 2010; SANParks, 2011:10).

Both national parks differ in management and the comparison may provide best practices to be applied to the other national park. One of the distinguishing management practices represents the amount of funding received from government to national parks. ONP receives more funding from the government and is therefore not so dependent on tourism within the region to survive while GGHNP receives much less funding with a high dependency on tourism to cover expenses (Eagles, 2001:19; Huhtala, 2004:3). A reason for this represents the lack of knowledge regarding the social value of biodiversity in South Africa in general with not enough economic resources available. The knowledge and understanding of biodiversity and the social value it has is not only imperative for conservation strategies but makes it a challenge to contend with issues such as insufficient (or zero) funding (Jane, 2003:200).

As illustrated in Figure 1, Oulanka National Park is located in north-eastern Finland bordering Russia and south of the Arctic Circle. The park was established in 1956 to mainly protect the biodiversity in terms of fauna and flora. According to Heino *et al.* (2009:1180), Juutinen *et al., (*2011), and Ruka, (2010), after expansions the park currently covers an area of 28 000 ha with 30 mammal species, 120 bird species and vegetation ranging from “old-growth coniferous forests to mixed-deciduous woodlands and from nutrient-poor bogs to fertile fens”. The popularity of national parks can clearly be seen with the increase of visitors to Oulanka with 60 000 in 1992 to 171 653 visitors in 2011 (Metsähallitus, 2012). With an increase in numbers, management becomes more apparent and important to maintain and protect the biodiversity. Although the management of national parks falls under Finnish parliamentary legislation, ONP is managed by the Natural Heritage Service of Metsähallitus (Board of Forestry) with duties in managing protected areas (Juutinen *et al.,* 2011).

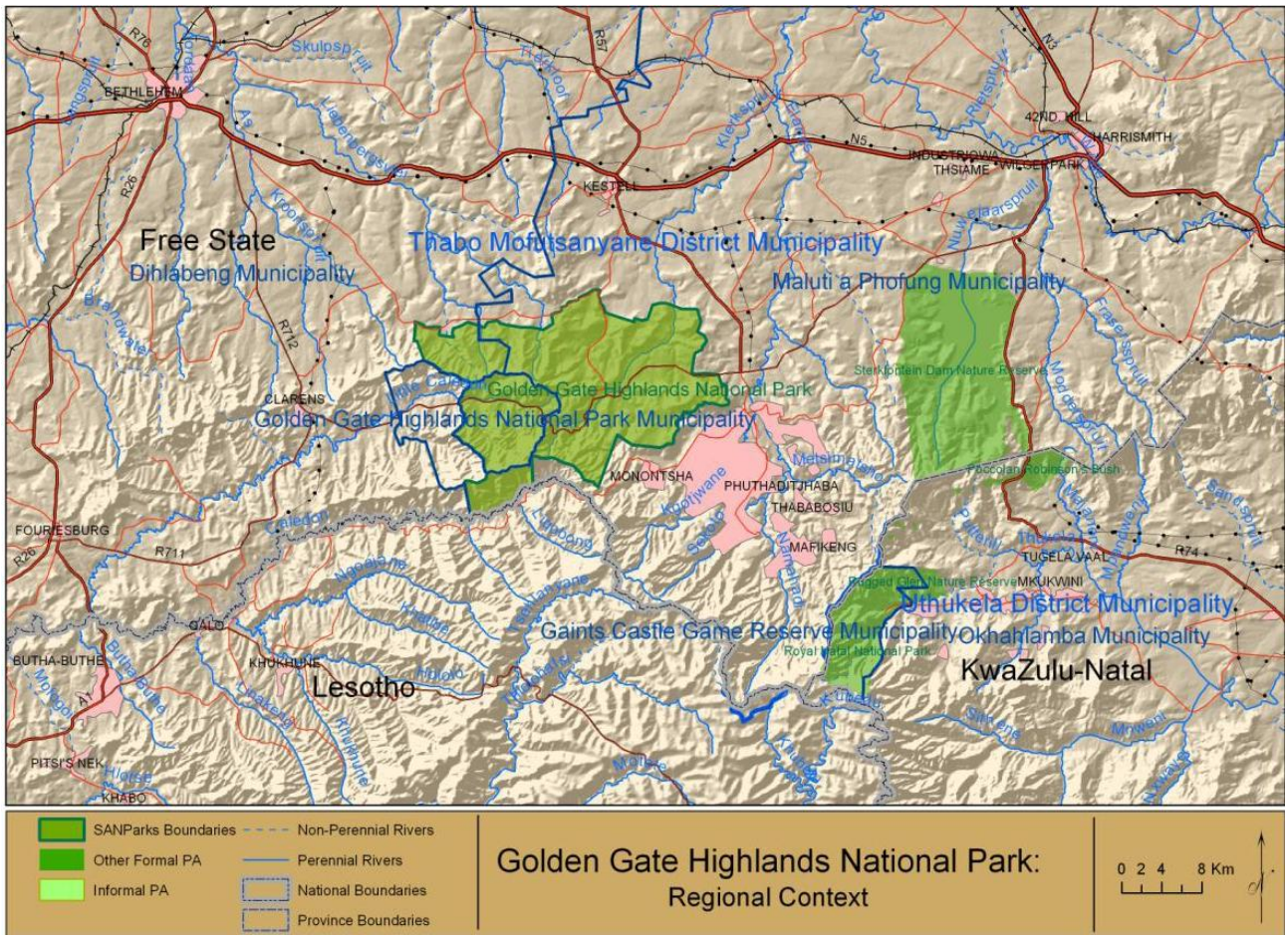
Figure 1: Oulanka National Park

Source: (Puhakka, 2011:81)

Golden Gate Highlands National Park (Figure 2) was established in 1963 when provincial administration of the Orange Free State bought land in 1962 to support the creation of the first national park in the Free State province. GGHNP is located in the north eastern province of the Free State, South Africa. The park's name is derived from the Golden colour cast by the sun on the sandstone cliffs. In regard to political geography, GGHNP's location is similar to ONP in terms of both the national parks bordering another country: Oulanka bordering Russia and Golden Gate bordering Lesotho.

The park is situated at the foothills of the Maluti Mountain range covering 32 690 ha and includes a section of the Qwa-Qwa National Park (SANParks, 2011:8). GGHNP is an extremely rich and biodiverse national park and represents the Drakensberg Grassland Bioregion and the Mesic Highland Grassland Bioregion. A wide variety of vegetation ranging from grasslands, fynbos and shrubland being classified as vulnerable to 32 species of mammals and 171 species of birds (SANParks, 2011:10). The national park provides a wealth of history with 64 cultural heritage sites (SANParks, 2011:47). Although GGHNP is managed as an individual national park; it falls within the auspices of the South African National Parks.

Figure 2: Golden Gate Highlands National Park



Source: (SANParks, 2011:80)

Both national parks strive to improve the biodiversity and natural integrity while at the same time offer a wide variety of activities and experiences to visitors. The fact that both are managed in different ways with each successful in different aspects, stipulates the

possible value they may have for one another. The world wide drive towards tourism being sustainable with minimum or no environmental impact paves the way for ecotourism and the possible successes in national parks.

4.1.2 The ecotourism dilemma

Ecotourism, although a relatively modern type of tourism when compared to mass or other types, is the fastest growing segment in both practice and theory (Fennell, 2002:1). Unfortunately the concept, definition and traditions of ecotourism and sustainable tourism are widely discussed with little uniformity without collective agreement on a definition due to different researcher's views (Fennell, 2002:4; Törn *et al.,* 2007). In ecotourism the simultaneous advancement of conservation (including biodiversity) and socio-economic aims are regarded as constant (Brandon and Margoluis, 1996; Tyler and Dangerfield, 1999:147). Ecotourism is seen as the perfect instrument for attaining economical and ecological success and although difficult to implement and control offers the best combination for conservation with economical benefits (Bookbinder, Dinerstein, Rijal, Cauley, & Rajouria, 1998:1400). Ecotourism, with similar concepts such as sustainable tourism, nature-based tourism and alternative tourism has matured as part of a response towards the environmental, economic and socio-cultural cost of mass tourism (Fennell & Weaver, 2005:374).

Ecotourism has three core criteria and should emphasise a holistic perspective regarding the ecosystem and the human influence induced on it. According to Fennell & Weaver (2005:374,367), the three core criteria include:

- nature based attractions,
- learning opportunities, and
- management practices in terms of ecological, socio-cultural and economic sustainability.

Due to the fact that tourism can impact negatively on a fragile biodiverse area within a national park, ecotourism focuses on the impacts of visitors on the environment and not on the motivations of visitors per se (Tyler and Dangerfield, 1999:147). Since protected areas cannot be isolated from human systems and are interrelated, it is argued that the areas

must create a culture of profitability (Fennell & Weaver, 2005:384; Nyaupane and Poudel, 2011:1349). Although ecotourism is relatively difficult to promote in an economic sense, issues such as biodiversity conservation and ecological sustainability present in national parks add to the credibility of ecotourism (Tyler and Dangerfield, 1999:148).

Tourism development offers economic value for biodiversity conservation instead of the alternative of biodiversity exploitation. With the International Union for Conservation of Nature (IUCN) recognising the potential benefits of ecotourism that relate to the protection of the natural and cultural heritage, together with the added benefit of enhancing the quality of life (Puhakka *et al.,* 2009:529; Nyaupane and Poudel, 2011:1349). To maintain the benefits of ecotourism the biological diversity needs to be managed in relation to visitor experiences. Therefore the protection of biodiversity that serves as the natural resource for visitor experiences is extremely important (Tyler and Dangerfield, 1999:148).

Central to conservation efforts is the nexus between biodiversity conservation and tourism development, although according to Törn *et al.,* (2007), there is a lack of research on the opinions of local residents with regard to nature conservation and tourism development. On the other hand, a study done in the Kruger National Park in South Africa found that opinions among park authorities indicated that no common ground exists between tourism and conservation (Zhou, L & Seethal, 2011). Although these are opinions, the ecotourism dilemma and importance to implement and manage ecotourism remains evident.

Biodiversity conservation varies between being complementary and competitive at times. People that live in biodiverse areas whether in or outside of national parks face various problems from displacement to restrictions on the natural resources on which they are dependent for survival. Therefore the relationship between poverty and conservation is strong and limits the success of conservation if the issue of poverty is not addressed (Nyaupane and Poudel, 2011:1345). Ecotourism principles and development should in theory lead to socio-economic benefits for the local population, although reality usually differs. According to Brandon and Margoluis (1996), after an analysis of 23 Integrated Conservation-Development Projects (ICDP's) with ecotourism components, the results indicated that few of the benefits went to local people. The management of ecotourism must therefore ensure that benefits are distributed accordingly. According to Fennell and

Weaver (2005:377), ecotourism should aspire to high levels of visitor satisfaction and financial sustainability for both the national parks and local communities. Although ecotourism developments differ in terms of various aspects, the core basics and principles must be followed to ensure success. Vague principles will lead to vague projects and can be seen in many Integrated Conservation-Development Projects (ICDP's) with limited results (Brandon and Margoluis, 1996).

In addition; a well defined development project with clear manageable objectives will benefit conservation and the local population which in turn will reflect on the national parks and increase visitations and visitor experiences. Brandon and Margoluis (1996) and Fennell (2002:2) identified certain areas that represent the basis for ecotourism that is a necessity to benefit conservation and the local population. The conservation benefits in turn reflect on the local population which in turn reflects positively on biodiversity that impacts on visitor experiences. The areas include:

- Sources of financing for biodiversity conservation in legally protected areas.
- Economic validation for protected areas.
- Economic alternatives for local population to reduce the exploitation of natural resources in and around protected areas.
- Enhancing the capacity of communities to be self sufficient which in turns leads to the conservation of resources.
- Constituency-building that in turn promotes biodiversity conservation.
- Introducing a sustainable impetus towards biodiversity conservation.

Apart from the six areas, for ecotourism to be successful and act as a benchmark for sustainable tourism, certain structures concerning the scope and operations of ecotourism products need to be defined for each national park (Tyler and Dangerfield, 1999:150). Taking into account the five areas with ecotourism as a concept, national parks can first utilise the opportunity to conserve biodiversity, secondly impact positively on the local communities and use both to communicate managerial efforts and enhance visitor experiences in the national parks while minimising and controlling visitor impacts.

4.1.3 Visitor impacts

As stated by Saarinen (2006:1123), the issue with visitor impacts is not only the current and direct impact on the environment but the effects of continued growth within a natural area. Any natural area can only accommodate a certain number of visitors before negative impacts on the environment occur even with effective management being present. The impacts, however, do not necessarily need to be viewed only in a negative way. The negative impacts of the past aids management in developing benefits for the future. The scope of tourism impacts exists in the economic, physical arenas and the social visitor, and can also be classified in terms of positive (benefits), negative, direct or indirect impacts (Mathieson and Wall, 1982).

4.1.3.1 *Positive impacts*

Both positive and negative impacts vary depending on the life cycle of the impacts. Over time negative impacts can become positive impacts if managed correctly. Impacts and the degree of the impact are generally difficult to determine due to the differences in culture, observation and perceptions of management in the national parks and their visitors. Impacts also differ in terms of what is impacted on. In terms of national parks, the environment, nature management regulations and visitor orientations come into play and are investigated in this study. Positive impacts can either be a physical and immediate positive impact or a benefit for the future. The negative impacts in the past have been transformed into positive impacts resulting in either management practices or governmental or national parks' legislation to protect the biodiversity of the park (Park, Manning, Marion, Lawson and Jacobi, 2008:98).

The main positive impact possibly represents the global trend in going green and protecting the environment for future generations. With this trend spreading across not only businesses and tourism ventures but also on a personal level while being somewhat enforced, has been a major benefit in protecting the environment. Visitors becoming more environmentally aware together with the movement towards sustainability has had various positive impacts on the environment, visitor behaviour and the industry known as ecotourism itself. According to Chin *et al.* (2000), these benefits have mainly enhanced the

appreciation for the natural environment itself which in turn has yielded various other positive impacts such as:

- The intrinsic and economic value for protection and conservation of biodiversity.
- The educational value in exposing both tourists and local people to conservation.
- The expansion of, or additional areas added for protection and conservation.

4.1.3.2 *Negative impacts*

Ongoing deterioration of biodiversity in natural areas has become an important issue in research to ultimately define and prevent negative impacts (Park *et al.,* 2008:98). Biodiversity is greatly under threat from various processes such as land conversion, exotic species, local population, tourism and a lack of funding to name but a few (Jane, 2003:200). These negative impacts refer to a number of impacts with different severity on a destination's ecosystem. Different degrees of severity also depend on whether the impact is direct or indirect. Direct impacts regarding wildlife would for example, be poaching, accidental killing and disruption of mother-offspring interaction. Indirect impacts regarding wildlife would be the change of natural habitats, feeding patterns and the introduction of diseases.

Both direct and indirect impacts are closely related to the term of carrying capacity (CC). CC refers to the maximum amount of visitors that a natural area can handle while offering sustainable qualities in terms of ecological, social and physical attributes without unacceptable change in the environment (Farrell and Marion 2002:33; Saarinen 2006:1125). Although many impacts occur due to CC, it is only representative of certain impacts and cannot be regarded as sufficient in determining the broad spectrum of visitor impacts within a national park. Therefore all possible impacts need to be determined in order for management to be able to address the impacts through management strategies.

According to Chin *et al.* (2000), Farrell and Marion (2002:32) and Park *et al.* (2008:98), direct or indirect impacts are most likely to occur in national parks include:

- Soil and dune erosion and compaction.
- Geological alteration and disruption of soil stability which in turn leads to fragile vegetation.

- Loss of precious plant and wildlife habitats.
- The disturbance of wildlife in general.
- Water, air, ground and noise pollution.
- The introduction and removal of species.

All impacts, direct and indirect listed above, may lead to a reduction in biodiversity within national parks or any natural area. Apart from the impacts on the environment, certain other problems arise from visitor impacts. According to Farrell and Marion (2002:32), the problems that require management attention include:

- The compromisation of protected area resource directive.
- Impacts that occur at initial or low level use with the collective degrading of resources.
- Other undesirable consequences in terms of decreasing visitation, financial en resource conservation incentives.

The impacts and problems mentioned above can be addressed through certain frameworks or a combination of frameworks to suit the national park more accurately. These frameworks present the means of assessing undesirable visitor impacts and determining appropriate strategies and the implementation thereof to minimise the detrimental effects tourism has on conservation (Farrell and Marion 2002:33; Törn, *et al.,* 2007). Although most negative impacts on the environment are intentional, it is not intended as vandalism per se. Unintentional impacts can be regarded as uninformed in terms of the protection of biodiversity and the environment and refers to depreciative behaviour and forms an important part of understanding visitor perceptions regarding biodiversity and the protection thereof (Alessa *et al.,* 2003:209) while evaluating experiences and the reasons behind the experiences in the parks.

4.1.4 Visitor perceptions and experiences

According to Alessa *et al.* (2003:209), perceptions of the health of an ecosystem are brought about by culture, increase of knowledge and exposure. Although the general perception would be that improved knowledge will increase responsible behaviour and decrease depreciative behaviour, results from some studies have substantiated this, while

other studies have contradicted this. A study done in the Kuusamo region in Finland has analysed the perception of nature conservation, ecological health and tourism development, and the complex interrelated relationship they have. Results have found that the largest segment (57.7%) of the respondents were educated locals and the most supportive of nature conservation and responsible behaviour (Törn *et al.,* 2007). Contradictory to general belief one study stated that visitors with a high level of knowledge engage in more depreciative behaviour (Alessa *et al.,* 2003:209). Therefore an increase in knowledge may have a reverse effect, for example, where a knowledgeable visitor may want to examine a specific species more closely or share it with other visitors therefore impacting negatively (Alessa *et al.,* 2003:213).

However, visitors who perceive biodiversity to be more sensitive, whether they are knowledgeable or not, will have less damaging effects on the environment. This is supported by a study done on water conservation that found no correlation between perception, knowledge and intention (Watson, Murthy & Moore, 1992 in Alessa *et al.,* 2003:216). Although Ballantyne *et al.,* (2008B:662) found that even though the correlation is rather small, visitors to wildlife areas prefer an increase in information regarding conservation and practical information on what visitors can do to help. Therefore a conclusion can be drawn in stating that although perceptions of visitors are more important than knowledge regarding ecological health, the need still exists to inform visitors regarding conservation and protection issues (Alessa *et al.,* 2003:215). This provides management with the tool to communicate with and influence visitors regarding various conservation issues and to determine perceptions, such as the influence the level of biodiversity has on visitor experiences.

Visitor experience is among the top priorities of national park management. The perception of visitors concerning the biodiversity of an area is scarcely researched, and although it was stated earlier that visitors prefer natural areas with greater diversity, the actual impact regarding the level of biodiversity on experiences per se remains unanswered (van der Duim and Caalders, 2002:745). In order to fully exploit the protection of biodiversity and social benefits, visitor perceptions need to be recognised. Apart from recognising the perceptions, national parks need to understand and differentiate between the attitudes and perceptions of visitors concerning environmental issues. The importance in determining

the perceptions of visitors regarding the national park; environmental and biodiversity issues and the impact they have on experiences and satisfaction cannot be over emphasised. Visitor perceptions are a powerful tool that can be utilised to improve the satisfaction and quality of visitor's experiences and to manage national parks more effectively.

Although stated earlier that visitors prefer areas that are more biodiverse and unique in various ways, the actual impact that biodiversity has on visitor experiences and specifically travelling to places with greater biodiversity is relatively unknown. However according to a recent study done by Juutinen *et al.* (2011), a reduction in biodiversity was found to be the most harmful in terms of visitor satisfaction in ONP. On the other hand an increase in biodiversity has been valued as the greatest attribute not only to visitor satisfaction but the local population adjacent to ONP (Carlsson, Frykblom and Liljenstolpe, 2003). Therefore it is clear that biodiversity can have quite a strong impact on visitor perceptions and experience. By identifying the direct impact the level of biodiversity has on visitor experiences and satisfaction at the national parks, can add greatly towards improving the quality of visitor experiences by sustainable development and adaption of national park areas most sought after by tourists.

In determining visitor experiences in general, many other factors have to be taken into account for national parks to be able to ultimately leverage all factors towards improving visitor satisfaction. In striving towards quality visitor experiences, it is important to remember that one of a national park's greatest strengths is also its greatest weakness, namely visitors. High visitation results in substantial financial income to protect the biodiversity of national parks but impacts greatly on the environment while affecting the quality of visitor experiences (Manning, 2001:94). On the other hand, fewer visitors reduce the impact on the biodiversity and increases visitor experiences but provide less financial support in protecting the biodiversity of the national parks. The relationship is complex and interlinked and therefore requires familiarity with impacts on visitor needs and preferences in order to fully satisfy and meet visitor's experiences without impacting on the environment. In terms of not impacting on the environment could provide difficult as facilities in general are needed to satisfy visitors. This issue therefore indicates the conservation-development nexus and revolves around the amount of acceptable

development compared to conserving the biodiversity while at the same time meeting the needs of visitors (Buscher and Dietz, 2005). Apart from meeting the needs of visitors, the impacts of visitors on the environment are equally important to identify and manage accordingly with the lowest possible negative impact. Management in national parks is therefore benchmarked against other national parks or natural areas to determine best practices that stipulate the need and importance for management to protect the biodiversity together with meeting or exceeding visitor experiences.

4.2 MANAGEMENT OF NATIONAL PARKS

The management of national parks can be best described as “conserving the scenery and natural and historic objects and the wildlife therein and to provide for enjoyment of the same in such a manner and by such means as to leave them unimpaired for the enjoyment of future generations” (Park *et al., 2008:*98). The main objectives are to provide enjoyment to visitors and to protect the environment for future generations. Therefore as listed above, the uniqueness and quality of visitor experiences are very important. To provide quality visitors experiences, the national park has to manage the environment as such to provide the visitors with quality experiences while protecting the biodiversity at the same time. If the national park is not managed accordingly, effects such as a loss in biodiversity; and a substantial decrease in visitor numbers over time may result in considerable damage in environmental and economic terms.

4.2.1 Managing the biodiversity of national parks

The decline of biodiversity globally is alarming and highlights the importance of planning and managing biodiversity in protected areas such as national parks (Heino *et al.,* 2009:1179). Tourism and recreation in national parks are considered as the greatest threats to biodiversity and make it imperative to understand the trade-off between visitor experiences and the protection of biodiversity in order to allow managers to successfully manage the national park with minimal impact (Juutinen *et al.,* 2011). Biodiversity is a very complicated and broad concept to measure and protect. In general biodiversity is classified in terms of three levels, genes, species and ecosystems (Fennell and Weaver, 2005:383).

It cannot be measured as a single aspect and therefore various aspects have to be taken into account when managing biodiversity in national parks (van der Duim and Caalders, 2002:746).

These aspects such as the number of mammal, bird, and plant and tree species need to be measured and evaluated separately to determine the health of an ecosystem (Juutinen *et al.,* 2011). Once the current state has been established, management can determine and formulate goals and objectives and a future strategy and vision. Desired goals and objectives will differ from ONP and the GGHNP although their approaches to reach these may be similar. Various national parks, globally, along with independent researchers have developed certain management frameworks that focus on the two main aspects, namely visitors, the environment and the relationship between them. According to Farrell and Marion (2002:39), effective biodiversity management strategies can only be done by attracting local experts with greater creativity and input.

According to Juutinen *et al. (*2011), strategies involving protection of the biodiversity include locating accommodation facilities on less sensitive areas with more tolerant vegetation types, using alien and not indigenous tree species within the national parks to construct many of the facilities and establishing new routes in the park to avoid congestion and disturbance due to overcrowding. Although this will protect the biodiversity, new routes to ease the impact on highly visited routes will again have negative impacts due to construction but will relieve negative impacts in future. The relationship between the protection and improvement of visitor experiences are truly intricate. In the case of South Africa, the lack of funding from governmental institutions forces national parks to depend greatly on tourism.

The willingness to pay (WTP) in terms of visitors is thus critical in the protection and management of biodiversity for national parks. According to Turpie (2003:212), WTP for biodiversity is directly related to the high income levels of visitors which is substantially lower on average than in Europe and in the case of ONP. Therefore due to the fact that income in South Africa's is not evenly distributed and a very high percentage of the population has a low income is troubling in terms of the protection of biodiversity in national parks. This situation, with the added effect that conservationists are confronted to

develop effective biodiversity conservation and protection strategies in economic deficient but biological rich and diverse areas, represents grave challenges (Bookbinder *et al.,* 1998:1400).

Certain main factors contribute to the loss of biodiversity and the acceleration of the extinction of species which is a top priority to manage according to Fennell and Weaver (2005:384). The factors include:

- Habitat destruction.
- Invasive species.
- Pollution.
- Population.
- Overharvesting.

Fennell and Weaver (2005:384), argue that rehabilitation is a major part of the management of biodiversity and is vital in restoring and protecting the environment. On the other hand, a strategy to increase and optimise the biodiversity is much more complex and difficult to improve. Due to the various aspects of biodiversity, a simultaneous optimisation is impossible and management needs to focus on different aspects, and whether to manage or to improve the situation (van der Duim and Caalders, 2002:746). Although most frameworks focus on biodiversity as a whole, the framework can be applied to certain aspects of the environment that requires the most attention. The common thread that most frameworks have and according to Hof and Lime (1997:30), that present a good base in managing biodiversity as listed below:

- To determine the current state of biodiversity in the national parks.
- To define current strategies and appropriate future environmental conditions.
- To develop indicators and standards of quality to be measured against.
- To continuously monitoring the level of biodiversity and standards through set indicators.
- To take corrective and suitable management action if needed while still continuously monitoring the environment.

