

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

**PLANNING FOR SUSTAINABLE TOURISM DEVELOPMENT  
IN THE LAKE VICTORIA SHORE REGION OF UGANDA: A  
PHYSICAL ENVIRONMENT PLANNING APPROACH.**

**By**

**JIM AYOREKIRE**

**Thesis presented for the degree of**

**DOCTOR OF PHILOSOPHY**

**In the Department of Environmental and Geographical Science**

**Faculty of Science**

**University of Cape Town**



**JUNE 2008**

## **Declaration**

I declare that the contents of this thesis are my own work, unless where stated and that the thesis has not been submitted anywhere for an academic award in any university.

Signed 

Signed by candidate
---------------------

.....  
Signature removed

**Ayorekire Jim**  
June 2008

University of Cape Town

## **Acknowledgements**

First of all I would like to acknowledge the efforts of my supervisors Prof. Mike Meadows and Assoc. Prof J.B. Nyakaana. Their guidance and support greatly contributed to the shaping up of the research up to its finalisation stage. I equally would like to acknowledge and express my gratitude for the sponsorship from USHEPiA (Universities Science, Humanities and Engineering Partnerships in Africa) without whose support this research would not have been possible.

I would like to thank all my colleagues at Makerere University and at University of Cape Town whom I continuously consulted. In particular I thank Dr. S. Lwasa and Dr. Anthony Gidudu who spared time to discuss with me, irrespective of their own busy academic schedules. I also equally thank Mugenyi Albert for his support. To all the numerous friends and relatives with whom I shared with ideas on my research, I say thank you for the encouragement.

Last, but not least, I would like to thank my family especially my dear wife Jackie who perfectly looked after the family when I was away studying, irrespective of the fact that she was also perusing her graduate studies.

May God abundantly bless you all.

## **Dedication**

I dedicate this thesis to my family – my dear wife Jackie Ayorekire for the love, and support she gave me during this long journey. Also to my lovely three sons, Kevin Ayebare, Colin Akandinda and Kyne Tashobya for the time they missed me when I was away from home studying or busy in office.

University of Cape Town

## TABLE OF CONTENTS

	<b>Page</b>
Declaration.....	i
Acknowledgements.....	ii
Dedication.....	iii
List of abbreviations.....	x
Definition of terms .....	xi
Abstract .....	xii
<b>CHAPTER ONE</b>	
<b>INTRODUCTION .....</b>	<b>1</b>
1.0 Introduction .....	1
1.1 Conceptual background.....	2
1.2 Statement of the problem .....	5
1.3 Scope of study .....	6
1.4 Aim and objectives of the study.....	7
1.4.1 Aim.....	7
1.4.2 Specific objectives.....	7
1.5 Research questions.....	7
1.6 Research hypothesis.....	8
1.7 Significance of the research .....	8
1.8 Organisation of the thesis by chapters .....	10
<b>CHAPTER TWO</b>	
<b>LITERATURE AND THEORETICAL REVIEW.....</b>	<b>12</b>
2.1 Literature review.....	12
2.1.1 Definition of tourism.....	12
2.1.2 Concept and perspectives of sustainable tourism.....	15
2.1.3 Spatial distribution, temporal trend, tourism site and visitor characteristics .....	24
2.1.4 Performance of tourism sites in relation to the physical environment indicators of Sustainable Tourism Development (STD) .....	29
2.1.5 Tourism planning.....	42
2.1.6 Tourism planning – contribution to sustainable tourism .....	47
2.1.7 Tourism development and the need for environment-based tourism planning.....	49
2.1.8 Lake tourism .....	52
2.2 Theoretical review.....	54
2.3 Conceptual framework.....	65
<b>CHAPTER THREE</b>	
<b>METHODOLOGY.....</b>	<b>68</b>
3.1 Research philosophy and design .....	68
3.2 Sampling design.....	69
3.2.1 Selection of study area.....	69
3.2.2 Selection of tourism sites.....	70
3.2.3 Sample frame .....	72
3.3 Sample size and sampling techniques .....	73
3.4 Response rate .....	75
3.5 Justification of methodology approach.....	76

3.6	Data collection .....	78
3.6.1	Survey methods.....	78
3.6.2	Non-survey methods.....	82
3.6.3	Geo-spatial methods.....	85
3.7	Data compilation and analysis.....	86
3.8	Overall study procedure.....	88
3.9	Constraints to data collection.....	91

## **CHAPTER FOUR**

<b>BIOPHYSICAL AND SOCIO ECONOMIC CHARACTERISTICS OF THE STUDY AREA .....</b>	<b>93</b>	
4.0	Introduction .....	93
4.1	Study area .....	93
4.2	Biophysical characteristics of the study area.....	98
4.2.1	Climate.....	98
4.2.2	Geology and Geomorphology .....	98
4.2.3	Ecological characteristics.....	99
4.3	Historical, socio-economic aspects and current developments in study area.....	101
4.3.1	Historical background of Lake Victoria shore region.....	101
4.3.2	Demographic trend.....	103
4.3.3	Land cover change.....	104
4.3.4	Socio economic activities.....	107
4.3.5	Tourism development.....	109

## **CHAPTER FIVE**

<b>PRESENTATION OF RESULTS.....</b>	<b>116</b>	
5.0	Introduction.....	116
5.1	Spatial distribution, temporal trend and characteristics of tourism sites...	116
5.1.1	Spatial distribution of tourism sites .....	116
5.1.2	Temporal trends.....	118
5.1.3	Characteristics of tourism sites .....	124
5.1.4	Visitor characteristics.....	133
5.2	Lakeshore sites performance in relation to physical environment indicators of sustainable tourism development.....	137
5.2.1	Contribution to nature conservation.....	137
5.2.2	Solid waste management.....	140
5.2.3	Sewage management.....	143
5.2.4	Water quality control.....	147
5.2.5	Development control.....	151
5.2.6	Use-intensity control.....	160
5.2.7	Visitors response about site performance relative to selected indicators	160
5.2.8	Overall view of site performance relative to physical environment indicators .....	163
5.3	Factors influencing the performance level of the lakeshore tourism sites.....	166
5.3.1	Awareness of environment conservation .....	166
5.3.2	Level of development control and environment monitoring.....	168

5.4	Evaluation of how areas planning caters for Sustainable Tourism Development (STD) .....	171
5.5	Developing a planning approach to Sustainable Tourism Development (STD) in the Lake Victoria shore region .....	181
5.5.1	Linear regression model-based planning approach for sustainable tourism development in the Lake Victoria shore region.....	183
<b>CHAPTER SIX</b>		
<b>DISCUSSION OF RESULTS.....</b>		
6.0	Introduction.....	187
6.1	Temporal and spatial characteristics of lakeshore tourism sites.....	187
6.2	Performance of tourism sites in relation to physical environment indicators of sustainable tourism development.....	191
6.3	Tourism planning in Lake Victoria shore region.....	193
6.4	Linear regression and incremental based planning approach.....	195
6.4.1	Linear regression model-based planning approach.....	196
6.4.2	Linear regression and incremental based planning approach.....	197
6.4.3	Contribution of linear regression and incremental based planning.....	199
<b>CHAPTER SEVEN</b>		
<b>CONCLUSIONS AND RECOMMENDATIONS.....</b>		
7.1	Conclusions.....	203
7.2	Recommendations.....	206
<b>REFERENCES .....</b>		
APPENDIX 1 - Significance graph for LR <sub>n</sub> values.....		
APPENDIX 2 – Questionnaire for visitors.....		
APPENDIX 3 – Questionnaire for local Residents.....		
APPENDIX 4 - Nearest-neighbour distances calculations (in km's).....		
APPENDIX 5 – Questionnaire for site managers.....		
APPENDIX 6 – Tourism investment data in Uganda 2001 - 2004.....		
APPENDIX 7 - Details of factor analysis.....		

## LIST OF FIGURES

	<b>Page</b>
Figure 1.1 World and regional tourism growth rates 2000-2006.....	2
Figure 1.2 International tourist arrivals in Uganda (1995-2006) .....	3
Figure 2.1 Conceptual framework.....	66
Figure 3.1 Summary of data compilation and analysis.....	87
Figure 3.2 Overall flow chart of the research.....	89
Figure 4.1 Location of study area and tourist sites.....	95
Figure 4.2 Tourism sites along the lakeshore (on IKONOS satellite image mosaic of 2004).....	96
Figure 4.3 Photographic presentation of selected tourism sites along the lakeshore.....	97
Figure 4.4 Census results and mid year population projections of selected districts.....	103
Figure 4.5 Land cover of Lake Victoria shore study area (1996).....	105
Figure 4.6 Land cover classification for 1987 and 2001.....	106
Figure 4.7 National Parks in Uganda indicating year (in brackets) when they were gazetted.....	111
Figure 4.8 Total tourist arrivals in Uganda and arrivals at Entebbe International Airport 1995 – 2006.....	114
Figure 5.1 Number of tourism sites along lakeshore 1965 – 2010.....	118
Figure 5.2 Tourism sites between 1965 and 2005.....	120
Figure 5.3 Number of licensed tourism businesses per year.....	123
Figure 5.4 Distribution of licensed tourism businesses in Uganda by district.....	124
Figure 5.5 Location of sites in relation to major land uses.....	128
Figure 5.6 Visitor likelihood of returning to a site.....	128
Figure 5.7 Visitor responses on the frequency of visiting a site in a year...	129
Figure 5.8 Potential of visitors to recommending the sites to other.....	130
Figure 5.9 Categories of sampled tourist sites.....	132
Figure 5.10 Categories of accommodation at the sites.....	132
Figure 5.11 Responses of visitors indicating their citizenship.....	134

## LIST OF TABLES

Table	3.1	Tourism sites in the study area .....	70
Table	3.2	Visitor and local residents respondents by site.....	76
Table	3.3	Sample size by respondent category.....	76
Table	3.4	Summary of materials and methods used in research.....	86
Table	4.1	Population density and annual growth rates of selected districts	103
Table	4.2	Land cover (Km <sup>2</sup> ) of Lake Victoria shore study area (1996)...	106
Table	5.1	Nearest-neighbour distances (in Km's) between Lake Victoria shore sites .....	117
Table	5.2	Responses of site managers and local residents on the trend of number of visitors received at sites .....	121
Table	5.3	Responses of site managers and local residents on the physical growth trend .....	122
Table	5.4	Visitors' perceived attractiveness of services/features at the sites .....	125
Table	5.5	Visitors' assessment of the quality of services/features at sites..	126
Table	5.6	Responses of site managers on the size of lakeshore sites .....	127
Table	5.7	Categorisation of tourism sites.....	131
Table	5.8	Relative importance of site characteristics.....	133
Table	5.9	Visitors responses indicating the age and frequency of visiting..	134
Table	5.10	Visitors responses showing their purpose of visiting the sites..	135
Table	5.11	Visitors length of stay at the sites .....	135
Table	5.12	Responses of visitors revealing if they followed nature conservation guidelines.....	136
Table	5.13	Relative importance of visitor characteristics.....	137
Table	5.14	Responses of site managers and local residents about the performance of lakeshore site in relation to conservation of the physical environment .....	138
Tablet	5.15	Site managers and local residents responses on the performance of sites in relation to solid waste management ...	142
Table	5.16	Site managers and local residents responses showing the performance of sites in sewage treatment .....	146
Table	5.17.	Beach water quality test results (sample 1 taken march 2006)...	149
Table	5.18	Beach water quality test results (sample 2 taken in may 2006)..	150
Table	5.19	Responses of site managers and local residents on the performance of lakeshore sites in water quality control .....	150
Table	5.20	Responses of site managers and local residents on the performance of lakeshore sites in regards to development .....	155
Table	5.21	Responses of site managers and local residents on the performance of lakeshore sites in use-intensity control .....	160
Table	5.22	Visitor' responses on performance of lakeshore sites.....	161
Table	5.23	Visitors' rating of the maintenance of tourism sites .....	162
Table	5.24	Performance of selected sites as assessed by all respondent categories.....	163
Table	5.25	Performance of selected sites as viewed according to their categories.....	164
Table	5.26	Relative importance of physical environment indicators of site performance as assessed by all respondent categories.....	165

Table 5.27	Responses of site managers showing factors explaining site performance.....	170
Table 5.28	Relative criticality and reliability of factors explaining the performance of lakeshore sites.....	171
Table 5.29	Rating of the extent to which the three-year development plans catered for STD in the lakeshore region .....	175
Table 5.30	Responses of site managers and local residents on the extent of local governments' involvement in tourism planning.....	176
Table 5.31	Visitor responses showing the evaluation of planning for sustainable tourism development at site level.....	177
Table 5.32	Responses of site managers on whether site planning addresses environment conservation .....	178
Table 5.33	Responses of site managers on whether there is need for sustainable tourism development and allowing more tourism sites to develop.....	179
Table 5.34	Site managers and local residents responses on whether more tourism developments are needed in the lakeshore region.....	179
Table 5.35	Criticality and reliability of the forms of planning for sustainable tourism development in the lakeshore region.....	180
Table 5.36	The relationships between independent variables and planning .	182
Table 5.37	A linear approach to planning STD in Lake Victoria shore region based on the study variables.....	184
Table 5.38	Detailed linear approach to planning for STD in Lake Victoria shore region based on the sub-components of the study variables.....	185

## LIST OF PLATES

		<b>Page</b>
Plate 1	Solid waste management at various tourism sites along the lakeshore.....	156
Plate 2	Surface water run off and sewage management.....	157
Plate 3	Development control.....	158
Plate 4	Water quality.....	159

## List of abbreviations

EIA	Environmental Impact Assessment
CBO	Community Based Organisation
GIS	Geographical information System
GPS	Global Positioning System
IP	Incremental Planning
NGO	Non Government Organisation
MFPEd	Ministry of Finance, Planning and Economic Development
MTTI	Ministry of Tourism Trade and Industry
MWLE	Ministry of Water, Lands and Environment
NBS	National Biomass Study
NEMA	National Environment Management Authority
UBOS	Uganda Bureau of Statistics
UGSTDP	Uganda Sustainable Tourism Development Programme
RCP	Rational Comprehensive Planning
RS	Remote Sensing
STD	Sustainable Tourism Development
TRDP	Tourism Rehabilitation and Development Project
UIA	Uganda Investment Authority
UHOA	Uganda Hotel Owners Association
UNDP	United Nations Development Programme
UNWTO	United Nations World Tourism Organisation
UWA	Uganda Wildlife Authority

## **Definition of terms**

**Attractions** - are natural and cultural resources from which visitors derive satisfaction

**Development control** - a process of directing new and existing tourism establishments, operations and activities as laid down in legislation

**Performance** - the level at which tourism sites are operating in relation to defined indicators

**Performance indicator** –a qualitative or quantitative measure of the level at which the tourism sites are operating in relation to the environment

**Planning** – a deliberate and systematic process of setting up strategies intended to improve the existing tourism situation using specified indicator variables

**Sustainable Tourism Development (STD)** - Fostering tourism development, while at the same time conserving the environment

**Tourism** – the temporary movement of people from their usual home or work place to sites that have facilities and activities created to cater for their needs

**Tourism developments** –structures or properties (such as, hotels, restaurants, resorts, entertainment centres, parks, beach developments and facilities such as roads and interpretive centres) that have been set up with the explicit purpose of serving visitor needs

**Tourism site** – a physical space in which individual or a group of tourism related structures or properties are or are to be located

**Use intensity control** - involves deliberate efforts to manage the numbers and activities of visitors at a site in an environmentally friendly manner

**Visitor** - any person at a tourism site with an intention of enjoying the features and services offered. Visitor can further be categorised into;

**Day Visitor** – a person at a tourist site who does not spend there a night

**Over night visitor** – a person at a tourist site who spends at least a night

**Visitor characteristics** - common attributes that can be considered about visitors to a tourism site, such as: duration of stay; type of tourist activity; levels of visitor satisfaction; and socio-economic characteristics, which include income levels, gender, and age

**Waste management** – the process by which tourism sites collect, transport, process or dispose of unwanted materials produced by human activity

**Water quality** - the biological, chemical and physical characteristics of water in relation to guideline values of what is suitable for human use in tourism and recreational activities

## Abstract

This study examined whether sustainable tourism development could be achieved in the Lake Victoria shore region of southern Uganda, based on the physical environment indicators of sustainable tourism. This arose out of the observation that tourism in this region was developing in an unplanned manner which was likely to be environmentally destructive. The study was conducted as a cross-sectional descriptive survey involving an analytical research design. Its objectives include: to identify the spatial and temporal characteristics of the tourism sites; to assess their performance relative to the physical environment indicators of sustainable tourism; to examine the factors explaining the performance of the sites; and to develop a planning approach that will help attain sustainable tourism development. Data were collected using survey, non-survey and geo-spatial methods. The survey methods included interviews and questionnaires, which were administered to planning and environment officials, local residents and visitors selected using various sample methods. Documentary analysis, field observation, remote sensing and experimentation were among the non-survey and geo-spatial methods used. Data were analysed using qualitative and quantitative analysis techniques, which included documentary analysis, statistical techniques involving, chi square, data reduction, ANOVA, and correlation and regression analysis. Results indicate that lakeshore tourism sites are increasing in both number and size, which is gradually resulting in a clustered spatial patterning, especially in urban areas. Sites are receiving an increasing number of visitors, mainly nationals and day visitors. Apart from conservation areas, the contribution of the sites to nature conservation is concluded to be minimal and their management of solid and sewage waste, water quality and use intensity generally poor. Moreover, tourism planning and development control was found to either be limited or lacking, a situation that has resulted in unregulated tourism development. This poses a significant threat, not only to the fragile physical environment of the lakeshore region, but also to the future of lakeshore tourism itself. Analysis of the results show that there are significant relationships between spatial distribution of sites, their characteristics, site performance and factors explaining the performance and planning for sustainable tourism development in the region. Further analysis indicates that each of these variables may significantly predict planning, especially at site and local government level. Accordingly, a linear regression model-based planning approach is developed. This study explains how the model, when rooted in incremental planning theory, can be applied in order to plan for sustainable tourism in the lakeshore region. It highlights the variables and the sequence in which tourism planning efforts can be applied. The study concludes that, although this planning approach may not provide a panacea to the achievement of sustainable tourism development in the lakeshore region, it represents a valuable contribution towards the understanding of sustainable tourism planning. With the identification of critical tourism planning intervention points, the Lake Victoria shore region may be able to develop into a major tourism destination that is environmentally sustainable.

# CHAPTER ONE

## INTRODUCTION

### 1.0 Introduction

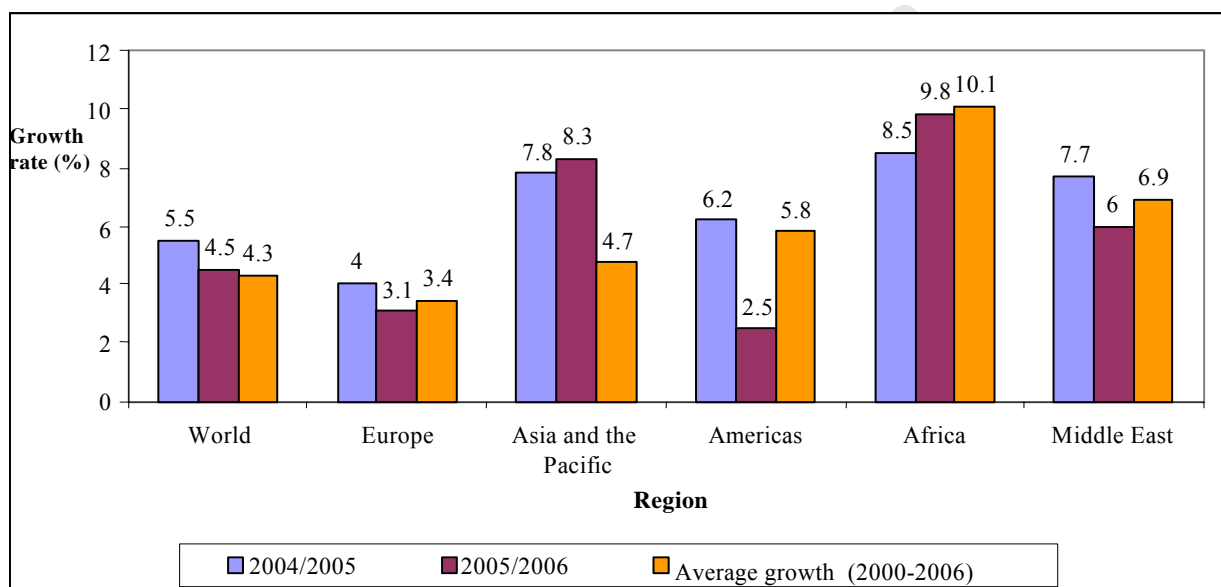
Many countries, especially those in the developing world, are still grappling with the challenge of developing tourism in a sustainable manner. Fostering tourism development, while at the same time conserving the environment (sustainable tourism development), is still a challenge facing many developing countries. In Uganda, tourism is one of the fastest expanding sectors of the national economy - growing at an estimated average rate of 7.3% per annum (MFPED 2006). However, as more tourism developments are established, the environment upon which their future depends may become degraded, destroyed or damaged. Indeed, many tourism developments are associated with construction processes involving infilling of wetlands, clearing of forests and swamps, and adverse alteration of the landscape. These practices and their related impacts are especially prominent in the Lake Victoria shore region of Uganda. Unfortunately, this region is highly ecologically sensitive and, if the tourism sector continues to develop in such a fashion, the likelihood of the sector's self-destruction in a short time is very high. It is therefore important that the development of the tourism sector be sensitive and responsive to the environment. Only when it is, can tourism develop in a more sustainable manner.

One of the key means of ensuring that the sector is sustainable and developing in a manner responsive to the environment is to invoke systematic planning principles and procedures. Planning focuses on determining what is necessary at the moment, what should or should not be done, and how to control tourism development in order to achieve the best results for the present and the future. It can therefore help to transform unsustainable development of tourism in the Lake Victoria shore region into Sustainable Tourism Development (STD). Planning can achieve this using a combination of various factors. Accordingly, this study is intended to establish how planning can help to achieve STD in the Lake Victoria shore region basing on the analysis of the spatial distribution of the lakeshore tourism sites, including their characteristics and those of the visitors they attract, along with a consideration of the performance of these sites relative to the physical environment indicators of STD. The study also examines factors underlying such performance and comes up with a model that planners can adopt to achieve STD in the region.

## 1.1 Conceptual background -

Globally, tourism has gained increasing recognition as an important economic sector with enormous potential for contributing to global socio-economic development. In many countries, it acts as an engine of development, offering diverse opportunities for international investment contacts and foreign exchange inflows. The World Tourism Organisation (UNWTO) predicts that 1.5 billion tourists will be visiting foreign countries annually by the year 2020, spending more than \$2 trillion annually or \$5 billion each day (UNWTO 2006). This prediction is based on continental tourism growth rates shown in Figure 1.1.

**Figure 1.1. World and regional tourism growth rates 2000-2006**

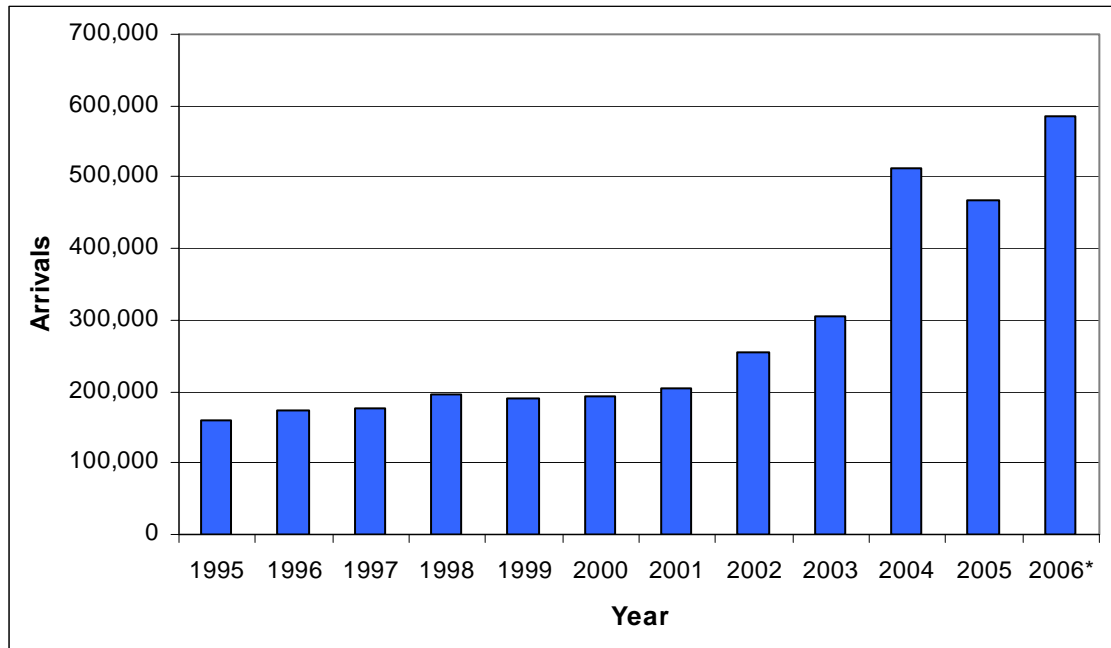


Source: UNWTO (2006)

Figure 1.1 shows the world and regional tourism growth rates, of which Africa's absolute and average rates were the highest over the entire period in question. In fact, tourism in Africa is now widely recognized as a major employer, an investment avenue, and foreign exchange earner (UGSTP, 2004). It is also known to serve as a catalyst for development of other economic sectors, including agriculture, forestry, manufacturing and trade. The planning of tourism is therefore crucial since its development sometimes takes place at the expense of the environment, more especially the physical environment (Frangialli 1999). Tourism development may adversely affect the environment in various ways leading to its degradation and associated loss of cultural identity and integrity (Holden 2000). This planning is even more important in Africa, since the growth rates (Figure 1) suggest continued and possibly accelerated further growth in the future.

The foregoing scenario of a rapidly expanding tourism sector is particularly reflected in Uganda, where tourism is one of the fastest growing economic sectors (MTTI 2006). In 2004, tourism contributed US \$ 316 million (as compared to US \$ 180.8 million in 2003) accounting for 64.1 % of Uganda's service export earnings (MTTI 2005). The increased earnings are a result of the significant increases in the number of international tourist arrivals in the country as illustrated in Figure 1.2.

**Figure 1.2 International tourist arrivals in Uganda (1995-2006)**



Source: UBOS (2004, 2005), \* estimates for 2006

Notwithstanding the benefits of tourism to Uganda, the increasing levels of tourist arrivals have several implications for the physical environment. For instance, the resultant development of tourism infrastructure, such as hotels, has the potential to adversely affect the physical environment (NEMA 2005). As tourism continues to develop in Uganda, there seems to be negligible attempts to mitigate its impacts, especially in regions outside protected areas. As a result, not only are the targeted potential socio-economic benefits of the industry threatened, but the very survival of the industry is also at stake.

Accordingly, planning for sustainable development of tourism is crucial, especially if Uganda is to keep harnessing the benefits that the industry contributes to the overall socio-economic development process. Such planning is even more pertinent because Uganda's national planning framework seems not to give the tourism industry the

attention it deserves. The extent to which sustainable tourism development is catered for under central and local government planning, forms part of this study's focus.

A critical analysis of the plans reveals that emphasis is on environmental protection by mainly underscoring maintaining gazetted areas such as forests, wetlands and National Parks. This means that such planning would most likely not be effective in the face of rapid tourism developments especially outside gazetted areas. Therefore, as much as environment protection issues are underscored in the plans, they are not clearly and specifically spelt out to enhance the achievement of STD. As a result, tourism developments may well spring up in direct conflict with protection of the environment. Given the increasing development of hotels, resorts, beaches, inns, and restaurants in the Lake Victoria shore region, the likelihood of having such conflict happening seems high.

The scenario suggests that planning in Uganda does not clearly outline how both environmental protection and tourism development can be achieved. This therefore reveals a critical inadequacy in the existing planning framework of the country. The continuation of such an inadequacy means that tourism developments are likely to continue to be developed in an environmentally insensitive manner, thereby leading to failure to achieve STD. This problem forms a major focus in this study, which attempts to formulate a planning framework or approach basing on the performance of tourism sites in the Lake Victoria shore region, in relation to the physical environment indicators of STD.

However, insufficient information on the spatial, temporal and performance trend of tourism in the Lake Victoria shore region, makes STD planning difficult. Without such planning, hotels, resorts, restaurants, beaches, camping sites, inns, and a host of other tourism facilities, will continue to be established, but in a manner that may adversely impact on the physical environment (MTTI 2006). Such a scenario should not be allowed to continue since it may place the future of tourism in the region at stake. In view of the goal of achieving STD, the performance of tourism sites in relation to the sustainable physical environment indicators need to be known and the likely impacts mitigated. This calls attention to planning that can practically combine concern for tourism development with concern for the protection of the environment. Given the increasing inflows of tourists in the country, (as shown in Figure 1.2), and the proliferation of tourism

developments in the Lake Victoria shore region, failure to plan for tourism only serves to put the industry on a potential path of self-destruction.

Accordingly, planning tourism in a more sustainable manner can no longer continue to be considered as a 'nice to have'. As a matter of fact, such planning has to be embraced as a practical necessity (Gunn 1994) especially as, without it, more tourism developments continue spreading to new and 'virgin' areas, which may be critical to the physical environment of the Lake Victoria region. This exacerbates the physical environment degradation already caused by other land uses and their associated infrastructure (NEMA 2006). In essence therefore, to optimise the benefits of tourism development while at the same time preventing, or at least mitigating any resultant physical environment problems, the industry has to be efficiently and carefully planned for.

On the basis of the above background, this study examines whether such planning can be achieved based not only on the analysis of the spatial distribution of the existing tourism sites, but also on the performance of these sites in relation to physical environment indicators of STD as *inter alia*: extent of tourism contribution to nature conservation; solid waste management; sewage management; water quality; extent of development control; and use-intensity control. It further examines whether planning can also be approached based on the factors behind the performance of the sites, their characteristics and those of the visitors received. This study therefore attempts to consider the fore-mentioned factors and propose a planning approach that can determine a course of tourism actions, which can ensure that the development of tourism is friendly to the physical environment in the Lake Victoria shore region of Uganda.

## **1.2 Statement of the problem**

The foregoing background indicates that the future of tourism development in the Lake Victoria shore region of Uganda is at stake, because of a critical inadequacy in the existing planning framework. The inadequacy is such that the attention devoted to environment protection is weak in the face of tourism development. As a result, tourism developments are emerging at the expense of environmental protection (NEMA, 2006) and the pace has been set for tourism to develop in a self-destructive manner. The inadequacy should therefore be of major concern to tourism planners interested in achieving sustainable tourism development, particularly in the Lake Victoria region.

From a research point of view, such inadequacy leads to questioning as to whether it can be addressed through developing a planning approach that integrates concern for tourism development with concern for environment protection. This study attempts to develop this approach by not only analysing of the spatial distribution of the tourism sites established in the region; their characteristics and those of the tourists they receive; but also analysing their performance relative to the physical environment indicators and factors behind such performance.

### **1.3 Scope of study**

While it may be regarded as important for the study to use a holistic and multi-disciplinary approach so as to deal with all the physical and socio-economic aspects and various schools of thought on planning for STD, this was not possible. The study only covers the physical environment aspects based on the fact that the inclusion of socio-economic aspects would make the study extremely wide and therefore not as detailed as it is when limited to the above scope. Equally important is the fact that, the study area is located in an ecologically sensitive lakeshore region and the immediate effects of tourism development are likely to be environment related. Hence, it could equally be argued that attainment of STD is more likely to be influenced by how the tourism relates to and manages the physical environment. As such, it appears more logical for this study to concentrate on developing a planning approach from the physical environment perspective. Although socio-economic factors also play a significant role in attainment of STD, it is mainly the physical environment governance mechanisms that seem to be lacking in the lakeshore region. This study presumes that, once these mechanisms are improved (such as by developing a physical environment planning approach), the natural resources will be efficiently and sustainably utilised, which will in turn be translated into sustainable socio-economic development.

The scope of this study therefore centred on the physical environment. A representative set of direct indicators was selected based on how accurately they could be measured to establish the performance of tourism sites in relation to the physical environment. The selected indicators include; tourism contribution to conservation, solid and sewage waste management, water quality, level of development control and use-intensity. Some environment related indicators such as greenhouse gas emissions, noise pollution and

energy management, were not included since they required data to be collected and analysed over a longer period of time in order to arrive at meaningful conclusions.