The aforementioned would be an example of a basic outline of a strategic management plan to protect the biodiversity or aspects of the biodiversity of a national park, however

considerable additions are required to suit both the ONP and the GGHNP. In the case of South Africa, SANParks lacks a formal biodiversity policy or management plan for most of their national parks although this is required by new legislation (Gaylard and Ferreira, 2011:1). As no sufficient information or maps exist on biodiversity hotspots in GGHNP this can be regarded as a major limitation in determining the role of biodiversity in this park. This limitation in GGHNP is in contrast to the effective management of various biodiversity hotspots in ONP. According to Siikamäki and Kangas (n.d.), the Oulankajoki river in ONP for example is identified as a highly biodiverse and visited area. Due to the fact of being a highly biodiverse and visited area, more intense management was introduced to protect the biodiversity. Therefore in order to manage biodiversity in a national park, the most biodiverse areas need to be identified, recorded and managed according to the appropriate biodiversity policy or management strategies.

Although a lack in biodiversity policy or management strategies exists within the South African context, a current response to this would be the SAM (Strategic Adaptive Management) framework that SANParks is currently using. This framework is adaptable in terms of the flexibility provided for the inevitable change due to the premature phase of formal biodiversity policy or management strategies. The SAM framework according to Gaylard and Ferreira (2011:2), include:

- Scientists and managers together providing technical input.
- Setting of combined objectives.
- Prioritising the combined objectives according to urgency.
- Regular meetings to measure and improve objectives.

The above is executed effectively by using a framework to force managers and scientists to collaborate and combine empirical and theoretical knowledge (of scientists) with the practical approach of managers in developing a strategic management plan for biodiversity (Gaylard and Ferreira, 2011:1). Apart from controllable impacts, the effects of global climate change have over the years been noted in national parks. The effects of climate change include both positive and negative impacts and represent certain activities that are either allowed or limited due to the changing climate and the time periods associated with them. The length of seasons in, for example, the polar regions have made areas more accessible to tourism and therefore impact negatively and are causing further change (Hall

and Saarinen, 2010:80; Scott, Jones and Konopek, 2007:570). On the other hand, various positive effects have emerged in terms of warmer climates with longer seasons for outdoor activities to name but a few. These positive and negative effects due to climate change need to be incorporated effectively within the strategic management frameworks to optimise the protection of biodiversity and management of visitor impacts and perceptions in national parks.

4.2.2 Managing visitor perceptions and impacts

Visitor's perceptions are extremely powerful and can either greatly benefit or cause serious damage to any organisation or destination. Therefore it is imperative for national parks to determine and understand visitor perceptions and attitudes towards the environment (Alessa *et al.,* 2003:208). As mentioned previously, the fact that relatively few tourists visit the central African countries, for gorillas as the main tourism attraction, is not only due to a lack of other tourism ventures, but the presence of political instability and the perception of instability of those countries (McNeilage *et al.,* 2001; Wilkie and Carpenter, 1999).

This is a clear indication of the influence that perceptions have on tourists and their desire to visit a destination. This can be seen throughout every country in Africa and therefore illustrates the importance of determining and managing visitor perceptions. In order to manage perceptions effectively, management needs to first determine visitor's perceptions and evaluate whether the current perceptions are in line with the national parks' desired image and that of environmental protection. In the case where the perceptions do not reflect the above, it is of the utmost importance that the management of the national parks correct and inform visitors through various means. Once visitors' observations have been corrected, the management of the national park has the task to manage the perceptions of visitors and maintain the improved status of the park.

An important part in determining visitor perceptions is that of differentiation in terms of tourists, their profiles and backgrounds. Any national park has visitors with different cultures, knowledge levels exposure and experience spread among domestic and foreign visitors. These aspects impact on perceptions regarding the national park and ecosystem's health (Alessa *et al.,* 2003:209; Juutinen *et al.,* 2011). Therefore determining and

understanding market perceptions in terms of issues such as protection of biodiversity is very important for the management of the ONP and the GGHNP.

A study done regarding ecological and recreational aspects in Oulanka National Park has yielded results that foreign visitors value certain ecological aspects and park features differently than domestic Finnish visitors. For example, foreign visitors preferred the increase of information regarding the parks and were less concerned about the richness of biodiversity, whereas Finnish tourists preferred less general-level information but more intensively managed areas. The Finnish visitors also valued the richness of biodiversity greatly (Horne, Boxall and Adamowicz, 2005:190; Juutinen *et al.,* 2011).

Apart from determining perceptions regarding national park aspects, perceptions are linked to visitor impacts. A new environmental paradigm (NEP) scale was used in a study concerning knowledge, personal attribution and perceptions of ecosystem health in national parks. The results indicated that the impacts visitors have on the environment are related to the perceptions they have regarding the "robustness" of the ecosystem. The greater visitors perceived the environment to be robust, the greater the impact was and vice versa. The same study indicated that increased knowledge of environmental issues was not significantly related to less impact on the environment (Alessa *et al.,* 2003:210-211). Although this might be true, studies have shown that visitors prefer an increase in information regarding conservation issues communicated to them. Results indicate that 79% of visitors in Bako National Park (Malaysia) strongly supported educating visitors more about conservation and biodiversity (Chin *et al.,* 2000:30-31).

The importance of education can be highlighted through "communicating the reasons behind management actions to visitors, so that visitors are more likely to support management strategies, especially those restricting their activities" (Cole, 1995). This is crucial when direct management strategies are used in national parks to restrict visitor activities and experiences. Research has shown that although direct management strategies restrict visitor activities, visitors prefer stronger site management due to the fact that the biodiversity is preserved and less impacts are exerted on the environment (Bullock and Lawson, 2008 ; Park *et al., 2008:*99-100).

The raising of awareness of the importance of biodiversity is critical and leads to the appreciation and understanding of protecting the environment. This along with various other factors such as education and direct management strategies can severely lessen visitor impacts in national parks (Ballantyne *et al.,* 2008A:440). Therefore according to previous research, a combination of improving visitor knowledge and perceptions, determine the markets of national parks. Portraying the importance of biodiversity would have a greater effect on minimising visitor impacts than only focusing on a few key aspects. These mentioned aspects refer to biodiversity optimisation or education and also include all possible aspects for a greater effect.

Although these aspects may lessen the impacts visitors have on the environment, management deals not only with the prevention of impacts but the management thereof. The issue is not solely on preventing visitor impacts as that is nearly impossible, the issue is in determining which impacts are acceptable to the specific area (Farrell and Marion, 2002:38). When evaluating visitor impacts in national parks, carrying capacity is notably the main impact that needs to be managed. Although carrying capacity is an important part in the management of visitor impacts, as stated above, it is only representative of some impacts and cannot be used in determining the general level of visitor impacts.

According to Chin *et al.* (2000:21), another issue in terms of carrying capacity is the lack of addressing resource management problems. In developing and effectively managing visitor impacts, a combination of various strategies such as carrying capacity (CC), visitor impact management (VIM), limits of acceptable change (LAC), and others, needs to be aligned in order to cover the whole spectrum of determining and managing visitor impacts effectively. Many different frameworks exist and monitor a combination of site conditions, management effectiveness, underlying causes of impacts, defensible decisions and a cohesive context for decision-making once visitor impacts have occurred. These frameworks have thus one thing in common, the amount of acceptable human-induced change (Farrell and Marion, 2002:38-39). However, apart from determining the level of impacts, management must understand how disturbances in respect to biodiversity and tourism are present, and only then can managers develop models for effective impact management (Alessa *et al.,* 2003:208). In defining indicators and standards of quality, not only carrying capacity but management objectives in terms of biodiversity protection can

be determined and monitored on a regular basis to lessen visitor impacts (Manning, 2001:98). The development of such models is best tailored to each national park and the specific impacts present. According to Farrell and Marion (2002:36), the ideal framework should:

- Be easy, quick and inexpensive to implement.
- Able to successfully assess and minimise visitor impacts.
- Identify underlying causes of impacts.
- Facilitate a variety of management actions.
- Distinguish between technical information and important information.
- Promote public involvement, learning and harmony building.
- Incorporate resource uses and resource management issues.

This framework provides an opportunity to enhance the natural integrity of a national park by minimising and controlling visitor impacts and enhancing visitor experiences. Any area such as a national park has a limit to growth before impacts start to occur at a disturbing and unacceptable level (Saarinen, 2006:1128). Therefore by determining and managing growth effectively, visitor impacts can be minimised or eliminated completely. In order to minimise visitor impacts, expansion of the destination provides a feasible answer and allows for continuous growth. According to Saarinen (2006:1128), by altering the destination in terms of introducing and expanding new types of facilities and infrastructure, the destination such as a national park can improve the limits of growth and lessen the impact of visitors. Although this is a solution, the development and expansion of facilities to improve growth potential may have negative impacts on biodiversity and needs to be managed accordingly.

On the contrary, Hof and Lime (1997) state that the traditional approach for national parks to expand in order to accommodate larger amounts of visitors is no longer possible. Although true that any destination can only expand to a certain extent due to space restrictions, the argument by Saarinen (2006:1128) is viable when expansions for larger numbers of visitors are incorporated by effective management. These effective management strategies are developed to accommodate and manage visitors' experiences, satisfaction and impacts in a limited space such as a national park. These strategies address issues of carrying capacity, visitor experiences and satisfaction and biodiversity

impacts caused by tourism (Hof and Lime, 1997). According to Törn *et al.* (2007), three categories between nature conservation and tourism impacts exist: coexistence, conflict and symbiosis. Of these categories, symbiosis refers to the relation where the protection of biodiversity can be improved by sustainable tourism that will in turn manage visitor impacts and perceptions and promote a higher quality of visitor experiences and satisfaction. Siikamäki *et al.,* (2010) argue that if sustainable tourism principles are followed, the socio-economical benefits will surpass the negative impacts and promote sustainability.

4.2.3 Managing the quality of visitor experiences

According to Eagles (2001:2), tourism is dependent on two fundamental aspects that include:

- Acceptable levels of environmental quality.
- Sustainable levels of visitor satisfaction.

To achieve this in a national park such as Oulanka or Golden Gate, the level of biodiversity has to meet or exceed the expectations of visitors, regardless whether they have low or high expectations. Apart from the level of biodiversity, every aspect that has an influence on the experience and satisfaction of visitors is required to be appropriate for future visitations and sustainable levels of satisfaction. The management of visitor experiences in a quality manner along with effective conservation requires managers to determine visitors' pre-visit environmental awareness, interest and motives to be able to draw a conclusion between their previous experiences and issues currently being interpreted (Ballantyne *et al.,* 2008A:440).

Therefore, being informed and aware of visitor preferences in the national park, the management strategies in improving the quality of visitor's experiences can be more effective and less time consuming with a greater success rate. This is extremely important as being aware of visitor preferences, certain tourism experiences may be limited. This could lead to the improvement of the biodiversity level in national parks. The limiting of certain experiences if the impacts on the environment are too severe can harm the effort put forth to improve the quality of visitor experiences (van der Duim and Caalders, 2002:750). Various studies have indicated that visitors care for the environment and its

preservation to the extent of limiting their own experiences. The main issue is that visitors want to understand why restrictions are put into place and want be informed. A study done on tourist support for conservation messages indicated that 88% of visitors considered the most important aspect that their experiences in watching sea turtles, had had the lowest possible effect on the turtles (Ballantyne *et al.,* 2008B:661). Another study indicated that visitors responded very well to visual mediums when restrictions were communicated to them regarding off-limit areas on Cadillac Mountain, U.S.A (Bullock and Lawson, 2008). Therefore, managerial aspects in determining and communicating restrictions to visitors in order to improve their experiences and at the same time protecting the environment, are extremely important.

The importance in communicating and balancing visitor experiences and resource protection are mirrored by the major challenge for any manager of a natural area (Juutinen *et al.,* 2011). As mentioned above, visitors are a national parks greatest asset and threat. Although ecotourism and the natural resource base can have a mutually beneficial relationship, it has to be managed accordingly in order to reach that status. According to Chin *et al. (*2000), “both the environmental conditions of natural areas and the quality of the ecotourism experience are influenced not only by the number of visitors per se, but by the impacts those have on the ecological and social conditions”. Therefore visitors are at the centre of management and the quality of visitor experiences. The increasing popularity and demand for national parks with the inevitable growing number of visitors has a negative effect on resources and visitor experiences in national parks. Apart from the negative environmental impacts, the number of visitors in a national park determines the quality of visitor experiences (Manning, 2001:102).

Visitor experiences and its relationship with the environment are intricate but duly researched. Various frameworks have been developed in order to asses and manage the relationship between them to ultimately improve visitor experiences and decrease impacts on the environment. One of the most noticeable and researched frameworks is the Visitor Experience and Resource Protection (VERP). Frameworks such as VERP, Visitor Impact Management (VIM), and Limits of Acceptable Change (LAC), Visitor Activities and Management Process (VAMP) et cetera, focus more on the impact of carrying capacity of natural areas, but provide a good base for national parks to protect and manage

biodiversity while at the same time providing satisfactory visitor experiences (Davenport, Borrie, Freimund and Manning, 2002:53; Farrell and Marion, 2002:34; Hof and Lime, 1997:30; Kangas and Siikamäki, n.d).

These frameworks according to Farrell and Marion (2002:34), were developed for various reasons and include:

- The identification of recreation and tourism opportunities.
- Assessing the impact relationship between visitors and the environment.
- Equipping managers with steps to determine satisfactory conditions.
- Identifying and providing management strategies to achieve satisfactory resources and social conditions.

Although these frameworks provide a very good basis for achieving sufficient results in protecting the environment while improving visitor experiences, any framework will need to be adapted and tailored for ONP and GGHNP separately, to achieve the desired results and enhance the quality of visitor experiences.

4.2.4 Best practices in natural areas and national parks

With a magnitude of national parks worldwide, expertise in management of every aspect of national parks is in abundance with best practices leading the way. Not surprisingly, national park management practises in First World countries are normally the best examples of sustainability and biodiversity conservation while providing quality visitor experiences with only a few examples in developing countries. On the other hand, First World countries do not have the amount and richness level of biodiversity. Therefore it is very important to capitalise on best practices and aim to avoid problems that have already been dealt with by other national parks. Through research it is evident that governmental funding to national parks has accelerated and provided the ability to develop high-quality policies that has led to the balancing of environmental conservation and the visitor experience (Eagles, 2002:132; Puhakka, 2011:77). The Australian government has issued A$10,000,000 towards the development and implementation of a national policy over a four year period with the increased emphasis on management in protected areas (Eagles, 2001:4).

Due to the fact that ecotourism is one of the fastest growing segments in the tourism industry, Australia has committed itself to this international trend and includes over 400 ecotourism operators (Fennell, 2002:1); and when viewing high-quality policies, it is evident that funding is necessary for development. In the case of New Zealand, a very successful policy is based upon high levels of public and private cooperation in natural protected areas with the emphasis on Total Quality Management (TQM). The policies have increased foreign visitation which has led to increased demand for developmental and maintenance levels of environmental and service levels (Eagles, 2002:133). Although many national parks incorporate private cooperation in term of external stakeholders, various benefits and disadvantages exist due to conflicting objectives. The conflicting objectives normally vary between external stakeholders that are profit driven while governmental objectives tend to focus more on protection of the environment.

The environmental objectives according to national parks in Finland and Nepal are also not only to protect and conserve, but also to integrate socio-economic and ecological goals by utilising sustainability principles (Bookbinder *et al.,* 1998:1400; Puhakka, 2011:77). These objectives have been developed by the state-owned Metsähallitus and focus more on the environment and improving the local communities, and are therefore not as interested in profit as are private companies (Puhakka, 2011:77). In terms of Nepal, the Royal Chitwan National Park developed various programs experimenting with economic benefits to local stakeholders and the community to ultimately save biodiversity in the national park. In experimenting with these programs, the results indicate that two conditions must be present to fulfil biodiversity conservation. The conditions include:

- Economic incentives must provide immediate and not futuristic benefits to local people.
- The economic incentives must mirror the value of the threat of biodiversity in the area.

In order to satisfy these objectives and conditions, the government of Nepal has passed a law stating that to increase local support for biodiversity in national parks and remote areas, 50% of park fees and a portion of conservation taxes must be distributed to local communities (Bookbinder *et al.,* 1998:1400). Apart from the park fees and conservation taxes, the government of Nepal has developed buffer zones programs to further increase the protection and conservation of biodiversity. The buffer zones do not only protect biodiversity but allow local people to manage and continue with their traditional practices in the buffer zone (Nyaupane and Poudel, 2011:1354).

In order to ensure sustainability within these buffer zones, major training programs are provided around Royal Chitwan National Park and include biodiversity conservation, income generation, nature guiding and ecotourism. Within the buffer zone, 30-50% of national park income is spent on local community development within the region with all biodiversity conservation programs training and hiring local people that feed back into the community (Nyaupane and Poudel, 2011:1355-57). The training, income expenditure and development of the local community with the buffer zones and benefits go directly towards the development and ensure sustainable development and the future conservation and protection of biodiversity.

Another example of zoning within a national park is the development of Recreational Opportunities Zoning (ROZ) in the Kruger National Park in South Africa. The ROZ was developed to spread the activities from high intensity leisure to relative low intensity in order to reduce the impacts on the environment (Zhou and Seethal, 2011:4). The ROZ therefore allows the national park to maintain certain wilderness qualities within zones and not to implicate the biodiversity negatively but at the same time offer quality visitor experiences. Although zoning is a proven and tested way of protecting the biodiversity of a national park, it is not the only way. According to Siikamäki and Kangas (n.d.), a meticulous and successful way of protecting the biodiversity of ONP was done in the form of indentifying and managing biodiversity hotspots. ArcGIS is a geographical information system that was used by ONP to identify and map biodiversity hotspots and usages within the hotspots. The biodiversity hotspots were and will in future be taken into account in any large scale planning or infrastructural development. When viewing the development of ONP, robust terrain was used for campsites in high visitation areas within the biodiversity hotspot. The rationale was to make use of high tolerance vegetation in the hotspot to accommodate high visitation and to alleviate the pressure of low tolerance areas in the hotspots in order to protect biodiversity (Siikamäki and Kangas, n.d.).

For any national park to be represented by the public and private sector, or by one or the other, has benefits and disadvantages. The debate of a best practice in terms of financing a national park through visitor expenditure, government subsidising or international initiatives is a heated one with sufficient evidence of benefits and disadvantages regarding

both. According to Puhakka *et al.* (2009:530), international initiatives and certification programs promote synergy between conservation and tourism with programs such as the World Wildlife Fund (WWF) and Molecaten which was the founder of Protected Area Network Parks (PAN Parks). This in turn paves the way for funding through accreditation that can be used for the management of conservation issues and maintaining quality standards of visitor experiences.

Apart from the financial benefit, the perceptions of visitors in a continuously adapting world moving towards everything sustainable can be the way forward for any national park. With the introduction of ONP as a PAN Park, certain labels such as ecolabels can be used for the benefit of the national park. An ecolabel refers to a label that indicates the degree to which a tourism organisation or destination is operating sustainably (Siikamäki *et al.,* 2010). Ecolabels were introduced to promote suitable tourism, and in a study done in ONP, 78% of respondents indicated that they would pay more for products and services with an ecolabel (Siikamäki *et al.,* 2010:101).

Apart from a large percentage of visitors in agreement to pay more, ecolabels are both an environmental management and marketing tool to help reduce negative impacts and gain a competitive advantage. The study therefore indicates that an ecolabels in a national park could increase demand which in turn leads to an increase in financial opportunities to manage and protect biodiversity. A global study done in biosphere reserves regarding the relationship between the direct income (funding included) and visitor numbers, the results indicated that higher visitor numbers correspond to higher budgets (Eagles, 2002:135). The reason being that the better a reserve is financed through either income generation, governmental or certification funding, the more likely it is to be managed accordingly and therefore attracting larger amounts of tourists which in turn lead to a larger profit to be used for environmental issues. In terms of certification programs, Oulanka National Park was one of the first national parks to be classified as a PAN Park through the balancing of the requirements of wilderness protection and community development by assisting sustainable development (Puhakka *et al.,* 2009:530).

Apart from this, according to Eagles (2002:135), issues such as visitor return rates and the length of stay, visitor satisfaction and service quality all decrease when financial return is

not tied directly to the financial operation of a park. However with governmental funding cut, many national parks dependent on funding don't have the capability to cover costs. An example would be the budget cuts in Canadian national parks during the 1990s with the closure of ten facilities, loss of staff at all remaining parks, less maintenance on all facilities and privatised services undertaken (Eagles, 2002:136).

Although the result was tragic, an example of limited budget availability from government with positive effects is the national parks in South Africa. With grants to national and provincial parks being phased out completely, SANParks needs to increase income levels generated through tourism. The national parks operate a variety of tourism businesses in the parks with licensed concessions set aside for private tourism companies. Due to the movement towards zero per cent funding from government, a unique and diverse set of income generators have been developed with the goal of self-sufficiency in SANParks (Eagles, 2002:140-141).

According to Eagles (2002:139-145), Spenceley & Goodwin (2007:259), when evaluating the advantages and disadvantages in terms of budget concerns to national parks, three models are worth discussing:

- *Private for-profit corporation* – When a private company has a monopoly and provides the tourism products and services in a licensed concession but does not have ownership of the park or natural area.
- *Non-profit corporation* – Although this approach is rarely used for the entire area of a national park and only for certain areas within the park, it is not as effective and only relies on volunteers and donations.
- *Parastatal agency* – A parastatal is an independent body within a government responsible for policy development, financial operations and decision structures. It allows a national park to function as a private company in terms of efficiency and profitability.

Apart from the models developed for budgetary concerns, Central and South America have taken a more practical approach to biodiversity conservation and management per se. Traditionally decision makers in Central and South America were and still are located off-site from the national parks. This is also the case in many national parks where

government funding is clearly present. The problem arose due to the fact that perceptions regarding funding allocation, carrying capacity and visitor impacts on biodiversity were very different from on-site to off-site decision makers (Farrell and Marion, 2002:40). The solution was the integration of perceptions of staff and decision makers on-site and off-site into a decision making framework. The framework was developed to assist in managerial issues within the national park and also financial related issues and could be adapted to the specific problem. The basic steps of the framework according to Farrell and Marion (2002:42), included:

- Indentify area values, purpose and management zones.
- Specify managerial objectives.
- Identify and prioritise impact problems.
- Conduct problem analysis.
- Select and implement managerial actions.
- Assess effectiveness of actions and correct if not up to standards.

When evaluating what option would be best suited, it is most important to assess the particular national park first. A best practice for a particular national park may not have the same effect when implemented in another. The careful evaluation of each national park along with the best practices of other substantiated by feasibility studies and integrated into GGHNP or ONP may prove very successful. The balance between government funding provided, international initiatives, accreditation labels and income generated through tourism differs from each national park in a country and between countries. The ability to provide additional tourism services in a national park should be taken into consideration when distributing funds to national parks that do not have the environmental or tourism ability to generate the same services and income. Governments demand that a national park earn more than its allocated budget (Eagles, 2002:139).

Funding should be distributed according to a national park's ability to generate additional income. Apart from the funding allocation, every country with its own business culture differs from the other and therefore no single model or best practice can be used for all. A careful evaluation of the national park will determine the best option or combination of options to be implemented for successful management and environmental protection. Thus in utilising a combination of all literature mentioned above along with the empirical

results from the research, suggestions and recommendations for the development and management in the form of Biodiversity Tourism Management Guidelines (BTMG) for ONP and the GGHNP will be presented to manage and improve the biodiversity of both national parks while improving and providing quality experiences to visitors.

5 RESEARCH DESIGN AND METHODS

5.1 DESCRIPTION OF INQUIRY STRATEGY AND RESEARCH DESIGN

The research design of the study includes a quantitative design with the inquiry strategy being a case study. A case study normally represents an in-depth study of individuals, group of individuals or institutions. The case study regarding the study focuses on certain aspects of individuals in relation to the National Parks' level and richness of biodiversity. The advantages with case studies include the significant amount of descriptive information, the detailed level of analysis and the capability to provide explanatory information to management (Brink, 2006:103). On the other hand case studies have been found to be too time consuming and in some cases too costly. In the case of the study, the two case studies include ONP and the GGHNP. A case study approach was chosen due to the characteristic of providing significant amounts of descriptive data to the management of both national parks (Brink, 2006:110; University of Pretoria, 2008). The in-depth analysis and substantial amount of descriptive data regarding ONP and the GGHNP provides a distinctive basis to analyse the empirical results and provide suggestions and recommendations to the management of both national parks.

According to the University of Pretoria (2008), the following are the most appropriate general descriptors that best reflect the broad research design of the study:

- *Empirical Research* – The study is classified as an empirical study due to the fact of primary data being collected and analysed both on-site and online and at GGHNP apart from analysing primary data collected at ONP by The University of Oulu, Finland.
- *Basic and Applied research* – The study includes both basic and applied research. The data collected and analysed may serve to increase the scientific knowledge and gain an understanding regarding various research objectives in national parks acting as basic research. The questionnaire was developed for the management of ONP to

improve the quality of visitor experiences and to determine the impact of biodiversity; the same questionnaire will be adapted with minor changes and utilised by management at GGHNP, and represents applied research.

- *Descriptive research* – The aim of this study is to provide an in-depth description of the sample of respondents regarding the research objectives. The descriptive research may be used to develop suggestions and recommendations for management at both national parks.
- *Cross-Sectional research* – The study represents cross-sectional research due to the fact that the data was captured at a specific point in time at ONP. The surveys at GGHNP were also done at a specific point in time with each participant completing a single questionnaire.
- *Primary data* – The data was collected specifically for the research project and the stated objectives at ONP and GGHNP.
- *Quantitative data* – Numerical data were collected physically at ONP with a sample size of 613 respondents whereas data were collected physically at GGHNP and through online questionnaires. The sample for GGHNP was substantially less than for ONP with only 113 respondents. The quantitative data were analysed separately for each national park and then compared where possible and appropriate.

5.2 SAMPLING

5.2.1 Target Population, context and units of analysis

The sample population of the study was day and overnight visitors to ONP in Finland and GGHNP in South Africa which therefore represents the units of analysis. The context extends between the two countries, Finland and South Africa.

5.2.2 Sampling method

The sampling method used in Finland was a non-probability convenience sampling method with various fieldworkers tasked to collect the data from respondents. To ensure uniformity in the case study between the two national parks, the same method was

physically used at the GGHNP in South Africa with the added online questionnaires. The non-probability convenience sampling is best suited in terms of the convenience of data collection at the national parks. The limitation of the non-probability convenience sampling method is the fact that it is the least reliable design with little opportunity to control bias (University of Pretoria, 2008).