In general, the scope of the study is confined to indicators that can contribute to developing a physical environment-based planning approach to STD in the lakeshore region. Focus is therefore directed not only on the analysis of the spatial distribution of the tourism sites, their characteristics and those of the visitors they receive; but also on the analysis of their performance relative to the physical environment indicators of STD, and factors behind such performance.

## **1.4 Aim and objectives of the study**

### **1.4.1 Aim**

The overall aim of this study was to develop a planning approach through which sustainable tourism development planning can be achieved in the Lake Victoria shore region of Uganda. This aim is to be achieved through the following specific objectives and related research questions.

### **1.4.2 Specific objectives**

The specific objectives of the study were to:

1. Establish and analyse the spatial distribution of tourist sites, their temporal trend, their characteristics and those of the visitors they receive
2. Assess the performance of the sites in relation to the physical environment indicators of sustainable tourism development
3. Examine the factors influencing the performance level achieved by the Lake Victoria shore tourism sites in relationship to the physical environment indicators of sustainable tourism development
4. Evaluate how the area's planning caters for sustainable tourism development
5. To develop a planning approach for achieving sustainable tourism development based on the spatial distribution of tourist sites, their characteristics, those of the received visitors, site performance, and factors underlying such performance.

## **1.5 Research questions**

### **Objective 1**

- (a) What is the spatial distribution of tourism sites in the lakeshore region?
- (b) What is the temporal trend of the tourism sites?
- (c) What are the lakeshore tourism site characteristics?
- (d) What are the visitor characteristics?

**Objective 2**

How do the sites perform in relation to the physical environment indicators of sustainable tourism development?

**Objective 3**

What factors influence the performance level achieved by tourism sites in the Lake Victoria shore region in relation to the physical environment indicators of sustainable tourism development?

**Objective 4**

- (a) What is the nature and structure of planning in general and in the lakeshore region in particular?
- (b) To what extent does this planning cater for sustainable development and management of tourism sites in the lakeshore region?

**Objective 5**

Can a planning approach for achieving STD be developed from the analysis of the lakeshore sites' spatial distribution, their characteristics, those of visitors, and site performance levels?

In answering the above questions, the study develops a better understanding of lakeshore tourism sites, their characteristics, performance levels and how planning for sustainable tourism development can be informed based on the analysis of these variables. Accordingly, the study tests the following hypothesis.

**1.6 Research hypothesis**

The main hypothesis of the study is;

*“A planning approach to sustainable tourism development in the lakeshore region cannot be developed based on the analysis of the spatial distribution of the established tourist sites, their characteristics and those of the visitors they receive; site performance relative to the physical environment indicators, and factors behind such performance.”*

**1.7 Significance of the research**

As outlined in section 1.1, the Lake Victoria shore area is developing into a popular tourism region but with critical inadequacies in the tourism-environment planning framework. In the light of this, the study contributes in the following ways:

The study intends to offer an approach to planning STD based on the spatial distribution of tourist sites, their characteristics, those of the received visitors, site performance, and factors behind such performance. This planning approach will provide an insight into how the tourism sites can be established, managed and developed in an environmentally more sustainable way. In addition, the results from the approach can be used as a useful input to the regional database that is needed in order to arrive at viable resource management decisions and in general sustainable planning of the region especially for tourism development. Accordingly, the study can help regional planners to set standards for the management of tourism sites. Based on the analogy type of planning, the results of the study can also help tourism planning in other areas with characteristics similar to those of the Lake Victoria shore region to promote sustainable tourism development and management.

Environment and local government authorities can also find the study useful since it contributes an approach that can be used to monitor the performance of sites in the Lake Victoria shore region, in relation to the physical environment.

The study results can also contribute to constructing planning models and methodologies for predicting future tourism developments, their spatial distribution and their related performance in relation to the physical environment indicators not only in the study area but also in similar destinations. This is important since as noted by UNEP (2002), when conducted early enough, tourism development planning helps prevent damaging and expensive mistakes by avoiding the gradual deterioration of environmental assets significant to tourism.

The survey methods to be used in the study generate important basic statistics previously unavailable as far as the lakeshore region is concerned. Such statistics can be of benefit to tourism site managers and entrepreneurs. Specifically, the study contains data on the characteristics of visitors and of the sites they visit. Also contains information on how the visitors perceive the quality of services and facilities offered by the lakeshore tourism sites, as well as the local residents' perception of the tourism sites. Views of site managers about the environment practices they implement and site developments in general are also collected. All this information is central to understanding intensity-use levels needed by tourism site managers and entrepreneurs to develop management

strategies not only for the individual sites but also for the region as a whole. Nevertheless, it should be borne in mind that the contributions of this study be considered in light of the constraints discussed in section 3.9.

## **1.8 Organisation of thesis by chapters**

The thesis is composed of seven chapters that are all interlinked in a logical and systematically progressing manner.

Chapter one introduces the background to the study and explains the research problem, aims and objectives of the study, research questions and scope of the study. These reveal the study framework and the focus of the research area. The chapter also highlights the significance of the study.

Chapter two mainly focuses on literature review from various sources; academic journals, published academic books and from government reports and publications. For systematic analysis, literature is reviewed and sub grouped into: tourism definition and overview, concepts and perspectives of sustainable tourism, spatial and temporal trend, site performance, tourism planning and contribution to sustainable tourism. The chapter also reviews general planning theory and how it can inform tourism planning. A conceptual framework for this study is presented based on the relationships that exist between the concepts.

Chapter three is about the methodological techniques and approach used by the study. It explains the research design adopted, identifies the sample size and sampling techniques applied and gives justification of the methodological approach used. The chapter further describes the process of data collection, compilation and analysis. The constraints to data collection are also highlighted.

Chapter four describes the study areas biophysical characteristics, namely, climatic, geomorphology, geology and ecological characteristics. This chapter also brings into context the historical and socio-economic aspects that have an influence on the tourism development. It highlights the demographic trend, land cover change socio-economic characteristics and general tourism development trend over time.

Chapter five presents the study results, which are systematically elaborated following the research objectives and the related research objectives. The results are presented according to the thematic areas of the study which include: spatial distribution and trend of tourism development; performance of tourism sites relative to environment indicators of STD; factors influencing such performance; level of tourism planning; and the development of a tourism planning approach.

Chapter six presents the discussion of the results obtained in chapter five. It follows a thematic approach in discussing the results. The discussion themes include, temporal and spatial characteristics, site tourism performance, tourism planning and linear regression and incremental based planning approach.

The last chapter, seven, presents the conclusions and recommendations drawn from the analysis of the findings and discussion of the study results. It also highlights areas for further research.

In general, this chapter forms the introduction and conceptual background of the study. It states the research problem, explains the scope of the study and its significance. It also states the aims and objectives of the study that form the core of the thesis. It is this chapter that guides the format and presentation of the rest of the chapters.

## CHAPTER TWO

### LITERATURE AND THEORETICAL REVIEW

This chapter focuses on the review of literature relevant to the study, theories underpinning planning for Sustainable Tourism Development (STD), and the conceptual framework of the study. It also contains a section of literature related to the methodology adopted in the study. Attempt is made to contextualise the review so as to highlight the gaps in how planning for sustainable tourism development has been approached in different scholarly works.

#### 2.1 Literature review

This section is organised according to the themes derived from the objectives of the study. The section, however, begins with a consideration of definition of tourism and the concept of sustainable tourism development in general.

##### 2.1.1 Definition of tourism

There have been many different attempts to answer the question ‘what is tourism?’ but unfortunately no definition has so far gained widespread acceptance (Przeclawski 1993, Pender 2005), due to the diversity of meanings and interpretations (Williams 1999, Mowforth and Munt 2003). This is mainly because tourism is a multidimensional (Goeldner and Ritchie 2006) and multifaceted activity, which touches many lives and different activities (Cooper *et al.* 1998, 2005), making its study complex. According to Holden (2000:3) “attempts to define tourism are made difficult because it is a highly complicated amalgam of various parts. These parts are a diverse range of factors including: human feelings; emotions and desires; attractions built upon natural and developed resources; suppliers of transport, accommodation and other services; and government policy and regulatory frame works. Subsequently it is difficult to arrive at a consensual definition of what tourism actually is”. Indeed, one of the most frustrating aspects of studying tourism is the lack of consistency in the use of the definition of tourism (George 2007).

Hunziker (1951), as cited by Przeclawski (1993:9), defines tourism as “the sum of the relations and phenomena which result from traveling and visiting an area by non-residents providing that it does not entail resettlement or paid work”. However such a definition is too broad and may make the studying and understanding of tourism more

complex. With time more definitions have been put forward with an attempt to narrow down. Nettekoven (1972), as cited by Przeclawski (1993:10), perceives tourism as the sum of phenomena pertaining to spatial mobility, connected with a voluntary, temporal change of place, the rhythm of life and its environment and involves personal contact with the visited environment (natural, cultural or social).

Mathieson and Wall (1982:14) provide a better working definition of tourism, "...the temporary movement of people to destinations outside their normal places of work and residence, the activities undertaken during their stay in those destinations, and the facilities created to cater to their needs". Despite all the efforts to define tourism, various authors (Gunn 1994, Shaw and Williams 1994, Burns and Holden 1995, Holden 2000, Manson 2003, Goeldner and Ritchie 2006) have still expressed the complexity of defining tourism, yet trying to understand the meaning of tourism is important for natural resource use and managing impacts associated with its' development (Holden 2000).

In order to have a universal definition for tourism, the United Nations World Tourism Organisation (UNWTO) indicates that '...tourism comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business or other purposes'. The United Nations Statistical Commission in 1993 subsequently endorsed this definition (UNWTO 1998). It should however be noted that although this definition includes the bulk of the tourists who mostly take day trips or spend a few nights at a destination, it does not make reference to interactions and impacts which are key to tourism planning and management (Manson 2003). Current definitions include some reference to the interactions. For instance, Goeldner and Ritchie (2006:5) define tourism as "...the processes, activities and outcomes arising from the relationships and interactions among tourists, tourism suppliers, host governments, host communities, and surrounding environments that are involved in the attracting and hosting of visitors."

From the above definitions it is realised that there is a general consensus that tourism involves travelling and a temporary visit to a place away from home and that change of place is voluntary (Przeclawski, 1993). There is also consensus that there is interaction with new environments and as such consequences or impacts result. Although progress has been made towards consensus in regard to international definitions, there is still

much variation in domestic tourism terminology (Smith 1989), such that it may be more realistic to accept the existence of a number of different definitions, each designed to serve different purposes (Smith 1990) or to suit different geographical areas. This approach would contribute to the further understanding of tourism since, as earlier noted by Cooper *et al.* (2005), it is a multidimensional and multifaceted activity, touching many lives and different activities, with a highly complicated amalgam of various parts (Holden 2000), which may vary from one geographical region to another.

Even if there was a generally accepted definition of tourism there are still challenges facing the analysis of tourism development. Unlike other sectors, such as forestry, fishing and manufacturing, the tourism industry has unique characteristics, which not only make the study of tourism complex but also pose a challenge to tourism development planning. These characteristics include;

- Tourism as an industry does not have the usual production function nor does it have an output that can physically be measured unlike in agriculture or forestry sectors (Lickorish and Jenkins 1997).
- In the tourism sector, it is the consumer who travels to the product and not the product being taken to the consumer. The major implication of this point is that the physical and cultural characteristics or qualities of destinations can be treated as a form of product to be sold in the market, (Murphy 1985, Burns and Holden 1995).
- Tourism products are ‘produced’ and ‘consumed’ in the same place – *in situ* nature of consumption (Weaver 2006), hence causing various social and environmental strains (Kousis 1984, Burns and Holden 1995, Manson 2003).
- The sense of fulfilment and satisfaction tourists gain from enjoying the environment, have no uniform measurable cash value, as a specific monetary value is not usually involved in acquiring them (Holden 2000).
- In destinations where tourism developments have taken place and environmental problems have arisen, it is not always easy to disaggregate tourism’s contribution to these problems from the contributions of other economic sectors (Lickorish and Jenkins 1997, Williams 1999).
- Tourism development and expansion in a community has much greater social, economic and cultural scope and implications (Gunn, 1994) than other sectors for instance a manufacturing industry.

- Fuzzy boundaries of tourism system - certain industries such as transport, accommodation and entertainment are not exclusively related to tourism, for they sell these services to local residents as well (Murphy 1995, Weaver 2006).

From the above review it is realised that defining and understanding what 'tourism' itself means is a complex issue. Different stakeholders in tourism (government, tourism operators, local communities and tourists) are likely to have different aspirations of what they hope to achieve from it, and subsequently hold different perspectives on what it means to them (Holden 2000).

Based on its unique characteristics and varied definitions, it becomes clear that further research is needed in tourism and in specific regions so as to take into consideration the unique sectoral and geographical characteristics. The key challenges facing research in tourism development today, especially in developing countries like Uganda, are: how to fully understand the different dimensions and perspectives of tourism; identify the relationship between tourism and the environment in order to ensure sustainable tourism development; and to determine where and how tourism should fit into the broad development planning spectrum.

### **2.1.2 Concept and perspectives of sustainable tourism**

The concept of sustainable tourism has generated a lot of debate. Various authors have alluded to the fact that the concept 'sustainable tourism' has not gained an acceptable universal definition, due to the various interpretations of different stakeholders (Hunter 1997, Holden 2000, Dwyer and Edwards 2000, Hardy and Beeton 2001, Helmy and Cooper 2002, Hughes 2002, Liu 2003, Sharpely 2005). Despite sustainable tourism becoming popular, it has remained ambiguous (Gunn 2002) and complex to assess (Schianetz *et al.* 2007). The ambiguity of the term means that it can be interpreted and owned by many different groups with opposing ideologies. Indeed, trying to agree on a common definition of the term is arguably meaningless (Holden 2000).

The concept of sustainable tourism development came into the tourism vocabulary in the late 1980's when countries, especially in Europe, began to recognise the adverse effects of unorganised and unplanned tourism on the physical and socio-cultural environments of tourist destinations (Gonzales 1997). However the first action strategies on sustainable

tourism emerged from the Globe'90 conference in British Columbia, Canada (Fennell 2003, Manson 2003). Concept of sustainable tourism has evolved from its more widely embracing predecessor, sustainable development, which originated through the convergence of economic development theory and environmentalism (Hardy and Beeton 2001, Lui 2003). However, unlike sustainable development, sustainable tourism has changed its focus from the traditional notion of environmental ethics, quality of life and cultural integrity with notions of growth and progress, to focus on business viability and customer satisfaction (Hunter 1997).

Sustainability has been applied to the tourism sector in different ways, at both national and local levels and in the public and private sectors (Holden 2000). Munt (1992) cited in Hunter (1997:858), explicitly recognises that different interpretations of sustainable tourism may be appropriate for developed and developing countries, since the indebted developing countries may emphasise the economic aspects, in opposition to the environmentalist approach of the developed countries. However although developing countries or regions have to achieve economic growth, they also have to protect their environments (Gezici 2005). Mbaiwa (2005) further notes that regions like Caribbean, Africa and Asia, which greatly rely on environmental resources, have to embrace sustainable tourism if future generations are to benefit from the same resources.

According to the Globe'90 Conference held in Canada, sustainable tourism is considered a model form of economic development which should be based on: developing greater awareness and understanding of the significant contributions that tourism make to the environment and economy; promote equity and development; improve the quality of life of the host community; provide a high quality of experience for the visitor, and maintain the quality of the environment (Fennell 2003), on which both the host community and the visitor depend. OECS (2005) observed that sustainable tourism is defined as the optimal use of natural and cultural resources for national development on an equitable and self-sustaining basis to provide a unique visitor experience and an improved quality of life through partnership among government, the private sector and communities. Sharpely (2005) highlights that sustainable tourism should seek to optimise the benefits of tourism to the tourists (their experiences), the industry (profits) and the local people (their socio-economic development) while minimising the impacts of tourism development on the environment. Similar to the view of Sharpely, Weaver (2006:10) sums up sustainable

tourism as involving minimisation of negative impacts and maximisation of positive impacts.

UNWTO described sustainable tourism as ‘the ability of a destination to remain competitive against newer, less explored destinations; to attract first time visitors as well as repeaters; to remain cultural unique; and to be in balance with the environment’ (UNWTO 1997). However in 2004 UNWTO Committee on Sustainable Development of Tourism revised the definition that highlighted three dimensions from which a suitable balance must be established. Thus, sustainable tourism should;

- Make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity
- Respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance
- Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation (UNWTO 2004b)

The above definitions underpin the aspect of various stakeholders working together at all levels in an effort to balance the interests of tourism, the people and the environment. Therefore it is crucial that stakeholder perception and expectations from sustainable tourism are explored. Indeed the stakeholder theory is now being advocated for in tourism studies (Hardy and Beeton 2001). Arguably, without a full understanding of how tourism is perceived by stakeholders who live among, use and manage tourism resources, there is a risk that sustainable tourism will not occur. Unfortunately, only few studies exist especially on tourist and host community perceptions of sustainable tourism (Hardy and Beeton 2001).

Some authors have noted that the definition and perceptions of sustainable tourism have been changing over time. For instance, Clarke (1997), cited by Hardy and Beeton (2001:172), identifies four changes in the ways sustainable tourism has been referred to or defined:

- The first view considers sustainable tourism as being the opposite of mass tourism. For the view contends that sustainable tourism operates on small scale and mass tourism on a large and unsustainable scale.
- The second view emerged in the 1990's whereby, instead of a dichotomy, a continuum of tourism types is seen to exist and one form of tourism could be adapted to another. However, scale was still a defining attribute and the notion that sustainable tourism was a definable end-point remained.
- The second view was then replaced by a third one, by which it is argued that mass tourism could be made 'more sustainable' and sustainability should be its goal rather than a definable end-point for only small-scale operations. Codes of practice and guidelines are introduced, and with government control, more sustainable practices are encouraged.
- The fourth and most recent position is one of convergence. Sustainable tourism is seen as a goal, which is applicable to all forms of tourism regardless of scale. It recognises that a precise definition of sustainable tourism is less important than the journey towards achieving it.

As much as there is no universally accepted definition and interpretation of the concept of sustainable tourism, a common thread runs through all the varied definitions and interpretations. There is shared understanding and agreement that tourism has the potential to create, enhance and or deplete the perceived "value" of a destination and therefore, cannot afford to destroy the very resources that have caused it to thrive in the first place. This suggests that tourism must be responsibly and effectively managed for it to be sustainable. Gonzales (1997) observed that this could be achieved by taking into consideration the quality of the environment and the views and aspirations of the tourists (foreign and local), tourist businesses (investors, developers, operators; shareholders, management, employees; public and private) the host community and their governments. Liu (2003), Helmy and Cooper (2002) made similar observations. Though all these observations indicate that there is need to fully understand what 'sustainable tourism' means to particular stakeholders, in particular areas or regions, literature is silent about the case of the Lake Victoria region and therefore create the need to bridge the gap by bringing this case on board.

Various forms of 'new' tourism or 'alternative' tourism have evolved such as, 'values-based', 'appropriate', 'green', "eco-", 'responsible', 'people to people', 'controlled', 'small-scale' tourism (Gonzales 1997, Fennell 2003, Mowforth and Munt 2003) and they have sometimes been used interchangeably to mean sustainable tourism development. In many countries, especially developing countries like Uganda, ecotourism is being advocated as a means of achieving sustainable tourism development. As with the term 'sustainable tourism', ecotourism has had several definitions (Fennell 2001) and interpretations. However, it has been generally defined as 'nature-based tourism that involves education and interpretation of the natural environment and is managed to be ecologically sustainable' (CDoT 1994:17). However, negative environmental impacts can also result from alternative forms of tourism, especially where it occurs in sensitive environments and in an improperly managed fashion (UNWTO 1997). Liu (2003) argues that none of the 'new forms' of tourism can be relied on as the way forward for the sustainable and growing tourism industry worldwide. Lui further argues that most of them have been developed more for marketing reasons than for fostering sustainable tourism. Therefore, even in the case of so-called alternative tourism, there is need to be more selective and engage in deliberate planning, management and control over development (Butler 1994). However, sustainable tourism is not a new form of tourism or synonymous to the new forms of tourism such as ecotourism and alternative tourism, but it is a new approach to tourism development that can be potentially applied to all forms of tourism in an effort to achieve sustainable development (Farsari and Prastacos 2003).

It should be noted that the concept sustainable tourism has not only been subjected to debate regarding its definition but also its validity and operationalisation (Hardy and Beeton 2001). Attempts to operationalised the concept in actual planning and management of tourism businesses and destinations have increasingly been faced with challenges (Weaver 2006). In an attempt to better understand this concept and how it can be achieved, various guidelines and principles have been formulated. As earlier noted, Globe'90 conference in Canada (1990) was one of the first public strategies on tourism and sustainability, which brought together government, non- governmental organisations (NGO's), the tourism industry and academics to discuss the future relationship of tourism with the environment (Holden 2001, Fennell 2003). In Britain, the Department of the Environment developed guiding principles in the 1990's. UNWTO, World Travel and

Tourism Council (WTTC) and the Earth Council incorporated into tourism a set of basic principles on sustainability derived from the 1992 Rio Declaration on the Environment (Hughes 2002). Most of the principles revolve around the aspects that tourism should; conserve the environment, respect the nature and character of the host area, foster harmony between the needs of the visitor, place and host community and be systematically planned with equity in mind so that costs and benefits are equally shared among the stakeholders. According to Mill and Morrison (1998) the key to achieving an acceptable balance between the positive and negative impacts of tourism seems to be in adopting the principles of sustainable tourism development.

Most of the above principles, based on the sustainable development concept, tend to suggest that sustainable tourism should ensure that there is a balance within all the sectors and stakeholders within the industry. However, on the contrary, Hunter (1997) argues that the concept of balancing all goals is unrealistic. His argument is based on the fact that, “sustainable tourism need not (indeed should not) imply that these often competing aspects are some how to be balanced. In reality, trade-off decisions taken on a day-to-day basis will almost certainly produce priorities, which merge to skew the destination area based tourism/ environment system in favour of certain aspects” (1997: 859).

The above argument points to the fact that the way in which sustainable tourism is defined and in what way it ensures that all goals are balanced, depends on a variety of economic and socio-political factors prevailing in the region or country. Consequently, various authors have highlighted different approaches to sustainable tourism. For example, Hunter (1997:860) outlines four possible sustainable tourism approaches loosely based on interpretations of sustainable development. According to Hunter, tourism can generally contribute to sustainable development through the following approaches:

a) The ‘tourism imperative’ approach; where fostering and development of tourism is heavily skewed towards satisfying the needs and desires of tourists and tourism operators. In this approach there is no immediate need to aim for tourism development, which is particularly sensitive to the environment or seeks to minimise the consumption

of resources, so long as loss of natural resources is less than would otherwise occur and does not affect the ability of the area to attract tourists.

b) The 'product-led' tourism approach; the environment at the destinations receive considerable attention but is secondary to the primary need to develop new and maintain existing tourism products, so that the growth in the tourism sector can be achieved as far as is possible. This approach might be mostly justified in relatively old and developed tourism areas, especially if tourism has come to dominate the local economy.

c) The 'environment-led' tourism approach; decisions are made which skew the tourism/environment system towards a paramount concern for the status of the environment. This approach is perhaps more applicable in areas where tourism is non-existent or relatively new, and the aim is to promote types of tourism which rely on the maintenance of a high quality natural environment.

d) The 'neotenus' tourism approach; environment is given primary consideration and tourism development is considered secondary. The major aim is to minimise the utilisation of renewable and non-renewable resources. The approach is also based upon the belief that in some circumstances tourism should be actively and continuously discouraged on ecological grounds.

However, according to Holden (2000), the concept of sustainability still needs to extend beyond the 'environment' focus and be broadened to embrace cultural, political and economic dimensions. He stresses that "the political values of those who have power and decision making, will be influential in determining the interpretation of sustainable tourism" (2000: 173).

Still other authors have examined sustainable tourism from the perspective of environmental ethics. According to Holden (2000, 2003) the approach of environmental ethics is concerned with redefining the boundaries of obligation to the environment and evaluating the human position towards it. Tourism's interaction with the physical and cultural environments raises ethical questions as to how they are used by the tourism industry and tourists. Based on a broader ethical concern, Holden (2003) has identified four ethical approaches to the environment. These are:

- The ethic of “instrumentalism”, where resources are viewed for the sole value of providing pleasure and profit for human use.
- The “conservation ethic” which places emphasis on ecological conservation for the benefit of mankind, rather than for the intrinsic value of any entity.
- The ethic “of the environment” where all natural objects have the same moral rights and legal rights to exist as human beings.
- The “ecological extension” ethic where the rights of species and interrelatedness of all entities is emphasised rather than the rights of the individual beings.

The analysis above seems to point to view that, sustainable tourism can be achieved by applying the principles of sustainability. However this becomes rather challenging based on the complex, multi-sectoral nature of tourism, which is fragile and sensitive to change (White *et al.* 2006) and operates over a variety of temporal and spatial scales (Farrell and Twining-Ward 2005). Understanding how such complex systems operate is therefore vital to any thoughts of achieving sustainability (Farrell and Twining-Ward 2005). As a result indicators of sustainability have been developed to help in the understanding the interactions within the tourism system. Increasingly they are being viewed as fundamental in overall destination planning and management (UNWTO 2004a).

A number of approaches have been developed to try and understand the notions of sustainability and their application to sectors such as tourism. Among them is the systems thinking which looks at sustainability as a framework for managing change resulting from cause and effect relationships. However there have been difficulties in linking cause and effect in complex systems (White *et al.* 2006) such as in tourism. Another approach has been the carrying capacity approach that is seen as a tool of achieving sustainability. In the context of tourism, carrying capacity refers to the ability of a site or region to absorb tourism use without deteriorating (Cooper *et al.* 2005). Various types of carrying capacities have been identified and they include: physical, psychological (perceptual), social and economic carrying capacities (Youell 1998, Mowforth and Munt 2003). However, the applicability of carrying capacity as a tool of achieving sustainability has been faced by a number of difficulties (Manson 2003, White *et al.* 2006). Major of them is the difficulty to quantify the carrying capacity thresholds, which vary over time, space (Youell 1998, Mowforth and Munt 2003) and greatly determined by the nature and type of tourist activities. Therefore as much as carrying capacity may be a useful concept in

helping understand sustainable tourism (Manson 2003), its practical application as a management tool is very limited (Hunter 2003).

Generally, present sustainability approaches to tourism are still lacking since they only provide a partial explanation (Farrell and Twining-Ward 2005). This is partly caused by the fact that sustainability concepts are themselves always changing and adapting to area-specific conditions that are also determined by a complex system of people, land and ideas. Therefore, it does not mean that interactions within a system behaving in a particular successful way, will behave similarly elsewhere (Farrell and Twining-Ward 2005). This points to the fact that, for sustainability to be achieved, each destination must be considered (planned for) based on a combination of its unique characteristics. According to Farrell and Twining-Ward (2005), sustainability (in tourism) must therefore be viewed as an evolving complex system that co-adapts to the specifics of the particular place and to the aspirations and values of its people.

In general, then, there are various approaches and interpretations to sustainable tourism, which can be applied depending on the environmental, economic and socio-political situation within a given area. According to Hunter (1997), perhaps the most appropriate way to perceive sustainable tourism is not as a narrowly - defined concept reliant on a search for balance, but rather as an over-arching paradigm within which several different pathways may be legitimised according to circumstances (1997; 859). Holden, (2000) holds a nearly similar view and argues that the most useful way of thinking about sustainability is not to think of it as an end point, but more as a guiding philosophy, which incorporates certain principles concerning our interaction with the environment. According to Weaver (2006) in order for sustainable tourism to be achieved, there is need for sound scientific analysis to determine what form(s) of tourism are best in a particular destination, based on the tourism characteristics and subsequent implementation of appropriate planning and management strategies.

From the literature reviewed above, it can be noted that with various perspectives principles or guidelines in place, the major challenge facing sustainable tourism is its implementation and operationalisation. There is a need to develop policies and measures that are not only theoretically sound but also practically feasible. Without translating ideals into action, sustainable tourism runs the risk of remaining irrelevant and inert as a

feasible policy option for the real world (Lui 2003). In developing countries like Uganda, the challenges are how to formulate efficient and acceptable method(s) of identifying the indicators of sustainable tourism and how they can be measured, monitored and evaluated to inform tourism planning. The other key challenge is how to formulate strategies that will ensure that tourism develops while at the same time ensuring that the environment on which tourism survives is not compromised. The conundrum is compounded by the complex nature and unique characteristics of the tourism industry as earlier highlighted. The scenario is even made more complex in Uganda, where there is inadequate or no data on which to base sustainable tourism planning. It is in the light of this complexity that this study intends to offer an approach based on site-specific selected indicators of STD, whose literature is reviewed forthwith in various sub sections.

### **2.1.3 Spatial distribution, temporal trend, tourism site and visitor characteristics**

As noted above, there are inadequate or no data on which to base sustainable tourism planning in the Lake Victoria shore region. This study therefore found it important to review literature on spatial distribution, temporal trend, site and visitor characteristics of similar studies elsewhere.

#### **(a) Spatial distribution**

Spatial distribution is described in various forms by different authors (Getz 1987, Smith 1995, Gunn 2002, UNWTO 2004a, Arthur 2006) depending on the variable or objects they were dealing with. Nevertheless, all seem to agree that it is about the location of objects, facilities, flora and fauna and so on, relative to each other and within a given space. These authors go on to indicate that spatial distribution is important to planning in that it offers information about relative distances, ratios and the density of objects per unit of measure in space. Sharpely (2005) notes that spatial planning strategies are needed to encourage tourism development in some areas while relieving pressure on sensitive or already degraded sites. He further notes that such planning can be used to separate incompatible tourism uses both spatially and temporally. Papatheodorou (2004) examines spatial distribution from the economic and marketing planning point of view, looking at the advantages that accrue from various spatial patterns. Gunn (2002) notes that spatial distribution of places around the earth has deep meaning for tourism and its' planning. In all, the various authors reveal the need for tourism spatial data that will inform planners on how to control tourism developments in a given space.

Indeed, Getz (1987), cited in Hall and Page (2002: 309), identified the land use/physical/spatial approach among the four broad approaches to tourism planning. He observed that under this approach, tourism is regarded as having an ecological base with a resultant need for development to be founded on certain spatial patterns, capacities or thresholds that would minimise the negative impacts of tourism on the physical environment. The land use/spatial approach is the dominant form of public tourism planning through its close relationship with regional and destination planning (Hall 2000). This approach reveals that understanding the spatial distribution of tourism activities is important in tourism planning. However, Getz does not provide a detailed explanation in respect of the methods that can be used to measure and examine spatial patterns and how they can inform spatial planning.

Smith (1995) identified a variety of methods which can help measure and examine spatial patterns based on the location of tourism facilities, for example: mean centre; standard distance; standard deviation ellipse; Defert's Tf ('Tourist function') compactness index; connectivity index, Lorenz curves; nearest-neighbour analysis; linear nearest-neighbour analysis; spatial association index, peaking index; directional bias index; and tourism attractiveness index. A number of Geographic Information System (GIS) tools have been developed through which planners can address geographical issues related to location, trends through time and spatial patterns (Bahaire and Elliott-White 1999, Hall and Page 2003).

A critical examination of each of the fore-mentioned methods reveals that the measurement and data conditions set for using the methods other than the linear nearest-neighbour analysis cannot be easily met in the study area given the poor records keeping. The advantage with the linear nearest-neighbour analysis is that the actual data it requires can be obtained through direct field measurements, and the theoretical comparisons are readily available in published works such as that of Smith (1995). Further more, linear nearest-neighbour as modified by Pinder and Witherick (1975) cited by Smith (1995:234), can be applied by taking distance measurements of a linear nature along highways, rivers, coast or shore lines. This measure was more appropriate for the Lake Victoria shore region since the other methods do not provide for linear measurements.

Smith (1995) observed further that this method calculates and uses a ratio between the observed distance and a theoretical distance to determine whether a pattern is clustered, random or uniform. The method is used to determine more precisely and objectively the nature of point patterns, since visual inspection of a map may not be sufficient and reliable especially where all the three kinds of pattern may be present (Smith 1995). Furthermore, Smith has noted that, if the pattern is known to be clustered, for instance, the method readily reveals this through the measured distances and the calculated  $LR_n$  values, which are then read off from an  $LR_n$  significance graph (Appendix 1), leading to better understanding of the extent of clustering. Gunn (2002) notes that tourism attractions tend to be clustered since they have greater promotional impact and they are more efficiently serviced with infrastructure of waste disposal, water, police, and fire protection.

In Uganda, a national baseline survey was conducted by MTTI (2002) to collect data on tourism establishments, attractions and employment. The survey aided collection of information regarding the spatial distribution of tourism establishments for each district in the country. Distance of each establishment from the district headquarters was measured. However this information could not be applied or used in the study since it did not indicate the linear distances of these establishments from each other. Even when the in-between distances could be computed, they still would not be relevant because they would reflect relative distances from the district headquarters but not along particular phenomena like the lakeshore. It is in the light of these observations that this study had to take direct measurement of the distances between sites along the Lake Victoria shoreline so as to engage the linear nearest-neighbour method.

#### **(b) Visitor characteristics**

In tourism, a visitor is regarded as any person travelling to a place other than that of his/her usual environment for less than 12 consecutive months and whose main purpose of the trip is other than the exercise of an activity remunerated from within the place visited (UBOS 2005). Visitor characteristics may be conceived as common tourism attributes that are considered about visitors as they spend time at a destination. According to UNWTO, the visitor is considered the basic unit of collecting tourism statistics (Jafari 2000).

A number of visitor characteristics have been used and they include: duration of stay at a destination Gokavali *et al.* (2006); levels of visitor satisfaction (Pan and Ryan 2007); type of tourist activity; level of usage; and socio-economic characteristics, such as income levels, gender, and age (Burns and Holden 1995, Jafari 2000). Other characteristics have been added to this list, including: origin of visitor; level of observing visitor guidelines and purpose of visit that may take up forms such as: leisure, recreation and holidays; business and professional tours; visiting friends and relatives; (UNWTO 2004a, Cooper *et al.* 2005, UBOS 2004, UBOS 2005). Jung and Pennington (2003) pointed out more tourist purposes of visit such as educational, heritage, and photography. It should however be noted that although these characteristics have been used in various tourism studies, it has mainly been for the purpose of describing or categorising visitors. This study attempts to establish whether visitor characteristics can contribute to analysing site performance and to the formulation of a planning approach for STD.

### **(c) Temporal trend**

Literature on temporal trends focuses on tourism performance over time in terms of: total tourist arrivals and departure (or tourist numbers over time); arrivals by region of origin; number of accommodation facilities and tourist estimated expenditure (UNWTO 2004a; UBOS 2005). Revenue generated from tourism, leakages from the economy and level of investment in the tourism sector, have also been used to describe tourism trend over time (UNWTO 2004a, UIA 2005). Other indicators of temporal trend include, tourism growth over time in terms of jobs, income, tax revenue, and the number of established tourism sites (Gunn 2002). Understanding the trend in tourism is important for planning purposes since it influences level of capital and labour investment, marketing and promotional structures (Williams 1999), which all determine the pace at which tourism develops.

It is important to note that these indicators are generalised and therefore need to come out clearly with respect to STD and to specific areas such as the Lake Victoria shore region. The review of statistics related to tourism in Uganda revealed that data collection on temporal trend was more focused on international tourism and very limited data are collected on domestic tourism, with the exception of the National Parks (UBOS 2005, 2006). Moreover, the data does not cover the entire range of aspects of tourism including

site characteristics, their spatial distribution, categories of tourism establishments, leakages from the economy etc.

Some data on tourism trend are also compiled by the Uganda Investment Authority (UIA), for purposes of investment planning. Unlike Uganda Bureau of Statistics (UBOS), UIA goes further to include other relevant variables to measure tourism performance such as: tourism contribution to the national Gross Domestic Product (GDP), level of planned investment and employment in the tourism sector (UIA 2005). However, the data are generated only at a macro level and the accommodation variables are only limited to hotels and serviced apartments leaving out other forms like cottages, hostels and camping which are relevant to this study.

In a countrywide baseline survey carried out by MTTI (2002), the variables mainly considered were names of tourism sites, accommodation type, room capacity, bed capacity, currently exploited and potential tourism attractions, and number and categories of people employed. However, some of the information collected was incomplete (as in the case of the lakeshore region) and collection was limited to sites with accommodation facilities, thus omitting most beach resorts, conservation areas and camping sites. The categorisation of tourism establishments used was based on the existing naming of the sites, but in some cases the naming was illogical (MTTI 2002) - names did not depict what was offered by the sites. More so, no information related to the quality of the attractions and development trends (such as size and degree of physical growth of a site) was collected, a gap which this study attempts to bridge in the case of the Lake Victoria shore region.

#### **(d) Site characteristics**

Tourism sites are individual property developments whether in or out door (including hotels, restaurants, resorts, attractions), which are owned, developed and managed by individuals, governments, organisations or firms for the explicit purposes of serving tourists (Jafari 2000, Gunn 2002). The attributes used to describe or distinguish these sites are considered as their characteristics.

A number of site characteristics have been identified. For instance accessibility and resource foundation characteristic, which can influence the nature of visitors likely to be

attracted to the location (Gunn 2002, Page 2007). UNWTO (2004a) identifies variables such as; quality of the site, attractiveness of the site, and sites potential to attract tourists, which according to this study can be considered as site characteristics. According to UNWTO these characteristics can be measured by:

- Level of satisfaction that tourists derive from the site features and services offered
- Extent to which visible features of a site like its scenery, environment setting, and general cleanliness, attract tourists
- Level of tourist satisfaction that is evaluated from their willingness to return, recommend the destination to others or conversely advise others to stay away. This satisfaction can be gained when a destination is capable of:
  - (i) meeting tourists expectations and interests e.g. bird watching, scenery enjoyment, taste of services provided
  - (ii) providing a sense of good value for money and
  - (iii) Providing a hospitable environment

In the study of Alpine ski resorts, Weiermair and Fuchs (1999) note that the quality of site attributes is an influential factor in sustainable destination management. On the other hand Gunn (2002) notes that, external factors may also have an influence on site characteristics, such as surrounding land uses, their characteristics, especially their compatibility with intended site use and trends in land use change.

In general, understanding the characteristics of tourism in a given area is vital since the number, quality, and size of tourist attractions determines the tourism potential capacity of a destination (Lui 2003). This implies that, these characteristics have to be put into consideration, if tourism is to be planned and developed in a sustainable way.

#### **2.1.4 Performance of tourism sites in relation to the physical environment indicators of Sustainable Tourism Development (STD)**

Literature in this section is reviewed with regard to how the performance of tourism sites can be measured using physical environment indicators of STD. For the purposes of ensuring a logical flow of ideas, literature is reviewed for each individual indicator since they are characteristically different. A review of the general definitions of indicators is also done at the beginning of each indicator.

### **(i) Indicators of Sustainable Tourism Development (STD)**

According to UNWTO (2004a:8) indicators are defined as measures of the “existence or severity of current issues, signals of upcoming situations or problems, measures of risk and potential need for action, or means to identify and measure the results of our actions”. UNWTO (2004a) further notes that indicators are information sets formally selected to be used on a regular basis to measure changes of importance for tourism development and management. UNWTO also highlights the benefits of appropriate indicators, which include:

- better decision making – lowering risks or costs;
- identification of emerging issues – allowing prevention,
- identification of impacts – allowing corrective action when needed;
- performance measurement of the implementation of plans and management activities – evaluating progress in the sustainable development of tourism;
- reduce risk of planning mistakes – identifying limits and opportunities;
- greater accountability; and
- constant monitoring that can lead to continuous improvement – building solutions into management

Due to the benefits, such as those mentioned above, a great deal of effort has been spent to try and develop indicators that can help clarify on the key issues of STD. Chapter 40 of Agenda 21, defined at the Rio Earth Summit, suggests the elaboration of indicators of sustainable development as a means of generating information that can support decision-making. More specifically, the Agenda 21 for tourism, reiterates that indicators as one of the priority action areas and a principal tool for monitoring (UNWTO 2004a). A number of other indicators have been developed by various international organisations like UNWTO, Blue Flag, and Green Globe 21, for purposes of monitoring and controlling tourism activities and the resultant impacts.

UNWTO has been at the forefront of developing indicators since the 1990’s and has pioneered the development and application of these sustainability indicators (Schianetz *et al.* 2007). UNWTO has been able to compile these indicators from studies conducted in more than 20 countries with 60 experts and practitioners (UNWTO 2004a), from which a guidebook for sustainable development for tourism destinations has been compiled. Although the indicators cover many dimensions (social, economic, and physical), this

study has focused on those that deal with STD relative to the physical environment. The study's content scope was confined to the physical environment since the impacts of tourism in the ecologically sensitive Lake Victoria shore region, are likely to be more far reaching on the physical environment.

Internationally, indicators have also been developed by Blue Flag, a beach eco-label, non-profit making non-governmental organisation that started its campaign in Europe in 1987. By 2005 it had spread in 38 countries with over 3000 sites awarded the Blue Flag. In Africa, by 2005 only two countries were members and had a few of their beaches awarded the blue flag status, that is, South Africa - 20 beaches and Morocco - 2 beaches (Blue Flag 2006). Blue Flag has developed criteria (indicators) that performance of beaches is measured. They cover aspects of:

- water quality (bathing water quality, sewage discharge, health of coral reefs)
- environment management (waste disposal, beach cleanliness, following existing laws, transport etc)
- environmental education and information (visitor code of conduct, water quality information, conservation areas and activities)
- safety and services (life guard services, first aid equipment, beach patrol services)

Other indicators have been developed by Green Globe 21, which is a global benchmarking, certification and improvement system for sustainable travel and tourism. The indicators are based on Agenda 21 and principles for Sustainable Development endorsed by 182 Heads of State at the United Nations Rio de Janeiro Earth Summit (Green Globe 2004). Green Globe's formal certification process was launched in 1997 to provide members with an avenue for independent verification that they are meeting certain standards with respect to environmental performance (Griffin and DeLacey 2002). The Green Globe standards (indicators) developed are based on performance criteria broadly categorised into:

- Environmental and social sustainability policy;
- Regulatory framework;
- Environmental and social sustainability performance;
- Environmental management systems; and
- Stakeholder consultation and communication

It should be noted that Uganda has no specific indicators or benchmarks developed for sustainable tourism development, particularly for areas outside the protected regions. As a result, this study is mainly based on indicators developed by international organisations (UNWTO, WHO, Blue Flag and Green Globe 21) since they have been internationally applied in a number of destinations. However, where national laws and national standards exist, the study refers to them as an enhancement to the international standards and benchmarks. They include: Public Health Act 1964, National Environment Statute 1995 and National Environment Regulations 2000. The combination of the fore-cited indicators, standards, and laws is useful to a developing country like Uganda, which wants to achieve STD. As a means of examining the level of tourism sustainability in the Lake Victoria shore region, the study sought to examine the performance of individual tourism sites. Indicators were used since according to UNWTO (2004:322) they are the basic tools of performance measurement for individual tourism enterprises (hotels cruise ships, restaurants), public authorities and destination management organisations.

The review of literature provided a number of indicators from which this study selected physical environment indicators that were directly measurable and could contribute to the planning for STD. Indeed, Weaver (2006) notes that carefully selected and monitored indicators can accurately depict the condition of an entire system. The indicators selected include: contribution to nature conservation, solid waste management, sewage treatment, water quality, development control, and measures of use intensity control. It is on these indicators that more literature was subsequently reviewed on.

#### **(a) Tourism contribution to nature conservation**

Tourism has been considered a major contributor to nature conservation since it provides a less destructive developmental alternative compared to the unsustainable practices associated with forestry, mining and intensive agriculture (Reid 2003). As noted by Sharpely (2005), the long-term success of the industry depends on maintaining a healthy and attractive natural environment because it forms a fundamental element of the tourism products. However, tourism development (which is poorly planned) has been cited as a significant threat to the conservation of the environment (Williams 1999, Holden 2000, Goeldner and Ritchie 2006) that it is supposed to protect in the first place. Such a threat takes the form of reclamation and infilling of wetlands, poor alteration of landscapes and the release of untreated sewage and wastes (NEMA 2005). Accordingly, there should be widespread acceptance that tourism may damage the environment and that it costs money

to ameliorate or solve the problems created (Holden 2000). Manson (2003) argues that it may be sensible that sites should have an integral overhead appended to tourist holiday packages and used to mitigate and remedy the damage caused. This way tourism would increase its potential to contribute to biodiversity conservation. Tourism can also help to conserve the environment through using nature attractions as a critical component of the products that tourists tend to enjoy (UNWTO 2004a). However, tourists should also be made aware of the environmental conservation needs in destination areas and should be encouraged to adopt environmental friendly behaviour (Mbaiwa 2005).

UNWTO (2004) notes that, although it is sometimes difficult to document the contribution to conservation, the following indicators can be applied:

- tourism support for conservation/development projects
- donations to local conservation projects,
- provision of opportunities for visitors to participate in conservation activities and
- level of commitment and activism by tourism establishments to conservation (frequency of meetings)

However, a number of tourism sites, especially in developing countries like Uganda, such parameters and activities are not usually recorded, making it difficult to use the UNWTO recommended indicators. In an effort to enhance the contribution of tourism to nature conservation, among other reasons, a number of international accreditation programmes (Green Globe 21, Blue Flag, International Organisation for Standardisation ISO - 14,000) and national programmes (Nature and Ecotourism Accreditation Programme in Australia, Certificate of Sustainable Tourism in Costa Rica, Green Deal in Guatemala, Fair Trade Tourism in South Africa) have developed a number of indicators. Accreditation and certification is an important tool they use, which has helped reduce environmental impacts of tourism, especially in developing countries (Font and Harris 2004) where such tools have been applied.

A number of studies have been carried out showing the relationship between tourism and conservation: in Vietnam (Le *et al.* 2006), in Turkey (Gezici 2005), in Kenya (Okello and Kiringe 2004), in (England Sharpely 2007), in Cuba (Winson 2006), in South Africa (Spenceley 2005), in Brazil (Puppim de Olivera 2005), in Australia Walsh and Sun (1998) and (Warnkena *et al.* 2005). These studies demonstrate a number of methodologies that can be used to document the relationship between tourism and

conservation using various indicators. However, in Uganda and in the lakeshore area in particular, limited studies, if any, have been carried out to specifically determine the extent to which tourism is contributing to nature conservation. This study, basing on other studies, therefore attempts to address this gap by contributing to the literature with specific reference to the Lake Victoria shore region.

#### **(b) Solid waste management**

According to the United Nations [UN] (2006), solid waste is described as useless and sometimes hazardous material with low liquid content. It includes municipal garbage, industrial and commercial waste, sewage sludge, wastes resulting from agricultural and other wastes like demolition wastes and mining residues. UN (2006) further describes solid waste management as supervised handling of waste material from generation at the source through the recovery processes to disposal.

Waste is generated in practically all activities that humans undertake, including tourism (UNWTO 2004a). Proper management of waste is highly essential to the sustainable development of tourism destinations. In order for this to be achieved, it is increasingly necessary for tourism sites to measure waste production and manage its treatment, since the 'out of sight, out of mind' solution has resulted into a new set of problems (UNWTO 2004a). According to the Blue Flag (2006) criteria, no litter should be allowed to accumulate on the site and surrounding areas like paths, parking area and on the beach. There should be an adequate number of litter receptacles, which are appropriately spaced, regularly emptied and maintained. These observations suggest that, for purposes of establishing how solid waste is managed, it is important to find out whether such facilities exist at the lakeshore tourism sites and the extent to which they are utilised, managed and maintained.

UNWTO (2004a) observes further that waste should be disposed of in licensed facilities that are approved by the relevant authorities and waste audits should be conducted to help design and implement waste reduction, reuse and recycle strategies. A number of indicators have indeed been developed and used to measure solid waste management performance. UNWTO (2004a) indicators cover aspects of: management of waste collection (waste volume produced, amount collected and disposal method); waste-reducing mechanisms such as waste separation at collection; number of tourism

establishments recycling waste, and amount recycled. Waste collection services (percentage of destination area and sites covered by waste collection services), hazardous waste handling, and maintaining a clean image of the site, are also given as indicators of waste management.

Studies about tourism and waste management at various destinations have been carried out by a number of researchers: Le *et al.* (2006) in Vietnam, Lukashina *et al.* (1996) in Russia, Erdogan and Baris (2006) in Turkey, Spenceley (2005) in South Africa, Mbaiwa (2005) Botswana and Kuniyai (2005) in India Himalayas. As to how tourism sites in the Lake Victoria shore region are performing in regard to waste management is largely unknown, yet as indicated from the literature, waste management is a vital indicator of sustainable tourism. This study intends to collect data on this less known, yet vital aspect of sustainable tourism with specific reference to the lakeshore tourism sites.

### **(c) Sewage management**

United Nations (2006) describes sewage as organic waste and wastewater produced by residential and commercial establishments. The management of sewage is of critical concern for tourism since sewage has an adverse effect not only on the water quality but also on the attractiveness of a tourism site, especially if the site is located along a lakeshore, near a river or on an ocean coast (UNWTO 2004a). Untreated sewage leads to water pollution (Holden 2000) and because surface water supports many tourist activities, maintaining its quality to desired levels becomes a significant factor for planning (Gunn 2002). Such pollution degrades the site and may also contribute to disease like gastrointestinal infections (WHO 2003, Davies and Cahill 2000), damage wildlife and natural resources (UNWTO 2004a). Tourism has directly contributed to water quality problem by discharging untreated or improperly treated sewage into the water bodies. According to Davies and Cahill (2000), a more gradual impact of poor sewage management, is the leaching of nutrients from septic systems of tourists' establishments, which accelerates eutrophication of adjacent water bodies and deplets dissolved oxygen supplies. They further argue that tourist facilities increase the amount of impervious surfaces, causing more runoff (which contains nutrients, suspended particles oil and gas) to reach water bodies hence contributing to water pollution.

However, as Holden (2000) notes, the problem of water pollution from human sewage is not exclusively caused by tourism but is also reflective of an inadequate infrastructure to meet the needs of both local people and tourists. Davies and Cahill (2000) further argue that, in some cases, tourism infrastructure increases the pressure on existing sewage treatment plants and can lead to overflows during peak tourist times.

According to UNWTO (2004a), indicators can be used to determine the level and efficiency of sewage management at a specific site or the destination as a whole. They include: percentage of sewage receiving treatment and being recycled; percentage of tourism establishments with approved treatment systems, and served by water systems separating sewage from runoff and surface drainage; water quality testing to determine pollution and contamination by sewage. Level of sewage management as an indicator for sustainability has been applied by: Le *et al.* (2006) in Vietnam, Spenceley (2005) in South Africa, Mbaiwa (2005) Botswana, and Kavanagh and Keller (2007) in Australia.

In the Lake Victoria shore region there is limited literature on the nature and level of sewage management. In particular, there are no previous studies that have been done on how tourism establishments perform in regard to sewage management. However, the available literature acknowledges that there is limited coverage by the sewerage network, particularly along the shoreline (KCC 2003, Entebbe Municipal Council 2005a). Therefore the selection of sewage treatment as one of the indicators for this study was viewed as pertinent, not only as a means of examining the environment-performance of tourism sites but also as a contribution to the existing literature.

#### **(d) Water quality**

Water Quality is a term used to describe the biological, chemical and physical characteristics of water (Water Technology 1996, WHO 2003, UN 2006;) and its general composition, which according to UN (2006), includes organoleptic (taste-related) properties. These attributes determine water's ability to sustain life and its suitability for human consumption (Water Technology 1996).

Water quality analysis is important since through construction and maintenance of tourist infrastructure, recreational boating, and other activities of the cruise industry water quality is affected (Davies and Cahill 2000). According to International Hotels

Environment Initiative (1996), all these activities have to be controlled to ensure that environment contamination is minimised or stopped. This can even help reduce health hazards and improve comfort of visitors and employees. The water quality indicators and benchmarks for recreational use are well described in WHO publications (1999, 2003) and Blue Flag (2005). Indeed, WHO (1999) and Blue Flag (2006) pointed out the main parameters that should be used to determine water quality, grouping them into two broad categories, namely: microbiological agents (especially faecal coliforms) and chemical and physical agents (such as pH). Recreational waters generally contain a mixture of pathogenic and non-pathogenic microorganisms. These microorganisms may be derived from sewage effluents, from the recreational population using the water, livestock (cattle, sheep, etc.), domestic animals (such as dogs), industrial processes, farming activities, and wildlife. However it should be noted that, recreational waters might also contain free-living pathogenic microorganisms (WHO 2003).

Monitoring of water quality is vital at recreational sites because of the likely effects on tourists. WHO (2003) notes that pathogenic organisms can cause gastrointestinal infections following ingestion or infections of the upper respiratory tract, ears, eyes, nasal cavity and the skin. Infections and illness due to recreational water contact are however generally mild and so difficult to detect through routine surveillance systems. Even where illness is more severe, it may still be difficult to attribute specifically to water exposure. Targeted epidemiological studies, however, have shown a number of adverse health outcomes (including gastrointestinal and respiratory infections) associated with faecal polluted recreational water. This can result in a significant burden of disease and economic loss to the population (WHO 2003). As such measuring water quality is of paramount importance to maintaining the desired standards of water quality for tourism use.

A number of parameters have been used to monitor water quality for recreational use. For instance, Crowther and Wyer (2002) measure coliform, *Escherichia coli* (*E.coli*) and streptococci bacterial concentrations. They investigate the relationship between the bacterial spatial variations in the pastoral catchment area and the coastal bathing water at two small UK coastal resorts - Staithes and Newport. Shibata *et al.* (2004) while measuring microbial water quality at beaches in Miami-Dade county USA choose enterococci, *Escherichia coli*, fecal coliform, total coliform and *C. perfringens*. Brownell

*et al.* (2007) measure *E.coli* and Entrococci, while investigating the effect of storm water on bacteria population in water and sediments along Florida beach in USA. Hill and Edge (2007) measure *E. coli* levels at Bayfront park beach on Lake Ontario to determine the source of faecal pollution.

Although different studies have used a number of parameters to measure water quality for recreational purposes, this study adopted the measurements used by the Blue Flag *viz.* Total Colibacteria (TC), Faecal Colibacteria (*E.coli*) and Faecal Entrococci (FE). The Blue Flag parameters were adopted because they are internationally used in over 30 countries and been applied in the accreditation of more than 2,500 beaches. The parameters have also been adopted in the European Union (EU) Bathing Water Directive (Blue Flag 2006). More so, Uganda lacks national recreational water quality standards, despite the fact that the National Environment Statue (1995) mandates NEMA to do so. Although attempts have been made by NEMA, Lake Victoria Environment Management Programme (LVEMP), and National Water and Sewage Cooperation (NWSC) to measure water quality in the country, they are still insufficient. The few studies carried out by the fore-cited agencies concur that the quality of water in Lake Victoria has over the years been deteriorating. However, the studies are silent on water quality for recreational purposes. They lack analysis of water quality at specific points along the lakeshore region particularly where recreational activities take place.

In general, the literature reveals that most water quality monitoring seems to exist on beaches along the coast and not on inland water beaches. This points to the need for ensuring the tourist sites on inland water bodies also develop and maintain strategies to ensure good water quality for recreational use. More so, literature also indicates that water quality monitoring for recreational use is still very limited in developing regions especially Africa. For instance, of the 2580 beaches accredited by Blue Flag (as per 2006) only 24 beaches (0.9%) are in Africa (20 in South Africa and 4 in Morocco). This points to a gap and therefore a need for water quality monitoring in developing countries, if tourism is to develop in a sustainable way. A study, such as this one, would therefore contribute not only to literature on recreational water quality monitoring but also to sustainable tourism planning of the Lake Victoria shore region of Uganda.

### **(e) Development control**

Development control is the process of regulating new developments by granting or refusing planning permission, and controlling unauthorised developments as laid down in legislation. Development associated with tourism includes: tourist attractions; accommodation facilities including seasonally occupied waterfront residences; tourism related infrastructure like roads, water supply and waste disposal facilities; retail stores and restaurants (Davies and Cahill 2000) among others. Accordingly, these should be the facilities and features development control should focus on. Indeed UNWTO (2004a) observed that if there is no such control, it becomes difficult to achieve STD. Therefore in the Lake Victoria shore region it is important to establish not only if such control is carried out over tourism developments, but also the extent to which it is conducted to achieve sustainable tourism development.

According to UNWTO (2004a:209), development control is one of the major indicators of sustainable tourism development. Baseline indicators suggested include:

- existence of a land use or development planning process (extent to which land use planning includes tourism, percentage of area subject to control and percentage of area designated for tourism)
- extent and effectiveness of monitoring and control process (specific criteria for tourism development control, percentage of building proposals receiving environmental review like EIA and percentage of proposals denied or sent for revision) and
- existence of a systematic enforcement of the plan and its criteria (review procedures in place and number of charges for plan, zoning or site plan violations)

Holden (2000), Gunn (2002, 2005), Mason (2003), UNWTO (2004a), Goeldner and Ritchie (2006) all agree that land use planning and tourism zoning are important tools in development control. Zoning can provide a proper recognition of the resources that exist in the area and subsequently identify where tourism can and cannot take place (Holden 2000) and guide the approval of building plans. It has been applied in various countries with varying levels of success. In the case of Costa Rica, for example, there was reluctance by local governments to establish legally binding zoning, perhaps because of the high cost of establishing zoning over a wide area for the first time and perhaps

because of political opposition to establishing limits permissible construction (UNEP and UNWTO 2005).

Enforcing laws and regulations is another tool used in development control. However, Davies and Cahill (2000) argue that the fragmented and dispersed nature of the tourism industry makes enforcement and compliance to existing regulations difficult. According to Davies and Cahill educational efforts seem more promising than regulations to attain STD. They emphasise that education can be used to support existing regulations and to encourage environmentally responsible behaviour where no such regulations exist. As the need for STD becomes more obvious, voluntary efforts to minimise or avoid further unguided developments have been encouraged among developers. As a means of achieving sustainable tourism development, international organisations like Green Globe 21 and Blue Flag have encouraged self-regulation of the tourism industry through the use of environment related accreditation systems and certification criteria. These systems and criteria have also been developed at various national levels, for instance, in Australia the National Ecotourism Strategy (1994) has provided successful examples of planned ecotourism development, which has been achieved through the National Ecotourism Accreditation Programme (NEAP), later renamed EcoCertification Programme (UNEP and UNWTO 2005).

In Costa Rica, under the National Tourism Development Plan (2002-2012), the certification for sustainable tourism programme was established to distinguish between tourism businesses that were truly conserving the natural resources and those that claimed to be 'green'. In Scotland, the Green Tourism Business Scheme (GTBS) established in 1998 a voluntary environment certification scheme for tourism enterprises. In Egypt, development control is under the Tourism Development Authority (TDA), which was established under the ministry of Tourism in 1991. The authority controls developments by allocating portions of land to private sector investors, who operate under contract with it. In the early years, growth targets in terms of visitor numbers and accommodation capacity were the parameters the tourism development programme used. However, the TDA has now rethought its approach to embrace concerns for the environment of the destination, its overall quality and the long-term future (UNEP and UNWTO 2005).

In Uganda, development control is achieved through the general planning framework for local or central government. Each district, under the decentralisation arrangement, formulates a three-year development plan, which is as a result of the submissions of the parish and sub county planning committees. The submitted plans are then used to guide the establishment of developments in an area, in line with the general central government planning and regulatory framework. Local governments have the responsibility to conduct development control and to ensure sustainable use of resources in their areas of jurisdiction (Local Government Act 1997). However, even the few existing development control mechanisms in the laws and development plans, seem to largely remain unimplemented. No specific tourism accreditation systems and certification criteria (national or international) seem to be applied in the Lake Victoria shore area and indeed in Uganda in general. What then is the case in the lakeshore area as far as this kind of development control is concerned? This study attempts to approach this significant question empirically and contribute to the existing literature.

**(f) Use intensity control**

Use intensity control mainly involves deliberate efforts to measure or calculate tourist density and the level at which sites facilities and resources are used. Use intensity measurement is carried out so that tourist numbers and activities can be regulated relative to the desired levels of use (UNWTO 2004a). Controlling use intensity is to a great extent determined by the level and effectiveness of visitor management measures in place.

As noted by Mason (2003), managing visitors is one of the important ways of achieving STD. Most tourism sites globally do indeed measure and monitor tourist numbers in an attempt to calculate the desired levels of use and to determine when standards or thresholds are likely to be reached (UNWTO 2004a). One of the concepts applied in use intensity control is that of carrying capacity which is defined as the maximum number of people who can use a site without an unacceptable alteration in the physical environment and without an unacceptable decline in the experience gained by the visitors (Mathieson and Wall 1982). However, using carrying capacity, which requires quantifying tourism capacity limits, is not easy where site management is weak or more profit-oriented (Holden 2002). Weak site management means that visitor management is poor and there is little or no data collected to help inform carrying capacity control measures. In a

number of cases, tourism site managers have tended to be more interested in profit maximisation (hence ignoring use intensity control) even at the expense of environment conversation concern (UNWTO 2002).

As a result legal regulations relevant to tourism and those relating to transport, safety health and hygiene need to be applied to regulate tourism (Mason 2003). Combining legal regulations and voluntary and self-regulatory use intensity control measures have proved to work. A review of tourism studies by Marion and Reid (2007) in USA, reveal that visitor education programmes, together with regulatory and site management efforts have effectively altered visitor knowledge and behaviour in the intended direction hence greatly contributing to the attainment of STD.

UNWTO (2004a:193) identified a number of variables that can be measured to determine the levels of use intensity. They include:

- total visitor numbers at a site,
- density on site (number of tourists per square meter of the site, site density counts for cars, boats, ratio of number of vehicles per parking space)
- percentage of total capacity used and
- perception of tourists and local residents on use intensity measures like crowding

However, the above variables of use intensity control can become difficult to measure especially where records are poorly kept or not kept at all (Mason 2003), as is the case in the lakeshore region. This study therefore attempts to measure the level of use intensity and evaluate the use intensity control measures in place in the Lake Victoria shore region.

### **2.1.5 Tourism planning**

Planning is a difficult term to define since it varies depending on the level, scale or geographical context in which it is being used (Mason 2003). According to Dror (1973), as cited by Hall (2005: 225) planning is the process of preparing a set of decisions for action in the future, directed at achieving goals by preferable means. Cullingsworth (1997), as cited by Hall (2000:68) defines planning as a process of formulating goals and agreeing the manner in which they are to be met. George describes planning as “a

process of forecasting potential opportunities and threats, and then determining what is to be performed and how it is to be completed” (2007:176).

Although a number of theories or models of planning have been developed, authors such as Hall (2000) and Reid (2003) have noted that planning theory, especially tourism planning theory is still limited (see section 2.2 for details). With grow of the tourism industry, the necessity for planning has become apparent and tourism planning is emerging as a distinctive subset of the planning discipline (Henderson 2005). According to Gunn (1994), tourism planning main purpose must be the long-term betterment of all involved. This means not only greater individual success but also overall betterment through greater team action. Tourism must be planned with greater unity of purpose since it involves so many individuals and organisations. Hence, unless planning can predict a better future, it will be ineffective.

The focus and methods of tourism planning continue to evolve in order to meet the new demands placed on the tourism industry (Hall 2000). A number of tourism planning approaches have been identified. Getz (1987) identified the; boosterism, economic, physical/spatial and community planning traditions (approaches). Later the sustainable planning approach was developed, which holistically integrates environmental economic and socio-cultural values into planning. Getz notes that these approaches are not mutually exclusive, nor necessarily sequential (see Hall 2000 for details). Jafari (2001), propounds the ‘platform’ model. He argues that tourism has been going through sequential platforms or perspectives, which provide a useful framework for understanding the emergence and development of sustainable tourism (Weaver 2006). The platforms include:

- Advocacy platform (1950s – 1960s) – post world war II period characterised with strong support for tourism development as means for economic development
- Cautionary platform (late 1960s – early 1970s) – argues that unregulated tourism development eventually culminates in unacceptable high environmental, economic and sociocultural costs especially for the residents of the destinations
- Adaptancy platform (late 1970s – early 1980s) – advocates for tourism to adapt to the unique sociocultural and environmental circumstances of any given community so as to avoid negative effects. This period saw the emergence of terms to describe such new forms of tourism, for instance ‘alternative tourism’

- Knowledge-based platform (1990s) – is a holistic, systematic approach that utilises rigorous scientific methods to compile the knowledge needed to properly assess and manage the tourism sector

The Knowledge-based platform notes that it is increasingly becoming apparent that any mode of tourism (whether small-scale or large scale) in any destination gives rise to both positive and negative impacts. Therefore the decision as to what mode(s) of tourism is best for a particular destination should be based on a sound scientific analysis of its characteristics and subsequent implementation of appropriate planning and management strategies (see Weaver 2006 for details). From the above-mentioned approaches, the sustainable tourism planning approach and the knowledge-based platform are the most relevant to this study. They highlight the need for appropriate destination planning based on sustainability principles.