Apart from the limitations represented by the sampling design, certain other limitations exist in the data collected. The data in Finland was collected over a longer time frame with more time and fieldworkers available to increase the number of respondents. As for Golden Gate, the time frame was shorter with less fieldworkers acquiring the data. Another limitation is that the visitor numbers to Oulanka were far higher to those of Golden Gate, with data collected over a longer time, with more fieldworkers and with superior visitation numbers it was not possible to acquire close to the same number to that of Oulanka. Thus all limitations taken into account, the researcher attempted to minimise and control the elements and factors to add to the credibility and accuracy of the study. The sampling method used in the online surveys is the quota sampling method. The fact that SANParks has a database with visitors to each South African National Park provided the sampling frame apart from the physical data collected at Golden Gate. The strata studied in the database were visitors to GGHNP with the sample having the same characteristics of the target population.

5.2.3 Sample size

The sample size collected at ONP by the fieldworkers was 613 respondents. The sample size physically collected at Golden Gate with the added online respondents from online surveys was 113. Due to the different levels of representativeness in populations the sampling does not allow direct comparisons between the study sites.

5.3 DATA COLLECTION

5.3.1 Survey methods

The survey method used in collecting the data at ONP was self completion questionnaires. The questionnaires were distributed by various fieldworkers at the park. The respondents were asked to complete the questionnaires while the fieldworkers offered assistance when necessary. The same was done at GGHNP with the researcher conducting the surveys. Apart from the questionnaires distributed at GGHNP, an additional quantity was conducted online. The SANParks database of visitors to GGHNP was used to conduct the research.

With any sampling method, certain advantages and limitations exist. An advantage of self administrated questionnaires, with a fieldworker present is the assistance that can be provided to improve accuracy and response rate. A common limitation with questionnaires and fieldworkers at hand are response bias that may affect the accuracy of the data. The advantages with online surveys are the cost factor. It is a very inexpensive way of conducting research but with the limitation of a very low response rate (University of Pretoria, 2008). Another limitation is the relevancy of data with the possibility of the same visitors completing a questionnaire more than once.

5.3.2 Measurement

Various abstract characteristics are measured in the questionnaires for ONP and the GGHNP. The two main characteristics are attitudes and perceptions towards the functioning and management of a national park and the impact of biodiversity on visitor experiences. The attitudes and perceptions regarding management were measured by multiple-choice single and multiple-response, dichotomous and Likert scales. The importance and impact of biodiversity were measured by the same scale types. Due to the fact that abstract characteristics were measured, known scales were borrowed to provide reliability and validity to the study.

5.3.3 Data collection instrument

Appendix A (p. 120) contains a copy of the questionnaires used for both the ONP and the GGHNP.

5.3.4 Pilot

Pre-testing the questionnaire was developed and tested in Finland by the University of Oulu. The questionnaire used in South Africa was based on the pre-tested questionnaire from Finland with minor changes that needed to be made in order to suit the national park and it was therefore not necessary to pre-test.

5.4 DATA ANALYSIS

5.4.1 Recording and storing of the data collected

The data was collected by fieldworkers of the University of Oulu with paper-based questionnaires. The fieldworkers recorded the data from the questionnaires into a SPSS dataset which was then exported into a Microsoft Excel spreadsheet. The spreadsheet was stored on to a CD-ROM as a backup copy. The recording of data at the GGHNP was handled differently using two collection methods. As mentioned earlier, the first method was online surveys using the SANParks visitor database. The recording and storing of data were both done online and exported directly to a Microsoft Excel spreadsheet. The second method was through two fieldworkers distributing questionnaires at the GGHNP. The data was then computerised into SPSS and exported to another Excel spreadsheet. The two Excel spreadsheets were merged into one consisting of all data recorded from GGHNP. Another CD-ROM backup was made for safekeeping.

5.4.2 The descriptive statistics used in preparing and analysing the data collected

The study focused on a case study between the two national parks and therefore represents a more descriptive study. Thus the methods and techniques used to prepare

and analyse the study was relatively simple. To prepare the data for analysis, various scales were assigned to the research questions. The scale designs for the questionnaires are a combination of dichotomous, multiple-choice, single and multiple response, rank order and Likert scales. The level of measurement for both dichotomous and multiple-choice scales is nominal, the rank order scale ordinal and the Likert scale interval (University of Pretoria, 2008:95).

In order to prepare the data for analysis, a codebook was developed to guide the coding of the quantitative statistics. The codebook included all question numbers, variable names and labels associated with the particular question, value codes and labels of the variables, the data or measure type and univariate descriptive statistics for each question. The minimum univariate descriptive statistics aimed to report all levels of measurement. This includes the mode, median, range and standard deviation (University of Pretoria, 2008:96). Therefore the data collected were analysed using the minimum descriptive statistics mentioned before plus the variance, correlation coefficient and various descriptive graphs.

5.4.3 External expertise used to analyse the data collected

The initial analysis of the data collected from both national parks were done by the statistical department of the University of Pretoria. The data were analysed by the department at no extra cost to the researcher. The researcher then used the already analysed data and interpreted the findings between the two national parks. The data analysis and interpretation took a few months.

5.5 ASSESSING AND DEMONSTRATING THE QUALITY AND RIGOUR OF THE RESEARCH DESIGN

5.5.1 Possible biases and errors

In any study various errors occur that cannot be controlled to the point of elimination. Many errors occur due to poor design or improper execution of the study (Zikmund and Babin, 2009). Potential errors for data collected at ONP and GGHNP may include acquiescence

bias, auspices bias and data processing bias. Acquiescence bias refers to respondents agreeing to all questions. Thus the error might have occurred with environmentally concerned questions due to the new trend of environmental consciousness amongst people. The auspices bias refers to the respondent being influenced by the sponsor organisation(s) which would be the national parks, the Universities, Metsähallitus or SANParks (Zikmund and Babin, 2009). Lastly the data processing error might have influenced data due to the fact that different fieldworkers computerised the data upon collection at ONP. In the case of GGHNP, additional to the already mentioned errors, a non-response error has occurred due to the online questionnaire whereas only a limited number of respondents were acquired. In an attempt to minimise the errors, the questionnaire reminded respondents of anonymity when answering and explained the benefits in terms of conservation, biodiversity, the environment and management in the national parks.

5.5.2 Ensuring reliability and validity

To ensure quality and credibility in the study, reliability and validity were evaluated in accordance with the scales used. Reliability is the consistency with which an instrument measures an attribute and is therefore a major criterion for assessing the quality and rigour of a quantitative study. Reliability is also known to maximise the true score component and minimises the error component to increase the accuracy (Brink, 2006:163; Poit & Beck, 2006:324). Important aspects considered with the testing of reliability included stability, internal consistency and equivalence. For the study, the Cronbach's Alpha was used to ensure reliability for the Likert scales. Although the measurement ranges from (0.00-1.00), for Cronbach's Alpha to be reliable, a measurement of 0.70 is considered as the lowest possibility of acceptable internal consistency (Poit & Beck, 2006:326). As with stability, internal consistency and equivalence, the closer the value is to 1.00, the stronger the reliability. Validity is the accuracy degree in which an instrument measures what it is intended to measure (Poit & Beck, 2006:328). Like reliability, important aspects evaluated regarding validity include content, criterion and construct validity. For the purpose of the study, construct validity was used to measure the validity of the measuring instruments. Construct validity represents the construct being measured by the instrument (Poit & Beck, 2006:330). In the case of the study, the construct of perceptions and experiences was

measured against the instrument to test the validity. By testing and ensuring construct validity and a Cronbach's Alpha value of ≥ 0.7, the research findings regarding the study were accurate and credible.

5.6 RESEARCH ETHICS

The primary data already collected in Finland and at GGHNP both adhered to the ethical requirements. The ethical requirements applicable to the study included:

- *Copyright* – No information/graphs were taken from copyrighted sources and included in the proposal. Where graphs and tables were included, the appropriate sources were included and referenced.
- *Plagiarism* – No plagiarism has been committed in the study. The appropriate in-text and list of references are included.
- *Anonymity/Voluntarily* - All respondents participated anonymously and voluntarily and could withdraw at any moment without any negative repercussions.
- *Incentives* - No incentives were offered to respondents while research was conducted at either national park.
- *Informed consent* – Appendix B (p. 132) contains a copy of the informed consent form discussing the study, stating the voluntary nature and indicating the amount of time needed to complete the study with contact information of the researcher and supervisor. The informed consent forms were attached to every questionnaire.
- *Permission* - Permission were granted from both ONP and SANParks to conduct empirical research.

6 RESULTS

6.1 OULANKA NATIONAL PARK RESULTS

6.1.1 Research location and respondents' profile

The broader focus of the research consists of providing information to assist Oulanka National Park in managing all aspects regarding the quality of visitor experiences while maintaining and improving the biodiversity that attracts visitors. Therefore respondents have been collected at various locations in ONP to maximise the accuracy of the sample in relation to the population and improve diversity and relativity. Table 1 indicates the locations and the amount of respondents received from the particular locations. The most respondents were surveyed at Kiutaköngäs and Luontokeskus with 41.6% and 24.1% respectively.

Table 2: Survey locations at Oulanka National Park

Location	Frequency	Percent
Kiutaköngäs	255	**41.6**
Luontokeskus	148	24.1
Jyrävä	47	7.7
Juuma Cafe	35	5.7
Niskakoski bridge	31	5.1
Oulanka Canjoni	9	1.5
Caravan camping place	4	.7
Total	613	100.0

The diversity among respondent's profiles provides a very good sample regarding the population of visitors to ONP as seen in Table 2. The respondents are almost evenly distributed between males and females with 47.9% and 52.1% respectively. The total amount of respondents surveyed at ONP was 613 respondents and ranges from the youngest being 9 to the oldest at 75. As Table 3 illustrates, although the majority respondents are between the ages of 41 and 50 (23.9%), the bulk of the entire group lies between the ages of 19 and 60 (78.4%) with each category representing more than a 100 respondents. Thus the conclusion can be drawn that the age group of 41 to 50 is currently the most popular visitor group to ONP.

Table 3: Respondents profile

Gender		Frequency	Percent
	Male	285	47.9
	Female	310	**52.1**
	Total	595	100.0
Missing		18	
Total		613	
Age		**Frequency**	**Percent**
	0 – 18	25	4.3
	19 – 30	105	17.9
	31 – 40	101	17.3
	41 – 50	140	**23.9**
	51 – 60	113	19.3
	61 – 70	90	15.4
	71 +	11	1.9
	Total	585	100
Missing		28	
Total		613	

Among the gender and age of visitors to ONP, nationality was also considered to provide a more in-depth profile of visitors. A total of 25 different nationalities ranging from Europe, Middle East, Asia and North America were indicated. Among the different nationalities, Finnish visitors represented the majority and accounted for 84.9% of all respondents to ONP. German respondents were the second largest group with 3.7% followed by Dutch visitors with 1.5%. When viewing geographical region, Europe accounted for 98.4%, Middle East 0.2%, Asia 0.2% the Americas 0.5% and Russia and Turkey being transcontinental with an Asian-European border accounting for 0.7%.

When viewing a respondent's profile, education and occupation provides an important variable for further evaluation. Table 4 represents the highest level of education or specialisation regarding visitors to ONP. When evaluating the educational level it is clear that the majority of visitors to ONP are educated or trained either by vocational training, university degree or polytechnic institutions and represents 81% of all visitors. When occupation was enquired, 59.5% represented an employee at a company or organisation, 16% was retired while students and entrepreneurs accounted for 10.6% and 7.4% respectively. Unemployed and housewife/man constituted a very small percentage of the sample with both accounting for 2.2% of visitors to ONP.

Occupations other than listed in the question represented 2% and ranged from artists, freelancers, researchers and trainees. Due to the fact of environmental protection becoming a more important aspect in modern life, the last question regarding respondents' profile illustrated whether a visitor's work or studies is related to environmental protection. The majority of visitors (88.1%) indicated no relation while 11.9% specified that either work or studies relates to environmental protection.

Table 4: Education level

Education		Frequency	Percent
	Primary school	55	9.3
	High school	51	8.6
	Vocational training	191	**32.2**
	Polytechnic	130	21.9
	University higher	160	26.9
	Different	7	1.2
	Total	594	100.0
Missing		19	
Total		613	

6.1.2 Visitation Statistics

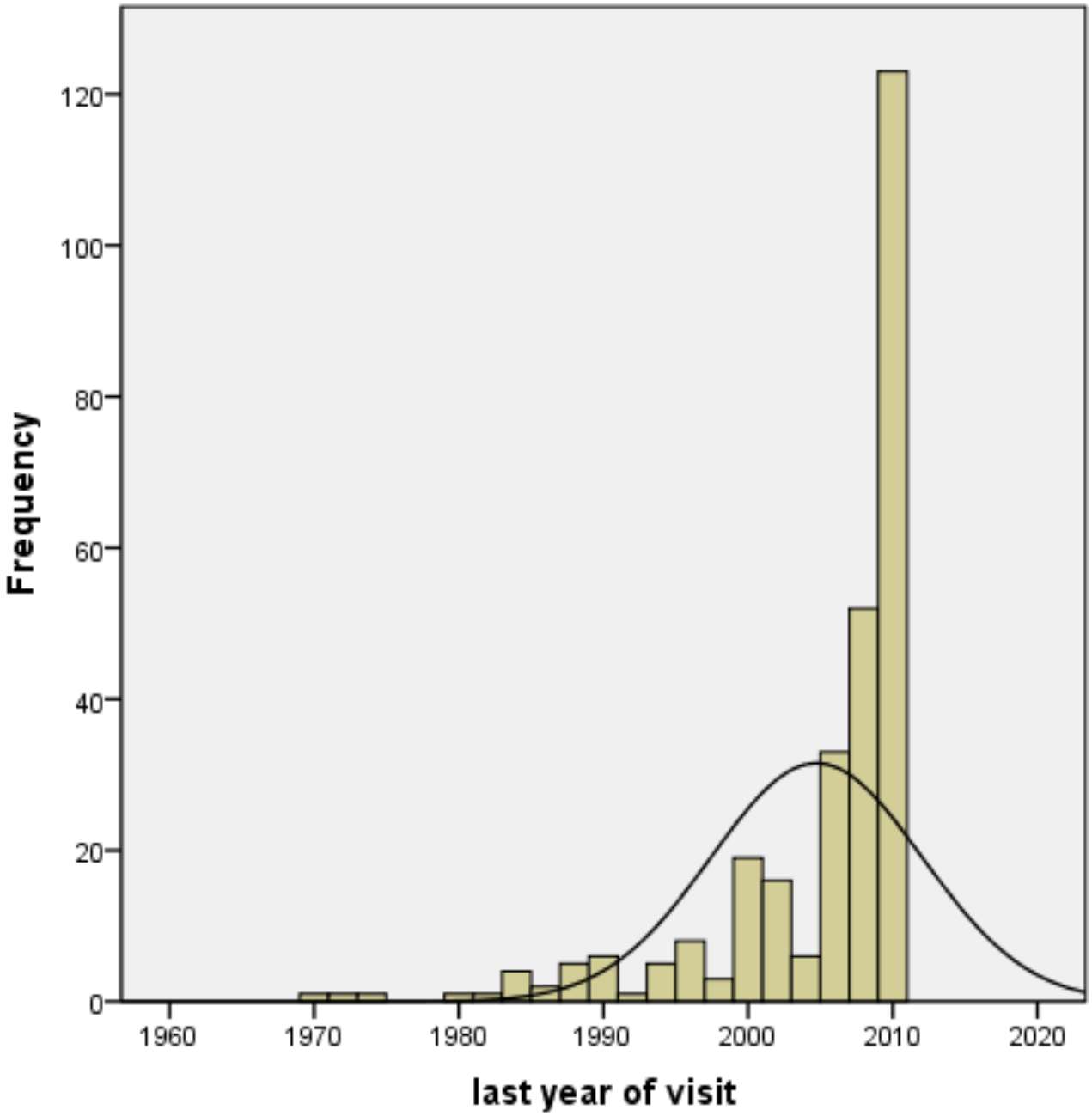
Duration of stay at ONP varies considerably among respondents. Table 5 indicates the quantity of day(s) respondents spend at ONP. Results suggested that the majority of tourists (54.6%) only visited ONP for a day trip and representing 18.5% of visitors staying 2 days/1 night, with frequency declining as number of days visited increased. As Table 5 illustrates, although with the increase in number of days spent at the park, a decrease occurs in visitors, the bulk of visitors staying between 1 and 7 days accounted for 98%.

Table 5: Number days spend in Oulanka National Park

Number days		Frequency	Percent
	1	328	**54.6**
	2	111	18.5
	3	61	10.1
	4	34	5.7
	5	21	3.5
	6	23	3.8
	7	11	1.8
	8	3	.5
	9	1	.2
	10	4	.7
	12	3	.5
	21	1	.2
	Total	601	100.0
Missing		12	
Total		613	

Separate from the quantity of days spent at ONP, the results indicated that the majority of the interviewed tourists (53.2%) already visited Oulanka with 46.8% being first timers. The even distribution of previous or first time visitors to Oulanka and the afore-mentioned distribution between males and females provides for an accurate indication of all data gathered regarding perceptions of management quality and biodiversity of ONP. Results indicated the quantity of previous visitations to ONP with the majority of respondents (29.3%) only having visited Oulanka once before. With the increase in previous visits, a decrease occurs in visitors numbers with 18.6% having visited twice before and only 16% thrice. Figure 3 illustrates the growth of visits to ONP. Results indicated between 2005 – 2010 as being the most active years with growing visitor numbers that account for 72.3% of all visits. Thus findings indicate that the popularity of ONP is steadily growing with an influx of visitors each year. The bell curve as illustrated in figure 3 represents the normal distribution of all visitors to ONP for the entire indicated visitation period.

Figure 3: Visitor growth at Oulanka National Park



(Source: Metsähallitus, 2012)

6.1.3 Visitor perceptions and attitudes towards environmental conservation

Due to the fact that environmental protection is becoming more important, results indicate that visitors are environmentally conscious and feel responsible for environmental deterioration. When asked whether respondents were part of any local or international nature conservation organisation, only 8.3% stated they were in fact members of such

organisations, while 91.7% of respondents stated that they did not belong to any organisation. As primarily stated, the majority of visitors (88.1%) indicated that there was no relation between their work/studies and environmental protection, while 11.9% specified a relation. Of the 11.9% of respondents that specified a relation towards environmental protection, only 26% were members of a local or international nature conservation organisation.

Thus it seems that there is not a strong relationship between visitors' whose study or work is related to conservation and those that belong to a conservation organisation. Apart from work, studies or membership being related to environmental protection, results indicate the extent to which visitor's volunteered for nature and landscape conservation during the last 12 months. Table 6 represents the percentage of visitors who have done volunteer work during the last 12 months regarding the various aspects listed below. The results indicate that generally a very small percentage of visitors to ONP partake in volunteer work. However, every fifth respondent implied that they have participated in the maintenance of nature areas which is a relatively large portion when compared to the other volunteering options.

Table 6: Volunteering work for nature and landscape conservation

	Yes %	No %
a. Inventory and monitoring of ecological data	12.2	**87.8**
b. Maintenance of nature areas (e.g. hay cutting, litter collection, maintaining paths etc.)	20.5	**79.5**
c. Administrative work in a nature organization	2.1	**97.9**
d. Educational activities, such as organizing excursions, courses, exhibitions	7.8	**92.2**

Although volunteer work normally requires visitors to actively partake in a specific organisation, the question is whether visitors in general feel responsible for environmental deterioration? Table 7 represents the attitudes of visitors towards environmental deterioration. Results indicate that although some visitors are neutral or do not feel responsible; the majority of visitors to ONP feel responsible for the loss of natural areas, climate change, endangered species or environmental degradation. This result can be

substantiated by the small percentage of respondents who are members of a nature conservation organisation (8.3%), those who volunteer (average 10.7%), and those who's studies or work is related to environmental conservation (11.9%).

Table 7: Visitors attitudes towards environmental deterioration

	Strongly Disagree %	Disagree %	Neutral %	Agree %
a. Because my personal contribution is very small I do not feel responsible for the loss of nature areas in the world	33.4	**34.7**	21.7	8
b. I do not feel responsible for the climate change	4.4	7.1	26.8	**41.8**
c. I feel responsible for the extinction of endangered species	17	27.9	**31.9**	16.5
d. I do not feel responsible for environmental degradation	5.1	10.7	27.7	**39.8**

On the other hand, a large part of the respondents who participated in one or more of these activities also participated in others. Results indicate that 47% of respondents whose studies or work is related to conservation and 51% of respondents who are members of a nature conservation organisation do volunteer work in either one of the aspects mentioned in Table 6. Therefore although visitors acknowledge environmental degradation and climate change, the majority feels no personal responsibility towards the problem or the solution. On the other hand a small percentage of respondents are not only conscious regarding the problems but also work together towards the solutions.

6.1.4 Importance of ONP and the Kuusamo region

In order to improve and manage the quality of visitor experiences in ONP, it is extremely important to determine visitor preferences and perceptions regarding various aspects of ONP and the importance of the national park as a tourist attraction within the Kuusamo area. In determining the importance of ONP, respondents were asked to indicate what role the national park represents in the Kuusamo area and whether tourist would otherwise visit the area. The ONP is the main attraction for visiting the Kuusamo area with only 19.2% indicating otherwise (Table 8). The majority of 80.8% of all respondents indicated ONP as being either the dominant role in visiting or very important.

Table 8: Role of Oulanka National Park in the Kuusamo region

		Frequency	Percent
	Dominant role	181	31.3
	Very important	287	**49.6**
	Not an important role	78	13.5
	No role	21	3.6
	Not aware	12	2.1
	Total	579	100.0
Missing		34	
Total		613	

Apart from the role ONP represents in the region, results indicate that 76.9% of respondents would still visit the Kuusamo area if ONP was not there. On the other hand, 23.1% of visitors feel that without ONP being present, the Kuusamo area is of no interest. This is rather interesting considering the fact that the national park was very important or played the dominant role in visiting the area for 80.8% of all respondents (see Table 8). Therefore the conclusion can be drawn that although most visitors come to visit the National Park, the Kuusamo area still represents a region worth visiting without the National Park being the main drawcard.

6.1.5 Visitor's perceptions and preferences regarding management regulations and ONP

The perceptions and preferences visitors have of a national park dictate to a large extent the success and future sustainability of that park and are therefore very important to determine. The insight visitors can contribute into management practices on various levels will not only improve the preferences of visitors but also the management of the park in a way that will result to an increase in visitor numbers and their satisfaction. Table 9 illustrates visitor's preferences of various aspects pertaining to an ideal area in a national park.

Table 9: Visitor preferences regarding an ideal area

Would it be negative or positive for your own amenity and satisfaction:	Very Negative (Mean)		Neutral (Mean)				Very positive (Mean)
A)…to find organized campsites with toilets, fire wood, fire rings and, litter bins	1	2	3	4	**5.39**	6	7
B)… to be able to dispose of litter in bins along the way	1	2	3	**4.97**	5	6	7
C)… to find marked trails in the area	1	2	3	4	5	**6.02**	7
D)… when trailheads and crossings are well signposted	1	2	3	4	5	**6.31**	7
E)… if boardwalks are provided in wet marshes	1	2	3	4	5	**6.35**	7
F)… to find huts/lodges where they offer meals and made beds	1	2	**3.38**	4	5	6	7
G)… to encounter many other outdoor recreationists during your trip	1	2	**3.69**	4	5	6	7
H)….that you can hike for hours without meeting anyone	1	2	3	**4.24**	5	6	7

According to the majority of visitors, organised campsites with toilets, fire wood, fire rings and litter bins will be a welcome sight. The mean of 5.39 represents a rather positive preference regarding the organised campsites. Although organised campsites are definitely a preference to visitors, the degree of being organised does in fact make a big difference. When looking at F (in the table) pertaining to the establishment of huts/lodges with made beds and meals offered, the mean fell considerably to 3.38 and represents neutral to slightly negative satisfaction. The conclusion can be that although visitors to ONP prefer organised campsites, the degree of organised is the key factor. The majority of visitors still want to be as close to nature without luxury.

Apart from luxury, results indicate that the majority of visitors prefer camping and cooking their own food instead of having “made beds and meals”. The disposing of litter in bins along the way has a mean of 4.97 and although in the region of neutral, leans slightly towards positive. Therefore in terms of management, by adding more bins to dispose of litter will not make an enormous difference regarding visitor preferences but may help lessen the amount of litter along the way which would considerably improve satisfaction as 77.5% of respondents stated litter as a disturbance in Table 11. Therefore when looking at results of litter disturbance, 13.3% of respondents were affected by it (refer to Table 12).

Although that share may be a small percentage, by adding litter bins along the route the percentage may be further reduced to a bare minimum.

The most prominent and positive reaction towards an ideal area would be the signage of different areas. Respondents indicated ‘very positive’ with a mean of 6.02 to “find marked trails” and even more positive with a mean of 6.31 for well signposted crossings and trailheads. Therefore results indicate the importance of sign posted trails at the start and crossings, apart from clearly marked trails throughout the entire trail. Table 9 also illustrates that the majority of visitors with a mean of 3.69 prefer not encountering many other recreationists during a trip. When asked if visitors would like to hike for hours without meeting anyone, respondents indicated the statement neutral towards positive with a mean of 4.27. This specified that although visitors are very neutral in meeting other visitors on a hike, the majority prefers not to encounter too many visitors during the trip. Therefore management actions can be to evaluate and regulate the specific amount of visitors ONP can accommodate in terms of other visitors preferences and also negative pressure upon the environment. In providing boardwalks in wet marshes, ONP will reduce the pressure on the environment and according to results will greatly comply with visitors preferences. The results indicate the most important aspect regarding visitor preferences with a mean of 6.35 (Table 9) as being a strong preference towards providing boardwalks in wet marshes. The very high mean indicates the importance of management to comply with visitor preferences at ONP.

Apart from the visitor preferences gathered regarding an ideal location in ONP, Table 10 represents visitor perceptions of nature management regulations and measures in ONP. Fourteen statements have been researched in order to understand visitor perceptions which in turn can aid management of ONP. Statements were grouped together to simplify the results in terms of protection of nature, facilities and management. Results associated with the protection of nature indicate that the majority of visitors agree not to remove tree trunks; to restrict some areas to protect nature; that nature conservation has the highest priority; that fishing only be allowed at certain places; that trail hardening be done to minimise visitor impacts on the environment and that open meadows be maintained for cultural history.

Results associated with facilities included whether tourism facilities are necessary to satisfy visitors in national parks. The majority of respondents (49.6%) did not fully agree and stated “it depends” (see Table 10). This result can be substantiated though when viewing Table 9 again where the majority of visitors preferred organised campsites and not huts/lodges with ready-made beds and meals. Both results therefore indicate that the majority visitors to ONP are more focused on being closer to nature with quality nature experiences as opposed to quality tangible hospitality facilities and features to enhance their experience. This can also be an indication of the important role biodiversity plays in affecting visitor experiences by looking at visitor’s preferences regarding nature management and regulations.

On the management side, 83.3% of respondents disagreed that motorised activities should be permitted in the park. This can be clearly seen by the main activities as indicated by respondents. The most prominent activity with 80.3% of respondents was hiking with the closest (second) activity at 9.5% being sightseeing. Therefore the importance of hiking in ONP can clearly be seen and the strong disagreement with any motorised activities. Apart from the disagreement with motorised activities, 41.9% of respondents suggested that the national park should not organise more opportunities for wildlife viewing. This can also be validated when looking at Table 13. Unspoiled nature, beautiful scenery, quietness and no signs of human influence all rate very high with means well above 4. Possible encounters with wildlife on the other hand only have a mean of 2.98 and indicate wildlife not as important as those listed above. Therefore the majority of respondents do not require ONP to add more organised activities for wildlife viewing. According to respondents, 42.4% indicated no hunting and reindeer herding in the park, 42.4% specified “it depends” and only 15.2% of visitors were in favour. More than half (53.4%) of the respondents suggested that it depends on whether local entrepreneurs should have more freedom to offer new activities and facilities in ONP.

Table 10: Nature management regulations and measures in Oulanka National Park

	Disagree %	It depends %	Agree %
a. Tree trunks should not be removed from the forest in the National Park	3.2	43.5	**53.3**
b. To protect nature, some areas need to be restricted from visitors	6.4	29.7	**63.9**
c. Nature conservation has the highest priority against all other land uses	4.8	44.3	**50.9**
d. The creation of tourist facilities is necessary to satisfy visitors in National Park	8.5	**49.6**	41.9
e. Trail hardening (such as gravel and boardwalks) is necessary to minimize visitor impacts	8.1	36.6	**55.3**
f. To protect nature, it is good that fishing is only allowed at certain places	4.2	15.8	**80.0**
g. Motorized activities should be permitted in the National Park	**83.3**	11.8	4.9
h. In the National Park there should be more organized opportunities for wildlife viewing	**41.9**	37.5	20.6
i. Local entrepreneurs should have more freedom to offer new activities and facilities in the National Park	32.2	**53.4**	14.4
j. Environmental education should be one of the main tasks of a National Park	5.0	28.5	**66.5**
k. For the sake of cultural history, open meadows should be maintained in the National Park	3.2	24.1	**72.7**
l. Hunting and reindeer herding should be allowed in the National Park	**42.4**	**42.4**	15.2
m. Fines for rule violation should be enforced	3.4	32.5	**64.1**
n. Fences and barriers are necessary to protect certain species	3.8	31.2	**65.0**

On the other hand, 66.5% of respondents agreed that environmental education should be one of the main tasks of ONP. Violations should be met with fines and enforced, according to 64.1% of respondents to Oulanka. The protection of certain species using fences and barriers are necessary with 65% of all respondents in agreement. Therefore when viewing the results above, it can clearly be seen that the majority of visitors to ONP are environmentally conscious, would like to minimise impacts, are focused on the environment and not on activities or facilities, value environmental education highly and support fines for violations in favour of protecting the environment.

Together with the preferences and perceptions, visitor experiences are also influenced by various other factors especially the behaviour of other visitors. Table 10 represents to which degree various visitor behaviours are found disturbing during a stay at ONP. The behaviours are measured with the degree of disturbance, with no disturbance at all, little and strong disturbance. Of the respondents (33.9%) indicate that the collecting of plants is of no disturbance, whereas 33.3% indicate little disturbance and 32.8% specify a strong

disturbance. Therefore results indicate that the respondents are split into thirds whereby management must decide upon a decision. The rest of the behaviour with the percentage of visitors indicating no disturbance included; mushroom and berry picking (76%), fishing (48.9%), hiking (81.6%), bird watching (83.2%), reindeer herding (51%), canoeing (81.4%) and river rafting with 78.3%. Little disturbance to visitors are the walking of designated trails, using branches of trees to make fire and the camping outside of campsites with 42.1%, 64.9% and 39.5% respectively. Although 39.5% of visitors indicate camping outside of campsites would be a little disturbing, 30% of visitors indicate no disturbance and strong disturbance representing rather diverse visitor opinions in terms of camping.

Results suggest various behaviours that may be of a strong disturbance to visitors at ONP. The strongest disturbance represents leaving litter in the national park with 77.5% of respondents in agreement while 70.7% indicate driving vehicles off-road in the park a strong disturbance. Snowmobiling and the making of fire outside of fire places classifies a strong disturbance with 58% and 54.9% respectively. Results specified the most indecisive strong disturbance would be dogs not on a leash and hunting with 44.5% and 45.2% respectively. Indecisive due to the fact of both “no disturbance” and “little disturbance” have a very close percentage of visitors and a rather low “strong disturbance” percentage. Therefore as mentioned above, activities such as the collecting of plants and camping outside of campsites, hunting and unleashed dogs should also be decided upon by management.

Table 11: Disturbing visitor behaviours

	Not at all %	Little disturbance %	Strong disturbance %
a. Walking off designated trails	40.0	**42.1**	17.9
b. Dogs not on leash	29.2	26.3	**44.5**
c. Making fire outside fire places	24.2	20.9	**54.9**
d. Leaving litter	10.7	11.8	**77.5**
e. Driving motor vehicles off road	16.4	12.9	**70.7**
f. Use branches to make fire	44.6	**64.9**	20.5
g. Collecting of plants	**33.9**	33.3	32.8
h. Mushroom and berry picking	**76.0**	20.0	4.0
i. Hunting	28.0	26.8	**45.2**

j. Fishing	**48.9**	39.6	11.5
k. Hiking	**81.6**	13.7	4.7
l. Bird watching	**83.2**	13.3	3.5
m. Reindeer herding	**51.0**	35.1	13.9
n. Camping outside campsites	30.4	**39.5**	30.1
o. Snowmobiling	20.4	21.6	**58.0**
p. Canoeing	**81.4**	15.8	2.8
q. River rafting	**78.3**	18.4	3.3

Apart from visitor behaviour in Table 11 above, respondents suggested certain other aspects that they found disturbing during their trip as illustrated in Table 11. Results showed that 8.14% of visitors found all mentioned aspects disturbing with the majority of visitors (91.86%) not disturbed at all. Although the actual disturbances experienced in ONP are relatively small with a limited percentage of visitors indicating a disturbance, it is vital for management to address these issues. In terms of the results, littering poses the greatest threat with 13.3% followed by both erosion and crowding with 9.0% of respondents signifying a disturbance.

Table 12: Disturbances in Oulanka National Park

	No %	Yes %
a. Erosion of the ground	**91.0**	9.0
b. Littering	**86.7**	13.3
c. Crowding	**91.0**	9.0
d. Behaviour of other visitors	**94.6**	5.4
e. Other	**96.0**	4.0

Apart from the percentage of visitors indicating a disturbance or not, the specification of the area in which the disturbance was experienced is also specified, in order for management to rectify the situation and improve visitor experiences. The areas where respondents specified the disturbances included:

- Kiutaköngäs waterfall
- Myllykoski
- Jyrävä waterfall

- Little Bear ´s Trail
- The Kiutaköngäs day trail
- Juuma
- Taivalköngäs
- Harrisuvanto
- Ansakämppä

These places were the main areas to rectify as visitors found erosion, littering, crowding, and the behaviour of other visitors the most disturbing. The litter, crowding and behaviour of visitors can be addressed by management in various ways but not in terms of erosion. Erosion forms part of the deterioration of the biodiversity in ONP and has to be dealt with in an ecological manner in terms of protection and the ultimate optimisation of erosion that will benefit biodiversity in the park as a whole.

6.1.6 Biodiversity and visitor experiences

The importance of biodiversity for visitors can be seen by the indication of the value of various aspects and biodiversity hotspots in ONP. The various aspects determining the importance of biodiversity for visitors and the biodiversity hotspots determining visitor experiences are illustrated in Table 13. Table 13 represents certain aspects regarding mostly the richness of biodiversity in ONP and visitors' degree of interest in terms of those aspects. The results indicate that the most prominent five aspects all represent a beautiful, unique and natural place thus stating an environment untouched by human influence with strong biodiversity. The most important features in terms of biodiversity are unspoiled nature, no human interference, rich variety of habitats, plants and animals. Therefore results indicate that the majority of visitors prefer and view these important features as very important with a very strong link between biodiversity and their experiences. Wildlife forms a large part of biodiversity and although the results indicate visitors to value biodiversity and the aspects regarding biodiversity as very important, results also indicate that the majority of visitors have a neutral feeling towards encounters with wildlife and therefore pose a further research question regarding specifically the encounters with wildlife.

Table 13: Aspects of importance in Oulanka National Park

	Not important at all		(Mean)		Very important
	1	2	3	4	5
a. Good tourist facilities	❑	❑	3.78	❑	❑
b. Good accessibility	❑	❑	3.72	❑	❑
c. Easy to find my way around	❑	❑	❑	4.19	❑
d. Beautiful scenery	❑	❑	❑	4.68	❑
e. Quietness	❑	❑	❑	4.30	❑
f. Unspoiled nature	❑	❑	❑	4.49	❑
g. No signs of human influences	❑	❑	❑	4.24	❑
h. Rich cultural history	❑	❑	3.53	❑	❑
i. Rich variety of plants and animals	❑	❑	3.91	❑	❑
j. Rich variety of habitats	❑	❑	3.87	❑	❑
k. Uniqueness of place	❑	❑	❑	4.22	❑
l. Personal attachment of the place	❑	❑	3.09	❑	❑
m. Possible encounters with wildlife, such as brown bear, eagle, reindeer	❑	2.98	❑	❑	❑

Apart from the physical allure of the environment visitors so greatly admire, the rich variety of habitats and plants and animals are also important to visitors with means of 3.87 and 3.91 respectively. These together with the above-mentioned have an average mean of 4.0 and contribute to the different features of biodiversity richness and emphasise the importance of biodiversity for visitors in ONP. Apart from the features of biodiversity, visitors indicate certain other important aspects in terms of visiting ONP. The most important aspects are clearly visible through the results and provide ONP with valuable information and the opportunity to capitalise on them.

By being aware of the importance of the level of the natural environment and facilities for visitors to ONP, activities that visitors partake in can be fully optimised and can contribute to visitor experience along with biodiversity. When evaluating the activities of visitors, results indicate that hiking in general in Oulanka is the main activity for 80.3% of all visitors with the closest other activity being sightseeing at 9.5%. It is therefore clear that the main focus is hiking on the various different trails and areas in ONP. The popularity of hiking can further be highlighted by results that indicate that 56.9% of all respondents have visited the highly biodiverse “Little Bear’s Trail” (area B, Figure 4) and 29% have actually hiked ONP’s famous “Bear’s Trail” represented by the green line in Figure 2. Apart from hiking and sightseeing, relaxation and fishing with 3.2% and 2.8% respectably also feature among

activities with the rest representing less than 2% of all visitors and not worth taking into account. When evaluating the importance of biodiversity on visitor's experiences, the activities visitors partake in and the different areas tourists visit, indicate whether biodiversity richness is important for visitor experiences. In general, if the activities and areas of the highest density of biodiversity are the main focal points and most visited with the best quality natural experiences for visitors, the result will be that biodiversity is important and does affect visitors' experiences in ONP.

Figure 4 (refer to page 66) illustrates the biodiversity hotspots, main visitor areas, the "Bear's Trail" and other areas of importance in ONP and can therefore determine the importance of biodiversity regarding visitor experiences. The results indicate numerous areas that respondents have visited during their trip with the main and most popular areas illustrated in Table 14. The area around Kiutaköngäs (area A, Figure 4) and Juuma (area B, Figure 4) are the most popular with the majority of respondents having visited with 75.2% and 56.9% respectively. The famous "Bear's Trail" (green line on Figure 4) also represents a popular area and activity with 29.9% of all visitors partook in the hike. When evaluating the actual biodiversity richness or level of biodiversity, areas A and B (Figure 4) are the top biodiversity hotspot areas in ONP. Therefore according to the results, areas A and B are the mostly visited areas and thus indicate the role and importance of biodiversity towards visitor experiences. These areas are extremely important and contribute largely towards ONP. Although the remaining areas are not that popular with less biodiversity, the importance to ONP and biodiversity is still significant.

Table 14: Main visitor areas in Oulanka National Park

Area	Visited %
a. Area around Kiutaköngäs	**75.2**
b. Juuma	56.9
c. Bear's Hiking Trail	29.9
d. Taivalköngäs	9.9
e. Oulanka Canyon	11.1
f. Ristikallio	6.0
g. Other	4.5

Apart from the main areas listed in Table 14, various sub-areas that respondents visit are also been identified. Other areas respondents visit in ONP include: Jäkälänmutka, Kitkajoki, Konttainen, Oulankajoki, Savilampi and the Valtavaaran day trail. When evaluating results regarding sub-areas, it is clear that the majority of respondents have mainly visited the rich biodiverse sub-areas around Kiutaköngäs and Juuma. Therefore it is important to focus on the sub-areas within Kiutaköngäs and Juuma. Table 15 represents the sub-areas of Kiutaköngäs and Juuma with the percentage of respondents who visit one or more of these sub-areas. The results indicate that the Kiutaköngäs waterfall is the main attraction in the entire ONP with 58.7% of all respondents visiting the waterfall. As illustrated in Table 14, the area around Kiutaköngäs apart from the waterfall, enjoys the most visitors with 75.2% of all respondents visiting the area.

The Kiutaköngäs day trail is also rather popular with 23.1% of respondents partaking in the day hike. The Hiidenlampi nature trail was visited by 16.2% of respondents with only 5.0% hiking the Rytisuo nature trail. The results indicate that different areas such as Ansakämppä, Melontareitti, Putaanköngäs and Riisitunturi are also visited by 2.0% of respondents. In terms of the Juuma area, the “Little Bear’s Trail” is the most popular with 31.6% of respondents doing the 12km hike. Myllykoski and the Jyrävä waterfall are largely visited with 26.8% and 24.0% respectively, with other areas only including Harrisuvanto. Results therefore indicate that the area around Kiutaköngäs and Juuma are the most dense biodiverse and visited sites in ONP with the Kiutaköngäs waterfall being the most prominent attraction in the entire park and with the “Little Bear’s Trail” the most important in the Juuma area.

Table 15: Main and sub areas visited in Oulanka National Park

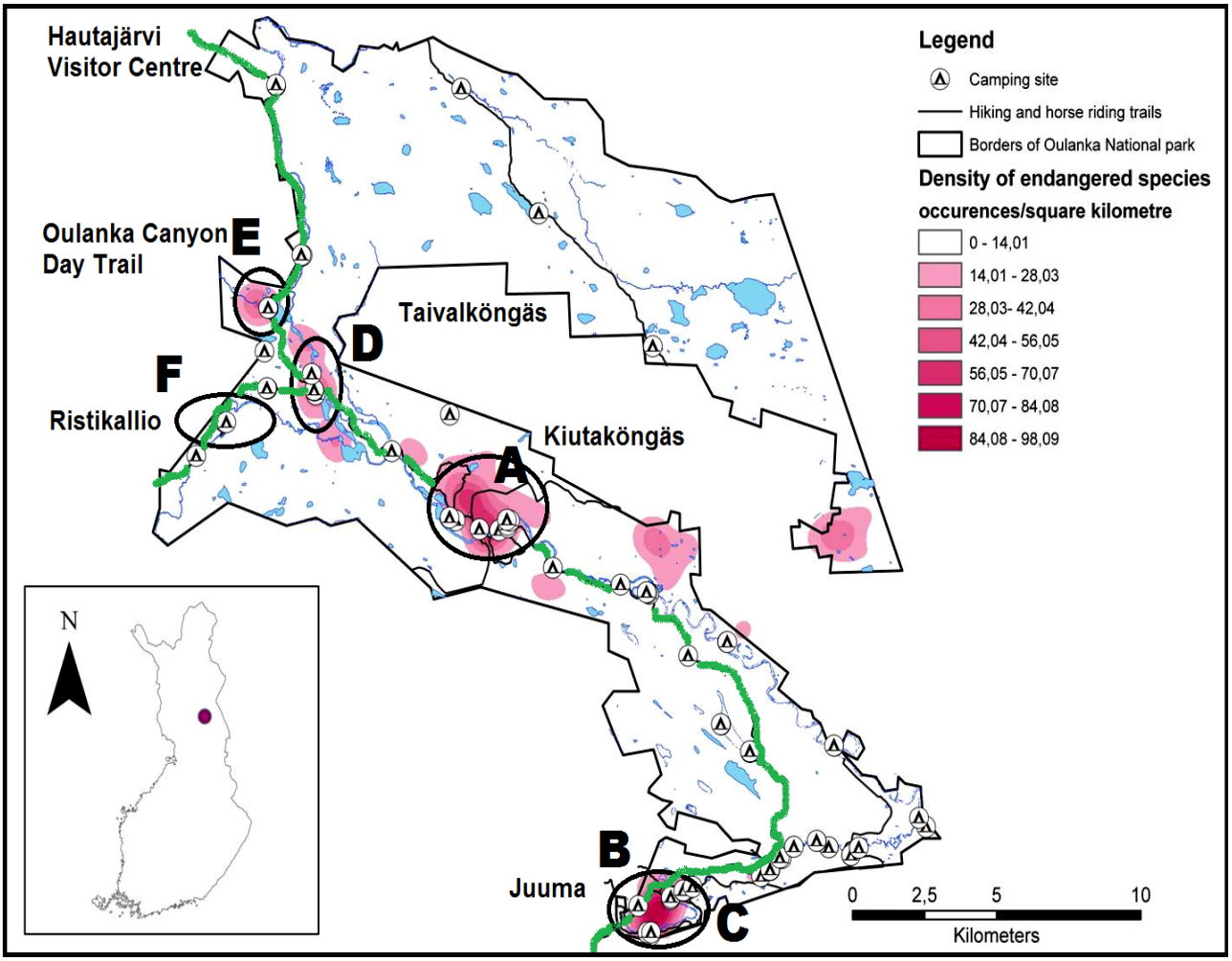
Kiutaköngäs Area	**%**	**Juuma Area**	**%**
Kiutaköngäs waterfall	**58.7**	Myllykoski	26.8
Hiidenlampi nature trail	16.2	Jyrävä waterfall	24.0
The Kiutaköngäs day trail	23.1	Little Bear’s Trail	**31.6**
Rytisuo nature trail	5.0	Other	2.0
Other	2.0		

Area C on Figure 4 represents the “Bear’s Trail” with a green line indicating the route options. The “Bear’s Trail” is a very prominent and famous trail in ONP. Roughly a third of all visitors hike the Bear’s Trail but this differs in start and finishing points. According to the results the most popular start and end point is the rich biodiverse Juuma area with 31.4% of all visitors starting and 41.9% ending the “Bear’s Trail” at Juuma. The location, according to results is a very popular start or end point with hikers. In terms of start points, the Oulanka visitor centre (22.5%) and both the Hautajärvi visitor centre and Ristikallio parking with 18.9% are rather popular.

The least popular start point was the Rukatunturi tourist centre (7.7%) with Salla indicated as another possible start point. Apart from the popular end point in Juuma, results indicate various other places to end the “Bear’s Trail”. The least popular start point according to results was the second most popular end point with 34.6% of visitors ending at the Rukatunturi tourist centre. The Oulanka visitor centre is a somewhat popular ending point with 16.2% of respondents. The least popular and remaining end points are Ristikallio parking place (4.4%), the Hautajärvi visitor centre (2.2%) and Nurmisaari as an alternative end point.

Thus by looking at the biodiversity hotspots and visitor patterns along with the popularity of certain areas, the role and importance of biodiversity on visitor experiences can be determined. As illustrated in Figure 4, the richest and most dense areas regarding biodiversity are areas A (Kiutaköngäs) and B (Juuma). According to results the most popular areas respondents visited are in fact areas A and B and therefore indicate that biodiversity is important to visitors, has a unique role and indeed affects visitor experiences in ONP. Figure 4 illustrates various other biodiverse areas such as D and E. These areas are not as biodiverse and densely populated by endangered species as areas A and B but biodiverse none the less. According to the results, areas D and E have a visitation of 9.9% and 11.1% respectively. Both areas are relatively similar in terms of the level of biodiversity and visitation. When compared to areas A and B, results suggest that the less biodiversity present in an area, the fewer visitations will occur. Although this statement is accurate to a large extent, the presence of more day trails, waterfalls, and things to do also attract visitors and must be taken into account when evaluating the true role of biodiversity.

Figure 4: Biodiversity hotspots in Oulanka National Park

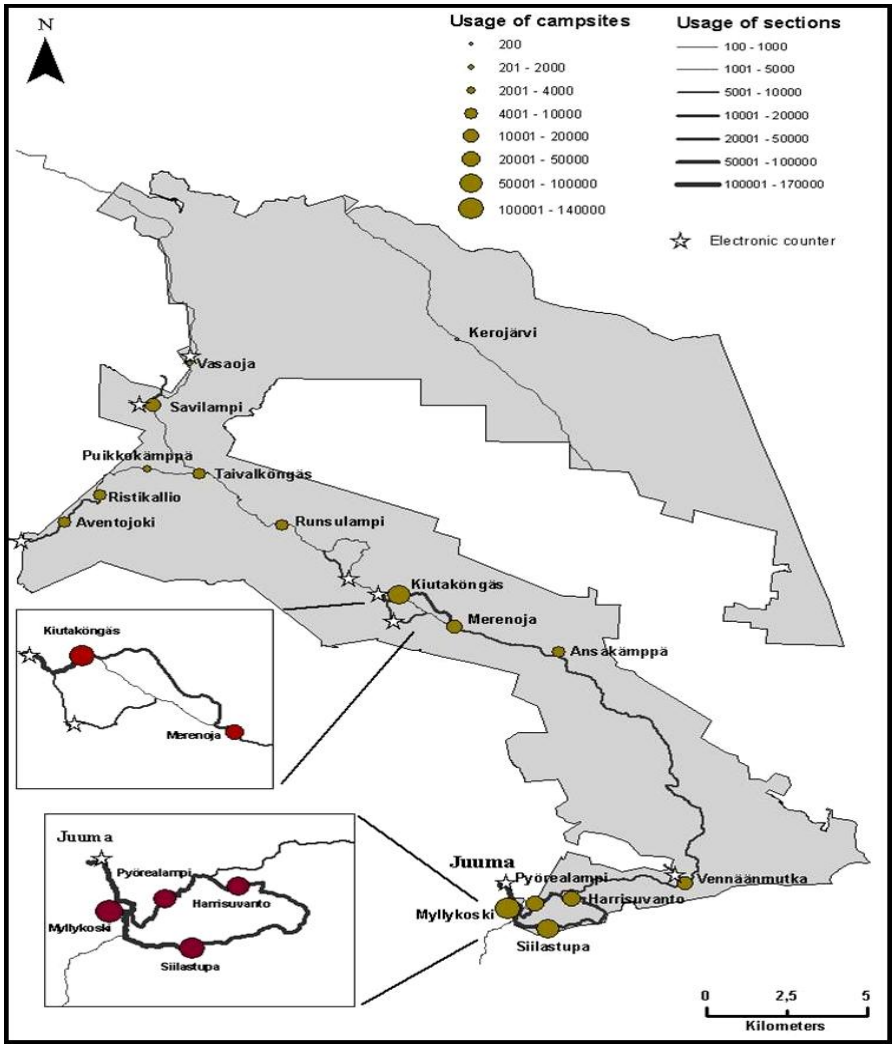


(Source: Metsähallitus, 2012)

The fact of more visitors to the biodiverse areas of A and B does not necessarily indicate biodiversity as the main and only drawcard but when evaluating usages apart from the visitation statistics above it becomes clear that biodiversity has a large effect on visitor experiences. Figure 5 indicates the usage of campsites and sections throughout Oulanka and the intensity of usage. The most popular campsites are also located in the highly biodiverse areas of A and B and therefore add to the visitation statistics. Kiutaköngäs and Myllykoski campsites in area A and B have the highest usage with both in the range of 100001 – 140000. The adjacent sites in the same area include Siilastupa (50001-100000), Harrisuvanto and Pyörealampi (20001-50000) and Merenoja with 10001-20000. Other areas in ONP with a rather high campsite usage include Savilampi (area E) with 10001-20000. Apart from the campsite usage, Figure 4 indicates various sections most used in ONP. As with the visitation statistics and campsite usage, the sections most used are

located in and around areas A and B and further indicates the role and importance of biodiversity. Lesser sections of usage are illustrated in Figure 4 at less biodiverse areas in ONP such as in and around Savilampi (area E) and Ristikallio (area F).