The institutional frameworks at various levels also influence tourism planning. According to UNWTO (1998) and Hall (2000) organisational authorities at the international, national, local or community and site levels play a major role in tourism planning. For logical understanding, literature in this section is reviewed according to the different levels of planning and specifically for national (central government), local government and site planning. These levels are selected based on the fact that they are the major levels at which planning is carried out in Uganda.

#### **(a) Central and local government planning**

Traditionally, tourism planning has been carried out at the national level with the ministry in charge of tourism in the central government playing a major role. The central government is usually concerned with tourism policy formulation, structural planning, coordination of different sectors related to tourism, setting national level facility and services standards and some times developing tourism education and training institutes, investment policies and marketing (UNWTO 1998, Hall 2000). Shaw and Williams (2002) note that state is a key stakeholder and its involvement at national and local level is important in ensuring development of sustainable tourism. They highlight the need for strategic and proactive intervention especially in environmental management. In the case of Uganda, tourism planning mainly takes place at the national level. However it should be noted that tourism planning in the country is fairly recent with the formulation of the Integrated Tourism Master Plan, (ITMP) in 1993 and the National Tourism Policy in

2003. More so, much of the planning effort has been concentrated on gazetted conservation areas especially National Parks.

Local level tourism planning is mainly concerned with comprehensive tourism area plans, and land use planning for tourism sites and facilities (UNWTO 1998). UNEP (2003) notes a number of reasons why local authorities should consider developing sustainable tourism plans within the context of Local Agenda 21. This is necessary because it:

- Ensures that tourism planning and development address key issues relating to the economic, social, and environmental impact of tourism in the long and short term;
- Places tourism within the overall context of the sustainable development and environmental management of the community;
- Provides a framework for, and give legitimacy to, the participation of a range of stakeholders in tourism and representatives of the local community;
- Raise the profile of tourism and the tourism strategy within the community;
- Strengthens the position of the authority as an organisation that takes sustainable tourism seriously, with national and international support; and
- Helps the destination to attract the attention of visitors and tour operators keen to visit or work with sustainable destinations.

Fennell (2003) notes that despite the divergent views about sustainable tourism, there appears to be general agreement that in order for sustainability to occur, it must be done at the local level, and perhaps shaped loosely by broader national and international policy. UNWTO (1998) highlights the importance of planning at local levels as a means to achieve STD. However, in most countries local government authorities have not been closely involved in tourism and have little experience of its planning, development and management (UNEP 2003). In Uganda at the local government level there is limited or no tourism planning taking place at most districts (MTTI 2003). In recent years, however, this has been changing, and the key role of local authorities is now recognised. Local authorities are often the best placed organs for establishing a sustainable approach to tourism in sites, setting a strategy and balancing the interests of tourism enterprises, tourists and local residents (UNEP 2003). The national Tourism Policy for Uganda clearly spells out roles of the local government in tourism planning and highlights the need to establish and strengthen tourism planning at this level. This study is therefore an

attempt to develop a planning approach that can be used to contribute to the efforts of achieving the desired level of tourism planning and development in the lakeshore region.

### **(b) Tourism site planning**

Site planning refers to planning the specific location of buildings and structures, recreation facilities, conservation and landscape areas, parking and other facilities on the development site (UNWTO 1998). It also includes site tourism management, which is concerned with the ways to manage resources for tourism, the interaction of tourists with physical resources and the interaction of tourists with residents of tourist areas (Mason 1995). To a great extent, tourism management is what tourism planners are, or should be, engaged in (Doswell, 1997) at all levels of planning.

Site level planning is very significant because, as noted by Gunn (2002, 2005), it is at this level where the real 'bricks and mortar' action of tourism development takes place. He further notes that, although regional and destination planning provides important policies, guidelines and stimulation for development, it is at the site level that tourism development plans are actualised. In regard to the lakeshore region, no specific literature was found on site level planning, since there seems to be no formal planning framework from which sites are supposed to operate from.

It should be noted that although planning is often carried out at separately levels, integrating tourism development at all levels holds greatest promise for guiding development toward the desired goals. Helmy and Cooper (2002) note that, for sustainable tourism development to be achieved principles of sustainability must be integrated into all levels of the planning process, through plans at the national and regional level to management programmes at the local and site level. A number of tourism planning studies carried out in different countries [in Egypt (Helmy and Cooper 2002), UK (Jennings 2004), Spain (Baidal 2004), Turkey (Tosun 1998, and Yuksel *et al.* 2005), China (Lai *et al.* 2005, Li 2005), Romania (Light 2007)] highlight the importance of integrating tourism planning at all levels. However, the extent to which tourism planning is integrated into the different levels of planning in the lakeshore region is not fully known. As one of its objectives, this study attempts address this gap in the literature.

### **2.1.6 Tourism planning – contribution to sustainable tourism**

Tourism planning is critical to having sustainable development and protecting the environment (Goeldner and Ritchie 2006). Planning for sustainable tourism is related to the great deal of interest aroused by the sustainable development paradigm since the celebration of the Rio Summit in 1992 (Baidal 2004). Various researchers (Inskeep 1991, Gunn 1994, Bramwell and Sharman 1999, Dwyer and Edwards 2000, Holden 2000, Pearce 2001) all agree that failure to develop sustainable tourism will lead to the depletion of the very natural resources on which tourism is based, hence the need for tourism planning. Dredge (1999) describes planning as the process of establishing a strategic vision for an area, which reflects the community's goals and aspirations, and implementing this through the identification of preferred patterns of land use and appropriate styles of development.

In tourism planning, the aspects usually considered are: policy-making, fiscal influences and land use planning measures which can be used by governments at regional and local levels to control the density, type and style of tourism development (Holden 2000). Land use planning is an important aspect, since tourism development obviously requires land. There is often competition for space between tourism and other economic activities like agriculture, mining etc and, if unresolved, these land use conflicts can result in serious aesthetic and environmental impacts. Therefore, there is a need to have tourism integrated into the physical or land use planning framework (Dredge 1999). The above must be considered in order to achieve sustainable planning and management of tourism.

According to Mill and Morrison (1998), tourism planning has five basic purposes of: identifying the alternative approaches; adapting to the unexpected; maintaining uniqueness; creating the desirable; and avoiding the undesirable. In regard to the purposes of tourism planning, Gunn (1994) notes that tourism planning should not only be used for problem solving. It should also be used for problem avoiding. According to UNWTO (1997) tourism is a kind of industry which has its' own unique requirements, impacts and rewards. Fulfilling those requirements, minimising the negative impacts, and reaping the rewards, are the primary goals of tourism planning.

Tourism planning has over time evolved from its earlier approaches, which reflected a generally simplistic view of tourism, to a more sophisticated and integrated approach

(Burns 1999). In planning, it is important to recognise that the tourism industry is an amalgam of different businesses and organisations connected by the common factor of providing services to the tourists (Holden 2000). Therefore, the tourism industry should be looked at as a system that is multidimensional (Cartel *et al.* 2001), requiring a multidisciplinary perspective in planning.

The clearly evident need for environmental planning and management of tourism (in light of the sometimes negative interaction between tourism and the physical environment) has become of concern to governments, Non-Governmental Organisations (NGO's), local communities and the private sector (Holden 2000). In reference to Mediterranean Europe, Pridham and Konstadakopulos (1997) noted that the impacts of tourism on the environment have become a serious concern and that environmental quality is regarded as a necessary condition for tourism. Therefore, in order for tourism planning to succeed, all the stakeholders must be involved in the planning process and tourism planning should be proactive rather than simply responding to various pressures as they arise (Tourism Policy Forum 1991).

Various authors highlight the need for collaboration among stakeholders if tourism planning and policy making are to be successful (Burns 1999, Bramwell and Sharman 1999, Holden 2000, Helmy and Cooper 2002, Carter *et al.* 2001, and UNEP 2003). Highlighting the benefits of stakeholder collaboration in tourism planning, Bramwell and Sharman (1999) noted three advantages: 'first, collaboration avoids the cost of resolving conflicts among stakeholders, second, collaborative relations may be more politically legitimate, third, it improves the coordination of policies and related actions and promotes consideration of the economic, environmental and social impacts of tourism' (1999:392).

If tourism is not well planned and carefully managed, it can overwhelm the very resources with which it attracts the visitors to the destination. Many of the negative impacts of tourism have occurred in areas where there has been little control and either poor or no management of tourism development (UNWTO 1997). Therefore, for positive outcomes to be realised and negative ones minimised, there is need for effective and efficient integrated tourism planning (Goeldner and Ritchie 2006), to ensure the sustainability of the tourism industry.

While there is a sizeable body of research upon the impacts of tourism (Holden 2000, Manson 2003, Goeldner and Ritchie 2006, Weaver 2006), little of it has been incorporated into what passes for tourism planning (Holden 2000, Goeldner and Ritchie 2006). In part, this is because much of what is called planning in tourism context is, in fact, marketing and promotion (Butler 1993). In general, there is need to develop a tourism sustainability framework and strategy to offer solutions for tourism development. Careful planning is required to control tourism development, based on analysis of the environmental resources of the area, stakeholders' aspirations and the socio-economic and political situation in a region (UNEP 2002). However it should be noted that since tourism planning operates at a range of scales, from national, through regional to the local level, problems of coordination are likely to arise (Mason 2003).

In light of all the above views and perspectives on the definitions and description of tourism, sustainable tourism and tourism planning, it is clear that tourism is a complex industry stretching across many different sectors with diverse stakeholders and perspectives. It is also realised that major terms like 'tourism' and concepts such as 'sustainable tourism', have no universally accepted interpretation due to the differences in environmental settings of the tourism resources, the nature and organisation of tourism and the perceptions of the different stakeholders which vary from one area to another. Therefore, in order for these terms and concepts to be operationalised, there is need to carry out destination-specific research in order to comprehensively understand sustainable tourism development, appropriate planning strategies, and the challenges being faced in a particular region. Such a study is very crucial to Uganda (especially in the Lake Victoria shore region) where tourism development has been taking place with either minimal or no sustainability-based planning.

#### **2.1.7 Tourism development and the need for environment-based tourism planning**

The reliance of tourism upon the natural and cultural resources of the environment entails that its development induces change, which can either be positive or negative. Unlike other sectors such as mining and heavy industry, tourism tended to remain largely immune from environmental criticism. The image of tourism had often been predominantly one of an 'environmentally friendly' activity - the 'smokeless industry' (Holden 2000). Historically, most tourism developments were undertaken without assessment or consideration of potential impacts except for anticipated economic benefits

(Butler 1993). However, continued research in tourism shows that, as much as it can lead to socio-economic development and contribute to natural resource conservation, tourism can also lead to devastating effects on the host environment (Butler 1993). As a result, in recent years many countries subject tourism developments to impact assessments before permission for investment is given and the impacts are closely monitored even after the establishment of the project.

Just as tourism has the capacity to contribute to rapid socio-economic development, it also has the capacity to lead to environmental degradation and be self-destructive - destroying the tourism assets needed to 'accommodate' the industry (Pigram, 1994; Tisdell 2001). Various authors (Mathieson and Wall 1982, Butler 1993, Holden 2000, Tisdell 2001, Hughes 2002, Reid 2003, Goeldner and Ritchie 2006,) have catalogued the negative physical environment impacts of tourism which include: over-use of resources like fuel wood and water that may lead to deforestation and water scarcity; reclamation of wetlands; construction of tourism and recreational facilities that increases pressure on resources (like fertile soils, forests, wildlife habitat and on scenic landscapes); and pollution of the air, soil and water as result of poor waste management. Tourism activities may also lead to other effects like trampling of vegetation, destruction of coral reefs, eventually leading to loss of biodiversity and other physical impacts. Negative impacts usually occur when the level of visitor use is greater than the environment's ability to cope with its use within the acceptable limits of change (UNEP 2002). Many of the negative impacts are interrelated and result from the cumulative and long-term impacts of tourism development (UNWTO 1997).

However, the above should not gainsay the fact that tourism has positive socio-economic and environmental effects. Tourism can significantly contribute to environmental protection, conservation and restoration of biological diversity and sustainable use of natural resources (UNEP 2002). Through the impetus of tourism, the establishment of sanctuaries including National Parks helps protect environmentally sensitive areas from other more damaging forms of land use. Revenue collected from tourism can be invested in conservation and environmental awareness programs and the alternative employment created by tourism indirectly helps to reduce pressure local people could have exerted on resources like agriculture, soils and forests. In general, tourism may contribute significantly to improved environmental management and planning which minimises the

otherwise negative environmental effects like pollution from poor waste disposal (Manson 2003, UNWTO 2004a, Weaver 2006).

According to UNWTO (1997), whether or not tourism will result in negative environmental impacts, depends on a variety of factors, which include;

- The amount or volume of tourism (the number of actual tourists and the extent of development put in place to support tourism)
- Concentration of tourism use, both at particular sites and at particular times.
- The type of use or tourist activity that takes place at a destination.
- The type of environment being impacted, since environments differ in terms of their sensitivity and fragility.
- The nature of management and planning of tourism impacts of tourism are closely related to the types of planning and management in the region.

If tourism is not well planned and carefully managed, it can overwhelm the very resources with which it attracts the visitors to the destination. Many of the negative impacts of tourism have occurred in areas where there has been little control and either poor or no management of tourism development (UNWTO 1997). Therefore, for positive outcomes to be realised and negative ones minimised, there is need for effective and efficient integrated tourism development planning (Hall 2000, Holden 2000, Weaver 2006 Goeldner and Ritchie 2006) to ensure the sustainability of the tourism industry.

However, in developing countries like Uganda, where integrated tourism development planning is either lacking or poorly administered, negative environmental effects from tourism may continue to occur especially on the fringes of urban areas where there are competing land uses and increasing population. This therefore calls for formulation of strategies, that will ensure tourism develops, and at the same time the environment on which tourism survives is not compromised. The sustainable tourism strategy is currently seen as to offer the best approach to tourism development. However in order to apply and later on evaluate this strategy, there is need to collect comprehensive data on the tourism resources, levels of tourism development and its' impacts.

In spite of the knowledge concerning possible environmental impacts of tourism, the challenge remains in terms of identifying the precise nature and scale of the impacts.

There are a number of significant methodological challenges that are faced when undertaking research on the environmental impacts of tourism (Mathieson and Wall 1982:94), they include

- The difficulty of distinguishing between changes induced by tourism and those induced by other activities
- The lack of information concerning conditions prior to the advent of tourism and, hence, the lack of baseline against which change may be measured;
- The paucity of information on the numbers, types and tolerance levels of different species of flora and fauna.

As a result the impact of outdoor recreation on the environment has not been well documented (Mathieson and Wall 1982), as well as how planning can be used to manage them. Few environmental based planning models have been developed, such as the Dowling's model (Dowling 1993) that explores the links between planning and regional tourism development. Hall and Lew (1998) later noted that research on the physical impacts of tourism on the environment was still at a relatively early stage of development and presented an important area of future research, particularly in the area of sustainable tourism development. Indeed, in response to the global focus on sustainable development, tourism has increasingly adopted indicators for sustainable tourism development, which have currently become major component of tourism planning and management (UNWTO 2004a). Based on selected indicators, this study examines the performance of tourism sites along the Lake Victoria shore region and attempts to develop a planning approach that can be used to enhance STD.

### **2.1.8 Lake tourism**

Lakes are open water bodies, ponds, dams or reservoirs on the surface of the earth, representing a valuable resource utilised for a variety of human activities (Cooper 2006) such as tourism. In various parts of the world, lakes and coastal areas in general form a vital component of the tourism and recreation industry (Hall and Harkonen 2006, Cooper 2006, Shaw and Agarwal 2007). However, despite that fact that they are major tourist destinations, academic interest in such areas has been limited compared to others forms of tourism (Shaw and Agarwal 2007). This has especially been true with regards to lake tourism where limited research has been undertaken (Hall and Harkonen 2006) as a result

there has been little critical assessment of its development and management (Shaw and Agarwal 2007).

Although some research has been carried on lake tourism (Puczko and Ratz 2000, Ryhanen 2001) most of it is primarily focused on the developed world especially on the Great lakes of North America (Hall and Harkonen 2006) and Europe (Shaw and Agarwal 2007). However, even then, literature on European lake destinations as tourist phenomena is difficult to find especially on lake tourism planning and development (Ryhanen 2001). This has partly been as a result of 'lake tourism' being an elusive concept (Ryhanen 2001). According to Hall and Harkonen (2006), the difficult to define lake tourism means there is no separate set of statistics that solely detail how many people visit lakes for recreation tourism purposes.

Lake tourism management, just like tourism management in general, is considered to be complex resulting from the wide array of actors and the varied interactions between social systems and environmental processes operating within contexts at different spatial levels (Shaw and Agarwal 2007). The idea of complexity has gained prominence in social science research (Bramwell and Profret 2007) in fields such as tourism. According to Shaw and Agarwal (2007), the notion of complexity should be used to help us understand tourism growth management and to improve the practical approaches to it that may be adopted. Tourism management and planning in lake regions is crucial given the lacustrine environment, which is in most cases ecologically sensitive, demanding high levels of management and coordination between users (Cooper 2006). In general, lakes are particularly vulnerable to change by forces both external to tourism and also by tourism itself (Cooper 2006). The impact of tourism on the lake environments is mainly a function of the type and number of people and activities being engaged in, and the nature of the lake environment itself. The impacts are mainly substantial on lakes in the peri urban areas of large urban populations and those within day-tripping distance from the urban conurbations (Hall and Harkonen 2006). This therefore highlights the need to have specific research focusing on lake and lakeshore tourism, since it represents a unique destination circumstances.

Lake Victoria, the largest lake in Africa, is a huge natural resource, which serves not only the people of East Africa, but also the world in general in terms of its waters and

immense biodiversity base. The three East Africa countries of Uganda, Kenya and Tanzania share it, with approximately 30 million people living within its catchment area (Ntiba *et al.* 2001). A number of economic activities take place in the basin such as agriculture, forestry, transport and tourism. However, the sustainability of lake's resources and the economic activities is threatened by the increasing levels of pollution (from industries, urban waste and agriculture sources), over fishing, noxious waterweeds and other associated problems (Ntiba *et al.* 2001, LVEMP 2005).

To address such challenges, trans-national bodies have been set up to coordinate resource use and management among the 3 countries. Such bodies include Lake Victoria Environment Management Programme (LVEMP), Lake Victoria Local Authorities Cooperation (LVRLAC), Lake Victoria Fisheries Organisation (LVFO) and Lake Victoria development programme initiated by the East African Community (EAC). However, these trans-national bodies have been faced by a number of challenges in managing the lakes transboundary resources. The major challenge has been the lack of harmonised laws and regulations governing and controlling resource use and management. Each of the 3 countries have different regulations, standards and penalties, which makes implementation and enforcement of regional policies difficult (Ntiba *et al.* 2001).

A closer analysis of the different researches carried out in the Lake Victoria region reveals that more attention has been given to sectors like fishing, agriculture less if any given to tourism. Indeed, the trans-national bodies set up hardly address issues dealing with tourism development, management and planning. Limited or no lake tourism research in the Lake Victoria region, points to the need for reorienting the research focus – an aspect this study attempts to contribute to using the scenario in Uganda. The Lake Victoria region, with a sensitive ecology and located in the urban and peri urban areas of Kampala and Entebbe, therefore urgently needs a study like this one to analyse the nature of lake tourism and develop a planning approach that will ensure sustainable development of tourism and other related sectors.

## **2.2 Theoretical review**

Exploring the theoretical base of planning is important because it helps understand the different standpoints from which solutions are designed to address the perceived

problems. According to Hall (2000), planning theory has the capacity to inform practice, thereby offering the opportunity for reflection and improvement of the planning process toward certain goals and objectives. However, Hall notes that, planning theory, especially tourism planning theory, is often regarded as having a soft theoretical base. Reid (2003) expresses a similar view and identifies two fundamental inadequacies tourism planning suffers from. First, there is lack of theoretical literature, specific to tourism development, which can be used to explain and predict how tourism behaviour is altered under various conditions. Few normative theories exist which specify on what basis tourism planning should proceed in order to accomplish its stated goals of profit maximisation while maintaining sustainable communities and environments (2003:144). Secondly, there is general lack of implementation theory that can be deployed within tourism planning. There is reliance on economic and business concepts, yet tourism development affects the social and environmental conditions of so many people's lives (2003:145).

Different theories, models or schools of planning have been developed, each reflecting different values, assumptions and beliefs about the nature of the world for which planning is done (Mitchell 2002). However, limited theories have been advanced for tourism planning hence the tendency to rely on other theories constructed for purposes other than tourism development. Even then the general theories are often treated in isolation from each other and, consequently, fail to be implemented in tourism in an integrated or systematic way (Reid 2003).

Mason (2003), Fennell (2003), Goeldner and Ritchie (2006), Weaver (2006), among others, refer to a number of tourism specific theories that have developed over time. The theories include: Plog's (1973) theory which investigated the psychological make up of tourists and how it influences their destination choices and travel patterns; Cohen (1972) analysing behaviour and typology of tourists; and Doxey's (1975) theory explaining the tourist-host interaction using an irritation index. However, these theories focus more on tourist characteristics than on tourism planning. Butler's (1980) theory on destination life-cycle is probably the single most important theory contributing to tourism planning and management (Mason 2003). It explains the processes and stages through which resorts develop and highlights that unregulated tourism development eventually undermines the very foundation assets at a tourist destination (Weaver 2006) unless remedial action is taken. Butler's theory identifies the stages through which resorts

develop as the number of tourists increases over time. However, it does not clearly explain the processes in each stage, how tourism planning can influence them and how it can help resorts to avoid some stages (such as stagnation and decline stages).

In general none of the above theories directly addresses aspects of planning and how indicators of sustainable tourism can be integrated into tourism planning. Nevertheless, the theories help describe the processes and stages tourism development goes through, that are obviously important for tourism planning to take into consideration. For instance, Butler's model highlights the need for tourism planners and managers to focus on destination's ecological quality, since its decline will result into tourism's gradual demise (Fennell 2003).

As a result of limited tourism-specific planning theories, this study reviews a number of general planning theories in order to understand how they are applied in various fields in order to realise desired ends. They are further evaluated on how relevant they are to the planning situation in the study area, especially how they can contribute to the understanding and achievement of STD in the lakeshore region. The theories reviewed include; rational comprehensive planning, incremental planning, systems theory, satisficing, optimising and multiplanar theories.

### **Rational Comprehensive Planning (RCP)**

Rational Comprehensive Planning (RCP) – also referred to as synoptic planning – is the most traditional 'ideal' model (Veal 2006) and most other models have developed based on its criticism (Mitchell 2002), by de-emphasising or omitting some aspects (Veal 2006). Hodge (1994), as cited by MacLeod (1996:3) notes that this theory rose in response to problems brought about by urban growth in the 19<sup>th</sup> century. This was at a time when scientific methods were the main methods of finding solutions to urban problems.

This theory is based on the assumption that those involved in planning are 'economic people' who judge alternatives against criterion of economic efficiency and seek to maximise returns. Those involved apply rational decision-making to planning by consistently identifying and ranking goals, values and objectives from all the collected necessary data (Mitchell 2002). They then choose a course of action that promises to maximise the benefits relative to the effort or cost required (Chandra *et. al* 2007). This

according to the theory is done through a number of established steps or phases, which include: defining the problem, goal setting, identification of policy alternatives, evaluation of means against ends, implementation, monitoring and evaluation. These are linked up with feedback loops creating possibility of incorporating changes (Mitchell 2002).

In practice, successful application of this theory requires exhaustive information gathering and analysis (MacLeod 1996). It stresses objectivity, adequate information and analysis, which allow planners to identify the best possible course of action. It approaches problems from a systems (integrated) viewpoint, using conceptual or mathematical models that relate ends (objectives) to means (resources and constraints), with heavy reliance on numbers (MacLeod 1996) and quantitative analysis (Mitchell 2002). By assuming that a community's various collective goals can be measured in some effective way, RCP side-steps the issue of conflict by presuming a discernable public interest (MacLeod 1996).

Although the theory has been widely applied in various fields like anthropology, political science, psychology and sociology (Chandra *et. al* 2007) due to its logical and deliberate process, it is best applied in purely scientific and econometric studies because it incorporates the fundamental issues, ends, means, trade-offs, and action-taking, which are part of most rational planning activities (Hudson 1979, as cited by MacLeod 1996). Today, its application is evident in some official plans and the plan-making processes both of which involve scientific methods like benefit-cost analysis, forecasts (Mitchell 2002), studies of anticipated social and environmental impacts, and goal statements (MacLeod 1996).

However, RCP is idealistic in its aims and attempts to bring the 'greatest good' to the 'greatest number'. The theory strives to be objective, technical, and excludes subjective and emotional discussion sparked by divergent perception of problem (MacLeod 1996), which is unrealistic especially in tourism industry with diverse stakeholder views. It also attempts to separate planning from politics by ignoring the political considerations of public interest (MacLeod 1996), yet planning is highly political (Hall 2000). Veal (2006) notes that political interests often intervene even before 'rational' or 'objective' decisions can be made.

Methodologically, RCP can only be applied in relatively simple problems and only in a modified form (MacLeod 1996). It ignores subjectivity, which is very crucial in the planning of a service industry like tourism. More so, in the real world, inherent limitations on resources, information and time make it impossible to use RCP in its purest form. Hence it becomes virtually impossible to be completely ‘comprehensive’ in assessing alternative options (Veal 2006). The impossibility of grasping all variables, predicting all consequences (Chandra *et al.* 2007) and lack of resources and time to collect information needed to make a rational choice, all limit the practical application of this theory. This theory is even more difficult to apply in developing countries such as Uganda where there is poor record keeping about variables, particularly pertaining to the physical environment indicators of STD. Even when such data can be collected, it is not always easy to analyse them due to the existence of intangible attributes (Mitchell 2002) that indeed exist in tourism.

In general the RCP theory does not seem well suited to deal with complexity and uncertainty (Mitchell 2002) yet tourism related problems tend to be complex involving consideration of public opinion, resource conditions and other influences that tend to be qualitative and therefore not easily solvable in such a direct manner (Gunn 2002). This therefore renders the RCP theory inappropriate to base on in order to plan for STD in the Lake Victoria shore region. Nevertheless, despite other alternative theories, RCP still remains the universal reference point (Veal 2006) and its shortcomings are not enough to lead to its complete rejection. Indeed, as noted by Faludi (1973), as cited by MacLeod (1996:4), all decision-making should at least try to be as rational and comprehensive as possible.

### **Incremental Planning**

Incremental Planning (IP) – also sometimes referred to as ‘disjointed incrementalism’ or ‘muddling through’ (MacLeod 1996, Mitchell 2002, Hiller 2007), was developed in the 1960’s by Charles Lindblom as an alternative to RCP. This theory is based on the idea that people are ‘boundedly rational’, who quickly simplify complexity and confusion which characterise the real world, into a more simple model (Mitchell 2002).

Rather than undertaking fundamental inquiry into all alternatives and consequences, IP theory restricts the number of alternatives and considers a limited number of important consequences for any given possible policy (Hiller 2007). Therefore in the incremental

approach the planner, faced with multiple problems, goals and values, does not try to optimise, but rather to identify practical attainable goals (Mitchell 2002). The theory considers remedial orientation and mutual adjustment (Hiller 2007) and in this way, IP caters for decision-making as it actually occurs. IP theory recognises that policy is continually being made and re-made, thereby avoiding errors that come with radical change in policy and stays within predictive capability (Lindblom 1959, cited by MacLeod 1996:5).

The theory advances that public policy is actually accomplished through decentralised bargaining in a free market and a democratic political economy. A key element of IP is its consideration of a pluralistic view of a society. It contends that society is composed of competing interest groups who lobby government for certain policies (MacLeod 1996). The model offers the advantage of spanning a wide range of communicative forms (Sager 1994, cited by Hiller 2007:263). IP therefore maintains that plans should not be developed through a strict process but rather, through a series of consultations based largely on peoples' actual experiences (MacLeod 1996). Large decisions must be divided into smaller ones and distributed among a large number of actors who make decisions independently, each pursuing their separate interests (Friedmann 1987, as cited by MacLeod 1996:4) and forming alliances to get support for their goals. Under IP, the state serves as an independent adjudicator, seeking compromises between different groups. This way, the public interest is catered for.

Hiller (2007) cites various authors (Weiss and woodhouse 1992, Sager 1994, 2002, Harper and Stein 1994, 1995, 2006), who all agree that incremental thinking and acting has the important advantage of being rational in an environment of high uncertainty. IP also has the ability to enable short-term strategic choices avoiding the potential paralysis of optimisation. The incremental approach is considered a preferably way of planning because it captures much of reality about the world in which planners function (Mitchell 2002). The theory is therefore claimed to be very workable and universally applicable (Hiller 2007).

However, the IP theory has been criticised basing on its weaknesses. The theory which takes up only a limited number of alternatives, is considered to be inherently conservative and the incremental planner appearing to be excessively narrow (Hiller

2007), tentative, timid, indecisive, hesitant and cautious (Mitchell 2002). The reliance on trial and error means that IP seems to proceed without knowing exactly where it is going – merely muddling through without fixed direction (Hiller 2007). Friedmann (1987, as cited by Hiller 2007:264) criticises incrementalism for its remedial piecemeal approach. However, Lindblom (1974) had earlier noted that people fall into environmental problems through piecemeal gradualism, which leaves open the possibility that the same route is the only way out of the problem (Mitchell 2002:41).

More so the theory considers options that are marginally different from the status quo, yet there may be situations in which a sharp change in policy or practice is needed. Under incrementalism, the planner is unlikely to consider innovative ways significantly different from the current practice (Mitchell 2002). Further more, critics of incremental planning argue that certain groups dominate society, which makes competition unequal and undemocratic. Decisions reached using incrementalism may therefore exclude the values and interests of the traditionally marginalised like the poor, aged, women and people with disabilities (Etzioni 1967, as cited by Hiller 2007:263). Incremental approach has also been criticised as being reactive to existing conditions, rather than being proactive in trying to move towards an improved state of affairs (Mitchell 2002).

Nonetheless, compared to RCP the incremental planning theory has: lesser demands for information; concentrates on the consequences of additional change; can be applied to yield determinate solutions; and is able to respond to the radically constrained situations faced by decision-makers.

### **Systems theory**

The systems theory in planning recognises the human environment as a complex system and the role of the planner is to control and guide change (McLoughlin 1969). As noted by Hall (2000), systems approach may provide valuable opportunities for the understanding of tourism and how it may be steered in one direction or another. In tourism studies, a number of authors (Holden 2000, Hall 2000, Gunn 2002, Fennell 2002, Pender 2005, Cooper *et al.* 2005, Goeldner and Ritchie 2006, Page 2007, George 2007) have hinted about the systems approach/analysis. They highlight the fact tourism is a system composed of various parts that are related to one another and they acknowledge that tourism cannot be planned without understanding the interrelationships among the several parts. Most reference is made to Leiper (1995) ‘tourism system’, which identifies

tourist generating regions, transit routes and tourism destination regions as the main interacting components of the tourism system. However Leiper's systems model has been criticised for being simplistic (Prosser 1998, as cited by Manson 2003:11). In general, systems theory tends to be concerned more with control (Hiller 2007), driven by technical expertise and leaving little room for public consultation and or input (Reid 2003). Nevertheless, the system theory has been applied to various disciplines of study. For instance, McLoughlin (1969) looks at the city as a system, indicating how the city evolves in a series of development phases (1969:83).

When referring to the systems approach, tourism studies mostly focus on describing the components that make up tourism as a system and not on how the systems theory can be applied to tourism planning in general and how to achieve desired goals in particular; for instance STD, as in the case of this study. Indeed, Farrell and Twining-Ward (2003) note: "...unfortunately, progress in tourism has lagged behind as researchers have only shown passing interest in whole systems approaches, despite the advantages such methods afford for coping with the multidisciplinary environment in which tourism operates. Researchers frequently refer to systems in casual reference, sometimes as a framework for focused understanding, and very occasionally as a real entity" (2003:278).

### **Satisficing theory**

Satisficing is a decision-making process through which an individual decides when an alternative approach or solution is sufficient to meet the desired goals rather than pursue the perfect approach (Simon, 1971:71 cited by Chandra *et al.* 2007). In general this theory postulates that planning involves efforts intended to attain some level of satisfaction as possible under the circumstances and the resources available. The level of attainment that defines 'satisfaction' is determined by what the decision maker is willing to settle for (Dror 1973). In further analysis of satisficing, Henden (2006), categorises and distinguishes between 'ordinary Satisficing' and 'genuine Satisficing'.