Figure 5: Usages in Oulanka National Park



(Source: Metsähallitus, 2012)

The highly biodiverse areas in ONP overlap for the areas with most visitors, campsite and section usage and demonstrate the importance and effects of biodiversity on visitor experiences in and around the Kiutaköngäs and Juuma areas (Figure 5). However to truly determine the role and importance of biodiversity with the effect on visitor experiences, the quality of visitor experiences at these areas must also be taken into account. The reasons behind visiting the dense biodiverse areas instead of other areas reveal the motivation of visitors and determine the quality or lack of quality experiences. The quality or lack of

quality experiences in ONP is determined by visitors to the main and other areas. Apart from their experiences, the locations and reasons are stated by visitors to reveal the actual cause regarding a quality or lack of a quality experience. Table 16 indicates the quality of visitor experiences in ONP. According to the results, 73.9% of all visitors have had a quality experience(s) in either one or more of the main or other areas in Oulanka. Visitors with a neutral experience(s) account for 10.8% while 15.3% of all visitors indicate a least quality experience during their trip to Oulanka. A low quality experience does not necessarily mean only low quality experiences but indicates a particular experience(s) during a trip.

Table 16: The quality of visitor experiences

		Percent
Valid	Quality experience	**73.9**
	Neutral experience	10.8
	Lowest quality experience	15.3
Total		100.0

The locations and reasons regarding the experiences are instrumental in determining the role of biodiversity on visitor experiences. The area and specific locations respondents indicated for both quality and no quality experiences are allocated within the main areas as listed in Table 14 and Figure 4. Among the respondents, 73.9% indicate quality experiences, 59.3% indicate the highest quality experience in the area around Kiutaköngäs. Therefore this area provided two thirds of all quality experiences and is without doubt the most popular amongst respondents and a highly biodiverse hotspot. The second highly biodiverse hotspot is the Juuma area and offers the highest quality experiences for 28.2% of the 73.9% of respondents. Therefore results indicate that these two main biodiversity hotspots are the most popular and provide the highest quality experiences for 87.5% of all visitors in ONP.

The “Bear’s Trail” covers all the areas and different biodiversity hotspots but only accounts for 4.5% of respondents experiencing the highest quality along the entire route. The small percentage may be due to the fact that the trail runs through areas A, B, D, E and F and visitors may have indicated the actual areas where the highest quality experience was

while hiking the trail and not indicating the entire trail per se. The rest of the main areas are not as popular and also less biodiverse. Taivalköngäs (area D) that is a relatively biodiverse hotspot is quite popular and 4.2% of respondents specify Taivalköngäs as the top quality experience in ONP. Oulanka Canyon and Ristikallio offer excellent quality experiences for 3.1% and 0.5% of respondents respectively. It is clear then that the biodiversity hotspots offer visitors the highest and unsurpassed quality experiences in the entire ONP and this emphasizes the importance and effects of biodiversity and visitor experiences.

Specific locations within the main areas of top quality experiences are identified by respondents. The most prominent locations according to results are the waterfalls. The most popular location of quality experience is the Kiutaköngäs waterfall for 56.3% of visitors. The Jyrävä waterfall offers the second highest quality experience with 14.5% of respondents and the “Little Bear’s Trail” with 13.0%. Apart from the three specific locations mentioned above and accounting for 83.8% of the highest quality experiences, the rest of the locations identified are minuscule and account for less than 5% of respondents. Although results indicate that the biodiversity hotspots provide visitors with the best quality experiences, the reasons behind the experiences are extremely important to ultimately coincide with the results above to determine the role and effect of biodiversity on visitor experiences.

Results indicate various different reasons regarding top quality experiences of visitors to ONP. The diversity of reasons implies that although visitors prefer the biodiversity hotspots as seen above, the reasons support the individuality of visitors. Table 17 presents the different reasons why visitors had a top quality experience at a specific location. Due to the fact of an open-ended question, visitor reasons are characterised into the following list in Table 17. The frequency of respondents is also listed below. Of the initial amount of 440 respondents who indicated a quality experience, 300 specified reasons with a rather large amount of 140 respondents missing. Although 68.2% have specified a reason, 31.8% have not and the quality and accuracy of the data is compromised to an extent. Of the 300 respondents, four main reasons are specified, with scenery as the main drawcard and reason for a quality experience for 101 of the respondents (33.7%). The beauty and force of the waterfalls are also a prominent reason with 82 respondents (27.3%) in agreement.

Beauty, uniqueness and untouched nature are a fairly common reason with 58 respondents (19.3%) and finally “peace and quietness” are specified by 27 respondents (9.0%) as a reason. Various other reasons as illustrated in Table 17 have been indentified but are too insignificant to be taken into account.

When evaluating the reasons respondents specified, the trend in terms of beauty, untouched nature, scenery and quietness comes to light. Thus the reasons behind quality experiences can be related into a single broad reason containing biodiversity as a whole. The reasons thus will be that visitors have had a quality experience at various places in ONP because of the enhanced level of biodiversity present. The locations specified of the quality experiences are predominantly in the most biodiverse areas A and B clearly indicating the strong role of biodiversity on visitor experiences.

Table 17: Reasons for quality visitor experiences

		Frequency	Percent
Valid	Beautiful, unique and untouched nature	585	19.3
	Beautiful and mighty waterfall	82	27.3
	Beautiful scenery	101	**33.7**
	Berries	2	0.7
	Contact with other international tourists	2	0.7
	Good coffee	1	0.3
	Good information, trail signage and connections	1	0.3
	Good hiking with children	4	1.3
	Good fishing	3	1.0
	Good camping	5	1.8
	Hanging bridges	2	0.7
	Nothing Negative	2	0.7
	Nice swimming place	1	0.7
	Nice to ski in sunlight	1	0.7
	Peace and quietness	27	9.0
	Reindeers	3	1.0
	Unique bird watching (Siberian Jay)	4	1.3
	Versatility	1	0.3
Total		300	100.0

Therefore taking all above data pertaining to biodiversity and visitor experiences into account, results indicate that the most important aspects for visitors are unspoiled nature, rich variety of plants, habitats and animals. The main visitation areas are A and B (Figure 4) and they represent the main biodiversity hotspots in ONP. The campsite usage (Figure

5) also indicates that visitor's predominantly camp in the biodiversity hotspot areas A and B. The highest quality experiences according to results are mostly in and around the biodiversity hotspots with the reasons of scenery, beauty, untouched nature and quietness indicating the importance of biodiversity for quality visitor experiences. Thus according to all results indicated above, the level and richness of biodiversity does affect the quality of visitor experiences and portrays the role of biodiversity on visitor experiences in ONP.

On the other hand, the areas and reasons regarding least quality experiences must also be taken into account. Table 16 above illustrates that 15.3% of visitors had the lowest quality experience. The areas and specific location of the lowest quality experience along with the reasons behind the experience further indicate the role of biodiversity on visitor experiences in ONP. According to results, areas A, B and C indicate the areas of the lowest quality experience. Among these areas, the highly biodiverse areas A and B are responsible for the highest concentration of low quality experiences according to 41.3% and 25.3% of respondents respectively. The "Bear's Trail" (area C) or certain parts of the trail delivered the lowest quality experience according to 21.3% of respondents. The lesser biodiverse areas D, E and G account for 12 % of respondents with area F indicating no lowest quality experiences at all.

Table 18 illustrates the specific locations of the lowest quality experiences and varies considerably with only two prominent areas pointed out by respondents. Although the Kiutaköngäs waterfall is the most popular attraction and offers the highest quality experiences in the entire national park, it is also the area that offers the lowest quality experiences for 36.1% of the 15.3% of respondents who indicated a low quality experience. Various reasons have been stated by respondents as to why the Kiutaköngäs waterfall offers the highest and lowest quality of experiences and illustrated in Table 17 and 19. The "Little Bear's Trail" in area B is the location of the lowest quality experiences for 13.9% of respondents. Various other specific locations have been indicated by respondents but rather miniscule and listed in Table 18.

Table 18: Specific location of the "lowest quality experiences"

		Frequency	Percent
Valid	Kiutaköngäs waterfall	26	**36.1**
	Hiidenlampi nature trail (5 km)	1	1.4
	The Kiutaköngäs day trail (8 km)	2	2.8
	Rytisuo nature trail (5 km)	2	2.8
	Myllykoski	2	2.8
	Jyrävä waterfall	5	6.9
	Little Bear ´s Trail (12 km)	10	13.9
	The Hautajärvi visitor centre	4	5.6
	Ristikallio parking place	4	5.6
	Oulanka Visitor Centre	3	4.2
	Juuma	2	2.8
	Harrisuvanto	1	1.4
	Taivalköngäs	3	4.2
	Runsujärvi	1	1.4
	Oulanka Canjoni	4	5.6
	Ansakämpä	2	2.8
	Total	72	100.0
Missing		19	
Total		91	

Above results indicate that the areas with the lowest quality experiences are also the areas with the highest quality experiences. This indicates that in determining the actual role and effect of biodiversity on visitor experiences, the reasons behind the experience represent the determining factor. Table 19 therefore indicates "reasons for the 'lowest quality' visitor experiences" that respondents have had in ONP. Among the reasons listed in Table 19, a variety of other reasons relating to the natural environment were identified by respondents but not included in the table due to the fact that environmental forces cannot be controlled. The reasons included: not favourable weather conditions for respondents such as heat, wind and rainy weather. Some respondents indicated the lowest quality experience due to no autumn colours also known as "Ruska" while the presence of a magnitude of mosquitoes was equally disturbing for some visitors in ONP. Besides the reasons not being controllable, Table 19 illustrates various reasons of importance to management to

improve the quality of visitor experiences apart from determining the actual role of biodiversity on visitor experiences.

Table 19: Reasons for the "lowest quality" visitor experiences

		Frequency	Percent
Valid	Bad and dangerous roads (Very rocky and must be blacktopped)	11	**18.3**
	Boring routes	5	8.3
	Certain areas difficult with a pram	1	1.7
	Difficult to find certain sleeping and parking places	4	6.7
	Human-made cottage areas	1	1.7
	Littering	8	13.3
	Long road from Runsajärvi to Oulanka visitor centre	3	5.0
	Not enough resting places on the way to Juuma	1	1.7
	Out of order/broken goods and equipment	2	3.3
	Plain forest terrain with nothing to see	4	6.7
	Poorly signed trails	4	6.7
	Shop promoted hunting, sold reindeer horns	1	1.7
	Too expensive	1	1.7
	Trail hardening	3	5.0
	Trails are to long	2	3.3
	Too many tourists (disturbing behaviour and traffic)	8	13.3
	Unfriendly employees in the tourist centre	1	1.7
Total		60	100.0

Various reasons are rather evenly spread across the amount of respondents and therefore indicate all reasons to be of a relative degree of importance with a few being of extreme value and importance. The main reasons include bad and dangerous roads with 18.3% and both littering and the amount of tourists with 13.3% of respondents in agreement. Visitors specified that the roads are dangerous at some places and too close to the edge of the cliff. Various places have slippery rocks or rocks falling down from the road. Apart from the safety issue, it adds to erosion and damages the biodiversity of the area. Visitors also indicated that various places were full of litter with the added negativity of litter bins being broken, full and far apart from each other stipulating the need to increase bins throughout ONP. The last main reason portrays to the amount of tourists, tourist behaviour and traffic.

As the results indicate, the main biodiversity hotspots attract the most visitors and offer the highest quality visitor experiences. Although the hotspots offer the best quality experiences, these hotspots are also responsible for the lowest quality experiences due to

the mass of tourists and tourists' behaviour. This in turn develops into a nexus for management of ONP. Apart from the main reasons discussed above, various other rather important reasons must be taken into account. Visitors indicate that the routes are boring and comprise of too much walking on the roads with the added effect of poorly signed trails through plain forest terrain. Trail hardening and the difficulty to find sleeping and parking places can be added to the list of reasons determining the quality of visitor experiences.

When evaluating all data regarding biodiversity, experiences and attitudes towards management regulations, it becomes clear that biodiversity plays a pivotal role in the determining and affect on visitor experiences. The results clearly indicate that the most quality experiences were in the biodiversity hotspots at Oulanka. The fact that the least quality experiences were also in the hotspots does not indicate biodiversity to be any less important. In order to differentiate that, reasons were included and analysed accordingly. The negative reasons were not focused on biodiversity at all but were reasons such as visitor behaviour as such. Therefore results indicated that although biodiversity hotspots were where respondents had the least quality experiences, it's not an indication of biodiversity that negatively affected visitor experiences.

Thus according to results, the quality experiences were due to a healthy degree of biodiversity and was experienced in the hotspots, therefore indicating and highlighting the role of biodiversity. Thus together with the negative reasons not being focused on biodiversity; results clearly indicate that visitors had the most quality experiences due to biodiversity at the hotspots. Therefore taking all information regarding the quality experiences along with the separate questions aimed at determining the importance of biodiversity into account; it is quite clear that biodiversity does affect visitor experiences in Oulanka and indicates the role and importance of biodiversity.

6.2 GOLDEN GATE HIGHLANDS NATIONAL PARK RESULTS

6.2.1 Research location and respondents profile

As with the research done in ONP, the broader focus also consists of providing information to assist Golden Gate Highlands National Park in determining visitor preferences and perceptions regarding all aspects of the management of quality visitor experiences while maintaining and improving the biodiversity that attracts the visitors. With ONP, the respondents have been collected at various locations in order to maximise the accuracy of the sample in relation to the population and improve diversity and relativity. This approach was the same with GGHNP. The sample respondents were taken from various locations at the national park with an added online survey on the SANParks website. The physical locations where research was done included:

- Brandwag Hotel
- Self catering units (Glen Reenen)
- Self catering units (Mountain View)
- Highlands Mountain Retreat
- Glen Reenen (Camping)
- Basotho Cultural Village

Apart from the different locations that respondents' data were collected to increase accuracy and credibility, the diverse distribution regarding gender also adds to the credibility of respondent's profiles. Table 20 illustrates the rather closely related distribution among males and females. The respondents are somewhat evenly distributed with the majority being males and accounts for 57.1% of all respondents with females accounting for 42.9%. In terms of age the respondents are widely distributed with the majority of respondents being in the age group of 19 – 30 and accounts for 30.6% of all respondents. The age group of 51 – 60 also includes 20.7% and together represents more than half of all respondents. The third largest age group were respondents between 41 and 50 and accounted for 16.2%. The rest were distributed among the different age groups and are illustrated in Table 20.

Table 20: Respondents profile

Gender		Frequency	Percent
	Male	64	**57.1**
	Female	48	42.9
	Total	112	100.0
Missing		1	
Total		113	
Age		**Frequency**	**Percent**
	0 – 18	4	3.6
	19 – 30	34	**30.6**
	31 – 40	14	12.6
	41 – 50	18	16.2
	51 – 60	23	20.7
	61 – 70	16	14.4
	71 +	2	1.8
	Total	111	100
Missing		2	
Total		113	

For the respondents' profile, nationality and country of residence were viewed in order to better understand the profile of visitors to GGHNP. When evaluating the nationality of visitors to the park, it is clear and not surprising that South Africans are the majority and accounts for 85.0% of all respondents. Among the other 15%, Germans represented 5.3%, and British accounted for 3.5%. Canadian, Dutch and Swiss respondents all represented 1.8% of all respondents with Mauritians only 0.9%. Clearly South Africans dominate the percentage of visitors to the national park and this is not uncommon. The percentage of respondents regarding country of residence is relatively similar but with minor changes in foreigners living abroad. In terms of respondents living in South Africa, results indicate that 88.5% of visitors to GGHNP are residents with a 3.5% increase in terms of nationality. When evaluating the profiles of respondents the main reason for visiting GGHNP is of the utmost importance to understand visitors. Results have indicated the main activities at Golden Gate and are indicated in Table 21. The two main activity groups that are also related are: "hiking, sightseeing and nature" with 54.7% as the denominator, and "relaxing, camping, sightseeing and wildlife" with 35.8%. The activities are relatively closely related, with sightseeing and nature (wildlife) being the linkages. In terms of hiking, respondents differed in doing hiking trails such as the Rhebok Trail compared to hiking for relaxation. The two main activity groups account for 90.5% of all respondents at Golden Gate. The main activities therefore can be categorised as hiking of main trails to hiking for relaxation, sightseeing, being close to nature and wildlife, camping and relaxing in various ways.

Table 21: Main activities

	Frequency	Percent
Visiting Basotho village	2	1.8
Hiking, sightseeing & nature	58	**54.7**
Overnight or passing through	7	6.6
Relaxing, camping, sightseeing & wildlife	38	35.8
Working	1	.9
Total		100.0

Apart from the main activities listed above, various respondents were in fact passing through the park visiting the surrounding areas, and only staying overnight when interested in the Basotho Cultural Village, in village tours and in work in the area. Taking all information into account, a thorough picture of respondents' profiles can be drawn up.

6.2.2 Visitation statistics

Due to the fact that Golden Gate has a main road that goes through the park, the visitors to the park are not in fact all there to visit the national park per se but also for a daytrip or are just passing though. To make the distinction whether visitors were only passing through, the options given to respondents in order to specify the amount of time spent at Golden Gate were categorised as: less than three hours stating, respondents just passing through; more than three hours, stating a daytrip visitor: one night spent: and more than one night spent in Golden Gate. As mentioned above, some visitors only drive through Golden Gate and have no intention to visit. Data indicate the percentage of respondents who only drove through or visited GGHNP for less than three hours and accounts for 8.9% of all respondents. Furthermore results suggest that visiting in excess of three hours represents a daytrip and accounts for 11.5% of all respondents (not all per centages are indicated in tables). The majority of respondents visited for at least one night or more and represents 79.5% of all respondents to GGHNP. Among the two options regarding the majority of respondents; visitors who spent more than one night make up 68.8% of all respondents to GGHNP and suggest that most visitors passing through Golden Gate are longer term visitors. When evaluating the results in terms of the specific amount of nights spent, Table 22 confirms the above-mentioned. Results suggest that only 23.9% of all respondents spend either a day at Golden Gate or are purely passing though. On the other

hand 76.1% of all respondents spend one night or more in Golden Gate. Table 22 indicates the specific percentage of respondents who spend a certain number of nights at Golden Gate. The majority of respondents spend two nights at Golden Gate and accounts for 18.8% with 16.7% spending 5 nights, 12.5% spending 1 night and 10.4%, 3 nights.

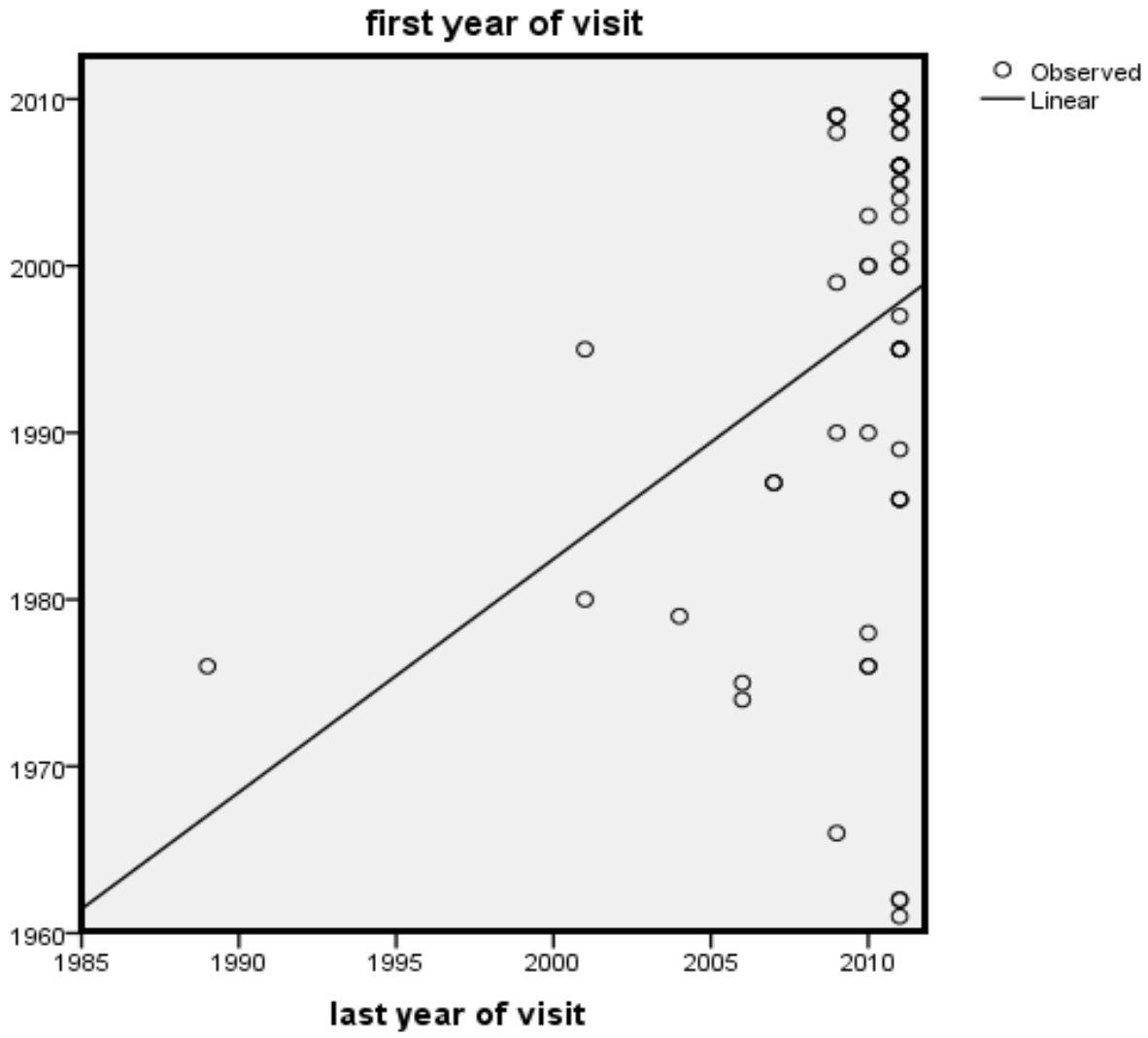
Table 22: Time spent in Golden Gate Highlands National Park

		Frequency	Percent
Valid	1	12	12.5
	2	18	**18.8**
	3	10	10.4
	4	3	3.1
	5	16	16.7
	6	2	2.1
	7	9	9.4
	9	1	1.0
	14	2	2.1
	Day visitor	13	13.5
	Passing Through	10	10.4
	Total	96	100.0
Missing		17	
Total		113	

Apart from the number of days and nights spent at Golden Gate, accommodation types are very important for future managerial decisions. When evaluating the accommodation it is clear that camping represents the biggest segment with 58.1% of all respondents indicating thus. The Mountain Retreat and Glen Reenen were rather popular with 22.1% and 16.3% respectively. Contrary to initial thoughts regarding the popularity of the Brandwag Hotel, only 2.3% of respondents indicated to be staying there with the Basotho Cultural Village only accounting for 1.2% of all respondents to Golden Gate. Although it has to be taken into account that about a fifth of respondents were only passing through or day visitors with 5.3% as a no response. Apart from that, it is clear that camping at Golden Gate represents the most respondents. Results also indicate the growth of visitor numbers over a period of 50 years as illustrated in Figure 6. The first visit to Golden Gate according to visitors was in 1961. Now according to historic information, GGHNP was only established in 1963 when the provincial administration of the Orange Free State bought

land but was only proclaimed a national park in 1963 (SANParks, 2011:8). This is thus contradictory to the information given by SANParks but can be debated that the respondent couldn't remember the year correctly or visited the area before it was actually proclaimed a national park. Nonetheless the data represents the entire time Golden Gate has been in operation and functioning, therefore adding a valuable and rare aspect to the research. The growth was analysed over a period of 50 year from 1961 up to 2011. Figure 6 demonstrates the first visit made to Golden Gate up to the last in 2011 and is displayed by a linear line illustrating the positive growth in visitor numbers over the time period. The circles represent the most densely visited time period at Golden Gate. When evaluating Figure 1 it is clear that and the influx of visitors was around the time period of 2008 and 2011.

Figure 6: Visitor growth at Golden Gate Highlands National Park



Although the results show an increase in visitors, it does not necessarily mean more first time visitors to the national park. Among the respondents the amount of first time visitors and returning visitors differ. Results indicate that the majority of visitors (60.7%) were in fact returning visitors with 39.3% being first time visitors. The results are unique in terms of the fact that the data comprises the entire existence of the national park with the first visit in 1961 up to 2011 when the research was conducted. Results have shown the amount of visits from returning visitors to be five or less visits and accounts for 75.8% of all respondents with another 12.1% having visited GGHNP more than ten times.

6.2.3 Visitor perceptions and attitudes towards environmental conservation

Due to the nature of this research, it is in the best interest of any national park to quantify the attitudes of visitors towards environmental protection and the amount directly involved through work or studies. Table 23 illustrates the amount of respondents directly involved in environmental protection or conservation with results indicating a 100% response rate.

Table 23: Involvement in environmental protection

		Frequency	Percent
Valid	No	84	**74.3**
	Yes	29	25.7
Total		113	

In terms of environmental protection, 74.3% of respondents indicated that neither their work nor studies were related to environmental protection. Although this represents the majority of respondents to Golden Gate, a rather large percentage indicated otherwise. Almost twenty six percent of all respondents indicated that either work or studies are related to environmental protection or conservation and represents a surprising result. The reason being might have many answers and might add value towards Golden Gate and future research. The trend of environmental protection and striving towards everything being “green” together with sustainable development and tourism is very important and needs to be communicated to visitors to Golden Gate. In order to understand the perceptions and attitudes results have indicated some interesting findings. When asked whether respondents are members of any international or national conservation organisation such as World Wildlife Fund (WWF) 83.3% indicated “no” with only 16.7% of

respondents indicating “yes”. Although this result adds to the knowledge of visitors to the national park, this is rather alarming and states that Golden Gate needs to increase communication regarding conservation and environmental protection to visitors.

Table 24 represents the attitudes and feelings towards their part in terms of environmental deterioration. Results have indicated that the majority of respondents (29.1%) agree and feel responsible for loss of natural areas with 28.2% indicating neutral. A rather large percentage of respondents (37.8%) agree in being responsible for climate change but with 26.4% indicating neutral when feeling responsible for the extinction of endangered species. In respect to environmental degradation, the majority of respondents (30.3%) indicated “neutral” but with 38.5% indicating “agree to strongly agree” compared to the 31.2% disagreeing with the statement. The results therefore indicate that respondents in general do feel responsible for climate change, environmental degradation and the loss of natural areas and species. Consequently Golden Gate must take the opportunity to capitalise on these results and communicate this information to management and all stakeholders.

Table 24: Visitor attitudes towards environmental deterioration

	Strongly Disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %
e. I feel responsible for the loss of nature areas in the world	13.6	13.6	28.2	**29.1**	15.5
f. I feel responsible for the climate change	12.6	17.1	24.3	**37.8**	8.1
g. I feel responsible for the extinction of endangered species	18.2	20.9	**26.4**	22.7	11.8
h. I feel responsible for environmental degradation	11.9	19.3	**30.3**	26.6	11.9

The results indicate that the majority of respondents feel responsible, however. when compared to the number of respondents who are part of an environmental organisation only 16.7% indicated “yes”. Therefore many reasons may exist in terms of respondents feeling responsible but not acting upon, improving or contributing to the situation and this may be addressed in terms of future research at Golden Gate.

6.2.4 Importance of GGHNP and the surrounding area

It is extremely important to determine the visitor's perceptions towards the importance of Golden Gate as a tourist attraction in relation to the surrounding areas such as Clarens or just a passing through route. Table 25 indicates the role and level of importance Golden Gate has for respondents in terms of the surrounding areas. The majority of respondents (46.8%) indicated that Golden Gate was in fact the main and dominant role in visiting the area with 42.3% indicating a very important role. Therefore when evaluating the results, 89.1% of all respondents indicated Golden Gate's role as very important when visiting the area and this adds to the profile of respondents. The other section (10.9%) indicated Golden Gate not to be important or that respondents were not even aware of it.

Table 25: Role of Golden Gate Highlands National Park in the surrounding area

		Frequency	Percent
	Dominant role	52	**46.8**
	Very important	47	42.3
	Not an important role	6	5.4
	No role	3	2.7
	Not aware	3	2.7
	Total	111	100.0
Missing		2	
Total		113	

Although the majority indicated that Golden Gate was the main reason for visiting, results indicated that 59.8% would still visit the surrounding area with a rather large group (40.2%) indicating "no". Therefore it is clear that even though respondents mainly visit Golden Gate, the fact that they also visit the surrounding areas can work in favour of Golden Gate and may present an additional marketing tool.

6.2.5 Visitors' perceptions and preferences regarding management regulations in GGHNP

The perceptions and preferences visitors have in terms of management are of the utmost importance for the management of Golden Gate HNP. The insight from respondents provides valuable information to improve management practices and may increase visitor

numbers if followed through. Table 26 illustrates respondents' opinions relayed to positivity and negativity on various aspects pertaining to Golden Gate. The majority of respondents (58.7%) indicated "very positive" to find organised campsites with toilets, fire wood, fire rings and litter bins and 49.5% indicated "very positive" to litter bins available along the way. Of the respondents, 56.5% and 57% indicated "very positive" in terms of marked trails and well signposted crossings respectively.

Table 26: Visitor preferences

Would it be negative or positive for your own amenity and satisfaction:	**Very Negative %**		**Neutral %**			**Very positive %**	
	1	2	3	4	5	6	7
A)…to find organized campsites with toilets, fire wood, fire rings and, litter bins	0.0	2.8	0.0	6.4	5.3	26.6	**58.7**
B)… to be able to dispose of litter in bins along the way	4.6	1.8	0.9	11.9	9.2	22.0	**49.5**
C)… to find marked trails in the area	0.0	0.0	1.9	4.6	5.6	31.5	**56.5**
D)… when trailheads and crossings are well signposted	0.0	0.9	0.0	4.7	6.5	30.8	**57.0**
E)… to find huts/lodges where they offer meals and made beds	0.9	2.8	2.8	21.5	11.2	23.4	**37.4**
F)… to encounter many other outdoor recreationists during your trip	5.5	14.5	10.9	**26.4**	10.9	20.0	11.8
G)….that you can hike for hours without meeting anyone	3.6	2.7	6.4	22.7	14.5	22.7	**27.3**

When asked whether respondents would be positive or negative regarding huts/lodges that offer meals, the majority (37.4%) indicated "very positive" with 23.4% stating a positive result. In terms of encountering other visitors along the way, the respondents were not so positive with the majority (26.4%) stating a neutral, with 27.3% of respondents indicating that hiking for hours without meeting anyone, as very positive. Therefore, although respondents want to find camps and made beds, and meals per se, the fact remains that respondents would like to be secluded and enjoy nature and hiking at the same time. For a further in-depth management assessment regarding visitors, results indicate the importance of existing activities at Golden Gate. The prominent Rhebok hiking trail was somewhat important to respondents with 27.1% stating "neutral" and 25.2% indicating "very important". Golden Gate offers various longer and shorter trails that the majority of

respondents (45.4%) state as “very important”. This ties in with the main activity of hiking, which 54.7% of all respondents participate in, as portrayed in Table 21. The herbal trail according to results was more important than the Rhebok trail with 28.3% stating it as very important compared to the 25.2% from the Rhebok trail. The Cathedral Cave guided walk was according to respondents was not important and results range from neutral to important. Together with the importance of hiking, scenery was very important for 87.2% of all respondents. In terms of activities such as horse riding, abseiling and canoeing together with rock art and the Basotho Cultural village, results indicated respondents as not viewing it very important with a widely distributed array of importance.

Nature viewing on the other hand is very important but with a distinction between self drives and game drives. Results indicated that game drives are evenly distributed with a small majority of 27.5% indicating it as “very important” compared to the 59.1% of respondents stating self drives to be very important. Conference facilities were according to the majority (33.9%) not important at all. Apart from the above, with regard to the importance of existing activities, respondents were asked to indicate the importance of various aspects for present and future visits. Table 27 represents future alterations and additions that would make Golden Gate more attractive. When evaluating Table 27 it is clear that respondents were neutral about most alterations or additions and can be seen by the evenly distributed percentage from not important at all up to very important. The only option that stood out with more than double the amount of respondents, ranging from important to very important was: reducing the traffic through the park, with 49.6% of all respondents in agreement.

Table 27: Importance of future alterations and additions

	Not important at all		%		Very important
	1	2	3	4	5
a. Family friendly interactive visitor interpretation centre	18.6	2.7	**33.6**	20.4	22.1
b. Bicycles available for hire	18.6	10.6	**30.1**	21.2	16.8
c. Improved interpretation of Rich cultural history	11.5	11.5	29.2	**30.1**	14.2
d. Designated Mountain bike tracks	17.7	6.2	23.0	**30.1**	19.5
e. Nature-oriented Health Spa	23.0	13.3	17.7	16.8	**23.9**
f. Reducing non visitor traffic through the park	4.4	1.8	17.7	23.0	**49.6**

In terms of Table 27, respondents were asked to include and specify some other additions that would make Golden Gate more attractive. The results indicated that even though an option was included for reducing non-visitor traffic, respondents persisted and included that into other additions as well.

Apart from reducing non-visitor traffic, some other suggestions included:

- Better shopping facilities
- Guided tours with locals
- Laundry services
- Restaurant at Glen Reenen
- Sports Bar/TV lounge
- Swimming pool
- Better information and signpostings for short hiking trails
- Entertainment area for children who cannot and don't want to accompany adults
- Provide a detailed map of Golden Gate

These additions are some of the main objections respondents have identified at Golden Gate and provide management with the unique opportunity to correct and capitalise on them. Apart from future alterations that respondents indentified, perceptions and preferences regarding nature, facilities and management were indicated. Table 28 illustrates various statements grouped together regarding nature, facilities and management.

In terms of management regulations of nature conservation, results have shown that the majority of respondents agree with statements A, B, D and I with 64%, 79.3%, 56.8% and 63.1% respectively. These results indicate that the majority of respondents agree with the management regulations to protect and conserve the environment even if enforcing it would impact on visitor experiences and be restricted in certain ways and areas.

Table 28: Management regulations and measures in Golden Gate Highlands National Park

	Disagree %	It depends %	Agree %
a. To protect nature, some areas need to be restricted from visitors	4.5	31.5	**64.0**
b. Nature conservation has the highest priority against all other land uses	0.0	20.7	**79.3**
c. The creation of tourist facilities is necessary to satisfy visitors in National Park	9.0	36.0	**55.0**
d. Trail hardening (such as gravel and boardwalks) is necessary to minimize visitor impacts	14.4	28.8	**56.8**
e. Local entrepreneurs should have more freedom to offer new activities and facilities in the National Park	**41.8**	31.8	26.4
f. Environmental education should be one of the main tasks of a National Park	8.1	27.0	**64.9**
g. Cultural history should be maintained at all cost and is very important in the National Park	13.5	30.5	**55.9**
h. Fines for rule violation should be enforced	3.6	14.4	**82.0**
i. Fences and barriers are necessary to protect certain species	7.2	29.7	**63.1**

In terms of facilities (Table 28), 55% of respondents indicated that the creation of tourist facilities is necessary to satisfy visitors; whereas 36% stated that “it depends (on the facility)”, indicating that it is not of cardinal importance to visitors, but should be taken into consideration. Statements regarding general management regulations differed somewhat in terms of respondents’ preferences. The statement of local entrepreneurs having more freedom to offer activities, was not taken favourably by respondents with 41.8% indicating that they should not have more freedom.

Whether environmental education should be seen as a main task of Golden Gate, 64.9% of respondents agreed with the statement and only 8.1% disagreed. The maintenance and protection of cultural history is important to respondents with 55.9% in agreement. The majority, 82% of respondents indicated that fines should be enforced for the violation of rules. When evaluating the results regarding Table 28 it is clear that respondents agree on certain structures and regulations in order to protect the biodiversity of Golden Gate to the extent of limiting their own experiences for the well-being and protection of the environment.

The perceptions and attitudes visitors have towards a national park and various aspects regarding the park largely influence experiences at the park. One such important aspect

that could positively or negatively influence visitors experiences is the behaviour of other visitors in terms of what is allowed by management and not controlled. Table 29 indicates certain activities that visitors would either find as a strong disturbance, little disturbing or no disturbance at all. Depending on the degree of disturbance, management could use the results as an indication to redevelop, control or improve certain aspect(s). Strong disturbances according to respondents were statements B, C, D and E with all of them well above 80% of respondents in agreement. Statements A, F and J were also regarded as a strong disturbance with more than half of all respondents in agreement. Fishing on the other hand was demonstrated as a little disturbing with 40.4% in agreement but with 35.8% indicating not at all. Hiking, birding, cycling and rafting on the other hand was no disturbance at all for 73.6%, 88.9%, 52.3% and 63.1% respectively.

Table 29: Disturbing visitor behaviours

	Not at all %	Little disturbance %	Strong disturbance %
a. Walking off designated trails	15.7	33.3	**50.9**
b. Making fire outside fire places	6.3	12.6	**81.1**
c. Leaving litter	0.9	0.9	**98.2**
d. Driving motor vehicles off road	5.5	14.5	**80.0**
e. Use branches to make fire	5.5	7.3	**87.3**
f. Collecting of plants	5.4	15.3	**79.3**
g. Fishing	35.8	**40.4**	23.9
h. Hiking	**73.6**	21.8	4.5
i. Bird watching	**88.9**	8.3	2.8
j. Camping outside campsites	14.4	25.2	**60.4**
k. Cycling and bicycle tracks	**52.3**	36.9	10.8
l. River rafting	**63.1**	30.6	6.3

When evaluating the statements where respondents agreed being a strong disturbance, it is clear that respondents have the best interest of the environment at heart. The fact that the majority of respondents agreed that a disturbance on various issues illustrates the positive attitudes of respondents towards conserving biodiversity at Golden Gate. Apart from the disturbances in Table 29, results have indicated some other disturbances that might give management of Golden Gate some input into visitor preferences and attitudes. Only 29.5% of respondents indicated that erosion was found with a rather equal

distribution, with 58.2% that indicated that no littering was found compared to the 41.8% indicated otherwise.

In terms of too many visitors, 87.4% indicated that no crowding was found with 69.1% stating no disturbances regarding other visitor behaviour. 74.1% of respondents indicated that Golden Gate had clear signs with 87.2% indicating standards and facilities up to standard. Suggestions were asked by respondents with the intention of identifying unseen or overlooked areas in order for management to improve Golden Gate as a whole. Various suggestions were identified and are listed below:

- Improve road signage to and from the park
- Improve the amount and availability of information regarding all aspects of the park
- Additional litter bins
- Fines regarding speeding
- Recycle bins
- General maintenance of rooms/ablutions
- Enforce a transit park fee to reduce visitor traffic
- Eradicate the traffic through the park

Results have indicated the suggestions and complaints listed above. One complaint that stood out and with the majority of respondents in agreement, is the traffic through the park. Apart from that and when evaluating all above results, it is clear that respondents are happy in general and perceive the management to be adequate and biodiversity of Golden Gate to be very important.

6.2.6 Biodiversity and visitor experiences

In order to determine the importance and role biodiversity plays regarding visitor perceptions, attitudes, experiences and satisfaction in general, the value of biodiversity must be determined. Results indicate aspects of importance in Table 30. Certain statements listed in Table 30 and the importance that respondents value towards them indicates the value of biodiversity for visitors. According to respondents, beautiful scenery was very important with an overwhelming majority (86.5%) of all respondents in agreement. Although quietness is not purely related to biodiversity, it states the absence of other humans which in turn links with statement E with “no signs of human interference”

which ties in with biodiversity and untouched nature. Therefore when evaluating the results, 75% indicated that quietness was very important with 63.6% stating no signs of human influence as very important.

Geology was indicated by respondents as being “important to very important” with 84.9% of respondents to Golden Gate in agreement. The other statement directly related to biodiversity and the richness level is statement I. Respondents indicated how important wildlife, birds and the natural habitat is at Golden Gate. Results suggest that according to the majority of respondents (77.5%), wildlife, birds and the natural habitat are very important at Golden Gate and therefore indicate the importance of biodiversity. Results have shown that all these statements were viewed as very important with an overwhelming majority of respondents indicating this and providing some insight into the role and importance of biodiversity at Golden Gate.

Table 30: Aspects of importance in Golden Gate Highlands National Park

	Not important at all		%		Very important
	1	2	3	4	5
a. Good tourist facilities	0.9	2.7	8.9	28.3	**58.9**
b. Good accessibility	0.9	0.9	7.1	31.3	**59.8**
c. Beautiful scenery	0.0	0.0	3.6	9.9	**86.5**
d. Quietness	0.9	1.8	3.6	18.8	**75.0**
e. No signs of human influences	0.9	0.9	12.7	21.8	**63.6**
f. Rich cultural history	6.3	8.0	17.9	27.7	**40.2**
g. Uniqueness of place	0.9	0.0	5.5	27.3	**66.4**
h. Personal attachment of the place	5.4	3.6	24.1	29.5	**37.5**
i. Wildlife, birds & natural habitat	0.0	2.98	3.6	18.9	**77.5**
j. Geology	0.0	1.8	13.4	29.5	**55.4**

Apart from the important aspects listed in Table 30, results indicate the importance of biodiversity, the degree to which the richness level of biodiversity affects experiences and the specific attributes associated with biodiversity richness. When asked how important biodiversity is for the respondent when visiting Golden Gate, an overwhelming majority indicated their opinion. Table 31 represents the degree of importance in terms of biodiversity for respondents at Golden Gate Highlands National Park.

Table 31: Importance of biodiversity in Golden Gate Highlands National Park

Not important at all		Neutral		Very important
1	2	3	4	5
0.9	0.0	2.7	6.3	**90.2%**

The results have indicated that 90.2% of all respondents to Golden Gate are of the opinion that biodiversity is very important when visiting a national park. Thus the affect it will have on their experiences are immense when evaluating the results. In order to further determine the role of biodiversity on visitor experiences, the degree to which it affects visitor experiences and how important various attributes are perceived when visiting Golden Gate must be determined. When asked to which degree the richness level of biodiversity in national parks affects experiences, respondents indicated similar opinions to the importance of biodiversity illustrated in Table 31.

Results indicate that 1.8% of respondents said that the richness level does not affect their experiences at all, with 2.7% indicating only a little affect. 5.4% of respondents suggested no effect in terms of feeling neutral towards the affect the richness level has on their experiences. In terms of the richness level actually affecting visitor experiences positively, 23.4% indicated that it affects their experiences to a large extent. The majority with 66.7% of all respondents to Golden Gate indicated that the richness level of biodiversity has a very large affect on their experiences. When combining respondents who suggested a large or very large affect, 90.1% are affected by the richness level of biodiversity. It is therefore clear when evaluating these results with the results listed in Table 31 that biodiversity does affect visitor experiences.

Due to the fact that the biological environment differs from each national park and in order to further determine the role of biodiversity on visitor experiences in Golden Gate, the biodiversity attributes regarding Golden Gate were presented to respondents. Respondents were asked to indicate the importance level of each different attribute as illustrated in Table 32. In terms of unspoilt nature in Golden Gate, 0.9% of respondents indicated “not important at all” with 1.8% stating neutral. Almost all respondents indicated that unspoilt nature was either important (7.1%) or very important (90.2%) with a combining amount of 97.3% of respondents stating how important unspoilt nature is at Golden Gate. In terms of rich variety of plants, 2.7% indicated no importance to them with

5.4% stating neutral. 25% of respondents indicated that rich variety of plants is important with 67% and the majority of respondents suggesting that it is very important for them when visiting Golden Gate. The combined amount of 92% stating either important or very important clearly illustrates the significance biodiversity has on visitor experiences.

Rich variety of different habitats such as forests, mountains, highlands, et cetera, as stated in Table 32 is specifically important due to the fact of Golden Gate being very diverse concerning a multitude of habitats. According to the respondents, 0.9% stated no importance at all, 0.9% not important and 1.8% being neutral. In terms of stating importance, 23.2% of respondents agreed, with 73.2% indicating it as very important. Therefore 96.4% which is almost all respondents are of the opinion that rich variety of habitats is very important and does affect their experiences in Golden Gate.

In terms of rich variety of wildlife, results indicated a total of 94.6% of all respondents stating wildlife either important or very important with 73.2% being very important. The rich variety of birdlife was according to results not important at all for 1.8% of respondents, not important according to 0.9% and neutral for 3.6% of respondents. 20.7% of respondents thus indicated that birdlife was important with 73% indicating very important. The combined percentage of respondents according to results was 93.7%, thus stating that an overwhelming majority of respondents are of the opinion that a rich variety of birdlife at Golden Gate is very important and affects their experiences.

Table 32: Importance of biodiversity attributes in Golden Gate Highlands National Park

	Not important at all		**%**		**Very important**
	1	**2**	**3**	**4**	**5**
a. Unspoiled nature	0.9	0.0	1.8	7.1	**90.2**
b. Rich variety of plants	2.7	0.0	5.4	25.0	**67.0**
c. Rich variety of habitats (forest, mountains, highlands etc.)	0.9	0.9	1.8	23.2	**73.2**
d. Rich variety of wildlife	1.8	0.0	3.6	21.4	**73.2**
e. Rich variety of birdlife	1.8	0.9	3.6	20.7	**73.0**

When evaluating the entire spectrum of results aimed at identifying whether biodiversity and the richness level of biodiversity through various attributes are important, and whether it affects visitor's experiences, the results clearly indicate that according to a large majority, it (biodiversity and the richness level thereof) does. Therefore the role of biodiversity in

Golden Gate is to enhance visitor experiences while at the same time protecting the biodiversity for future generations. Management must realise that without rich levels of biodiversity, visitor numbers would decrease, and should capitalise upon this research and acknowledge the role and importance of biodiversity.

6.3 COMPARATIVE RESULTS

In order to compare the results, it must be highlighted that the sample sizes and level of representativeness for Oulanka and Golden Gate are not the same. As mentioned above, the sample size for Oulanka was 613 respondents while Golden Gate consisted of 113 respondents and this acts as a limitation to the comparison between the two national parks. Although the samples differ and this acts as a limitation, the visitor numbers to the national parks per annum must be taken into account. In stating the limitation the results can indirectly be compared by using the internal relative differences between the study sites. This study was undertaken in order to determine the role of biodiversity in national parks regarding visitor experiences and whether the richness level of biodiversity impacts on visitor experiences and satisfaction. Although the mentioned limitation above for Oulanka National Park in Finland and Golden Gate Highlands National Park in South Africa exists, a comparison was undertaken in the light of the results from the two national parks.

Both samples were collected at various locations in the parks to increase the accuracy and relativity. Although the number of respondents surveyed at Oulanka is significantly more than Golden Gate, the visitor numbers are also significantly more. Thus according to statistics by Metsähallitus (2012), Oulanka National Parks had a visitor number of 171 653 in 2011. The amount of respondents collected accounts for 0.36% of the total amount visitors to the park in 2011. When compared to Golden Gate, the visitation statistics are much lower with the sample accounting for roughly 1.8% of the total amount visitors. This is unfortunate due to the fact that an increase in the number respondents is generally sought after.

6.3.1 Research locations and respondents profiles

Respondents from both national parks were surveyed at different locations to include wider segments of visitors. The respondents from Oulanka were surveyed at various places of interest and accommodation facilities where respondents at Golden Gate were mostly surveyed at the different types of accommodation facilities. The respondents' profiles in terms of gender were rather evenly distributed among males and females. Oulanka national park consisted of 47.9% male, 52.1% female and Golden Gate with 57.1% male and 42.9% female. The percentages in terms of gender between the two national parks are rather close with a variance of only 14.2%.

In terms of age of respondents the two national parks differ considerably. Oulanka has the highest concentration of respondents in the age category 41-60 with 43.2%, while Golden Gate has a separated distribution with 30.6% falling in the category of 19-30 and 20.7% between 51-60 years. Although the distributions vary at Golden Gate, when evaluating the national parks as a whole, both seem to attract the older generation rather than the young. In terms of nationality, both national parks are very close with locals accounting for the majority of the respondents. Finnish visitors represented 84.9% of visitors to Oulanka while South Africans accounted for 85% to Golden Gate with only a 0.1% difference between the two parks. In the data foreign visitors to Oulanka represented 25 different nationalities with only seven for Golden Gate. Thus, the results indicate that Oulanka has a significantly larger nationality base than Golden Gate but it must also be taken into account that of Finland is a developed country with many countries geographically closer.

6.3.2 Visitation statistics

The visitation statistics for both national parks are interesting as they comprise of respondents visiting the national parks for either the first time or as returning visitors. Results indicate that 53.2% of respondents from Oulanka are returning visitors compared to the 60.7% of respondents from Golden Gate. Although Golden Gate has a higher return rate with a variance of 7.5%, both percentages in relation to the amount of respondents are relatively similar. In terms of first time visitors, 46.8% of respondents from Oulanka i visited for the first time compared to the 39.3% of respondents from Golden Gate.

Although again a variance, both percentages in relation to the amount of respondents are relatively similar and add to the accuracy of the comparison.

When evaluating the amount of time spent in both national parks it is clear that the visitation is more spread out over longer periods at Golden Gate than at Oulanka. Results indicate that among respondents from Oulanka, 54.6% were day visitors, 18.5% spent one night and 10.1% spent two nights. 83.2% therefore spend less than three nights in the park. When comparing this to respondents in Golden Gate, 13.5% indicated day visitors, 12.5% one night, 18.8% two nights, 10.4% three nights, 3.1% four nights and 16.7% five nights. Collectively 75% of respondents from Golden Gate spend at least five nights in the park with another 9.4% in excess of 7 nights. Thus comparing the results, respondents from Golden Gate spend on average more time in the national park than respondents from Oulanka. Visitor growth to both national parks can clearly been seen in Figure 3 and 6. When comparing results, visitor growth in Oulanka has been the most active with an influx during 2005–2010 compared to 2008–2011 at Golden Gate. When comparing the figures, it is clear that although an influx occurred at both national parks during the time specified, a clear and distinct growth in visitor numbers over the years can be seen.

6.3.3 Visitors' perceptions and attitudes towards environmental conservation

When evaluating the perceptions and attitudes towards environmental conservation in both national parks, some similarities and differences can be seen. 88.1% of respondents from Oulanka indicated that their work or studies were not related to environmental conservation compared to 74.3% of respondents from Golden Gate. Thus among the respondents of each national park, respondents to Golden Gate accounted for 13.8% more being involved in environmental conservation regarding work or studies. In terms of feeling responsible for statements regarding environmental deterioration, respondents among both national parks differed rather substantially in certain statements. When asked whether respondents feel responsible for loss of natural areas in the world, 34.7% of respondents from Oulanka disagreed with 29.1% of respondents from Golden Gate agreeing. In terms of climate change, 41.8% of respondents from Oulanka and 37.8% of respondents from Golden Gate agreed on being responsible. Feeling responsible for the extinction of endangered species was neither agreed nor disagreed but rather stated

neutral with 31.9% of respondents from Oulanka and 26.4% from Golden Gate. When asked whether respondents felt responsible for environmental degradation, 39.8% of respondents from Oulanka agreed with 30.3% of respondents from Golden Gate stating neutral. When comparing the results it is clear that certain statement were the same for respondents of both national parks but also with variances stating the differences between respondents from both parks.

This may be due to the fact that when evaluating the membership of any local or international environmental organisation, only 8.3% of respondents from Oulanka indicated belonging to such an organisation compared to the 16.7% of respondents from Golden Gate. Among the respondents from both national parks, the percentage of respondents were double in belonging to such an organisation. Thus when objectively evaluating the results, it may be suggested that respondents from Golden Gate are more in agreement and feel more responsible for environmental deterioration.

6.3.4 Importance of both national parks and the surrounding areas

The importance of both national parks was determined due to the activities undertaken by respondents and the role the national park represented in the area. When evaluating activities, Oulanka National Park was relative straight to the point with 80.3% of all respondents indicating their main activity as hiking. The closest other activity was sightseeing with only 9.5% and it is therefore clear that respondents in Oulanka is mostly interested in hiking. When evaluating Golden Gate, respondents indicated the main activity as a multitude of similar activities grouped together. Hiking, sightseeing & nature was indicated by 54.7% of all respondents to be the main reason for visiting the park. When comparing the activities of both national parks, it is clear that hiking and being in nature is the same for both. The importance of both national parks in relation to the surrounding areas is unique for both national parks. Only 31.3% of respondents indicated that Oulanka is the dominant role in visiting the area where as 46.8% of visitors to Golden Gate indicate the national park to be the main attraction. Thus when comparing results, respondents of Golden Gate can be classified as mainly visitors the national park. When evaluating and combining the results in terms of the national parks being the dominant and very important role together, Oulanka and Golden Gate are similar with 80.9% and 89.1% respectively.