Whereas the economic person strives to maximise, in satisficing, the boundedly rational person (planner) searches for a solution, which is 'good enough' or satisfactory (Mitchell 2002). Therefore instead of concluding that some action is best or better than its alternatives, the planner often concludes that it is good enough or fine. Which means he/she 'satisfice' rather than maximise goodness or well-being (Henden 2006). Thus, a satisficing planner begins with setting objectives and targets what he/she believes are

feasible and desirable, then chooses alternatives to achieve them basing on what he/she considers good enough.

The above however forms the basis for the major criticism of the satisficing theory, since the planner is choosing an option he/she judges as satisfactory or good enough when he/she does not know that it is the best option (Henden 2006) for all other people. Thus the satisfier may view his/her choice of option from his/her own perspective and not from an all-encompassing perspective (Henden 2006). In addition, satisficing planners are not explicitly concerned with possibilities or probabilities. They do not produce radical changes from the past but are conservative with their plans. This is because they may satisfice based on the alternatives they are able to find and thus stop looking for more (Chandra *et al.* 2007) alternative options to solve the problems.

In this study, satisficing planning could not be easily applied since tourism development and planning should be perceived as satisfying to all the stakeholders whom are being planned for, and not only to the planners. More so, there aren't specific definitions or descriptions in tourism of what 'good enough' or 'satisfying' options are. An attempt to use this theory would require this study to exhaustively analyse, list and rank all the planning options, to be able to determine what was 'good enough'. Even then, inspite of the study time and resource limitation, in many situations it is neither possible to know the entire spectrum of options, nor is it possible to compare the benefits each may offer (Simon 1955, as cited by Chandra *et al.* 2007:4).

There are a number of other planning theories, which were considered by this study not to be very applicable to tourism planning in general, and to regional sustainable tourism planning in particular. For instance the optimising planning theory, which mainly relies on mathematical models to come up with ways by which minimum resources, can be utilised to realise maximum results (Forojalla 1993). This theory tends to ignore goals or variables that cannot be quantified, such as human resource factors, perceptions and reactions, which are common parameters in tourism and tourism planning. Another theory is the multiplanar theory, which is a perspectivalist approach that allows multiple opportunities for flexibility and experimentation along paths of making an area a better place (Hiller 2007). However it is mainly premised on spatial planning and governance of urban areas, hence no suitable for regional tourism planning.

After critical review of the above planning theories, the Incremental Planning (IP) theory was adopted to inform this study based on a number of reasons. First of all, the essence and approach of IP fitted the conditions in the study area. The lakeshore region is characterised by inadequate baseline information about tourism, applicability of alternative planning approaches and their likely consequences. In such a situation other theories, (for instance, Rational Comprehensive Planning) which require comprehensive information could not be applied. More so, this study constrained by time and resources could not conduct a survey to collect such information. Incremental theory therefore becomes appropriate to apply since it indicates that, in such a situation of unknown alternatives, limited number of alternatives can be explored based upon familiar and better-known experiences (Mitchell 2002).

Although incrementalism is criticised as being excessively narrow (Hiller 2007) and based on exploring limited alternatives, Mitchell (2006) argues that an incremental planner may be viewed as being realistic, pragmatic and a shrewd problem solver, who recognises and accepts the complexity and uncertainty characterising the real world especially in environmental and resource issues (2006:41). Indeed, this study does not attempt to address all alternatives of achieving STD in the lakeshore region but it identifies a number of variables that are used to try and develop an environmental-based performance planning approach. The theory was therefore appropriate given that this study was to be based on selected variables, which were not exhaustive of all there is to include in planning for STD.

Further more, IP theory was selected because attention is focused on solving ‘smaller problems’, when it is realised that the ‘larger problem’ cannot be solved through comprehensive means. With limited time and resources, this study decided to focus on the smaller problem: limited physical environment sustainability, than trying to comprehensively address the larger problem: limited achievement of STD in the lakeshore region. As a result physical environment variables were selected to try and develop a planning approach that would identify critical intervention points within the efforts to achieve STD in the sensitive lakeshore ecosystem. This study therefore acknowledges that the planning approach developed is a contribution and not a sole panacea of achieving STD in the lakeshore region. As argued by Mitchell (2006), the incremental planner may very well know that the chosen option may not be quite

adequate, but through sequential incremental decisions, the continual nibbling at the larger problem is as good as taking one large bite (2006:41). Incremental planning theory was therefore seen to offer a more realistic piecemeal approach to a rather detailed and complex sustainable tourism phenomena. Looking for efficient and effective ways to plan for STD is necessary, especially in a developing country like Uganda where realisation of sustainable tourism is threatened.

Another reason for adopting incrementalism, as opposed to other theories (such as rational planning and satisficing), is that incrementalism takes a pluralistic view of society with various interest groups involved through a series of consultations. Indeed according to Holden (2000) sustainable tourism (which forms the central theme of this study), is a concept applicable to all tourism levels (site, local community, regional, national and international) and all sectors (public and private sectors). Thus this theory creates an opportunity for various actors at different levels to get involved in planning for the common good. In the case of this study, the actors identified were: site managers, visitors, the local community, local and central government authorities, NGOs and CBOs. In fact, according to the UNWTO all the above are stakeholders must be considered in efforts geared towards achieving STD (UNWTO 1997).

More so, the pluralistic manner of incrementalism describes a natural decision-making process, whereby a plan with specific goals is arrived at through consensus. It rejects the notion that policies can be guided in terms of centralised institutions. On this basis IP theory was adopted because the study's planning scope extended beyond the central government to include lower planning levels and stakeholders in the lakeshore region. The pro-people nature of the theory allows planners to carry out planning based on mutual understanding amongst all stakeholders. It helps build on the past rather than starting from a clean sheet. This way, the incremental theory operates in a more democratic fashion, with planners acting as guides and ensure all stakeholders compromise (MacLeod 1996) on what is being planned.

However as earlier noted the incremental decision-making has been criticised for the possibilities of not being fully inclusive of the values and interests of the traditionally marginalised groups. In order to overcome this, while selecting local residents, this study ensured that respondents were representative of all different interest groups in the region.

More so, the theory is criticised for being more reactive than pro-active in nature. This study attempts to develop a planning approach that can, not only be applied in the already established tourism areas, but also to new areas - hence contributing to proactive tourism planning.

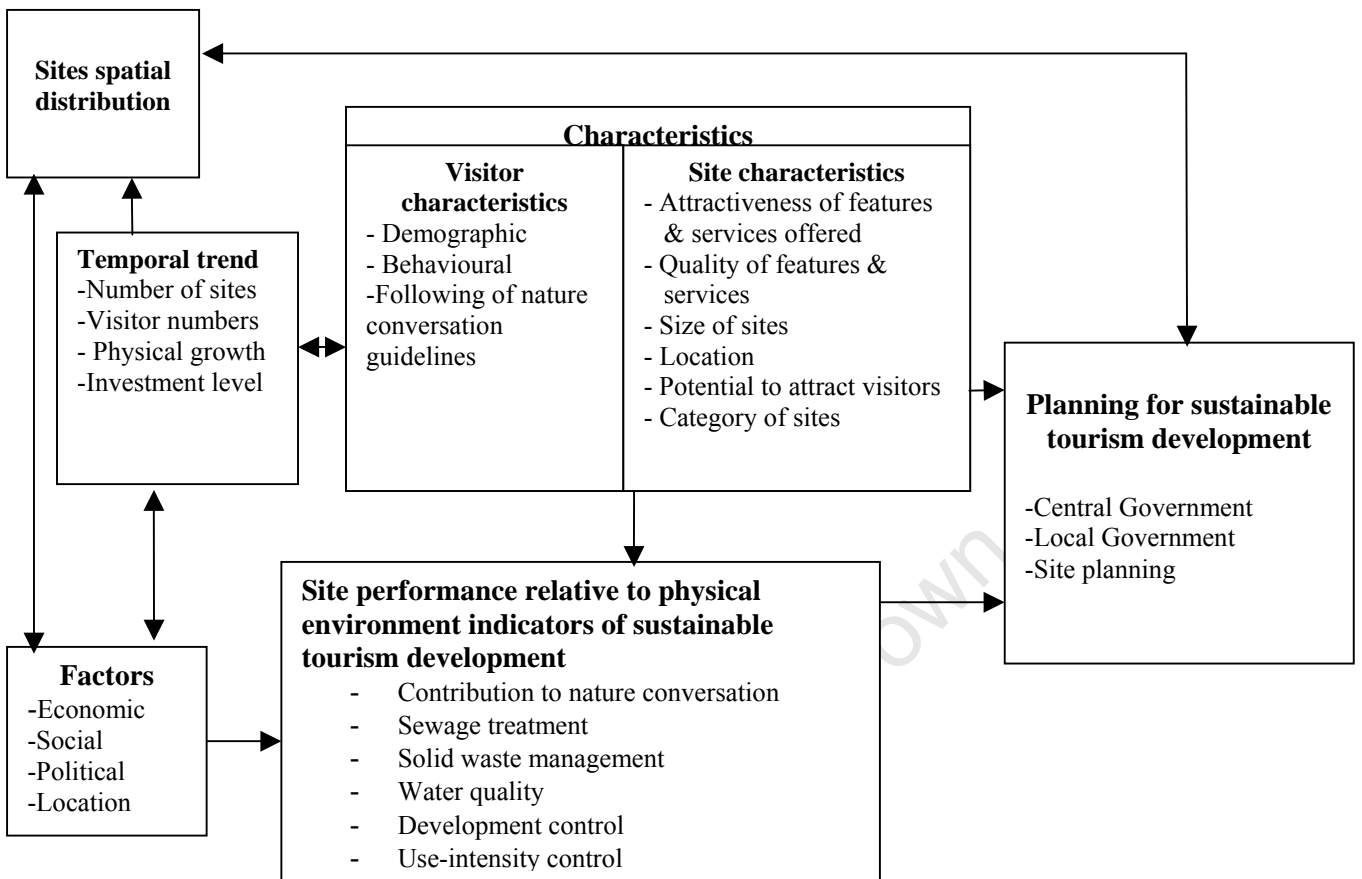
It must be pointed out that although incrementalism largely informs the study, where need arises aspects from other theories will be applied, since no single approach or modal of planning is perfect (Mitchell 2002). According to MacLeod (1996), different theories can be used together since each theory describes part of the planning picture. He explains that in daily planning practice, some planning departments usually prefer to use the RCP to develop the official plans and later employ incrementalism to implement the plans. However depending on the circumstances, planning would start off with incrementalism and later turn to RCP in order to achieve the goals.

Therefore, if need arises, this study will go contingent, applying what MacLeod (1996) Mitchell (2006) and Hillier (2007) refer to as 'mixed Scanning'. The basic idea in mixed scanning is that, planning relies mainly upon a continuous series of incremental decisions but also steadily keeps scanning a limited range of other alternatives. Planners however remain pragmatic by recognising the cost and efforts required to examine a wide variety of options (Mitchell 2002:42). In such a case, planning not only captures the strength of different theories, but also minimises their weaknesses.

### **2.3 Conceptual Framework**

On the basis of the preceding literature and theoretical review, this study is conceptualised and schematically represented in Figure 3.1.

**Figure 2.1 Conceptual framework**



*Source: Original*

In light of the foregoing literature, reference is made to a number of variables that influence STD. This study, in the above conceptual framework, identifies the dependent and independent variables, showing how they relate to each other. Planning (for STD) constituted the dependent variable and the selected independent variables that inform this planning include:

- The spatial distribution of the lakeshore sites
- The temporal trend of these sites,
- The site characteristics
- The characteristics of the visitors received at these sites
- The performance of the sites relative to the physical environment indicators of STD (contribution to conservation, solid waste management, sewage management or treatment, and so forth) and
- Factors responsible for site performance

The study also recognises that there are relationships within the independent variables. For instance, the temporal trend of the tourism sites is recognised to have an effect on the spatial distribution of the sites. Indeed, trend approached in terms of the number of sites established over time is certainly directly proportional to the spatial distribution: the more sites that are established the more they change the spatial distribution pattern. Equally, site performance is conceived to be affected by both site and visitor characteristics; and these very characteristics are also deemed to have an effect on the temporal trend. Actually, development in terms of the physical expansion of a tourism site tends to depend on the characteristics of the visitors received at the site, as well as on its own characteristics such as location, attractiveness, and quality of features and services offered to visitors. The recognition of these relationships notwithstanding, the study is largely confined to the description of each independent factor and how it contributes to informing planning for STD.

Furthermore, the study's framework is conceptualised following the incremental planning theory that was selected to inform this study after a critical theoretical review. Incremental planning permits the selection and use of limited variables in an effort to achieve practical attainable goals. This study's conceptual framework identifies the selected independent variables, and indicates the relationship with each other. Basing on these relationships, this study examines how they can be used to develop a planning approach that can incrementally contribute to attaining sustainable tourism goals in the lakeshore region.

In general, this chapter reviews the relevant theoretical and conceptual literature, which indicates the need for STD planning, if the adverse effects of tourism are to be avoided. However, there is limited literature detailing the critical intervention points in tourism planning, if STD is to be enhanced. Using a number of selected variables (as indicated in the conceptual framework), this study, based on tourism sites in the Lake Victoria shore region, attempts to empirically establish if an environment-based sustainable planning approach can be developed. In light of this, a methodological approach was conceived and developed as discussed in the next chapter.

## **CHAPTER THREE**

### **METHODOLOGY**

This chapter focuses on the methodology that was used to identify, collect and analyse relevant and adequate data in order to achieve the objectives and research questions stated in section 1.4. It presents and discusses the research and sampling design adopted for the study and how the sample size was determined. The chapter also highlights the various steps taken to select respondents, and how the data were collected, compiled and analysed.

#### **3.1 Research philosophy and design**

Research philosophy refers to the philosophical assumptions about how the world is perceived and how we can best come to understand it (Ritchie *et al.* 2005, Trochim 2006). While research design relates to the underlying structure and logical interconnections of the components of the study and how they influence each other at every stage of the study (Maxwell 1996, Rubin and Babbie 2008).

This study adopts aspects from both the positivism and post-positivism philosophies since both qualitative and quantitative data were to be collected. The positivism philosophy is applied in the collection of data on phenomena that would directly be observed and measured. This mainly applied to quantitative data such as, water quality and number of visitors. On the other hand the post-positivist philosophy mainly relates to qualitative data that is based on perceptions and views of what exists in the study area. This applies to perceptions and views on the quality of attractions and services, level of sustainable tourism and planning. In order for this study to generate data depicting the reality, views are collected from a number of respondents and correlated in order to get a representative picture of the reality. Although there has existed a debate on which philosophy is more appropriate in tourism research, Ritchie *et al.* (2005) notes that sometimes that pragmatic position is a mixture of both.

Given the ‘mixed’ philosophical foundation, this study is designed as a multifaceted descriptive and analytical study, using a mixed methods approach (as summarised in the overall research flow chart in Figure 3.2). It adopts this design because it is appropriate for the collection, description and analysis of all the qualitative and quantitative data, which includes sites’ spatial distribution, temporal trend, characteristics and performance data (Figure 3.1). These data are vital in informing and helping to design a planning approach for sustainable tourism development.

A multifaceted research design is used because it involves not only cross-sectional descriptive survey methods that include administering of questionnaires and interviews, but also geo-spatial methods that include Remote Sensing (RS) and Geographic Information System (GIS) applications (see Figure 3.2). Selected geo-spatial techniques were used to generate the primary spatial data needed to describe and analyse the spatial distribution of the sites. The survey methods employed enabled the collection of data on the performance of the sites, their temporal trends over time, factors behind the performance, and the characteristics of the visitors received. Most of the data could only be collected in a descriptive form, due to limited or no record keeping. As a result, the study was mainly descriptive in nature. The mixed methods approach was found appropriate to employ since the data was both quantitative and qualitative in nature. Observation and documentation as the non-survey methods were used to supplement data collection and enhance analysis to derive a planning approach to sustainable tourism development in the lakeshore region. Further explanation of how the research design is applied appears in the subsequent sections of this chapter.

### **3.2 Sampling design**

Sample design is concerned with how to select the part of the population to be included in the study (Kalton 1983). This section explains what criteria were used in selecting the study area, tourism sites and the respondents

#### **3.2.1 Selection of study area**

The Entebbe-Kampala lakeshore region (see Figure 4.1) was selected as a suitable area for study based on a number of factors. These included:

- Tourism establishments are rapidly developing in this area
- The area has a wide range of tourism establishments – resorts, hotels, camping sites and conservation areas which are pertinent to the assessment of performance of different categories of tourism establishments
- The administrative, tourism and settlement infrastructure in the area provide opportunities for selecting respondents targeted in the study, that is, the central government and local government officials, site managers, and local residents
- The lakeshore region is a sensitive ecological area which warrants attention in respect to the performance of tourism sites since they have a high potential of either conserving or destroying the physical environment

- The area is located along a rapidly urbanising lakeshore region with Entebbe International Airport and Entebbe Municipality at its south western end and Kampala City to the north east – creating a unique zone along the Lake Victoria shoreline
- The region is susceptible to environmental degradation resulting from multiple, uncontrolled and sometimes conflicting land uses
- The area is very accessible since some of the study area is within the administrative boundaries of Entebbe Municipality and Kampala City and the rest of the study area within a 40 km distance from either Entebbe or Kampala. This made data collection more convenient

### 3.2.2 Selection of tourism sites

Each tourism site located in the study area was given an equal chance of being selected to participate in the study. This was based on the fact that each site was considered a component of tourism in the area, based on which effective planning for sustainable tourism development can be suggested. A reconnaissance survey was taken along the lakeshore region recording the name and location of each site using a Global Positioning System (GPS). All tourist sites in the study area were categorised and a list was compiled for use as a sampling frame for the sites. It comprised 24 sites as shown in Table 3.1.

**Table 3.1 Tourism sites in the study area**

Site category	Tourism site	Coordinates	
		Latitude	Longitude
Beach hotels	Speak Resort and Conference Centre	00° 14' 30"	032° 37' 24"
	Imperial Botanical Beach Hotel	00° 03' 32"	032° 28' 47"
	Imperial Resort Beach Hotel	00° 02' 48"	032° 28' 13"
Beach resorts (With accommodation)	Nabinonya Beach	00° 06' 31"	032° 32' 49"
	Ssesse Gateway	00° 05' 24"	032° 29' 23"
	Anderita Hotel	00° 04' 12"	032° 28' 53"
	Ranch on the Lake	00° 12' 31"	032° 34' 56"
	Lutembe Beach	00° 10' 05"	032° 34' 39"
	New Beach	00° 05' 19"	032° 29' 27"
Beach resorts (No accommodation)	Victoria Café	00° 05' 27"	032° 29' 15"
	K.K Beach	00° 15' 26"	032° 38' 10"
	Entebbe Sailing Club	00° 04' 32"	032° 29' 05"
	Kisubi Beach	00° 06' 46"	032° 32' 47"
	Garuga Golf and County Club	00° 03' 17"	032° 34' 06"
	Gaba Beach	00° 15' 29"	032° 38' 13"
	Aero Beach	00° 02' 29"	032° 27' 38"
	Peninel Beach Restaurant	00° 02' 28"	032° 27' 35"
	Lido Beach	00° 02' 24"	032° 27' 27"
	Water Front Club	00° 03' 27"	032° 28' 45"
Conservation sites	Botanical Gardens	00° 03' 45"	032° 28' 52"
	Uganda Wildlife Educational Centre (UWEC)	00° 03' 21"	032° 28' 40"
Camping sites	Kaazi Camping Ground	00° 13' 20"	032° 37' 06"
	Kitubulu Camping Site	00° 04' 55"	032° 29' 06"
	Kisubi Camping Site	00° 06' 57"	032° 32' 44"

However, all the above mentioned sites could not be included in the study. Following the reconnaissance survey, the following tourism sites were eliminated due to reasons given against them:

- (i) Speak Resort and Conference Centre: Access to conduct research interviews at this site was denied as a matter of management policy.
- (ii) Anderita Hotel and Victoria Café were also reluctant to be part of the study so they were not included.
- (iii) Kaazi Camping Ground: This is a seasonal site mainly used by the Uganda Scouts and Girl Guides Association. It was not in operation at the time of data collection.
- (iv) Kitubulu and Kisubi camping sites were also not included since each time the researcher visited them there were no visitors camping.
- (v) Garuga Golf and County Club: Site was temporarily not in operation at the time of data collection.
- (vi) Entebbe Sailing Club and Water Front Club: These are exclusively 'members only' sites and out of bounds for non-members.
- (vii) Aero Beach, Penile Beach Restaurant and New Beach: These were new beaches and not yet operational. They were in final preparations to open.

After elimination of the above sites, the remaining twelve sites were all included in the study in order to obtain more representative results. These were:

- (a) Gaba Beach
- (b) K.K Beach
- (c) Ranch on the Lake
- (d) Lutembe
- (e) Kisubi Beach
- (f) Nabinonya Beach
- (g) Ssese Gateway Beach
- (h) Botanical Gardens
- (i) Imperial Botanical Beach Hotel
- (j) Uganda Wildlife Educational Centre (UWEC)
- (k) Imperial Resort Beach Hotel
- (l) Lido Beach

Although the other twelve sites were not included in the sample, the remaining sites are adequately representative of the tourism industry along the Lake Victoria shores, since the sample was diverse (belonging to different site categories) and represented 50% of the total sites. Moreover, fewer sites enabled the study to carry out more detailed investigation than would have been the case with all the tourism sites included.

### **3.2.3 Sample frame**

The sample frame of this study included: site management, visitors, local residents and officials from the local government, Ministry of Tourism Trade and Industry (MTTI), National Environment Authority (NEMA), Community Based Organisations (CBOs) and Non-Governmental Organisations (NGOs). Why each of the above respondent categories were selected is explained and justified as follows:

(i) Site management: They were selected because they were considered as key stakeholders in the tourism industry since they are the ones who make management, investment and development decisions at the site level. They would provide valuable information as regards the temporal trends, site and visitor characteristics, site performance in relation to the physical environment and factors responsible for the levels of site performance

(ii) Visitors: The theoretically sample frame was all the visitors who came to the sites. Visitors were selected for the purposes of establishing visitor characteristics and their perceptions on the performance of the sites in relation to the physical environment indicators. Specifically, their views as to what attracted them to a particular site, how they rated the sites and its facilities, and on whether the site's management practices were considered environmentally friendly. All these variables were required to accomplish the study.

(iii) Local residents: These were people who were either residing or working in the neighbourhoods of the selected sites. Since they lived or worked near the sites, they were selected to participate in the study in order to elicit information on the influence of tourist sites on the surrounding physical environment and sustainable tourism development in general.

(iv) Local government officials: They control administrative units in whose jurisdiction the selected sites are located. They were targeted to give information about the

development planning and control measures in place and the general performance of tourism sites in relation to the selected physical environment performance indicators.

(v) Officials from MTTI, NEMA, CBO, and NGO: These organisations were selected because they are either directly or indirectly involved in the coordinating, monitoring or control of tourism or parts of the tourism industry. They were regarded as key informants about the physical environment indicators and standards of sustainable tourism development in Uganda. They were also expected to divulge information on the extent to which existing regulations were being followed while establishing and operating the sites. Such information was sought to help establish whether or not site activities were favourable to the physical environment and therefore sustainable tourism development. This information was intended to help suggest remedies.

### **3.3 Sample size and sampling techniques**

The sample population of the visitors and local residents hypothetically included all the visitors and local residents, however:

(a) Records showing the number of visitors received at each of the selected sites were incomplete. Even when some sites kept records, they were often reluctant to release them. Some sites refused completely to cooperate, reasoning that their respective management policies did not allow them to release the figures of the received visitors. Efforts to trace the figures at Uganda Bureau of Statistics (UBOS), Uganda Tourism Board (UTB) and at Ministry of Tourism Trade and Industry (MTTI) were also futile, as no site-specific records existed there.

(b) There were no records on the specific number of local residents experiencing the environment effects of selected sites.

Scenarios where destinations have very little information concerning the nature of their visitors are a typical problem to many tourism studies and as such alternative sampling methods have to be employed (Finn *et al.* 2000). In effect, the visitors and local residents population in this study was considered infinite and sample size was determined using a statistical formula for infinite populations.

According to Kothari (2005), the formula for determining the size of the sample from an infinite population is given as:

$$e = z \sqrt{\frac{pq}{n}} \dots\dots\dots (1)$$

Where

*e* is the margin of error allowed in the selection of the sample

*z* is the z-value corresponding to the selected level of confidence.

*p* is the proportion of the study population with the desired attributes

*q* is the proportion of the study population with the undesired attributes and is given by

$$1 - p$$

In this study, and as Smith (1995) observed for most research purposes, the sample is selected at a 95% confidence level, which means that the margin of error allowed was 5%. Therefore, *e* = 0.05. The z-value corresponding to the 95% confidence level is given in the Normal Distribution Table as 1.96. Therefore *z* = 1.96.

Kothari (2005:179) further observes that when sampling from an infinite population, *p* is taken to be equal to half the population. Therefore *p* = 0.5. This implies that *q* = 1 – 0.5 = 0.5. By squaring both sides and making ‘*n*’ the subject, formula (1) given above can be simplified and re-arranged as follows:

$$n = \frac{z^2 pq}{e^2} \dots\dots\dots (2)$$

Substituting the values for *e*, *z*, *p* and *q*, formula (2) gives *n*, the sample size as follows:

$$\begin{aligned} n &= \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2} \\ &= 384.16 \approx 384 \end{aligned}$$

Since the actual numbers of both visitors to each site and local residents experiencing the environmental effects was unknown, the obtained sample size 384 was used. For this study, the goal was to obtain a total sample size of 267 visitors at the sites in order to attain a confidence interval of plus or minus 6% (see Veal 2006). Since the number of visitors to each site was unknown, the visitor sample size (267) was equally divided among the 12 sites hence an approximate sample target of 22 visitors per site. Similarly the remaining sample size (117) was equally divided among the 12 sites to attain an approximate sample size of 10 local residents per site. Local residents were allocated a smaller proportion since only key respondents were to be selected to represent the views of the wider local residential population, whereas for the visitors each was expressing an

individual opinion, hence a higher proportion was needed to capture a representative view.

Visitors were selected using both judgmental and simple random sampling. Theoretically, each visitor found at a selected site at the time of data collection had, by virtue of being a visitor, an equal chance of being selected to participate in the study. The 'constant rate' sample technique was applied, where following completion of the designed questionnaire by one respondent, the next person to pass by would be requested to spare some time and participate (Veal 1997, as cited by Cottrell *et al.* 2004:412). When a visitor declined to participate, the next would be selected. However, visitors who were below 15 years of age were eliminated since they were considered too young and not in position to give the required data especially on sustainable tourism and planning. However, this selection method met some limitations that account for the level of non-response. They include:

- (a) Certain visitors spoke no English or any local language.
- (b) Some visitors were too skeptical and therefore showed reluctance to participate in the study.
- (c) Others were so pre-occupied with their leisure programs and activities that they said they could not spare any time to answer the questionnaires.

The above limitations meant that some of the would-be visitor respondents were omitted from the surveys. This notwithstanding, a 75% average response rate was attained at each of the selected sites (see Table 3.2).

In respect of the local residents, since the study could not easily identify specific residents experiencing the environment effects of selected sites, community and opinion leaders were selected. They were considered suitable key informants since they were expected to best know and express the collective views of the local residents. Community leaders (local council chairpersons) were purposively selected and opinion leaders (persons who have been actively engaged in community work) were selected using the snowball sampling method.

### **3.4 Response rate**

The target sample and response rate of visitors and local residents at each of the selected sites are shown in Table 3.2

**Table 3.2 Visitor and local residents respondents by site**

Site	Visitors			Local residents		
	Target sample	Actual Response	Response Rate (%)	Target sample	Actual Response	Response Rate (%)
Gaba Beach	22	16	73	10	9	90
K.K Beach	22	15	68	10	8	80
Ranch on the Lake	22	13	59	10	8	80
Lutembe	22	15	68	10	10	100
Kisubi Beach	22	14	64	10	9	90
Nabinonya Beach	22	17	77	10	10	100
Ssesse Gateway Beach	22	20	91	10	10	100
Botanical Gardens	22	13	59	10	10	100
Imperial Botanical Beach Hotel	22	13	59	10	9	90
UWEC	22	22	100	10	9	90
Imperial Resort Beach Hotel	22	20	91	10	7	70
Lido Beach	22	21	95	10	10	100
<b>Total</b>	<b>264</b>	<b>199</b>		<b>120</b>	<b>109</b>	

Table 3.2 indicates that, of the visitors target sample size (n= 267), 199 were interviewed representing 75% response rate. Out of 117 local residents sample target, 109 were interviewed representing 93% response rate.

For the other respondent categories, purposive sampling was used since the sample population was known and key sample respondents could easily be identified. The sample size for each category was determined as shown below in Table 3.3

**Table 3.3 Sample size by respondent category**

Category of Respondents	Targeted size	Comment/justification of sample
Site management	12	From each of the 12 selected sites, one overall site manager was purposively selected to represent the views of the sites management
Local government officials	6	The selected sites are located within a geopolitical area that is under three local governments, hence from each area one physical planner and one environment officer was purposively selected since they are directly in charge of development control and the environment respectively.
Officials from MTTI, NEMA CBO, NGO	6	Two officials each from MTTI and NEMA (since they are major organisations) and one official each from a CBO and NGO in the area were purposively selected to represent the views of their organisations

The total target sample of this study was therefore 408 respondents

### 3.5. Justification of the methodological approach

As stated in the objectives (section 1.4), the study focused on how the planning of lakeshore tourism development could analytically be approached based on the performance of the sites relative to the selected physical environment indicators of sustainable tourism development. In order to attain this, a planning approach was developed with specific reference to physical environment indicators. This

methodological approach was considered the most appropriate based on the following reasons:

- The Lake Victoria shore area is a sensitive ecosystem hence a planning approach based on the physical environment was deemed most appropriate.
- Tourism has many impacts on the physical environment some of which are positive and others negative. Understanding the performance of tourism sites and how this relates to planning can help develop a more appropriate approach to the conservation of the environment.
- Tourism development involves a paradox – it tends to destroy the very physical resources which promotes its existence – hence the need for an environment based approach to inform planning
- Most development planning in Uganda seem to be concentrated on ensuring increased provision of tourism facilities and the resultant economic benefits rather than on the environmental impacts of such developments

The above notwithstanding, developing a planning approach based on the physical environment had its own limitations especially in the lakeshore region where:

- There is lack of environment standards or benchmarks upon which tourism performance could be measured since most standards did not specifically cater for tourism
- Limited data collected over time at the sites about site and visitor characteristics

As a result, the study relies more on primary data collected from the respondents. Even so, these data are limited or constrained by the short time period of the study, which resulted in research instruments being administered at the sites over a period of 3 months. Sampling from an infinite population also posed a limitation in that the number of respondents sampled may not have been fully representative of all the visitors or local residents since the total sample population was not know and the study was only carried out in high visitor season.

As a result of the above limitations, a holistic view or full picture of what exists on the ground may not have been captured. The above notwithstanding, this is a pioneer study that forms a foundation on which further analytical research can be based. However, in order to ensure that the results of this study are as dependable as possible, a reliability and validity analysis was conducted (see reliability and validity in section 3.6.2) and

interviewing of respondents, especially visitors, was carried out in intervals in order to capture a more representative view.

### **3.6. Data collection**

Data were collected on the number of variables, including spatial distribution and temporal trend of lakeshore tourism sites, visitor characteristics, tourism planning, and on the physical environment indicators of STD. The selection of the indicators upon which data were collected was agreed upon and carried out in consultation with a panel (constituting the researcher, academic supervisor and an official from NEMA). Those selected were: solid waste management, sewage treatment, water quality, contribution to environment conservation, development control, and use intensity control at the sites. The rationale in the selection was based on the observation that each of these indicators was relevant as a physical environment indicator of STD in the lakeshore region, data on it could readily be collected, and was considered important in informing planning or better decision-making. Both qualitative and quantitative data were collected depending on what was appropriate for each variable of the study (see Figure 3.2). Qualitative data were gathered in the form of respondents' rating of the performance of tourist sites and their planning in relation to the selected indicators of STD. Quantitative data were collected on age of visitors, their frequency of visits, length of stay at the site, water quality among others. The instruments, materials and methods used to collect all the data are summarized in Table 3.4.