Therefore both national parks are either the main or a very important aspect when visiting the surrounding area. Apart from the high percentage of respondents indicating that the national parks are very important and the dominant role in visiting the area, results indicated that 76.9% of respondents from Oulanka and 59.8% from Golden Gate would still visit the area if the national parks would not be present. The conclusion therefore is that although most visitors visit the both national parks, the surrounding areas still represent a region worth visiting without the national park being the main draw card.

6.3.5 Visitor's perceptions and preferences regarding management regulations

Perceptions and preferences differ from person to person. The difference with visitor preferences regarding an ideal area at Oulanka (Table 9) and visitor preferences in general at Golden Gate (Table 26) was to adapt to the specifics in terms of the activities of visitors of each national park. The mean for statements was determined at Oulanka while a percentage given at Golden Gate. When comparing the statements illustrated in Tables 9 and 26, it is clear that some respondents from Oulanka and Golden Gate align and some differ. In terms of finding organised campsites with toilets, fire wood, fire rings and litter bins the majority of respondents from both Oulanka and Golden Gate were very positive. To be able to dispose of litter along the way, among the respondents of Oulanka the majority indicated neutral with the majority of respondents from Golden Gate indicating very positive.

Statements such as to find marked trails and well signposted crossings and trailheads were indicated as very positive by respondents from both national parks. Statements that were indicated not the same when compared were finding huts/lodges where made meals and beds are offered and hiking for hours without meeting anyone. Respondents indicated neutral for both while respondents of Golden Gate indicating very positive. In terms of encountering many other outdoor recreationists, respondents from Oulanka suggested that it would be negative while respondents from Golden Gate only suggest a neutral response. Results further indicate the importance of various existing hiking trails or cultural sights but cannot be compared due to the fact that it is specific to the national park and has already been discussed. A unique difference in the comparison between the national parks is the activities and orientation of respondents to the national parks. Results suggest that respondents preferences when visiting a national park such as Oulanka is more focused

on hiking or some kind of activity, whereas respondents to Golden Gate enjoy hiking and activities, but are more focused on the scenery, relaxing and game viewing.

Tables 10 and 28 illustrate the opinions regarding certain management regulations either already enforced or for research purposes. In comparing the different results, it must be indicated that certain statements have been altered or removed from either national park as certain activities are specific to a national park and not possible in the other park, such as reindeer herding is not possible in Golden Gate. Therefore only statements that are specific to both national parks are compared. When asked whether some areas need to be restricted from visitors to protect the nature; whether nature conservation has the highest priority against all other land uses; if fines should be enforced; whether fences and barriers are necessary to protect certain species; and whether trail hardening is necessary to minimise visitor impacts; the majority of respondents from both national parks are unanimous in agreement. With the creation of tourist facilities necessary to satisfy visitor, respondents from Oulanka suggested “it depends” while respondents from Golden Gate agreed. Both the majority of respondents from Oulanka and Golden Gate stated that it depends on whether local entrepreneurs should have more freedom to offer new activities and facilities in the national park; both respondent groups agreed on environmental education being a main task of both national parks.

To determine whether visitor behaviour may or may not influence respondents differs from Oulanka and Golden Gate. Certain activities that respondents to Oulanka would find disturbing are not viable in Golden Gate and vice versa. Behaviours that could be compared with both respondents indicating a strong disturbance include making fire outside of a fire place; leaving litter; and driving vehicles off-road. Respondents from Oulanka indicate that using branches for fire wood and camping outside of camp areas as a little disturbing compared to respondents from Golden Gate that indicate a strong disturbance. An interesting finding is that the majority of respondents from Oulanka suggest that there is no disturbance at all when asked regarding collecting of plants, whereas respondents from Golden Gate indicated a strong disturbance. The statement concerning hiking, bird watching and river rafting was indicated as no disturbance from respondents from both national parks.

6.3.6 Biodiversity and visitor experiences

Due to the fact that Golden Gate does not have any information on biodiversity hotspots presented in a geographical form such as a map or type of measurable data, the importance of biodiversity and affect it has on visitor experiences has to be researched in a different way than done by Oulanka. In terms of Oulanka, the biodiversity was communicated by various maps indicating the hotspots. Apart from the hotspots, data is also introduced in the form of a map illustrating the usages in terms of camping and visitation statistics. This in turn can be translated into whether biodiversity has an effect on visitor experiences by comparing the areas with the highest usage rates and most quality experiences. This is also true as illustrated in the results for Oulanka regarding biodiversity that the least quality experiences were mostly reflected in areas of biodiversity hotspots. To differentiate whether the experiences were in fact regarding the richness level of biodiversity, reasons were asked from respondents in order to differentiate between standard reasons and reasons pertaining to biodiversity.

In the case of Golden Gate, biodiversity had to be determined in a totally different way. A simple question was asked on how important respondents view biodiversity in a national park and the affect it has on their experiences. In order to further substantiate the role and effect of biodiversity on visitor experiences, certain attributes pertinent to biodiversity in Golden Gate were introduced and measured on a scale of importance. Therefore some underlining questions were introduced to measure the importance of biodiversity for respondents from both national parks that could be compared directly. The aspect of importance for respondents pertaining to biodiversity and the degree of biodiversity includes beautiful scenery, quietness and no signs of human interference. For all three of these statements, the majority of respondents from both Oulanka and Golden Gate indicated important to very important, thus indicating the underlying fact of the importance of rich biodiversity for them when visiting a national park.

Comparing other results from Oulanka and Golden Gate is not plausible due to the different questions and methods in determining the importance of biodiversity for visitor experiences. Therefore the separate findings provided in the results from both Oulanka and Golden Gate answer the questions regarding biodiversity. As mentioned in the results

section the majority of respondents from both national parks have indicated that biodiversity is very important to any national park and does affect their experiences. Biodiversity affects respondents' experiences to a large extent and certainly influences their decisions to visit. Apart from the results in terms of biodiversity, various other questions underlining the importance of biodiversity to respondents also specify the role biodiversity plays in national parks and indicate the extent in which the richness level of biodiversity affects respondent's experiences in a positive or negative way. By evaluating results, both directly and indirectly pertaining to biodiversity from both Oulanka National Park and Golden Gate Highlands National Park, the findings indicate that biodiversity plays a very important role and affects the experiences of visitors to national parks to a large extent.

7 CONCLUSION AND RECOMMENDATIONS

The recommendations drawn from the results present the opportunity for both national parks to capitalise upon the results and improve management where necessary. Some recommendations are similar for both national parks, but differ considerably in other aspects. The one constant is that according to results analysed, biodiversity has an effect on visitor experiences and satisfaction and plays an important role in both national parks. Although the research material does not allow for wider generalisations, it seems that biodiversity represents the main drawcard for both national parks and it is vital to maintain and improve biodiversity in the parks.

Apart from the recommendations, any completed research must be analysed over a period of time with continuous research to maximise the benefit derived. In terms of the tangible results, visitation is growing steadily from year to year and has been for the last couple years with a large influx of visitors to both national parks. It is therefore recommended that continuous maintenance, expansion and improvement in terms of facilities, general management and mainly biodiversity is boldly undertaken. This will in turn retain and increase the growing number of visitors and their satisfaction in the parks. This is highly recommended for Golden Gate due to the fact that the national park does not receive the amount of funding and support from governmental institutions such as Oulanka and

therefore needs to retain visitation with continuous growth. The profiles of visitors to the national parks also present an opportunity to identify the main target markets. Being knowledgeable of the main age groups, visitor patterns and different foreign nationalities, both national parks can focus on, for example, the preferences of certain nationalities if they form a segment of the visitors, especially with the focus on attracting more foreign nationalities due to the fact that they are in the minority.

Apart from the direct profile of visitors, the results indicate that for the majority of respondents from both national parks, work and studies are not related to environmental conservation and protection, with the added fact that the minority of respondents also do not belong to any local or international environmental conservation organisation. Apart thereof visitors to both national parks agree that environmental education is very important. This is substantiated by the results (refer to Tables 10 and 28); where the majority of respondents indicate that environmental education in a national park is very important. It is therefore recommended that considerable effort is put into environmental education for visitors to both national parks not only to educate them, but also to decrease the negative impacts on biodiversity. By educating visitors at the national parks through, for example, an interactive visitor centre among other options (Table 27), impacts on the environment may considerably be reduced and biodiversity protected. Based on the research materials and results the importance of education is also highlighted in terms of the perceptions visitors have regarding feeling responsible for either:

- The loss of natural areas.
- Climate change.
- Extinction of endangered species.
- Environmental degradation.

The above suggests that visitors in general increasing feel responsible for the protection of the environment and the conservation thereof. Oulanka and Golden Gate must realise this opportunity and capitalise on it by educating the already environmentally conscious visitors in order to protect the biodiversity which in essence is the main drawcard in visiting the national parks and that has a large affect on visitor experiences. According to results, since both national parks are situated in an area well worth visiting, this can be utilised as an additional marketing tool for both national parks to increase visitor growth. In terms of

activities it is recommended that the national parks must focus on the main activities the results have yielded. Due to the fact that biodiversity has a major impact on visitor experiences the activities can be linked to biodiversity 'activities' to enhance experiences. By focusing, for example, on hiking which is the main activity in Oulanka, the biodiversity along the main routes will be more susceptible to environmental impact, and by reinforcing sections through protective measures, such as trail hardening while working on biodiversity improvements, the national park can reduce visitor impacts while at the same time improving the biodiversity that increases visitor experiences.

In terms of management regulations and the results pertaining to the perceptions and attitudes of visitors, both national parks have a significant opportunity to increase visitor experiences through increased biodiversity. Based on the research material and results, Oulanka and Golden Gate are recommended to:

- Restrict visitors if necessary for biodiversity conservation or optimisation.
- Attend, maintain and improve all facilities regarding the national parks.
- Increase environmental hardening with the least possible impacts to protect the biodiversity.
- Educate visitors in various environmental issues as a main task.
- Conserve the cultural history to improve visitor experiences.
- Introduce, maintain and enforce fines and violations.

Apart from management regulations, other visitor behaviour is an area of concern. The results indicate that the behaviour of visitors are generally a strong disturbance. It is recommended that both national parks strongly take this into account in order to further improve the quality of visitor experiences by controlling unwanted visitor behaviour. This of course will differ from Oulanka to Golden Gate. The results indicate that visitors agreed with the above recommendations, and that they will restrict their own experiences to save and protect biodiversity. Although this is true it is strongly advised for management to inform and communicate the possible changes and reasons behind the changes or restrictions to visitors. Although Golden Gate currently does not have an instrument for measuring biodiversity, such as a biodiversity hotspot map such as Oulanka has, the importance and effect of biodiversity for Golden Gate has to be determined in a different manner. Both results indicate the same outcome and illustrate the importance and affect

biodiversity has on visitor experiences. However, in order to expand the research further and actually put theory into practice, Golden Gate must be able to quantify and measure its programs in terms of biodiversity. Thus one of the major recommendations entails the lack of information regarding biodiversity in Golden Gate. It is therefore highly recommended that Golden Gate does another study or use existing information to develop a map or other means of measuring data for the biodiversity hotspots and usages in terms of accommodation and activities. When compared to Oulanka National Park, ArcGIS was used to identify and develop a map of biodiversity hotspots and usages within the national parks and particular within the hotspots. When a map or any suitable type of measurable data regarding biodiversity hotspots and usages is developed, programs can be put in place to measure, maintain, improve or correct biodiversity aspects to determine the ongoing success or failure of such a biodiversity program.

Apart from the research and the development of guidelines according to results, best practices from other institutions, organisations or national parks, local and international, may provide the needed insight. By combining the results and best practices, Oulanka and Golden Gate National Parks can better determine the way forward in answering the research questions and developing strategies, policies and frameworks necessary to maintain, overcome and improve biodiversity and the quality of visitor experiences. Apart from best practices, both national parks can use tried and tested strategies and practises from each other to improve an array of aspects. In terms of Oulanka being a national park in a First World country, Golden Gate has the added opportunity to capitalise on information gained at Oulanka, in terms of addressing the stated research questions and by gaining valuable insight in terms of sustainability issues and biodiversity conservation while striving to provide quality visitor experiences. Oulanka receives a large amount of funding from government and other organisations when compared to Golden Gate. Golden Gate manages biodiversity and visitor experiences with limited funding through various other means such as the focus on purely visitors experiences to provide an income and ensure sustainability. This in itself presents Oulanka with the opportunity to capitalise upon the successes of Golden Gate. Both national parks can therefore learn from the other in order to improve biodiversity and visitor experiences. Apart from this, it is highly recommended that Golden Gate attempts to increase governmental and other local/international organisations funding through various means such as international

accreditations and ecolabels and being part of groups such as the Protected Area Network Parks (PAN Parks), and others. Apart from seeking funding through governmental or organisations it is recommended for national parks to consider funding through public and private co-operation. Although this may prove difficult with a difference of interest among the parties, that is, profit versus biodiversity protection; it is still worth pursuing if biodiversity can benefit from the endeavour. This is exceedingly important as Eagles (2002:132) indicates that it is evident that funding accelerates and provides the capability of national parks to develop quality policies and strategies that can lead to balancing environmental conservation and visitor experiences. The developing of policies by experts in a particular field that addresses problems regarding biodiversity and visitor experiences and the balancing of both is of the utmost importance for both national parks.

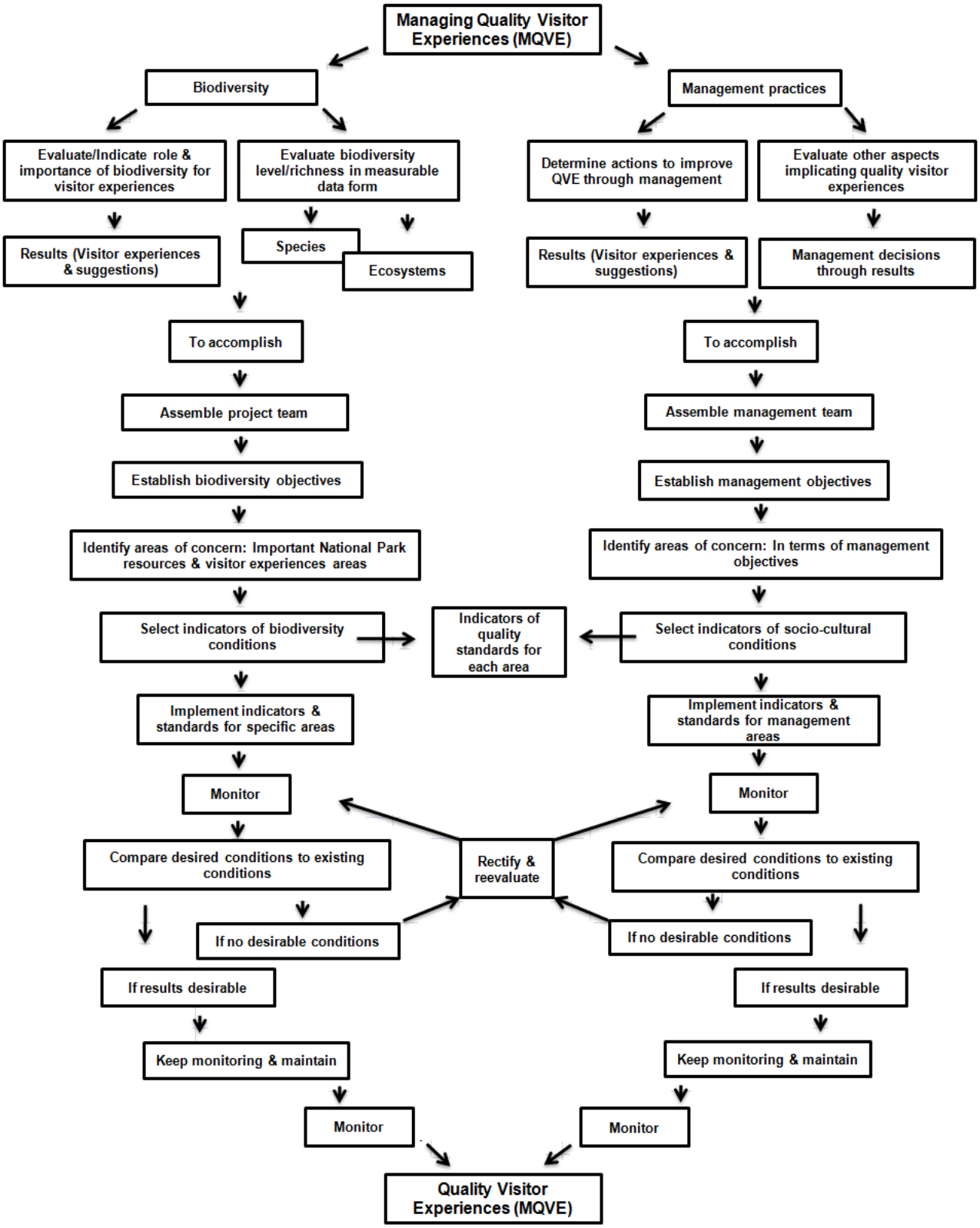
The move towards ecotourism on a large scale must also be considered by both national parks with Total Quality Management (TQM) dictating any new venture. The integration of socio-economic and ecological objectives apart from biodiversity conservation for both national parks is critical when ecotourism is introduced. In order to fully capitalise on socio-economic benefits, it is recommended that both national parks provide immediate economic and not futuristic benefits to local people. This economic benefit does not necessarily include only monetary benefits but rather sustainable benefits. According to the research material and results an array of benefits provided to the community can include:

- Primary and secondary education.
- Opportunity for tertiary education with the added chance of employment at the national parks.
- Various other work opportunities.
- Health services.
- Skills development.
- Biodiversity conservation.
- Training.
- Infrastructural development.
- Income generation.
- And other economic incentives.

Apart from large scale ecotourism, the protection of biodiversity is of the utmost importance. Results indicate that visitors agree that certain areas should be protected and restricted from visitation and it is recommended that each national park does a survey of the natural health of all areas. If certain areas are under protected or impacted negatively, the areas should be restricted and restored before opening them to the public. Although visitors agreed to this, both national parks are recommended to communicate this information clearly to visitors. This can be done with the zoning of certain areas if these areas are only deteriorating and not at a critical stage. This recommendation can be paired with any development in high tolerance vegetation areas as not to further impact the biodiversity. Another recommendation is the issue of advertising and promoting ecotourism and sustainable tourism practices within the national parks to domestic and international visitors. This refers to visitor perceptions and may increase the visitor numbers that can provide income for the sustaining of, for example, Golden Gate, due to the movement towards zero funding for this park. It is recommended that although Oulanka does not have this particular problem, that national parks take heed of the successes of Golden Gate in the sense of managing biodiversity without funding, and adapts to this strategy for improvement.

The careful evaluation of the national park (both Oulanka and Golden Gate) will determine the best option or combination of options to be implemented for successful management and environmental protection. In the utilisation and synthesis of all research material mentioned above along with the empirical result from the research, suggestions and recommendations for the development and management, together with best practices from both national parks, other national parks, natural areas and general research, and an analysis of impact and visitor experience frameworks, a conceptual framework of Biodiversity Tourism Management Guidelines (BTMG) for ONP and the GGHNP has been developed and is presented in Figure 7. This guideline has been adapted from various sources (acknowledged below Figure 7) and aims to manage and improve the biodiversity of both national parks while improving and providing quality experiences to visitors, therefore “Managing the Quality of Visitor Experiences (MQVE)”.

Figure 7: Biodiversity Tourism Management Guidelines Framework



Adapted from: (Brandon and Margoluis, 1996; Farrell and Marion 2002:35; Manning, 2001:99; Siikamäki and Kangas, n.d & van der Duim and Caalders, 2002:747).

Figure 7 demonstrates the two main sectors identified that reflects and implicates quality visitor experiences The two main sectors are “biodiversity” as indicated per results and the “management practices” illustrated by respondents as being of importance. Both these sectors are of the utmost importance and impact greatly on visitor experiences. The framework suggests certain steps that must be followed in order to achieve certain levels. By following the steps the maintenance and enhancement of the biodiversity for both national parks can be ensured. The steps follow upon each other and must be done in order to achieve the desired results. The framework also creates room for correcting nonsatisfactory results or failure. The measurable aspect during the course of action at each stage creates the opportunity to ensure a greater success rate and the ability to correct by focusing on the previous step without having to start over.

The fact that although desirable results may be achieved, the framework allows and requires continuous monitoring to minimise the work needed to be done if deviation occurs. This monitoring also allows management to retrace a previous step to correct the deviation, and emphasises that biodiversity or management practices is actually monitored. The practicality is that although the framework is simple, it ensures a structure that can be adapted to any national park or natural area, however staying within the parameters of biodiversity and management practices is important as this will have an impact on visitor experiences.

Therefore in terms of biodiversity, step 1 would be to evaluate and indicate the role and importance of biodiversity for visitor experiences by assessing the results from respondents. In terms of evaluating the richness level of biodiversity, a more scientific approach must be taken. By determining this, the two main aspects represent species and ecosystems. This is done in various and different ways as seen in the results between Oulanka and Golden Gate and may differ depending on other national parks. Both the level and importance of biodiversity for respondents implicate on the quality of their experiences in the national park. Therefore to accomplish this (satisfactory quality visitor experiences) or if it has already been accomplished within the national park and illustrated through results with the only intention of improving or optimisation thereof, the national park must follow the rest of the steps in the framework. In addressing the issues, the national parks are required to assemble a project team that will spearhead the project in all

or any direction initially chosen. The direction will be dictated by the establishing and setting of biodiversity objectives.

By identifying goals and objectives, the project team can work towards them and provide regular progress reports. The main objectives are broken down into manageable areas and specific people are assigned to each area. A timeframe is added as not to lose track of the main goals and acts as a guideline to ensure accountability. Upon establishing biodiversity objectives, the team is required to identify areas of concern regarding important resources and visitor experience areas within both national parks. Although this is optional and not necessary, the areas can also be close to the national parks as results state that the areas around the parks are of importance. The areas are then evaluated and the objectives set for each area of concern. In order to maintain and improve the situation, apart from working towards the desired objectives and the state of biodiversity, various indicators must be set for desired biodiversity conditions. These indicators reflect quality standards agreed upon by the project team for each specific area identified.

The implementation of these indicators and specific quality standards for each area are extremely important as accurate measurement cannot be done with faulty implementation. The implementation should be evaluated by external experts separate from the project team. Once the indicators have been implemented and each member from the project team has approved the implementation, the monitoring is set in place over a continuous period and not specific to a time frame. The project team specifies checks at specific dates to measure the success and identify variances. Continuous monitoring is therefore required with certain time frames only being used as measurement against the specified indicators.

Monitoring should be done throughout the year and measured against the specified indicators and desired conditions. The desired conditions are then measured against the existing conditions at the specific time frames to determine the current state of biodiversity. When the desired conditions are met, no alteration is undertaken and only continuous monitoring and maintenance of biodiversity are focused on. If the desired conditions are not met, the project team must rectify the situation, re-evaluate and when back on track, continuously monitor the situation. This step can be repeated until the current conditions

align with the desired conditions. In order to achieve the desired quality of visitor experiences as illustrated in Figure 7, both biodiversity and management practices must align. In terms of the management practices, the steps followed are relatively similar with only some differences when compared to biodiversity as suggested in Figure 7.

By achieving quality visitor experiences from a management practices point of view, certain key aspects must be adhered to. Both national parks must first determine the actions needed to improve the quality of visitor experiences. This is done by the results the research has brought forth. Apart from the empirical results, the suggestions and recommendations from respondents with the added best practices from other national parks and natural areas must also be taken into account.

The evaluation of the research material and other aspects within the results and abroad that currently impact negatively on the quality of visitor experiences are of the utmost importance. The results indicate the areas of concern from respondents that need to be highlighted and addressed. The management decisions therefore must be subjected to the results done to accomplish a set standard and to achieve quality visitor experiences. As with biodiversity, a management team must be put in place to be able to achieve the results. The management team will then establish certain management objectives in order to achieve the results. Within the objectives, management must identify areas of concern with rank order for areas of the most importance.

Once the areas and objectives have been identified, specified and aligned according to urgency and importance with the desired conditions identified, indicators must be identified to ensure success. The management team must identify and select socio-cultural conditions apart from management conditions with each of them at specific standards. After identification and specification of standards, the implementation of indicators within the management areas identified needs to be done. As with biodiversity, the implementation is exceptionally important. Once the indicators have been implemented, the management team must monitor the situation and indicators continuously to be able to detect non-desirable conditions. The monitoring must also be done with evaluations at regular time intervals over a specific time period.

Once the evaluation has been done, the existing conditions are measured against and compared to the desired conditions set out by the objectives. If the current conditions align with the desired conditions, it is successful and monitoring must be done for continuous success. The monitoring and evaluation must also be done over time intervals for a better success rate and by improving the chances of rectification if the conditions change. If the existing conditions do no mirror the desired conditions, the management team must rectify and revaluate the situation. Once the conditions have been rectified, the monitoring can commence whereby the process will be repeated until the current and desired conditions align. This ensures that the objectives and conditions are met whereby biodiversity and management practices enhance the quality experiences of visitors to both national parks.

The suggestions and recommendations presented may add substantial value to both national parks. In terms of the respondent's profiles, both national parks can market according to their largest existing visitor base and focus more intensely on attracting other segments locally and internationally. The visitation statistics provides both national parks with the visitor growth that can be measured in the following years against the existing growth percentage once the BTMG framework has been introduced, implemented and managed. This may indicate the success of the framework together with the ecological improvements in terms of biodiversity. The recommendations may also provide an opportunity for further research in terms of the effect the BTMG framework has on both national parks. Apart from the further research possibility, data indicate the perceptions and attitudes for both national parks regarding biodiversity and management practices. This provides both a marketing tool to indicate the change undertaken to current and future visitors, and the best possible manner to move forward to achieve success in an environmental and management sense.

The importance of the national parks and the surrounding areas sheds light on the possibility of attracting visitors only visiting these surrounding areas through various means. Apart from attracting other visitors, the results regarding management regulations and measures provide both national parks with the ability to protect the biodiversity by setting restrictions, and by being aware of existing visitors' reactions towards them. However, disturbances identified present management of both national parks with information to rectify situations that might not have been identified internally. The main

research questions have thus been answered and results indicate that the level of biodiversity has an effect on visitor experiences. This therefore indicates the importance and role of biodiversity in both national parks to enhance visitor experiences.

Regarding management practices, both Oulanka and Golden Gate can combine results from the biodiversity and management practices sections of the framework to ultimately improve the quality of visitor experiences while protecting the environment. This can be done in various ways by tailoring the BTMG framework to Oulanka and Golden Gate. However, the key in terms of the BTMG framework is for Oulanka and Golden Gate to focus both on biodiversity and management practices as results have shown that they implicate the quality of visitor experiences. Therefore as illustrated in Figure 7, both national parks can ultimately improve the level of biodiversity, richness of biodiversity, and management practices, and by doing this improve the quality of visitor experiences that in turn leads to profit generated that can be used for the protection of the natural environment within and around both national parks.

It is therefore highly recommended that each national park identifies, examines and evaluates the results provided together with the research material and act henceforth, but also include and evaluate best practices from other national parks, natural areas or previous related research done, combined with the suggested framework to ultimately provide quality visitor experiences, while at the same time protecting the parks' natural integrity. Although based on Oulanka National Park and Golden Gate Highlands National Park, this study with the research material, the results analysed and the BTMG framework can add value to national parks or protected areas. The practical value together with the theoretical value are illustrated in the expansion of knowledge in the cardinal areas of biodiversity, conservation, management and ecotourism to provide any national park or protected area with the opportunity to improve, optimise and ensure the protection of the natural environment for future generations.

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APPENDIX A

- Data collection instrument(-s) -

Oulanka National Park
Visitor Survey 2010

Number: _____
Date: _____
Interviewer: _____
Location: _____

This survey is developed by researchers from Metsähallitus and the University of Oulu to provide information to **help manage the quality of the visitor experience at Oulanka National Park**. The information on this questionnaire will be treated confidential.

It is very important that you answer all questions. If you have any concerns while answering the questions, please ask the interviewer for help.

For more information, please contact University of Oulu at the following number: 040 7677155 and katjaka@hotmail.com.

Thank you for your assistance!

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1. Imagine that you are going on a trip for several hours in a forest or mountain terrain. Imagine an area according to your wish – your "IDEAL AREA" for such a trip. *(Circle the number that best represents your preference on each line*

Would it be negative or positive for your own amenity and satisfaction:	**Very negative**			**Neutral**			**Very positive**
…to find organized campsites with toilets, fire wood, fire rings and, litter bins	1	2	3	4	5	6	7
… to be able to dispose of litter in bins along the way	1	2	3	4	5	6	7
… to find marked trails in the area	1	2	3	4	5	6	7
… when trailheads and crossings are well signposted	1	2	3	4	5	6	7
… if boardwalks are provided in wet marshes	1	2	3	4	5	6	7
… to find huts/lodges where they offer meals and made beds	1	2	3	4	5	6	7
… to encounter many other outdoor recreationists during your trip	1	2	3	4	5	6	7
….that you can hike for hours without meeting anyone	1	2	3	4	5	6	7

2. How many days will you spend in Oulanka National Park on this trip? _____days

3. Please write down your main activity in Oulanka National Park on this trip? (hiking, fishing….):

---

4. Is this your first visit to the park?
   - ❑Yes (please go to question 6)
   - ❑No

5. How many times have you been here previously? _____ times

   a. When was your first visit? In_____ (year)

   b. When were you here last? In_____ (year)

6. Which part of the National Park did you visit during your current trip? Check all that apply. You may use the map on the next page.

Please mark which area you have been and next which place within the area.		
A	❑ Area around Kiutaköngäs (Nature centre)	
	❑ Kiutaköngäs waterfall	
	❑ Hiidenlampi nature trail (5 km)	
	❑ The Kiutaköngäs day trail (8 km)	
	❑ Rytisuo nature trail (5 km)	
	❑ Else, please specify:_____	
B	❑ Little Bear ´s Trail Area (Juuma)	
	❑ Myllykoski	
	❑ Jyrävä waterfall	
	❑ Little Bear ´s Trail (12 km)	
	❑ Else, please specify:_____	
C	❑ The Bear ´s Trail–hiking trail	
	Please circle your starting point:	*Please circle your end point*:
	❑ The Hautajärvi visitor centre	❑ The Hautajärvi visitor centre
	❑ The Rukatunturi tourist centre	❑ The Rukatunturi tourist centre
	❑ Ristikallio parking place	❑ Ristikallio parking place,
	❑ Oulanka Visitor Centre	❑ Oulanka Visitor Centre
	❑ Juuma	❑ Juuma
D	❑ Taivalköngäs	
E	❑ The Oulanka Canyon day trail	
F	❑ Ristikallio	
G	❑ Elsewhere, please specify?_____	

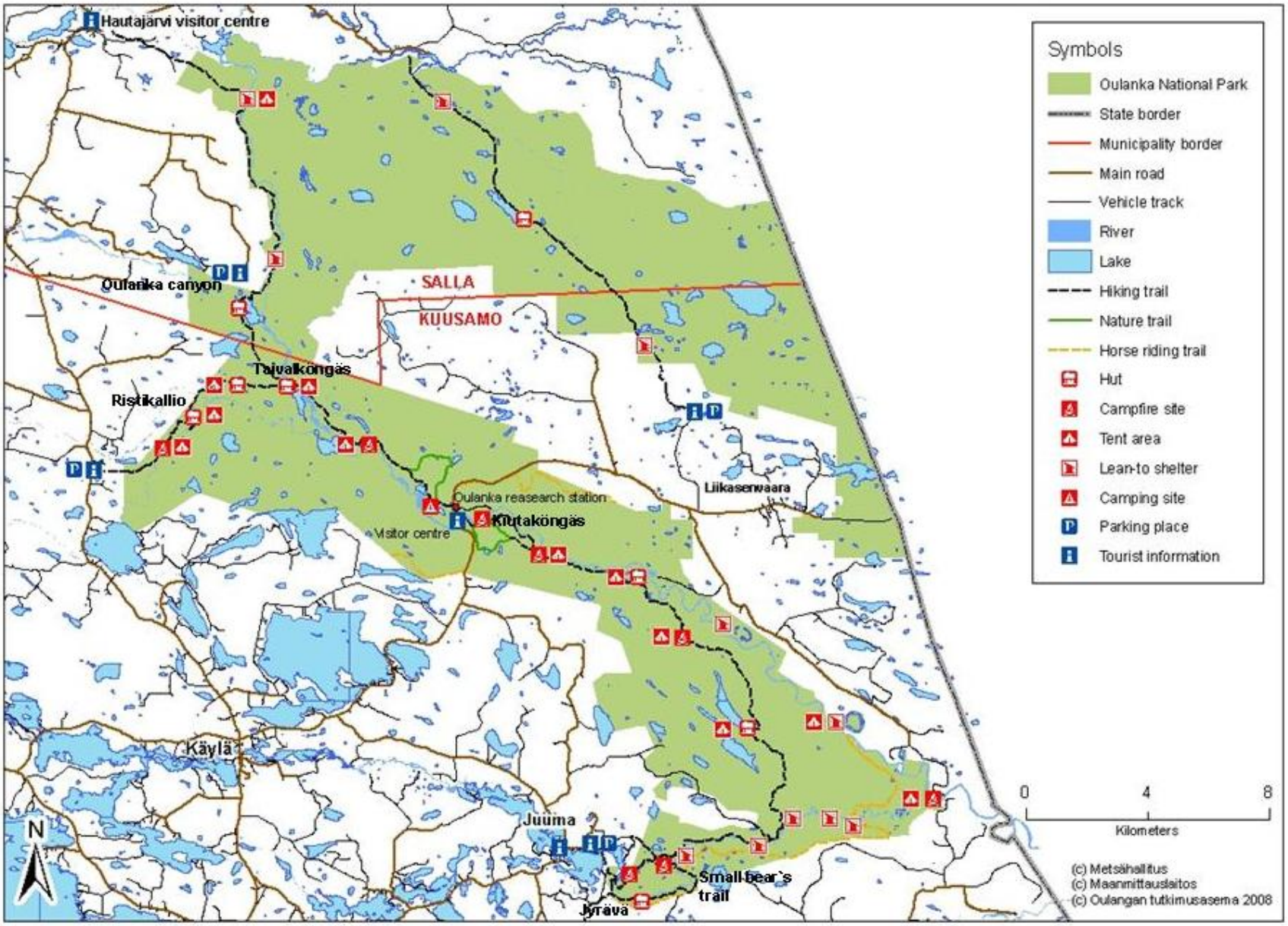
7. Please circle on the map (see next page) where you had the most quality nature experience.

Explain why: _____

_____

8. Please indicate on the map (see next page) with a cross where you had the least quality nature experience, if any.

Explain why: _____


Hautajarvi visitor centre
Oulanka canyon
SALLA
KUUSAMO
Taivalkongas
Ristikallio
Oulanka reasearch station
Visitor centre
Kiutakongas
Liikasenvaara
Käylä
Juuma
Jyrävä
Small bear`s trail
Symbols
Oulanka National Park
State border
Municipality border
Main road
Vehicle track
River
Lake
Hiking trail
Nature trail
Horse riding trail
Hut
Campfire site
Tent area
Lean-to shelter
Camping site
Parking place
Tourist information
N
0
4
8
Kilometers
(c) Metsähallitus
(c) Maanmittauslaitos
(c) Oulangan tutkimusasema 2008

9. Did you find any of the following disturbing during your visit? (Please respond to each alternative)

a. Erosion of the ground No ❑ Yes ❑ Where _____
b. Littering No ❑ Yes ❑ Where _____
c. Too many visitors No ❑ Yes ❑ Where _____
d. Behaviour of other visitors No ❑ Yes ❑ Where _____
e. Other, please specify?_____ No ❑ Yes ❑ Where _____

10. How important are the following for you in Oulanka National Park?

	Not important at all				Very important
	1	2	3	4	5
a. Good tourist facilities	❑	❑	❑	❑	❑
b. Good accessibility	❑	❑	❑	❑	❑
c. Easy to find my way around	❑	❑	❑	❑	❑
d. Beautiful scenery	❑	❑	❑	❑	❑
e. Quietness	❑	❑	❑	❑	❑
f. Unspoiled nature	❑	❑	❑	❑	❑
g. No signs of human influences	❑	❑	❑	❑	❑
h. Rich cultural history	❑	❑	❑	❑	❑
i. Rich variety of plants and animals	❑	❑	❑	❑	❑
j. Rich variety of habitats	❑	❑	❑	❑	❑
k. Uniqueness of place	❑	❑	❑	❑	❑
l. Personal attachment of the place	❑	❑	❑	❑	❑
m. Possible encounters with wildlife, such as brown bear, eagle, reindeer	❑	❑	❑	❑	❑

11. What is your opinion of the following nature management regulations and measures in Oulanka National Park:

	Disagree	It depends	Agree
j. Tree trunks should not be removed from the forest in the National Park	❑	❑	❑
k. To protect nature, some areas need to be restricted from visitors	❑	❑	❑
l. Nature conservation has the highest priority against all other land uses	❑	❑	❑
m. The creation of tourist facilities is necessary to satisfy visitors in National Park	❑	❑	❑
n. Trail hardening (such as gravel and boardwalks) is necessary to minimize visitor impacts	❑	❑	❑
o. To protect nature, it is good that fishing is only allowed at certain places	❑	❑	❑
p. Motorized activities should be permitted in the National Park	❑	❑	❑
q. In the National Park there should be more organized opportunities for wildlife viewing	❑	❑	❑
r. Local entrepreneurs should have more freedom to offer new activities and facilities in the National Park	❑	❑	❑
s. Environmental education should be one of the main tasks of a National Park	❑	❑	❑
t. For the sake of cultural history, open meadows should be maintained in the National Park	❑	❑	❑
u. Hunting and reindeer herding should be allowed in the National Park	❑	❑	❑
v. Fines for rule violation should be enforced	❑	❑	❑
w. Fences and barriers are necessary to protect certain species	❑	❑	❑

12. What role does Oulanka National Park play for you to visit the Kuusamo area? (Choose 1 answer)
- ❑ the dominant role coming to this place
- ❑ a very important role coming to this place
- ❑ not an important role coming to this place
- ❑ no role coming to this place
- ❑ was not aware visiting a national park

13. Would you still visit the Kuusamo area if Oulanka National Park was not here?
- ❑ yes
- ❑ no

14. How much of the following visitor behaviors would you find disturbing to nature in Oulanka National Park?

	Not at all	Little disturbance	Strong disturbance
a. Walking off designated trails	❑	❑	❑
b. Dogs not on leash	❑	❑	❑
c. Making fire outside fire places	❑	❑	❑
d. Leaving litter	❑	❑	❑
e. Driving motor vehicles off road	❑	❑	❑
f. Use branches of trees to make firewood	❑	❑	❑
g. Collecting of plants	❑	❑	❑
h. Mushroom and berry picking	❑	❑	❑
i. Hunting	❑	❑	❑
j. Fishing	❑	❑	❑
k. Hiking	❑	❑	❑
l. Bird watching	❑	❑	❑
m. Reindeer herding	❑	❑	❑
n. Camping outside campsites	❑	❑	❑
o. Snowmobiling	❑	❑	❑
p. Canoeing	❑	❑	❑
q. River rafting	❑	❑	❑

15. Are you member of a nature conservation organization (e.g. WWF, SLL, Greenpeace, Bird Society, whether national or local)?
- ❑ Yes
- ❑ No

16. Did you do <u>volunteer</u> work for nature and landscape conservation in the last 12 months?

	Yes	No
a. Inventory and monitoring of ecological data	❑	❑
b. Maintenance of nature areas (e.g. hay cutting, litter collection, maintaining paths etc.)	❑	❑
c. Administrative work in a nature organization	❑	❑
d. Educational activities, such as organizing excursions, courses, exhibitions	❑	❑

17. What is your opinion on the next statements?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. Because my personal contribution is very small I do not feel responsible for the loss of nature areas in the world	❑	❑	❑	❑	❑
b. I do not feel responsible for the climate change	❑	❑	❑	❑	❑
c. I feel responsible for the extinction of endangered species	❑	❑	❑	❑	❑
d. I do not feel responsible for environmental degradation	❑	❑	❑	❑	❑

18. What is your nationality? _____

19. What is your country of residency? _____
    a. City_____
    b. County_____
    c. Postcode_____

20. Year of birth?_____

21. Gender?
    ❑ Male
    ❑ Female

22. What is your highest level of education that you have completed?
    ❑ Primary school
    ❑ High school
    ❑ Vocational training
    ❑ Polytechnic (BA, BSc)
    ❑ University or higher (MA, MSc, Dr)
    ❑ Different: _____

23. What is your occupational status?
    ❑ Entrepreneur
    ❑ Employee
    ❑ Student
    ❑ Unemployed
    ❑ Retired
    ❑ Housewife/man
    ❑ Other_____

24. Is your studies or job related to environmental protection?
    ❑ Yes
    ❑ No

THANK YOU FOR ANSWERING THIS QUESTIONNAIRE!
If you wish to tell us something else, please use the space below.

Golden Gate Highlands National Park
Visitor Survey December 2011

Number: _____
Date: _____

This survey is developed to provide information to determine the impact of biodiversity on visitor experiences at the Golden Highlands Gate National Park. **Your input will help conservation of biodiversity and improve visitor experiences.** The information on this questionnaire will be treated confidentially.

It is very important that you answer **All** the questions. If you have any concerns while answering the questions, please contact Marnus Botha (082 852 4808, 012 348 7151), marnus_botha@yahoo.com or Dr.Fecite Fairer-Wessels at felicite.fairer-wessels@up.ac.za for help.

Thank you very much for your assistance!

---

1. Please indicate your opinion on the following when visiting Golden Gate national park.

Would it be negative or positive:	Very negative			Neutral			Very positive
1…to find organized campsites with toilets, fire wood, fire rings and, litter bins	1	2	3	4	5	6	7
2… to be able to dispose of litter in bins along the way	1	2	3	4	5	6	7
3… to find marked trails in the area	1	2	3	4	5	6	7
4… when trailheads and crossings are well signposted	1	2	3	4	5	6	7
5… to find huts/lodges where they offer meals and made beds	1	2	3	4	5	6	7
6… to encounter many other visitors during your trip	1	2	3	4	5	6	7
7….that you can hike or drive for a long time without meeting anyone	1	2	3	4	5	6	7

2. What is your main activity at Golden Gate Highlands National Park during this trip?

---

3. How important are the following activities in Golden Gate Highlands National Park during the trip?

Activities/Interests:	Not important at all			Neutral			Very important
1. Rhebok hiking trail	1	2	3	4	5	6	7
2. All other short hiking trails	1	2	3	4	5	6	7
3. Herbal Trail	1	2	3	4	5	6	7
4. Scenery	1	2	3	4	5	6	7
5. Horse riding, Abseiling and canoeing	1	2	3	4	5	6	7
6. Rock art	1	2	3	4	5	6	7
7. Basotho Cultural Village (Cultural and Museum Tour)	1	2	3	4	5	6	7
8. Game and nature 4x4 drives	1	2	3	4	5	6	7
9. Game and nature viewing in own vehicle	1	2	3	4	5	6	7
10. Cathedral Cave guided walk	1	2	3	4	5	6	7
11. Conference	1	2	3	4	5	6	7
12. Other _____							

Biodiversity refers to the variety among all living organisms from all sources of ecosystems. Biodiversity indicates the degree, health and abundance of wildlife, birdlife and all things living in an ecosystem. The more animals and living organisms a national park has, the more biodiverse the park is. In light of biodiversity please answer the following questions:

4. How important is biodiversity in a National Park for you?

Not important at all				Very important
1	2	3	4	5
❑	❑	❑	❑	❑

5. To which degree does the richness level of biodiversity in a National Park affect your experience?

No affect at all				Very large affect
1	2	3	4	5
❑	❑	❑	❑	❑

6. How important are the following attributes of biodiversity in Golden Gate Highlands National Park for you?

	Not important at all				Very important
	1	2	3	4	5
a. Unspoiled nature	❑	❑	❑	❑	❑
b. Rich variety of plants	❑	❑	❑	❑	❑
c. Rich variety of habitats (forest, mountains, highlands etc.)	❑	❑	❑	❑	❑
d. Rich variety of wildlife	❑	❑	❑	❑	❑
e. Rich variety of birdlife	❑	❑	❑	❑	❑

7. Did you find any of the following disturbing during your visit?

a. Erosion of the ground	No ❑ Yes ❑
b. Littering	No ❑ Yes ❑
c. Too many visitors	No ❑ Yes ❑
d. Behaviour of other visitors	No ❑ Yes ❑
e. No clear signs in the park	No ❑ Yes ❑
f. Facilities not up to standard	No ❑ Yes ❑
g. Other, please specify? _____	No ❑ Yes ❑

8. How important do you perceive the following in Golden Gate Highlands National Park?

	Not important at all				Very important
	1	2	3	4	5
a. Good tourist facilities	❑	❑	❑	❑	❑
b. Good accessibility	❑	❑	❑	❑	❑
c. Beautiful scenery	❑	❑	❑	❑	❑
d. Quietness	❑	❑	❑	❑	❑
e. No signs of human influences	❑	❑	❑	❑	❑
f. Rich cultural history	❑	❑	❑	❑	❑
g. Uniqueness of place	❑	❑	❑	❑	❑
h. Personal attachment to the place	❑	❑	❑	❑	❑
i. Wildlife, birds, and natural habitats	❑	❑	❑	❑	❑
j. Geology	❑	❑	❑	❑	❑

9. What would make future visits to golden gate more attractive?

	Not important at all				Very important
	1	2	3	4	5
a. Family friendly interactive visitor interpretation centre	❑	❑	❑	❑	❑
b. Bicycles available for hire	❑	❑	❑	❑	❑
c. Improved interpretation of Rich cultural history	❑	❑	❑	❑	❑
d. Designated Mountain bike tracks	❑	❑	❑	❑	❑
e. Nature-oriented Health Spa	❑	❑	❑	❑	❑
f. Reducing non visitor traffic through the park	❑	❑	❑	❑	❑
g. Other (Please specify other products that would make a visit to golden gate more attractive)					

10. What is your opinion regarding the following nature management regulations and measures in Golden Gate Highlands National Park:

	Disagree	It depends	Agree
x. To protect nature, some areas need to be restricted from visitors	❑	❑	❑
y. Nature conservation has the highest priority against all other land uses	❑	❑	❑
z. The creation of tourist facilities is necessary to satisfy visitors in National Park	❑	❑	❑
aa. Trail hardening (such as gravel and boardwalks) is necessary to minimize visitor impacts	❑	❑	❑
bb. Local entrepreneurs should have more freedom to offer new activities and facilities in the National Park	❑	❑	❑
cc. Environmental education should be one of the main tasks of a National Park	❑	❑	❑
dd. Cultural history should be maintained at all cost and is very important in the National Park	❑	❑	❑
ee. Fines for rule violation should be enforced	❑	❑	❑
ff. Fences and barriers are necessary to protect certain species	❑	❑	❑

11. What role does Golden Gate Highlands National Park play for you to visit the surrounding area? (Choose 1 answer)

- ❑ the dominant role coming to this place
- ❑ a very important role coming to this place
- ❑ not an important role coming to this place
- ❑ no role coming to this place
- ❑ was not aware visiting a national park

12. Would you still visit the surrounding area if Golden Gate Highlands National Park was not here?

- ❑ yes
- ❑ no

13. How much of the following visitor behaviors would you find disturbing to nature in Golden Gate Highlands National Park?

	Not at all	Little disturbance	Strong disturbance
r. Walking off designated trails	❑	❑	❑
s. Making fire outside fire places	❑	❑	❑
t. Leaving litter	❑	❑	❑
u. Driving vehicles off road	❑	❑	❑
v. Use branches of trees to make firewood	❑	❑	❑
w. Collecting of plants	❑	❑	❑
x. Fishing	❑	❑	❑
y. Hiking	❑	❑	❑
z. Bird watching	❑	❑	❑
aa. Camping outside campsites	❑	❑	❑
bb. Cycling and bicycle tracks (Include mountain biking)	❑	❑	❑
cc. River rafting	❑	❑	❑

14. Are you member of a nature conservation organization (e.g. WWF, Greenpeace, Bird Society, whether national or local)?

❑ Yes
❑ No

15. Please select strongly disagree to strongly agree on the following statements

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
e. I feel responsible for the loss of natural areas in the world	❑	❑	❑	❑	❑
f. I feel responsible for the climate change	❑	❑	❑	❑	❑
g. I feel responsible for the extinction of endangered species	❑	❑	❑	❑	❑
h. I feel responsible for environmental degradation	❑	❑	❑	❑	❑

16. Was this your first visit to the park?
❑Yes (please go to question 18)
❑No

17. How many times have you been here previously? _____ Times

a. When was your first visit? In_____ (year)

b. When were you here last? In_____ (year)

18. How long will you stay at Golden Gate Highlands National Park?
❑ Passing through (less than 3 hours) ***please go to question 20***
❑ Day visit (more than 3 hours) ***please go to question 20***
❑ Overnight visit (1 night stay)
❑ Overnight visit (more than 1 night, *please specify number nights*_____)

19. Please indicate accommodation type.

- ❑ Hotel
- ❑ Self catering (Glen Reenen)
- ❑ Self catering (Mountain view)
- ❑ Camping

20. What is your nationality? _____

21. What is your country of residency? _____

a. City_____

22. Age? _____

23. Gender?

- ❑ Male
- ❑ Female

24. Is your work or studies IN ANY WAY RELATED to environmental conservation?

- ❑ Yes
- ❑ No

25. Any other comments and suggestions?

_____
_____
_____
_____
_____
_____
_____

THANK YOU FOR ANSWERING THIS QUESTIONNAIRE, YOUR INPUT WILL HELP CONSERVATION OF BIODIVERSITY IN NATIONAL PARKS!

If you wish to tell us something else, please use the space below.

APPENDIX B

- Informed consent form -

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Economic and
Management Sciences

Informed consent for participation in an academic research study

Dept. of Tourism Management

THE IMPACT OF BIODIVERSITY IN NATIONAL PARKS ON VISITOR EXPERIENCES: A CASE STUDY OF OULANKA NATIONAL PARK IN FINLAND AND GOLDEN GATE HIGHLANDS NATIONAL PARK IN SOUTH AFRICA

Research conducted by:
Mr. M. Botha (27279830)
Cell: 082 852 4808

Dear Respondent

You are invited to participate in an academic research study conducted by Marnus Botha, a Masters student from the Department of Tourism Management at the University of Pretoria.

The purpose of the study is to determine whether the level of biodiversity impacts on visitor experiences while the perceptions regarding the functioning of a national park are examined to ultimately provide suggestions and recommendations for management in the form of Biodiversity Tourism Management Guidelines.

Please note the following:

- This study involves an anonymous survey. Your name will not appear on the questionnaire and the answers you give will be treated as strictly confidential. You cannot be identified in person based on the answers you give.
- Your participation in this study is very important to us. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
- Please answer the questions in the attached questionnaire as completely and honestly as possible. This should not take more than 10 minutes of your time
- The results of the study will be used for academic purposes only and may be published in an academic journal. We will provide you with a summary of our findings on request.
- Please contact my supervisor, Dr. Felicite Fairer-Wessels at felicite.fairer-wessels@up.ac.za if you have any questions or comments regarding the study.

Please sign the form to indicate that:

- You have read and understand the information provided above.
- You give your consent to participate in the study on a voluntary basis.

Respondent's signature **Date**