The methods used to collect data included:

- Survey methods
- Non-Survey methods
- Geo-spatial methods

#### **3.6.1 Survey methods**

Use of surveys to collect data is among the most important source of information for tourism analysis, planning and decision-making (Smith 1995). In this study, questionnaire and interview survey methods were used as the main instruments of data collection. Two sets of guided questionnaires were designed. One set (Appendix 2) was administered to the visitors at the selected sites. Another set (Appendix 3) was administered to local residents.

Guided questionnaires were preferred in the case of both visitors and local residents because of their flexibility, especially when the literacy level of respondents is not easy to predetermine. Indeed, this proved to be the case with both visitors and local residents. As such, if a selected visitor or local resident was regarded as sufficiently literate to answer questions on his or her own, he or she was allowed so to do. If such a respondent was regarded as illiterate, he or she was assisted, either by interpreting or by paraphrasing the questions without changing the original meaning and purpose, and without influencing the respondent's answer. The Likert scale was mostly used in the questionnaires since it is easy to administer (Finn *et al.* 2000), code and it provides a scale that enables one to appropriately capture the strength of the respondent's perception and attitude. Moreover, the Likert scale was used since responses can easily be quantified (Veal 2006).

Interviews were conducted with the aid of a semi-structured set of questions. Semi-structured interviewing has the advantage of flexibility in that answers are open ended and they can be fully expanded at the discretion of both the interviewer and/or interviewee and can be enhanced by probes (Schensul *et al.* 1999). Semi-structured interviews were administered to key respondents who included the selected site managers, NEMA officials, the physical planners, the environment officers, and respondents from MTTI. Interview schedules were used in the case of key informants because they were appropriate. Indeed, interview schedules are not only flexible, given their ability to contain both open-ended and close-ended questions, but they also allow respondents to answer questions *ad libertam*. They can also be answered in writing, especially when respondents are literate. Their choice was therefore based on the following grounds:

- (i) The flexibility of the interview schedules meant that, if need arose, they could be administered orally in a face-to-face medium. Here the questions could be asked directly, interpreted, translated, or paraphrasing as the situation deemed fit.
- (ii) The flexibility of open-ended answers meant that key informants could freely express their views with limited constraints.
- (iii) By virtue of the positions that most of the key respondents held in the formal employment sector, they were all regarded as sufficiently literate to answer interview schedules in written form if the situation so demanded.

It is important to note that, before the various instruments were administered, they were all tested for reliability and validity. This was carried out as explained below.

**(a) Reliability of the questionnaire items**

Reliability concerns the extent to which an experiment, test or any measuring procedure yields the same results on repeated trials (Zeller and Carmines 1979, Yin 2003, Rubin and Babbie 2008) overtime, in different sites and populations and by different researchers (Schensul 1999, Veal 2006). The reliability of questionnaires was investigated using the Cronbach method of internal consistency formula:

$$\alpha = \frac{K}{K-1} \left[ 1 - \frac{\sum SD_i^2}{SD_T^2} \right] \dots\dots\dots(3)$$

- Where:  $\alpha$  is the coefficient of reliability
- K is the size of the pilot sample
- $SD_i^2$  are the variances of within the items
- $\Sigma$  is the summation sign
- $SD_T^2$  is the overall variance for all items

A pilot study was conducted initially that involved administering draft questionnaires to five visitors and five local residents (not included in the sample for the study). The formula (3) was then applied to compute the consistency of the respondents in addressing the items in their respective questionnaires. This yielded a reliability coefficient of 0.9 for the questionnaire designed for visitors and 0.8 for that designed for local residents. In regard to the Cronbach method, the two questionnaires were therefore regarded as reliable since their coefficient was above 0.5.

**(b) Validity of research instrument items**

Validity is the extent to which an instrument measures what it is intended to measure (Zeller and Carmines 1979) and how applicable it may be to other populations (Schensul 1999). According to Veal (2006) validity is the extent to which the information collected by the researcher truly reflects the phenomena being studied. In this study, validity was investigated using the content validity test, which examines the degree to which a measure covers the range of meanings included within the concept (Rubin and Babbie 2008). The test was conducted using item analysis by examining each item of the

instrument to ensure that it was measuring what it was intended to. The exercise was carried out by seeking help from colleagues and research experts at Makerere University who were knowledgeable about the themes of the study. They were asked to examine the items by rating each item using the scale that ran from relevant (R), neutral (N), to irrelevant (IR). After rating all the items, the Content Validity Ratios (CVR) were calculated using the following formula:

$$CVR = \frac{R}{R + N + IR} \dots\dots\dots(4)$$

Where CVR, R, N, and IR are as defined above.

From the formula, the CVR of the questionnaire for the visitors was 0.8 and that of the questionnaire for locals was 0.7. The CVR of the interview schedule for the site managers was 0.8. It was also 0.8 for the interview schedule of NEMA officials while it was 0.6 for the officials from MTTI, CBOs and NGOs. The CVR for the interview schedule of the physical planners and environmental officers was 0.7. Clearly, all CVRs were greater than 0.5, implying that the instruments were sufficiently valid to collect the required data.

After assessing the necessary validity and reliability of the instruments, data collection proceeded with the help of two research assistants who had been trained by the principle researcher. Before administering the instruments, the principle researcher first introduced himself to the respondents by explaining the purpose and objectives of the study that he was conducting. He also made efforts to convince respondents that the study was for academic purposes only. He then went on to ask for permission to administer the instruments. Whenever a respondent accepted, efforts were made to seek his/her honesty, willingness and cooperation throughout the answering of the instrument. The principle researcher was mostly involved in the administration of interviews. As far as research assistants were concerned, they were provided with an introductory letter to show to all the respondents. The research assistants were mainly employed in the administration of questionnaires to local residents and visitors.

It is important to note that, in the case of visitors, care was taken to ensure that the data collected from them was reflective of a true visitor perception of the sites. This was achieved by collecting data at four different times during the high visitor season of

November – December and in January. This meant that each site was visited every two weeks, for four times, targeting at least five visitors each time. Most of the data were collected over the weekend since that is when most visitors can be found at the sites. This was intended to yield data from different visitors at different times so as to be able to capture a more reliable and representative picture of visitor perception of a particular site.

Observation was also used to collect data, especially during transects walks. At various sites, observation helped identify the types and location of tourism facilities, their level of development and the visible effects of tourism management practices especially those related to the environment. Observation was also used to identify the general spatial distribution of activities and the general layout of tourism facilities in the study area. This method was complimented by taking digital photographs (presented in chapter five) of various phenomena as they existed at the time of observation. Photographs were found useful since they help convey research findings around a number of themes or messages (Veal 2006).

### **3.6.2 Non-survey methods**

These included documentary review and experimentation

#### **(a) Documentary review**

This mainly involved the collection of data by reviewing government and Non-Governmental Organisation (NGO) reports, and policy documents related to tourism development, environmental laws and guidelines, physical plans and general research documents regarding sustainable resource use and management on the lakeshore region. Among the main documents reviewed are, Integrated Tourism Development Master Plan for Uganda (1994), Uganda National Tourism Policy (2003), State of Environment Reports for Uganda (1998, 2000, 2002, 2005), National Wetland Conservation and Management Policy (1994), National Environment Action Plan for Uganda (1994), Wetland Sector Strategic Plan (2001), Wetlands, River Banks and Lakeshore Management Regulations (2000), newsletters from conservation groups such as Nature Watch Uganda, among others. Using major key words such as tourism development and sustainable tourism, data were compiled from above mentioned documents. They were critically analysed to identify and compile those aspects of the policies, laws and guidelines that were applicable to this study.

All these documents were accessed from the NEMA and Makerere University libraries. UBOS annual statistical data reports were accessed online from their official website ([www.ubos.org](http://www.ubos.org)). UIA reports were accessed both online ([www.ugandainvest.com](http://www.ugandainvest.com)) and from their offices where permission to access the information was granted upon application for it. All these provided important data sources.

### **(b) Experimentation**

Data on water quality were collected through experimentation and international agreed criteria were followed. According to the Blue Flag guidelines it is recommended that the first water sample should be taken within 5 – 17 days before the beginning of the bathing season and during the bathing season, sampling must be carried out at least fortnightly. However this procedure was not fully followed since the study area is located in the tropics along the equator (warm throughout the year), where there is no specific bathing season restricted by weather.

The first water sampling was carried out in March 2006 and the second in May 2006 with a two months spacing. This was done in order to gain a representative sample of the water quality over time. Frequent sampling, for instance once a month throughout the year, would obviously have given a more comprehensive view, however this was not possible given the resources and time available for the study. Hence it should be noted that the water quality data presented in this thesis may not fully be representative of the real situation along the beaches, but it nevertheless provides preliminary data, the first of its kind about water quality testing for recreational purposes along the beaches.

Water sampling was carried out on two occasions at each of the selected sites. First sampling was carried out during the rainy month of March and the second one in a relatively dry period of May. Composite sampling was used, that is, three water samples were taken from different locations of the same beach shore and mixed at equal proportions in order to arrive at a more representative sample. Water samples were collected from locations along the beach where it was observed that swimmers mostly concentrate. During the first water sampling an extra water sample was taken from a surface storm water outlet that was directly discharging into the beach waters.

Water samples were obtained from waist depth water (since that is where swimming mostly takes place), between 30-25 cm below the water surface. The depth was determined by an average from varying depth recommendations viz; Blue Flag,

American Public Health Association (APHA) and European Community (EC) Directive (1976) all recommend 30 cm, while the World Health Organisation (WHO) and United Nations Environment Programme (UNEP) recommend 25 cm below water surface.

In order to avoid contamination of the water before, during or after sample collection, sterilised sample bottles were used. The bottles were submerged into the water to the required depth and screwed open to allow them to fill up. The water from various points on the beach was then measured and mixed in equal proportions in one bottle. An air space of at least 2.5 cm was left to allow proper mixing by shaking before examination. In order to reduce any chances of contamination, care was taken not to touch the top of the bottle during the removal, mixing and placement of the bottle cap. The water samples were then placed in an icebox with temperatures below 10 degrees Celsius and transported to the microbiology laboratory at Makerere University for examination.

At the laboratory, the samples were tested for both physical-chemical and microbiological parameters used by Blue Flag and WHO to monitor the quality of recreational water. The water samples were analysed for physical-chemical parameters, mainly for Hydrogen ion concentration (pH) using a calibrated pH meter. pH has a direct impact on the recreational users of water only at low or very high values, when it may affect the skin or eyes particularly in sensitive subjects (WHO 2003).

Under microbiological parameters, samples were tested for three different types of bacteria viz; Total Colibacteria (TC), Faecal Colibacteria (*E.coli*) FC, Faecal Entrococci (FE) using the membrane filtration method. The analysis of water samples was to determine the frequency of each type of bacteria in the water samples. The general logic here is that a small number of bacteria per 100ml of water would imply that the bathing water is clean and a high value per 100ml would imply that the water is polluted and could contain bacteria from sewage (Blue Flag 2006). Blue Flag has developed a range of the maximum numbers of bacteria allowed in bathing water. However it should be noted that bathing water quality requirements and standards might vary from one region or country to another depending on their existing legislation.

This study adopted the South and East African Blue Flag recreational bathing water quality standards (see chapter five, section 5.2.4) that are partly inspired by the South African national bathing water quality standards, which are also inspired by the WHO recommended standards for the Caribbean (Blue Flag 2006).

### 3.6.3 Geo-spatial methods

The geo-spatial methods used included Remote Sensing (RS) techniques were used to collect spatial data on land cover over the different periods of time along the lakeshore region. Landsat TM satellite images of 1987 and 2001 were used to classify land cover. Using Geographic Information System (GIS) software - ILWIS 3.2 a true colour composite was generated for the respective two years by combining the various bands. In order to be more realistic, training fields were selected and supervised classification was used. Several classifiers were tried out and eventually the maximum likelihood classifier method was used since it provided a more realistic representation of land cover at the time. Faced by the limitation of not being able to carry out ground truthing, the study used a series of vertical aerial photographs (greyscale) and topographic maps (1:50,000) of around the same period to verify the land cover output. The researcher's expert knowledge of the study area was also useful. However, due to differences in spatial resolution of the two Landsat images (1987 and 2001), detailed land cover change could not be calculated and, as a result, only visual interpretation of land cover change was made (See section 4.3.3).

Spatial data on the precise location of the tourism sites was collected by use of a Global Positioning System (GPS) receiver from which coordinates of each site were recorded and input in Microsoft Excel where they were saved as a dbf file. This file was imported into ArcView GIS 3.3 to generate a point map layer representing the tourism sites. This point map was overlaid on the study area map layer to show exactly where each of the tourism sites was located along the lakeshore. Using both the GIS generated map and topographic (1:50,000) map sheets of Entebbe, Kajjansi and Kampala, the distances between each site were calculated and later used to in the linear nearest neighbour analysis (see section 5.1).

A summary of the materials and methods used in data collection is presented in table 3.4 below.

**Table 3.4 Summary of materials and methods used in research**

<b>Method /Material</b>	<b>Description</b>	<b>Data collected and application</b>
Satellite Imagery	Landsat of 1987 and 2001	Classification carried out to generate land cover maps - used for land cover change detection by general visualisation
Aerial Photography	Vertical and oblique aerial photos, of selected areas (1957, 1993)	Identify land cover, state of environment, location and extent of tourism establishments. Used to 'ground truth' data from satellite images
Topographic Maps	1998 Topo sheets of Entebbe, Kajansi, & Kampala	Identification of Land cover, tourism areas and infrastructure
Observation	Field observation, photograph taking	Ground truthing, situation analysis of site performance and site management practices
Global Positioning System (GPS)	Hand held GPS	Captured coordinates of tourism sites and later combined with study area map layer
Survey methods	Questionnaires, interviews, discussions	Collected views from key respondents on what they perceived of tourism development and its impacts
Non survey methods	Review of tourism and environment reports, policies, Laws, guidelines and related statistical data reports.	- Historical perspective of tourism development, level of tourism policy and planning - Review of plans for tourism development and planning

### 3.7 Data compilation and analysis

As discussed in section 3.6 data were collected using three methods. Data from each method were compiled and analysed independently and later combined to generate a combined data set which was later analysed as a whole to generate results, as illustrated in Figure 3.1.

**Figure 3.1 Summary of data compilation and analysis**

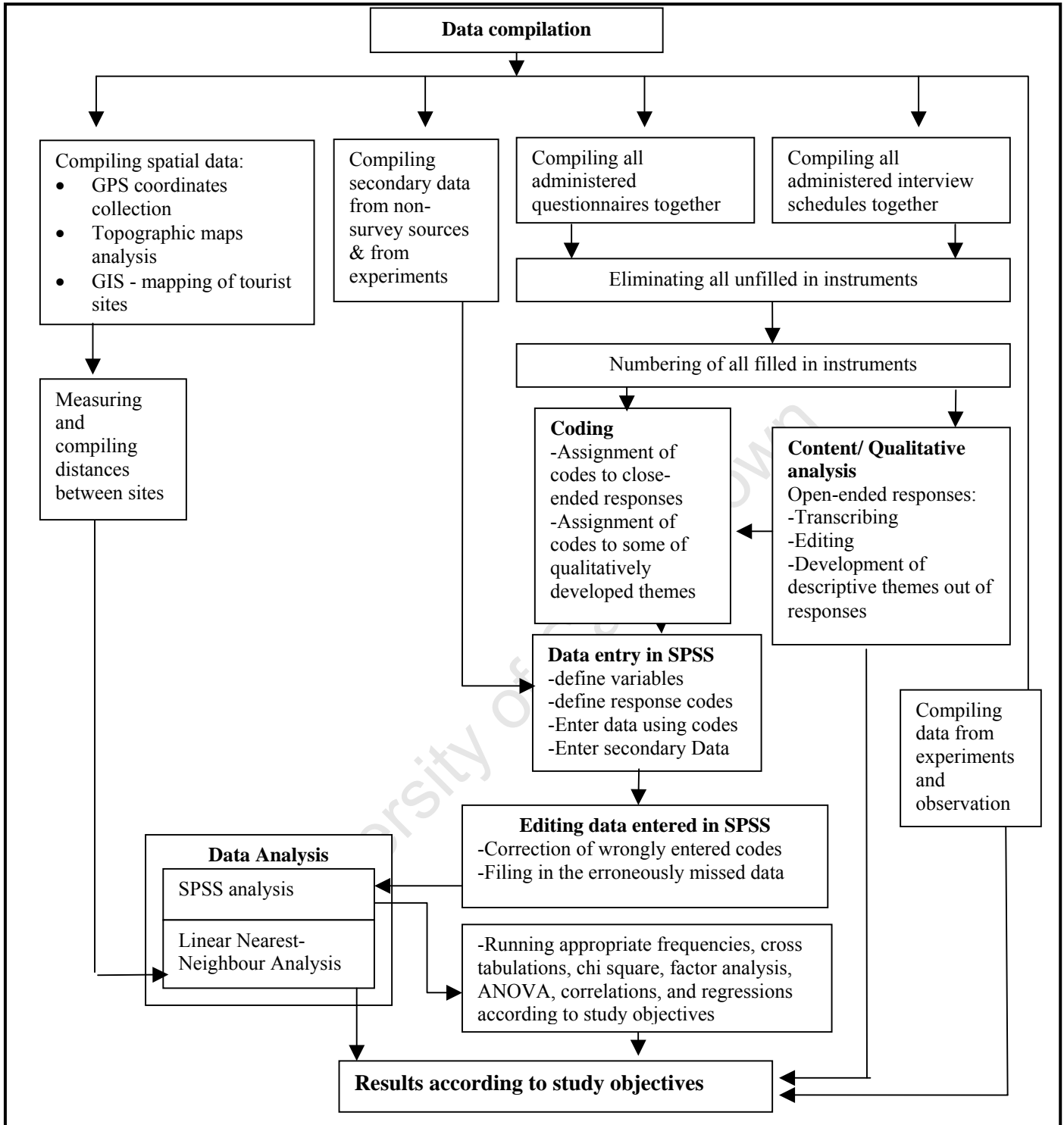


Figure 3.1 indicates that data analysis was carried out using the following analysis techniques:

**(a) Linear nearest-neighbour analysis**

Linear nearest-neighbour analysis (after Smith, 1995) was applied to identify and analyse whether the spatial pattern of the tourism facilities was clustered, uniform or random.

Distances between the tourism facilities were measured and the linear nearest-neighbour analysis formula was applied.

### **(b) SPSS analysis**

Data from survey methods was analysed using SPSS 10.0 computer programme. Analysis began with data entry. Every response was assigned a numerical code like 0, 1, 2 and so on. Thereafter, the following analysis methods were applied to generate the required data:

**(i) Descriptive method:** This was used to generate results in form of frequency tables, cross tabulations, graphs and pie charts

**(ii) Chi Square:** This method was used to establish whether the different categories of selected respondents differed in their responses to the manifest indicators of site performance and planning

**(iii) Analysis of variance (ANOVA):** This method was used to establish whether respondents differed in their overall mean assessment of site performance and planning as a result of their categories and those of the sites at which the respondents were selected.

**(iv) Factor analysis:** This method was used to establish the most important and reliable factor in relation to others, so as to identify which one to pay more attention to when planning for STD

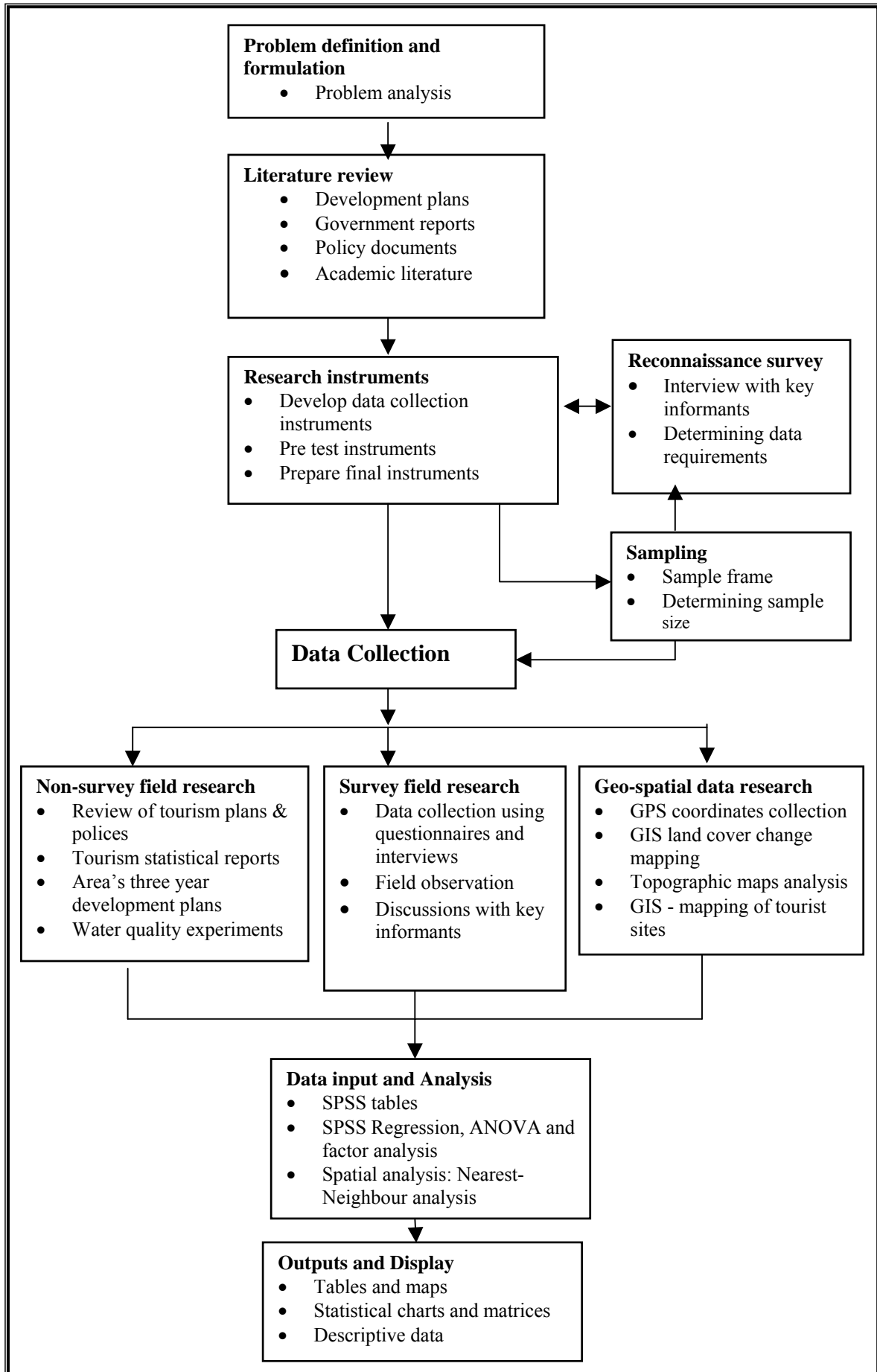
**(v) Correlation analysis:** The Pearson product-moment method was used to test the null hypothesis of the study. This hypothesis assumed that the variables investigated in the study could not be used to develop a planning approach to STD, testing it necessitated establishing whether any relationship existed between the variables and this planning so as to pave the way for developing the approach. For any variable in question would only be used to develop the approach to this planning if it was related to it any some way.

**(vi) Regression analysis:** If a relationship was found between a variable and planning for STD, regression analysis was used to establish the extent to which that variable could influence this planning.

### **3.8 Overall study procedure**

This is summarised in Figure 3.2

**Figure 3.2 Overall flow chart of the research**



The study began with the problem definition and formulation during 2003. In order to more fully conceptualise the research problem, literature was reviewed from government reports, public and non-governmental organisation (NGO) reports, and policy documents related to tourism development, environmental laws and guidelines, environment performance indicators, development planning and sustainable resource use and management in general. From these a framework was developed which was used to guide the study into the formulation of objectives and research questions. It also formed a foundation for the further stages of the field research.

The next stage was the pilot research survey. Reconnaissance visits to the research area were carried out in 2004 during which informal interviews were held with key officials in the Ministry of Tourism Trade and Industry (MTTI), local government district officials and site managers. This helped provide an overview of what had so far been put in place in respect of tourism infrastructure, environmental conservation and tourism planning measures. During the field visits observation was used to help identify the types and spatial distribution of tourism facilities, their general level of development and to identify the surrounding land uses. It is from this pilot and reconnaissance survey that a sample design used in the study was determined.

The information gathered was used in the formulation of research instruments (interview schedules and questionnaires) during 2005. Questions included in the instruments were selected based on the various environmental and planning indicators that had been identified from literature and agreed upon by a panel (as earlier mentioned in section 3.6). Questions to be asked each respondent category were then selected based on their perceived knowledge and capability to answer them. The instruments were then pre-tested on selected sample population. The information gained from pre-testing, document review, observation and oral interviews was analysed and used to help reframe and refocus the content of the instruments, which were finally administered in the next stage. For instance, pre-testing indicated that some respondent categories like local residents and tourists (especially teenagers) could not interpret the meaning of concepts like sustainable tourism. As the result the questions had to be rephrased with emphasis on indicators of sustainable tourism that were much simpler to interpret and understand. Pre testing indicated that visitor respondents of from 15 years and above could interpret and understand the questions, so it was set as the age limit.

The next stage mainly involved field data collection, which was carried out from the end of 2005 to mid 2006. The data were collected using three approaches: non-survey research; survey research and geo-spatial data research methods. Data were input, compiled by use of GIS and SPSS tools and analysed using Chi-square, Factor analysis, Regression, and ANOVA. It is from this analysis that research outputs were produced, which included tables, statistical matrices, statistical charts and maps. All these were later compiled into the research thesis as the final output in 2007.

### **3.9 Constraints to data collection**

The major constraint was paucity of sufficient data covering the period and area of study. With limited research and mapping carried out in the area, there were restricted data available regarding site characteristics, spatial distribution of sites, their environmental performance in particular and sustainable development in general. In addition, documents that did exist, such as district development plans, did not even categorise tourism as a separate sector and hence tourism was not specifically catered for when district statistics were being compiled. Only data collected by UBOS and UIA categorised tourism as a sector; but even then, much of the data was general, not representing the lakeshore region but districts or the whole country. Also, the data were not spatially analysed and presented for specific tourist regions and sites. There was a general lack of statistics on important parameters such as: sites visited by both domestic and international tourists, hotel occupancy rates and expenditure by tourists. It is as a result of a combination of these factors that the contribution of the tourism sector to the economy is currently not accurately measured (MTTI 2004). As a result this study had to collect as much background data as possible from primary sources.

The study was also limited by poor record keeping by tourism site operators. For instance, it was discovered that most tourism sites on the lakeshore poorly kept or did not keep any records on the numbers and characteristics of visitors received at the sites. At beach hotels and beach resorts (with accommodation), records kept were only for overnight guests but even then, the data was scanty and irregularly collected (MTTI 2002). Data about day-visitors, who mainly visited the gardens, beach and used facilities such as swimming pool, bars and restaurants, was seldom recorded. Further, most of the sites did not collect and keep environment related data such as, amount of waste generated, water quality, state and change in vegetation cover and so on. It was only at

UWEC, that data was reasonably and regularly collected. Therefore the study mainly relied on general descriptive analysis of quantitative variables like visitor numbers.

Furthermore, even when some of the tourism sites collected some information that would be relevant to the study, the information was treated as confidential, most probably because of the competition and rivalry in the tourism industry. Some site managers were suspicious that, once such information (especially on the environmental performance and compliance levels) was published, institutions such as NEMA would find ground to take action against them, which would interrupt their business operations. For this reason, management at some sites not only declined to fill in questionnaires, but also denied the researcher permission to interview its visitors.

Furthermore, administrative boundary changes that have been taking place over time in the region had important implications on the availability of data. For instance, much of the lakeshore-study-area in the current Wakiso district was prior to 2001 administratively under Mpigi district. Shifting of record keeping and changing of staff meant that accessing reliable and updated information was difficult. Data were found fragmented, making temporal trend analysis difficult. As a result, for some of the information the study had to rely more on general views collected through survey methods.

Limited time and resources also meant that not all aspects of the physical environment indicators could be included for study. For spatial data, the study relied more on topographic maps, photographs (aerial and ground) and to some extent satellite imagery. For non-spatial data it relied on survey methods to collect views from visitors, local residents, site managers and other key respondents. Therefore, this study reflects analysis and arguments based partly upon the researcher's general observation and views generated from the data collected, which may not represent the true and real situation in the region.

In general, the above methodology enabled the study, identify the study sites, the respondents and collect sufficient data that was analysed to give valid and reliable results in the context of the aims and objectives of the study. The study, which was mainly descriptive in nature, obtained results that are presented in chapter 5. In order to fully understand the context of this study and its results, the biophysical and socio-economic characteristics of the study area are presented in the next chapter.

## **CHAPTER FOUR**

### **BIOPHYSICAL AND SOCIO ECONOMIC CHARACTERISTICS OF THE STUDY AREA**

#### **4.0 Introduction**

The biophysical characteristics of an area play a major role in influencing the natural tourism resources, nature and geographical location of tourism developments. Indeed the proximity of the study area to the lake Victoria shore has shaped the nature of development in the region (KCC 2003), including tourism development. Therefore understanding the biophysical characteristics of region is very fundamental to not only to the natural environment but also the socio economic development of the area. Tourism in the Lake Victoria shore region being a nature-based economic activity is a function of the biophysical and socio economic characteristics of the study area, which are explained in the subsequent sections.

#### **4.1 Study area**

The area of the study is located in Uganda (see Figure 4.1) along the northern shores of Lake Victoria – which is the second largest freshwater lake in the world (68,800 km<sup>2</sup>) and the source of River Nile (NEMA 2002). The study area lies between latitude 0° 02' and 0° 16' north of the equator and between longitudes 32° 24' and 32° 38' East of the Greenwich Meridian. The area is located along the lakeshore between Kampala city (the capital city of Uganda) and Entebbe municipal town (airport town and former administrative capital) both of which are rapidly developing urban areas.

The study area is found in the administrative boundaries of Kampala and Wakiso districts (see Figure 4.1). Under the decentralised administrative structure in Uganda, the districts are divided into a number of hierarchical administrative units. The immediate unit to the district is the sub county (or a division in the case of urban areas) that is at the level of Local Council III (LC III). The next administrative unit is the Parish or Ward - at the level of Local Council II (LC II) and the last unit at the grass root is the village at Local Council I (LC I) level. At each of these levels (LC I, LC II and LC III) they have councils and executive committees, which coordinate various functions and carry out planning (KCC 2003, Wakiso 2006).

The study tourism sites are confined to the lakeshore region in Makindye Division, Wakiso district and Entebbe Municipality. The tourism sites in Makindye Division include: Gaba Beach; K.K Beach; and Speak Resort and Conference Centre. Those in Wakiso district include: Kaazi Camping Ground; Ranch on the Lake; Lutembe Beach; Kisubi Camping Site; Kisubi Beach; Nabinonya Beach; Garuga Golf and County Club; and Ssesse Gateway Beach. The others are in Entebbe Municipality and they include: Victoria Café; Kitubulu Camping Site; Entebbe Sailing Club; Anderita Hotel; Botanical Gardens; Imperial Botanical Beach Hotel (IBBH); Uganda Wildlife Educational Centre (UWEC); Imperial Resort Beach Hotel (IRBH), Aero Beach; Peninel Beach Restaurant; Lido Beach; Water Front Club; and New Beach (see Figures 4.2 and 4.3).

University of Cape Town

**Figure 4.1 Location of study area and tourist sites**

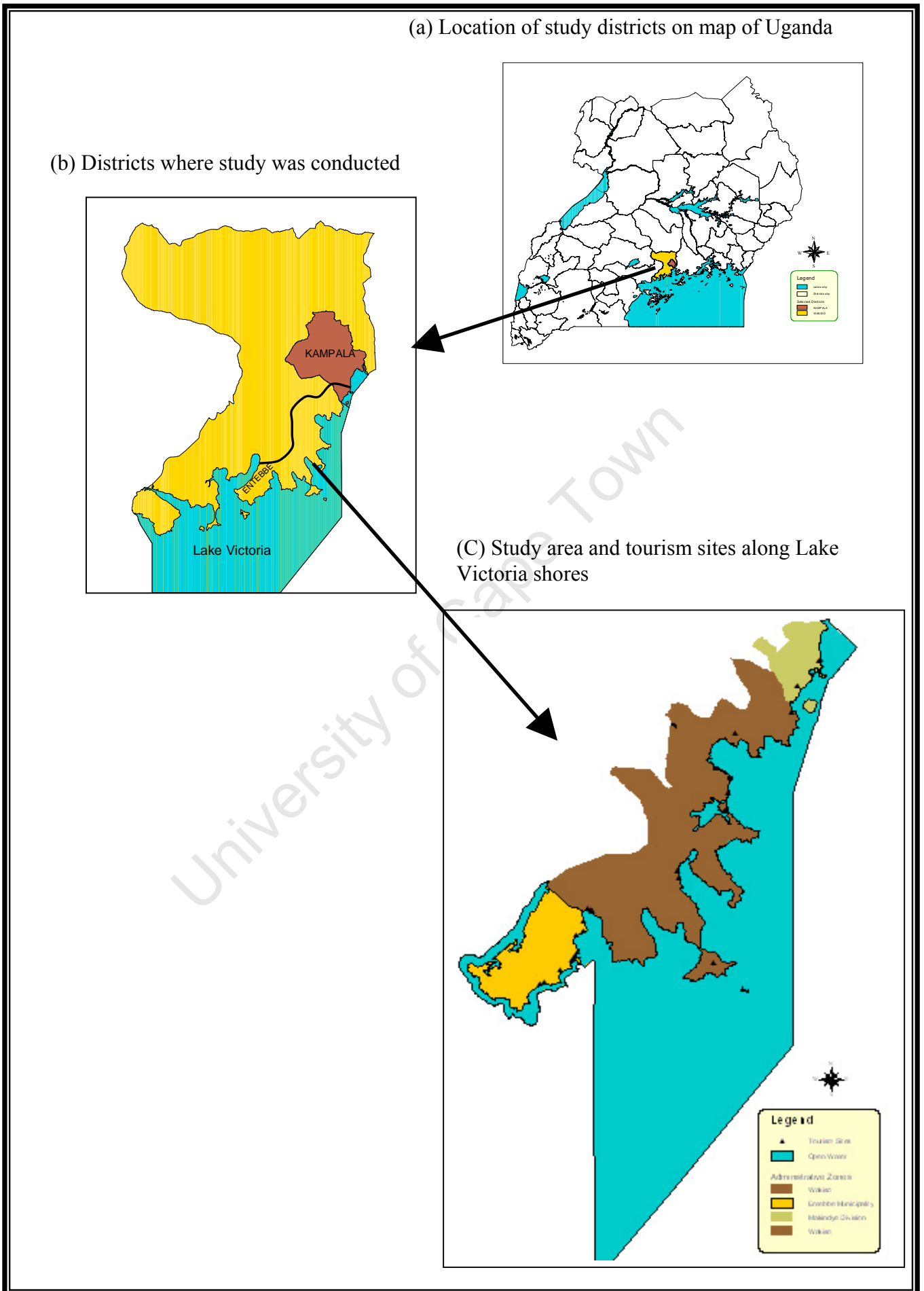
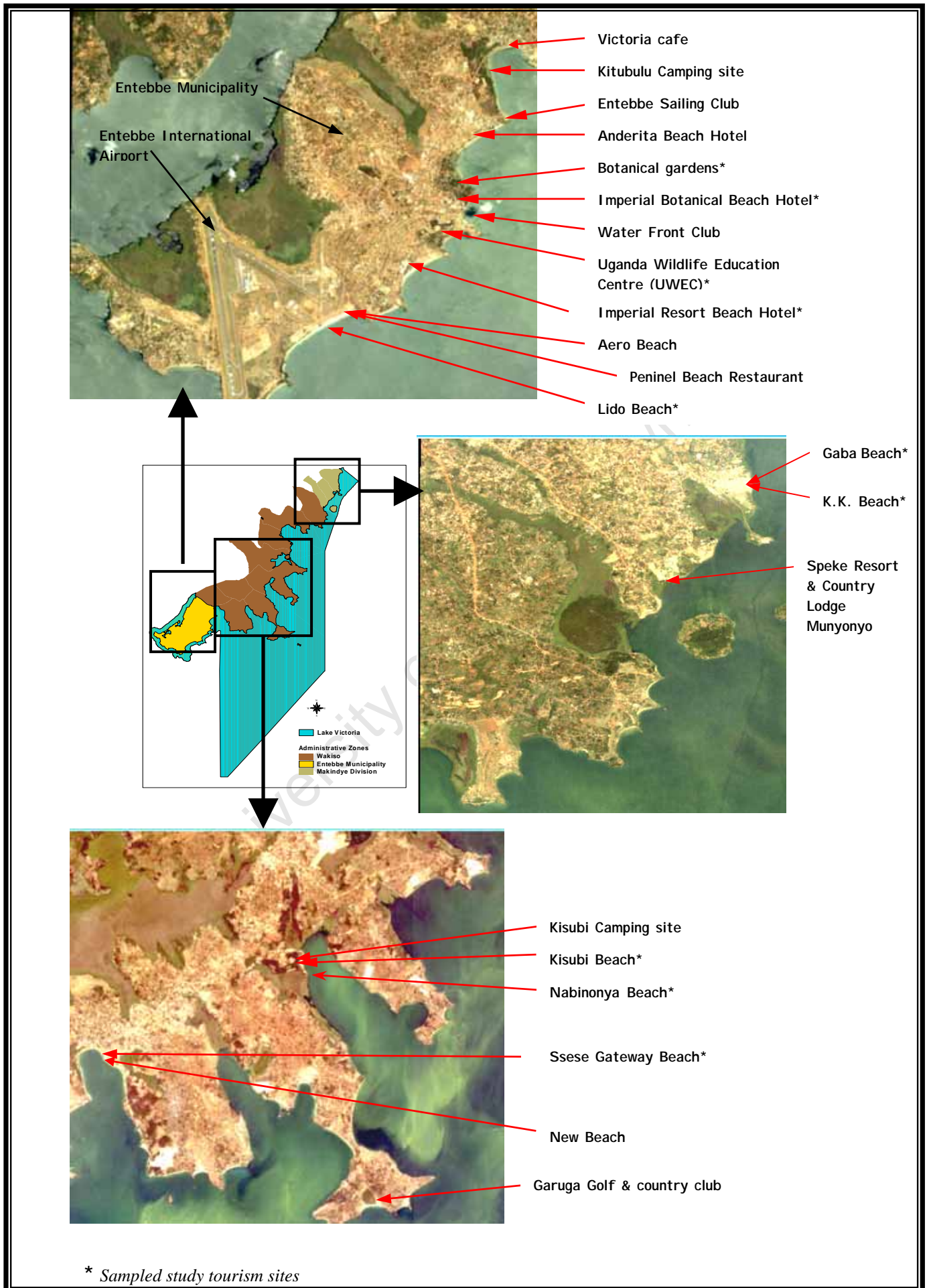
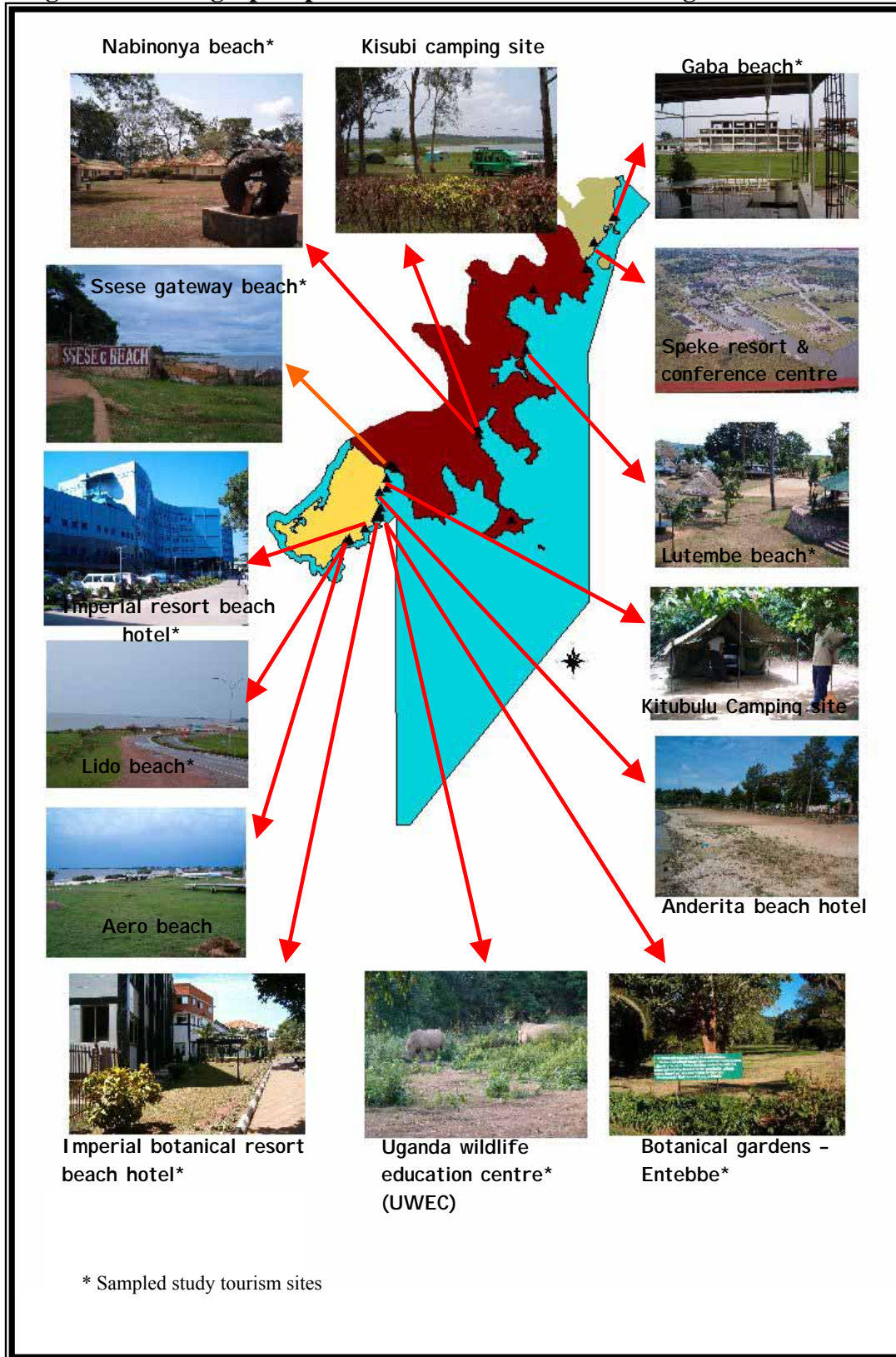


Figure 4.2 Tourism sites along the lakeshore (on IKONOS satellite image mosaic of 2004)



**Figure 4.3 Photographic presentation of tourism sites along the lakeshore**



## **4.2 Biophysical characteristics of the study area**

This section describes the climate, geology, geomorphology and ecological characteristics of the area since they have an influence on the tourism resources and activities, which are mainly nature based.

### **4.2.1 Climate**

The study area straddles the equator and hence has a typical tropical climate modified by altitude and proximity to the lake. The would be high day temperature of the area is modulated by the strong Lake Victoria breeze (NEMA 1997b); mean annual temperature is 22° C, with a mean daily maximum of 27° C and a mean daily minimum of 17° C. The temperature however may extend significantly beyond such main values, and absolute maxima of 35° C and minima of 12° C are occasionally experienced. Average humidity over the year is 75%, typically high in the morning and low in the afternoon. In general the lake Victoria region displays comparatively small variations of temperature, humidity and wind throughout the year (NEMA 1996, NEMA 2000).

Mean annual rainfall lies between 1750 and 2000 mm (NEMA 1997b), mostly falling during the two wet seasons of March to May, and September to November. Dry seasons are December to February and June to August (NEMA 1996). However, even during the dry months, occasional heavy rains are received leading to a relatively even distribution throughout the year - indeed mean monthly rain days exceed 10 (NEMA 1997b). The Lake Victoria region generally is regarded as experiencing a bi-modal high rainfall regime (NEMA 2002).

### **4.2.2 Geology and geomorphology**

Except for the tiny portions underlain by recent deposits of alluvial and lacustrine formations, most of the study area is underlain by the Precambrian rock system (NEMA 1997a). The largest portion of the lakeshore is underlain by the Basement Complex System of mainly undifferentiated gneisses with some granites (GoU 1967, NEMA 1997a). The Cenozoic sediments of the Quaternary and Holocene comprise swamp deposits, alluvium, and lacustrine deposits near the lakeshore (NEMA 1997a).

The altitude of the area ranges between 1100 m to 1310 m above sea level and the topography is generally undulating. The landscape is characterised by flat-topped hills

that slope gently towards the broad swampy valleys that lead to swampy inlets of the lake (GoU 1967, NEMA 2002).

The study area is dominated by ferrallitic soils that are strongly weathered, with little or no mineral reserve left. The dominant soil types are sandy loams and sandy clay loams (GoU 1967). The shoreline area which is mostly occupied by wetlands has grey sands whose parent material is alluvium and hill-wash; grey coarse sands from lake deposits; black and grey clays from river alluvium; and peaty sands and clays formed from *Papyrus* residue and river alluvium (GoU 1967). These wetland soils when drained (and for instance developed for as hotel gardens) they are prone to deterioration through acidification caused by conservation of sulphide in the soil to sulphuric acid. As a result soils shrink upon drying and become too thin (MNR 1995).

#### **4.2.3 Ecological characteristics**

The study area has a variety of luxuriant tropical vegetation ranging from medium altitude evergreen forests to savanna woodland and swamps (NEMA 1997b). The Lake Victoria area has an undulating landscape with broad valleys mostly occupied by wetlands, which provide habitat for a variety of plants and animals (NEMA 2002).

However, with increasing human population and activities, most of the flora and fauna in the region is highly threatened with extinction. This has mainly been as a result of increased pollution and unsustainable utilisation of resources. For instance over 30 indigenous plant species that are endangered as a result of deforestation and clearance of land (NEMA 2002) for agriculture and settlement.

Most of the shoreline is covered by wetlands (flooded grassland), however many of them are increasingly being drained for commercial, agricultural, industrial and sometimes residential purposes (NEMA 1997a, NEMA 2005). For instance by 2001, 19.7% of the 33 km<sup>2</sup> of the wetlands in Kampala district had been converted to other land use (NEMA 2001). A district wetlands status inventory report indicates that the central region (Kampala, Wakiso and Mukono) had the highest rate of wetland reclamation (NEMA 2002). Wetlands and their resources are under increasing pressure, yet they have major ecological and socio-economic functions (MNR 1995). This has contributed to the increasingly high levels of pollution of Lake Victoria since wetlands that purify industrial and domestic effluent, agrochemical runoff are declining (NEMA 2002). More so

draining of wetlands has caused disruption in water supply, change in microclimate, lowering of the water table and flooding (NEMA 2002). This is a threat to the environment, livelihoods of the community and to nature based activities in the lakeshore region like fishing and tourism.

The other areas in the lakeshore study area have a forest/savanna mosaic. Savanna trees and a grass layer mainly covers the surrounding higher land slopes. The lower slopes mainly consist of a mixture of forest remnants and savanna. Valleys and some parts of the lakeshore line have patches of dense moist evergreen natural forests. The hilltops are dominated by short grass and scattered shrubs (NEMA 1997b, NEMA 2005).

However, due to increasing levels of human activity, most natural vegetation in the study area has been cleared for residential and commercial buildings or replaced with planted ornamental trees and planted grass in compounds and recreational grounds (NEMA 1997a). Nation wide, Uganda has lost about 55% of its forest and woodland since 1890 and over 30 indigenous plant species that are endangered (NEMA 2002). In the study area, many of the natural forests have been reduced as a result of repeated cultivation, cutting trees to provide charcoal fuel and grass fires (NEMA 1997a). Apart from a few remaining natural forests reserves (such as Kitubulu forest reserve) with a land cover of approximately 0.3% and conservation areas (such as in the Botanical Gardens and the Uganda Wildlife Education Center - UWEC) covering approximately 0.2% land coverage, there are no other gazetted conservation areas in the region. (MNR 1995, NEMA 1997b, NEMA 2005).

The favourable climate, thriving vegetation and landscape characteristic of Lake Victoria shore region all promote diverse biodiversity but most of the wildlife is struggling against the tide of human encroachment (NEMA 1997b). Human activities such as deforestation, cultivation, draining of swamps and urbanisation have all affected the survival of wildlife species, which are on the decline in the lakeshore region. Some species (such as Sitatunga and the March Mongoose) have disappeared in Kampala district (NEMA 1997a) and a few still exist in pockets of swamps and unsettled woodlands in Wakiso district (NEMA 1997b). Many others have decreased in number (such as giant rats, porcupines and hedgehogs) and a few have been introduced, while others have become adapted to a human-modified environment (NEMA 1997a, NEMA 2002).

The ecological of the lake has also been threatened by the introduction of alien species. For instance in the last 30 years, the Lake Victoria has lost an estimated 200 endemic cichlid species following the introduction of the non-native Nile perch fish specie in the early 1960s. Further more, the accidental introduction of the water hyacinth in 1998 has not only affected fauna like fish, but also interfered with various human activities like transport and power generation (Ntiba *et al.* 2001).

In general from the above, it is realised that the lakeshore ecology is under pressure and strain from the increasing human activities including tourism developments, which are nature based. There is therefore need to analyse the performance of tourism sites in relation to the physical environment and establish how tourism planning can be enhanced as a means of contributing to sustainable development of the region.

### **4.3 Historical, socio-economic aspects and current developments in study area**

The historical and socio-economic perspective gives background to the changes that have taken place over the years in the study area. This gives insight into the past and current developments that enables better examining of whether the region is developing in a sustainable manner. Understanding this perspective is also important to this study since tourism development is a function of the changes that take place in a society. The sections below therefore give an analysis overtime of the historical background, demographic trend, land cover changes, socio economic activities and tourism development perspectives of the study area.

#### **4.3.1 Historical background of Lake Victoria shore region**

The historical development of the Lake Victoria region dates back to the early Stone Age about 50,00 BC. From the many archaeological sites around lake Victoria, it is apparent that there was early human occupation and a mixed hunting-food gathering and fishing economy being perused (UoG 1967). For instance Hippo Bay at Entebbe, has Middle and later Stone Age cave sites (50,000 BC – AD 1000) from which occupation evidence indicates a transition from the Stone Age to the Iron Age with iron tools gradually replacing quartz microliths and pottery becoming common item (Langlands 1974). The interior from the lake region also showed evidence that sophisticated Iron Age societies existed. However there is limited archaeological data and palaeontological research that

has been undertaken in Uganda in general and the lake Victoria shore region in particular (UoG 1967).

During pre-colonial times (before 1880's) the whole of the study area was part of the Buganda kingdom, established in the 16<sup>th</sup> Century, with its headquarters and the king's palace at Mengo (from which the current Kampala city has evolved). With the advent of coastal Arab traders (1830's to 1850's) Christian missionaries (1870's) and, later, colonial administrators (1890's), the Buganda kingdom (Mengo in particular) became the centre of trade and administrative power in the region (Karugire 1980, World History 2006). In 1893 Entebbe town was established as an administrative and commercial town by the British colonial government and one year later was adopted as the capital city of Uganda after British commissioner Sir Gerald Portal shifted it from Kampala in search of a tranquil place of work (Entebbe Municipal Council 2005). Entebbe also strategically provided easy navigation across the lake to other colonial enclaves, especially to Kenya. This led to the construction and improvement of a road to connect the Entebbe colonial headquarters and Mengo, the administrative headquarters of the tribal kingdom (Wakiso 2006).

In 1947 Entebbe was identified as the most suitable location for constructing an airport, which was eventually commissioned in 1951. This meant increased traffic between Entebbe and Kampala since Entebbe airport was the major international gateway (CAA 2001), a function it has maintained to present. As both a former colonial administrative centre and as an airport town Entebbe has experienced increased population, economic activities, administrative functions, and growth in general infrastructure. With Kampala becoming the capital city of the country following independence in 1962, the Entebbe-Kampala region continued to develop and urbanise. The increased development of Entebbe and Kampala has led to increased traffic along the road, which has in turn resulted in the development of smaller towns in between such as Abayita Ababiri, Kisubi, Zanna Kajjansi among others. These towns are characterised by retail and craft shops, restaurants and other services (Wakiso District 2006).

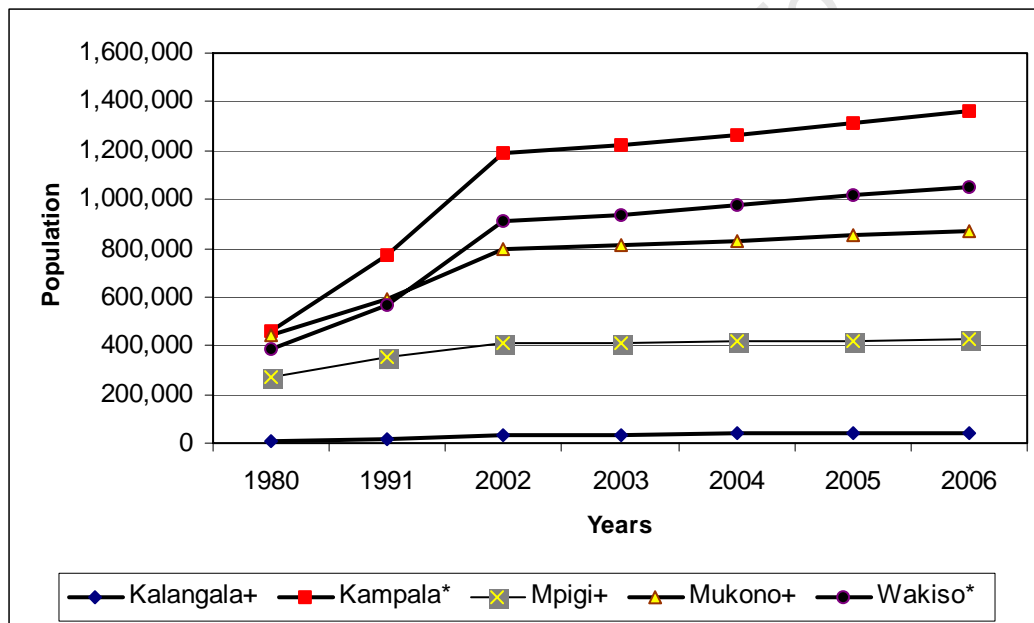
Increasing population and economic activity has led to the increased need for accommodation, leisure and recreational facilities. As a result, a number of hotels, restaurants and recreational centres began to develop in and around Entebbe and Kampala and along the Entebbe-Kampala highway. Attracted by the scenic lakeshore

landscape and natural beaches, accommodation and recreational facilities began to develop along the lakeshore (KCC 2003), a scenario that has continued to date. It is from this historical background that this study found it worth to further explore the tourism development along the Lake Victoria shore region.

### 4.3.2 Demographic trend

The study area, being located in an urban and peri-urban environment has undergone substantial demographic change, with absolute population numbers (Fig. 4.4) and population density (Table 4.1) increasing over time. These changes have had knock-on-off effects, for example on land cover and of course on the nature and rate of tourism development in the region.

**Figure 4.4 Census results and mid year population projections of selected districts**



\* Districts where study area is located (note: most of the study area is found in Wakiso district)

+ District adjacent to the study area district

Source: UBOS (2005b, 2006)

**Table 4.1 Population density and annual population growth rates of selected districts**

District	Population Density / km <sup>2</sup>		Annual Total Population growth rates (%)	
	1991	2002	1980-1991	1991-2002
Kampala*	4,727	7,259	4.8	3.7
Wakiso*	302	545	3.4	4.1
Mukono+	192	256	2.7	2.6
Mpigi+	128	138	2.3	1.3
Kalangala+	36	74	5.9	6.5

\* Districts where study area is located (note: most of the study area is found in Wakiso district)

+ District adjacent to the study area district

Source: UBOS (2004, 2005)

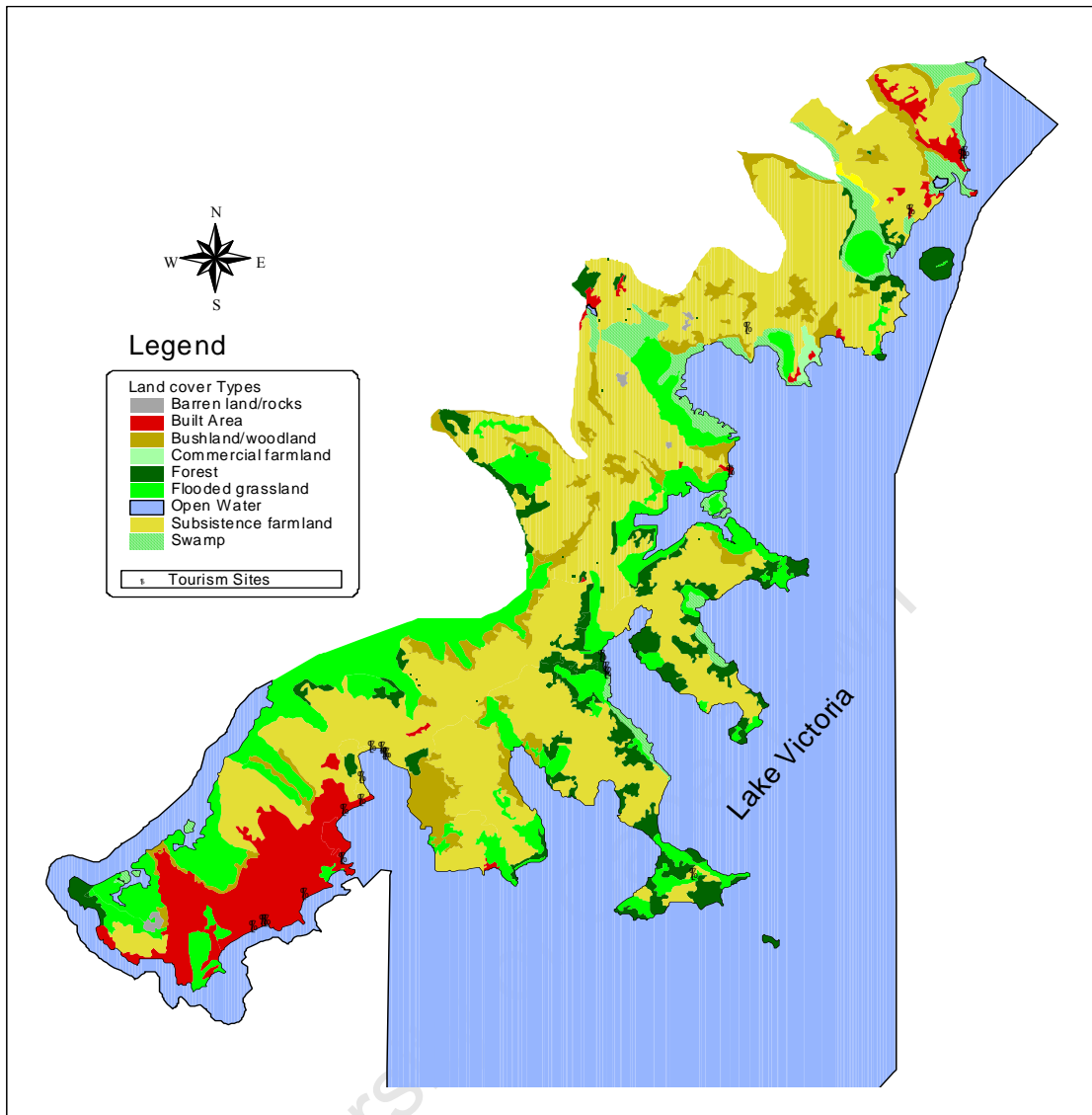
From Figure 4.4, it can be seen that the population of the region has been increasing at a high rate, more especially in Kampala and Wakiso districts where the study area is located. Between 1980 and 1991, the average annual total population growth rate in Kampala district was 4.8% and in Wakiso district 3.4%, values that are almost twice the national average annual growth rate of 2.5% (UBOS 2005). Similarly, between 1991 and 2002 the annual growth rate in Kampala (3.7%) and Wakiso (4.1%) was still significantly higher than the national average of 3.3%. This is attributed to the high urbanisation rate in these two districts as a result of high rural-urban migration as well as intrinsic population increase. The growing population has resulted in higher population density values as indicated in Table 4.1. Kampala still had the highest population density of 7,259 people per square kilometre followed by Jinja (587/km<sup>2</sup>) and Wakiso (545/km<sup>2</sup>).

However, further scrutiny of the population statistics reveals some interesting patterns of population growth. Between 1980 and 1991, Kampala district had a higher annual growth rate (4.8%) than Wakiso (3.4%), but between 1991 and 2002, Wakiso district had a higher growth rate (4.1%) than Kampala district (3.7%). This change in trend may be attributed to the fact that Kampala city is sprawling from the traditional city centre to peri-urban areas that characterise Wakiso district, which surrounds Kampala city. This means that more people migrating to Kampala are settling more in the peri-urban areas, which include the study area. Such population trend obviously has influenced tourism development trend and sustainable resource use, an aspect this study is interested in exploring.

#### **4.3.3. Land cover change**

There have been few studies in the Lake Victoria shore region to identify and map land cover change. Land cover mapping was conducted in 1996 (Figure 4.5) as part of the National Biomass Study (NBS) that was integral to the first national land cover mapping exercise. Prior to this, there was no land cover database available to determine the status of land cover in the study area, and indeed in the country as a whole.

**Figure 4.5. Land cover of Lake Victoria shore study area (1996)**



*Source: MWLE (2003)*

Attempts have been made by this study to identify land utilisation patterns and collect land cover statistics, but they are so limited and fragmented that they cannot meaningfully be used for planning purposes. Using the available land cover map (Figure 4.5), land cover types are identified and area coverage in Km<sup>2</sup> computed as presented in Table 4.2 below

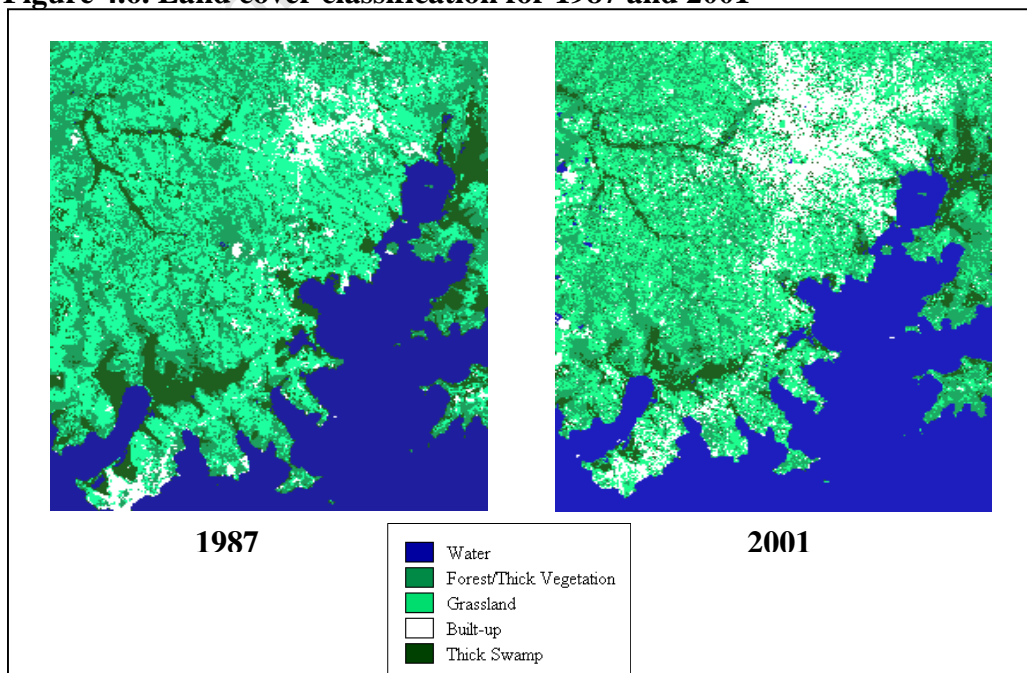
**Table 4.2 Land cover (Km<sup>2</sup>) of Lake Victoria shore study area (1996)**

Land cover type		Area (Km <sup>2</sup> )	Percentage Coverage
Barren Land/Rocks		4.2	0.1
Built Up		169.0	4.4
Bush land		89.2	2.3
Woodland		119.4	3.1
Farmland	Commercial farm land	10.1	0.3
	Subsistence farm land	2350.5	61.3
Grassland		102.7	2.7
Open Water		286.1	7.5
Forest	Forest Plantation (Deciduous)	14.1	0.4
	Tropical forest (encroached)	144.1	3.8
	Tropical forest (well stocked)	13.1	0.3
Wetland	Swamp	135.6	3.5
	Grassland (permanently Flooded)	398.4	10.4
<b>Total</b>		<b>3836.5</b>	<b>100</b>

Table 4.2 indicates that the major land covers in the study area include, farmland (61.6%), wetland (13.9%), open water (7.5%) and built up area (4.4%). It also indicates that of the total land cover only 0.3% (13.1 Km<sup>2</sup>) of the tropical forests are well stocked, with the larger part 3.8% (144.1 Km<sup>2</sup>) encroached on by human activities.

As earlier noted, most available land cover statistics cannot enable comprehensive land cover change detection. In order to examine the land cover change in the Lake Victoria shore region, this study using 1987 and 2001 landsat satellite images, attempted supervised classification. Using the maximum likelihood classifier method, land cover classification was carried out for each satellite image and the outputs are presented in Figure 4.6 below.

**Figure 4.6. Land cover classification for 1987 and 2001**



From the visual comparison of the two images in Figure 4.6, it is realised that a number of land cover changes took place between 1987 and 2001. Notably, is the built up area that drastically increased especially in and around Kampala city and Entebbe Municipality. This urban sprawl can directly be related to the increasing population in the region as earlier discussed in section 4.3.2. The visual comparison also shows that the thick swamps (wetlands) and forest/thick vegetation coverage was larger in 1987 than in 2001. This observation is in agreement with NEMA state of environment reports that indicate high and increasing levels of deforestation and wetland reclamation as earlier observed in section 4.1.3. In general the land cover classification confirms the view that human activities in the region are increasing and putting pressure on the existing natural resources in the Lake Victoria shore region.

#### **4.3.4 Socio economic activities**

The lakeshore region is characterised by a number of economic activities, which include fisheries, agriculture, commercial services and trade. Being a lakeshore region, fishing is a major source of livelihood for a big percentage of the population (Wakiso 2006) who are mostly low-income earners (Entebbe Municipal Council 2005a) employed in fish business activities such as fishing, fish smoking and fish mongering. Major fish landing sites include Gaba, kasenyi, Kitubulu and a number of other landing sites dotted along the lakeshore. For instance, in Wakiso district there are 28 operating fish landing sites (Wakiso 2006). However most of the fishing activities are small scale and constrained by a number of factors hence the vast potential of this sector has not been fully exploited (KCC 2003).

Under the agriculture sector, subsistence agriculture is the main source of livelihood for the rural parts of the Lake Victoria shore region and backyard farming in the urban areas to supplement household income (Wakiso 2006). Local authorities are increasingly putting in place strategies to favour urban and peri urban agriculture (KCC 2003, Wakiso 2006) as a means of reducing urban poverty and enhance food security, health and nutrition of the community (Entebbe Municipal Council 2005). However over the year's export oriented commercial flower farming has increased and there are about ten flower farms along the lakeshore. Using greenhouse-farming techniques a number of flower farms are located near the shoreline in order to have access to water supply.

There are a number of trade and commercial activities along the lakeshore region ranging from large scale ones like hotels, petrol stations to small scale ones like market stalls for food stuffs, general groceries, craft and arts shops. Commercial services are steadily increasing at all levels of production (KCC 2003). Most of the community, especially women, derive their livelihood from engaging in small-scale businesses (Wakiso 2006). Tourism businesses fall under this sector and they mainly include hotels, bars, restaurants and a chain of leisure and entertainment related services like dancing halls and theatres. In order to take advantage of the scenic and cool lakeshore environment most of tourism businesses like hotels are increasingly being established on the shoreline (KCC 2003). However the extent to which the local community benefits from these activities in terms of ownership, employment and market for their products, is not fully documented.

Brick making, sand mining and stone quarrying are activities that have greatly increased due to the rapid urbanisation that has attracted the construction of more houses in the urban and peri urban areas of the Lake Victoria shore region (Wakiso 2006). Brick making and sand mining are the most dominate activities, which are carried out in the lakeshore region due to the abundance of clay soils for brick making and sand along the areas near the shore line. However, these activities have environment impacts such as deforestation through cutting down trees for brick baking (Wakiso 2006) and many open pits which are left behind once sand mining and stone quarrying has been carried out.

In general the level of socio economic development in the lakeshore region is still low, reflecting the general low level of economic development in Uganda. The lakeshore region characterised by subsistence agriculture, small-scale businesses and poverty levels are generally high with about 20 - 30% of the population living below the poverty line (UBOS 2004). The low level of socio economic development in the lakeshore region plays a significant role in the sustainability of the region since a link has found between poverty, environment and sustainable development where the poor are both agents and victims of environmental degradation (NEMA 2002). Understanding the level of socio economic development in the lakeshore region is therefore important in informing this study.

### **4.3.5 Tourism development**

Tourism development in Uganda has evolved through a number of stages as a result of a number of factors. In order to analyse this evolution this study categorises the stages into three phases; Pre-colonial phase (before 1880's), Colonial phase (1900 – 1962) and the Post-colonial phase (1963 – to date - 2006). This categorisation is based on the argument that, the socio-political organisation of Uganda has had a lot of influence on the characteristics and trend of tourism development and determined the nature of tourism policy and planning.

#### **(a) Pre-colonial phase**

Prior to the establishment of British colonial rule in the nineteenth century, East Africa and Uganda in particular was little known to the outside world, apart from the Arab traders who had penetrated the interior reaching Buganda kingdom in 1845. The Buganda (and later Uganda) region came to be known to the outside world through the writings of explorers such as Speke (1862)<sup>1</sup>, Grant (1865) Stanley (1865) and the work of missionaries who started arriving in 1877 (Karugire 1980). During this period, the East African region was remote, regarded as exotic, but characterized by the absence of tourism and hospitality infrastructure (Akama, 1999) and lacked tourism planning, just like in many other parts of the world (Hall 2000).

#### **(b) Colonial phase (1900 – 1962)**

Colonial rule was effectively established in the region in 1894 when the Buganda kingdom was placed under a formal British protectorate. There was no formal tourism in the region by then. Limited tourism began in the region with the construction of the Uganda-Kenya railway (Akama, 1999) that reached Nairobi in 1900, Kisumu 1901, Kampala 1931 and extended to Kasese 1956 (Nairobi Railway Museum, 2005). The railway became the main transport route to the interior not only for the goods and colonial administrators but also for the first tourists. The major recreational activity undertaken by westerners who ventured into the hinterland, was big-game safari hunting (Akama, 1999). Among the tourists was Winston Churchill (former British prime minister) on his visit to Uganda in 1907 described the country as “the pearl of Africa” (a description still being used to market and boost tourism in Uganda to date) due to the magnificent landscape, wildlife and culture (MTTI 2006).

---

<sup>1</sup> *The first European explorer to see the source of the Nile*

In order to market and promote tourism the colonial government in collaboration with conservation organisations formed the East Africa Travel and Tourism Association (EATTA) in 1948 (Ouma 1982 as cited by Akama 1999). From the 1950's, EATTA, developed and implemented a new tourism policy whose aim was to shift tourism activities in National Parks and reserves from where wildlife viewing and photographing would be the main activity, rather than sport hunting (Akama, 1999).

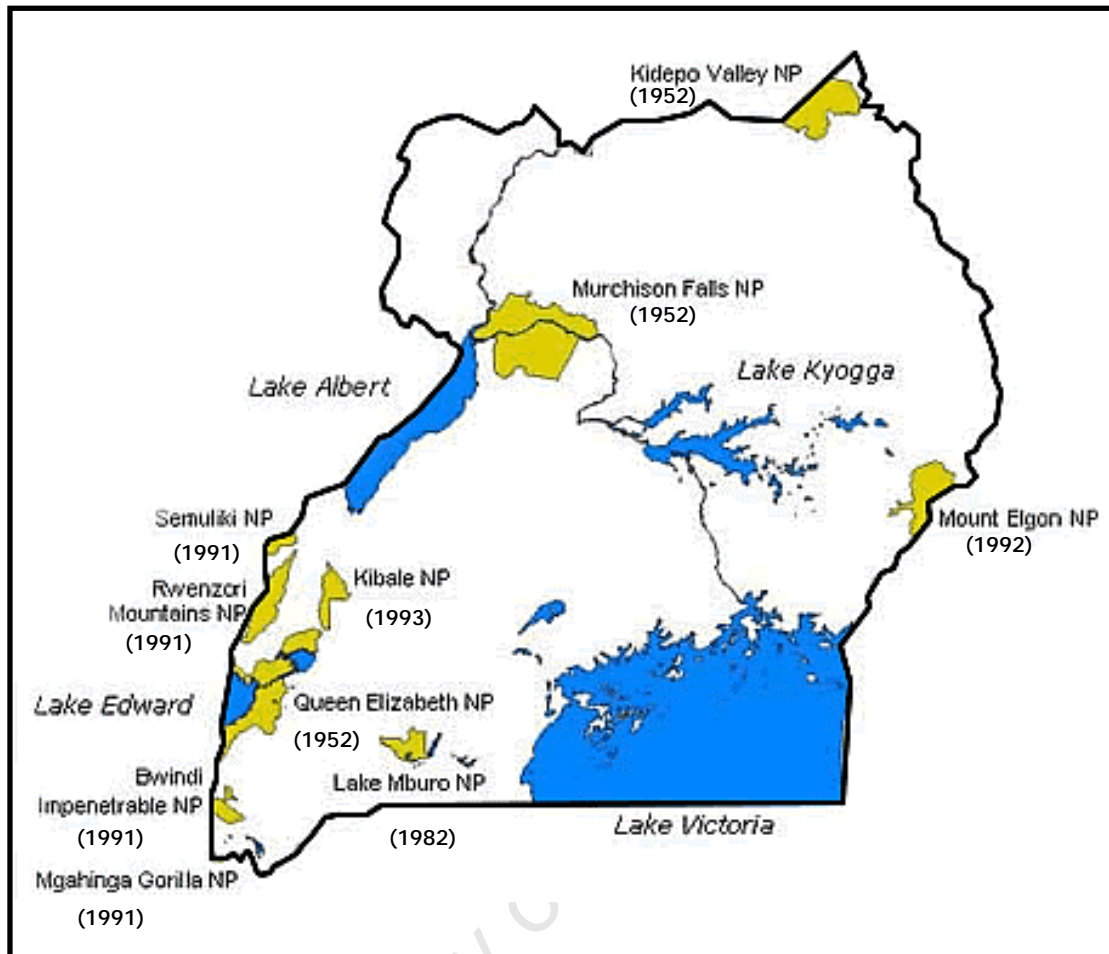
The association also started advocating for development of beach tourism at the Kenyan coast (Akama, 1999) as a way of promoting and marketing a diversified tourism product (Ouma, 1982 as cited by Akama, 1999). The work of EATTA marked the beginning of deliberate tourism development and planning. The colonial government in the East African region took a more active role. Similar to the general international tourism policy trend, this period was characterised by greater government involvement in tourism marketing (Hall 2000).

In Uganda, deliberate tourism development and to some extent tourism planning began in the 1952 with the gazetting of the Queen Elizabeth National Park, Murchison Falls National Park and Kidepo National Park (see figure 4.7), the principle attractions being the abundant large game animals and the diverse scenery.

These conserved areas attracted tourists to the country and, during the 1960's, Uganda became the main tourist destination in Eastern Africa; by that time tourism was the third largest foreign exchange earner after the traditional cash crops of cotton and coffee (UIA 2005). In this phase, the colonial government centered on tourism development by providing the basic infrastructure like roads and lodges, and promoting the conservation of wildlife and 'safari' drives in National Parks.

The tourism resources and potential of the lakeshore region and the surrounding areas was realized even during the colonial period when the Botanical Gardens and a zoo – now the Uganda Wildlife Education Centre (UWEC) - all in Entebbe - were established in 1898 and 1952 respectively. Apart from the Entebbe peninsula, which was later to be gazetted as bird sanctuary, the other parts of the lakeshore remained remote and without any tourism development. The traditional economic activities carried out on the lakeshore were fishing and subsistence agriculture. In general, it should be noted that during this phase there was no formal tourism policy or guidelines set up.

**Figure 4.7 National Parks in Uganda indicating year (in brackets) when they were gazetted**



Source: UWA (2006)

### **(c) Post colonial phase**

This phase may be sub-divided into three-time periods viz. 1962 – 1970, 1971 – 1985 and 1986 – to date (2006), based on the political characteristics and the level of attention given to tourism planning at the time.

#### **(i) 1962 – 1970**

Uganda attained independence in 1962 without an armed liberation struggle so the transition was smooth and without any political instability (Karugire 1980). The government approach to tourism development remained more or less the same as in the preceding colonial period. Emphasis remained placed on developing infrastructure and conserving wildlife in the National Parks. During this period the hotel industry experienced the greatest expansion at the peak of the tourism industry in the mid and late 1960's (UIA 2005).

Tourism was government-led with most facilities mostly hotels owned and managed by the government (under Uganda Hotels Limited) were set up in the National Parks and in major adjacent towns. Provision of accommodation close to Entebbe International airport and the capital city – Kampala was also a priority (Langlands 1974). Nevertheless, there were some few private investments made in recreational and leisure facilities. For instance, in the study area, some facilities were established such as at Lutembe beach in the mid 1960's, and Nabinonya and Kisubi beaches that were privately owned by the catholic church of Kisubi, but were not open to the public.

In general, government was the major key player and emphasis was on maintaining National Parks and wildlife conservation. This period was also characterised by a general increase in international tourism although domestic tourism was still very low. This was a general characteristic trend in the East African region at the time (Akama, 1999). It should be noted that major emphasis of government was also on infrastructure development in order to attract more tourist and less emphasis was put on social and environmental impacts of tourism development.

#### **(ii) 1971 – 1986**

This period was characterised by severe political instability especially between 1971 and 1979 during the brutal regime of Idi Amin. During this period, the country witnessed the over-throw of six ruling governments, causing a lot of unfavourable political and economic conditions. As with other sectors within the economy, the tourism industry suffered tremendously from these years of political turmoil. Most wildlife in National Parks was hunted to near extinction, and associated tourism infrastructure was looted and destroyed (MTTI 2003). As a consequence virtually no tourism development and planning took place during this period. The number of tourists visiting the country was greatly reduced and the international image of the country as a tourism destination was significantly damaged; even to date the image has not been restored to its pre-1970 level. In the study area in particular, the situation was similar with less or no investment in and development of tourism related infrastructure.

#### **(iii) 1986 – 2006**

This period can be referred to as the 'boom period' since it has witnessed the highest rate of tourism developments across the country. In the study area, most of the tourism related developments along the lakeshore have been developed in this period. This period begins

in 1986, when the new National Resistance Movement government gained power and ended the long period of widespread political instability. Tourism was again given priority as a means of improving and diversifying the economy, which had been shattered by years of political unrest. In order to revitalize the tourism sector, the government focused on rehabilitating the existing tourism facilities including hotels, lodges and National Parks, which had been run down (UIA 2005). Most of the National Parks (such as Bwindi, Rwenzori and Elgon among others) and conservation areas have been gazetted in this period (see Figure 4.3).

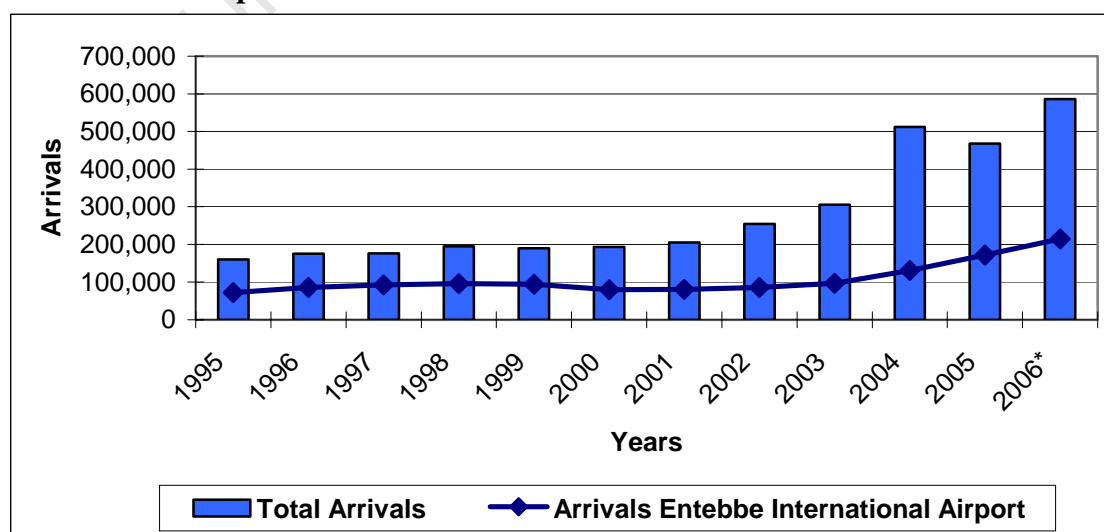
In this phase tourism was given specific and deliberate attention. This was witnessed by the formulation of various national tourism projects and plans. In 1988 the Tourism Rehabilitation and Development Project (TRDP) was set up with the main objective of identifying means to bring about tourism institutional improvements. In 1992, the government formulated the ten-year Integrated Tourism Development Master Plan whose purpose was to redefine the role of government and the other stakeholders in the development of tourism. As a result, there was substantial restructuring of the tourism industry operations. The Uganda Tourist Board was set up by Act of Parliament in 1994 to promote the marketing of tourism (MTTI 2006). Uganda Wildlife Authority was also established in 1996 by merging Uganda National Parks and the Game Department. It has the responsibility to ensure the conservation and sustainable management of the wildlife in protected areas and within the communities for the benefit of the people of Uganda and the global community (UWA 2006).

The government also adopted a new management strategy, which included, either the complete privatisation of the tourism facilities or having a joint management partnership with the private sector. By this approach all hotels that were being owned and managed by government under the Uganda Hotels Limited were privatised. The private tourism sector responded positively and several new tourism facilities were developed in various locations throughout Uganda (MTTI, 2003). From this point onwards the government remained with the overseeing and supervision role, while the private sector took the lead in provision and management of tourism facilities. Since then as major stakeholders the private sector has played a major role in determining the trend of tourism development in the country in general and in the Lake Victoria shore region in particular.

With the above changes and the improved security situation in the country, the performance of the industry has tremendously improved. For example, the number of international tourist arrivals increased from 25,000 in 1985 to approximately 60,000 tourists in 1991 (UIA 2005) and, since then, the number of international tourists entering the country (especially through Entebbe International Airport) has continued increasing as indicated Figure 4.8. However, full potential of tourism sector has not been fully realised due to a number of factors, especially incidences of insecurity such as the 1999 incidence when 8 international tourists were killed by rebels in Bwindi National Park found in the south west of Uganda. There has also been continued political instability in northern Uganda as a result of Lords Resistance Army (LRA) rebel activities. Such factors, among others, have not only constrained tourism development but also painted a poor image of Uganda as a tourist destination (MTTI 2003).

With a shift in government policy from state-driven to private sector-driven tourism, coupled with an improving investment climate, private sector investment in the Ugandan tourism industry is rapidly increasing (UIA 2005). The private sector has responded positively and there are increasing numbers of private tourism facilities, especially in the accommodation, travel and tour service sectors (MTTI 2003). As a result the tourism sector earned the economy US \$ 172 million in 2003 (UBOS 2004), and increased to US \$ 200 million in 2004, surpassing fish and coffee as the top foreign exchange earners (MTTI 2006).

**Figure 4.8 Total international tourist arrivals in Uganda and arrivals at Entebbe International Airport 1995 – 2006**



Source: UBOS (2006), \* estimates for 2006

As a way of defining a new way forward for tourism development in Uganda the National Tourism Policy was formulated in 2003. The main goals and objectives of the policy are to develop tourism not only as a vehicle for poverty eradication but also as a base for environment conservation in the community. It also highlights the need for tourism to be socially and culturally acceptable. The policy marks an important milestone in the development of tourism in Uganda since it highlights the need for sustainability and calls for the balance between environmental, social-cultural and economic benefits among all stakeholders. Particular emphasis is given to environmental sustainability, where the need to plan tourism facilities and products in a nature friendly manner is emphasised. This forms the basis and background of this study, which investigates if indeed tourism development in the Lake Victoria shore region is developing in an environmentally friendly manner. With tourism developing in the lakeshore region that is characterised by increasing population, deforestation, wetland reclamation, pollution etc, the need for a study to develop a sustainable tourism planning approach becomes more pertinent - an aspect this study attempts to address.

In general, this chapter provides a biophysical and socio-economic background highlighting the important historical changes that have taken place in the country in general and the Lake Victoria shore region in particular. Identifying the regions characteristics and the changes that have taken place in the population, land cover and in the tourism sector, are key in understanding the context of the study. This chapter reveals that, the lakeshore region is experiencing rapid development (even in the tourism industry) that is increasingly putting pressure on the physical environment – pointing to the need for planning. This leads to questioning whether the analysis of this background and the use of sustainable tourism indicators can be used to develop a planning approach to enhance the attainment of STD in the lakeshore region. This study attempts to find the answers by presenting and analysing the research results in the subsequent chapters.

## **CHAPTER FIVE**

### **PRESENTATION OF RESULTS**

#### **5.0 Introduction**

This chapter focuses on the presentation of results collected and analysed through methodological steps described in chapter three. The chapter is organised following the objectives and associated research questions of the study. For logical consistency, the findings are, where necessary, presented according to the categories of respondents from whom they were collected or according to the categories of the tourism sites.

This chapter is presented in five sections, which correspond to the five objectives of the study as stated in chapter one (section 1.4). The sections are: Spatial distribution, temporal trend and characteristics of tourism sites; Sites performance in relation to physical environment indicators of sustainable tourism development; Factors influencing the performance level of the tourism sites; Evaluation of how planning caters for Sustainable Tourism Development (STD) in the lakeshore region; and a planning approach to Sustainable Tourism Development (STD) in the Lake Victoria shore region.

#### **5.1 Spatial distribution, temporal trend and characteristics of tourism sites**

The first objective of the study was to establish and analyse the spatial distribution of lakeshore tourism sites, their temporal trend, characteristics and those of the tourists they receive. The following research questions were formulated to guide a systematic approach to this objective:

- (a) What is the spatial distribution of the tourism sites in the lakeshore region?
- (b) What is the temporal trend of the tourism sites?
- (c) What are the lakeshore tourism site characteristics?
- (d) What are the visitor characteristics?

The presentation of the research results follows the same sequence as the research questions stated above.

##### **5.1.1 Spatial distribution of tourism sites**

Clearly, the first research question was intended to establish the spatial distribution of the tourist sites in the lakeshore region. This was important because spatial distribution of places on the earth has deep meaning for tourism and its' planning (Gunn 2002). As

earlier noted in chapter 3, the linear nearest-neighbour analysis was used to establish the distribution pattern. Using study area topographic maps (1:50,000) and coordinates collected by GPS, distances from one site to the next along the lakeshore line were measured and the results are shown in Table 5.1

**Table 5.1 Nearest-neighbour distances (in km) between Lake Victoria shore sites**

Tourism sites		Distance in km
From	To	
Start point of sand beach	Lido Beach	0.6
Lido Beach	Penile Restaurant Beach	0.1
Penile Restaurant Beach	Aero Beach	0.1
Aero Beach	IRBH	2.3
IRBH	UWEC	1.3
UWEC	Water Front Club	1.1
Water Front Club	IBBH	0.4
IBBH	Botanical Gardens	0.8
Botanical Gardens	Anderita Hotel	0.8
Entebbe Sailing Club	Kitubulu Camping site	1.1
Kitubulu Camping site	Victoria Café	0.8
Victoria Café	Ssese Gateway Beach	0.3
Ssese Gateway Beach	New Beach	0.4
New beach	Garuga Golf and Country Club	33.8
Garuga Golf and Country Club	Nabinonya Beach	8.5
Nabinonya Beach	Kisubi Beach	0.3
Kisubi Beach	Kisubi Camping Site	0.2
Kisubi Camping Site	Lutembe Beach Resort	29.4
Lutembe Beach Resort	Ranch On The Lake	7.7
Ranch On The Lake	Kaazi Camping site	8.5
Kaazi Camping site	Speke Resort and Conference Centre	3.4
Speke Resort and Conference Centre	K.K Beach	3.7
K.K Beach	Gaba Beach Hotel	0.2
Gaba Beach Hotel	Gaba fish landing Site	0.2

*IRBH – Imperial Resort Beach Hotel, IBBH – Imperial Botanical Beach Hotel, UWEC – Uganda Wildlife Education Centre*

From the distances shown in Table 5.1, a linear nearest-neighbour ratio of 1.9 was obtained for the site spatial pattern (for calculations, see Appendix 4). Nearest-neighbour analysis contends that a ratio greater than 1.0 indicates a tendency towards uniform spacing (regular), yet a ratio equal to 1.0 indicates a random distribution pattern. A ratio less than 1.0 indicates a pattern tending towards clustering. Referring to the significance graph (Appendix 1) a value of 1.9 for 24 observations falls within the area that indicates uniform or regular spacing of the tourist sites along the lakeshore region.

However, much as the ratio indicated a regular spacing of the sites, critical observation of the sites on the map as well as in the field, revealed that there is in fact some variation in the regular pattern. The sites near major urban areas of Entebbe and Kampala tend to be regularly spaced but very close to each other. For instance, the average distance between the sites in Entebbe Municipality and Makindye Division is

0.79 km and 1.87 km respectively. However, as one moves away from the urban area, the distances between the sites along Lake Victoria shore increases – with an average distance of 11.47 km. Furthermore, observation from the field indicated that in some parts of the lakeshore with regularly spaced sites, there are planned developments already demarcated and in some cases already landscaped. The planning implications of the varying patterns within the generally regular spacing are discussed later in chapter 6.

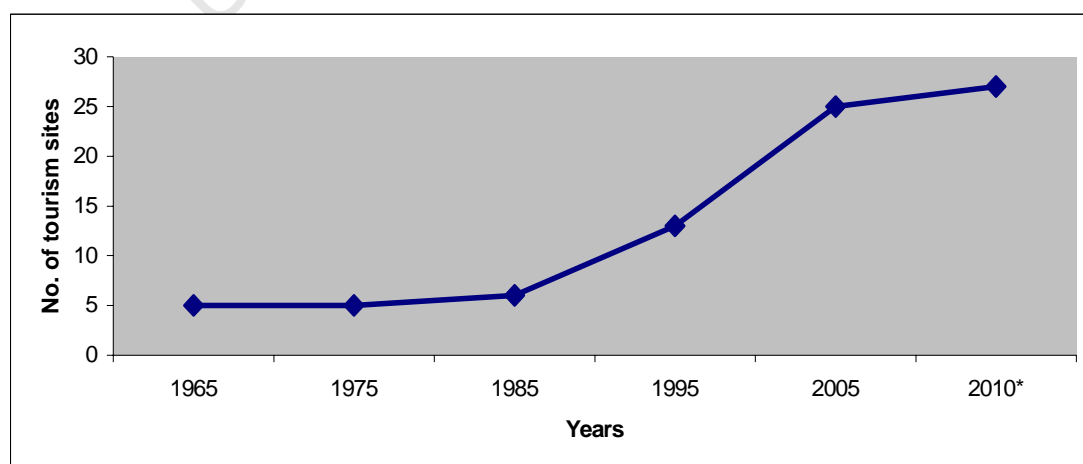
### 5.1.2 Temporal trend

The second research question formulated out of the first objective focused on establishing the temporal trend regarding the development of tourist sites. This was important since the study realised that identifying the changes over the time would help understand the temporal context in which the sites are developing. Temporal trend was assessed in terms of: number of established sites over the years, number of visitors received over the years, and physical growth (expansion) of the sites. The level of investment in tourism sector was also considered.

#### (a) Number of sites 1965 - 2010

In order to identify the trend in terms of number of tourism sites along the lakeshore, dates when sites were established were recorded. Through a questionnaire (Appendix 5) administered to the site managers and data from secondary sources, information as to when sites were established was obtained. However, due to successive changes of ownership and management, some site managers just estimated when the sites were established. The cumulative number of sites over the period is presented in Figure 5.1

**Figure 5.1 Number of tourism sites along lakeshore 1965 – 2010\***

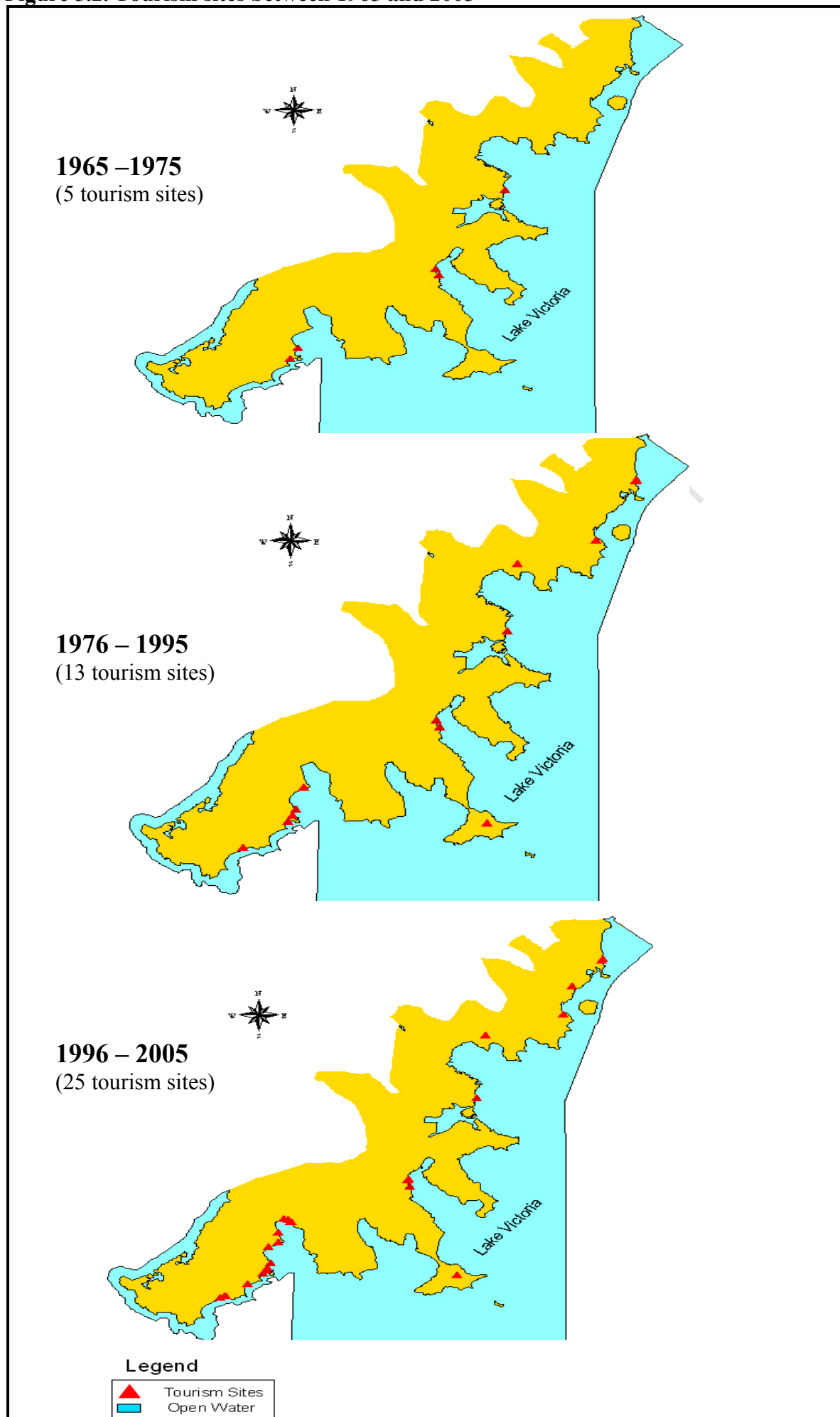


*ote: \*2010 figure is a simple estimate derived from the project proposals submitted to NEMA (as per 2006) for approval and field observation of new sites being established*

Figure 5.1 indicates that, between 1965 and 1985, there were few sites in the lakeshore region with only one site added in 1985. However, the established sites more than doubled in number by 1995 and the trend steadily increased as shown in Figure 5.1 and 5.2. The implications of this trend in respect of planning are discussed in chapter six.

University of Cape Town

**Figure 5.2. Tourism sites between 1965 and 2005**



## (b) Number of visitors

Number of visitors to a site is a key piece of data for site management especially in measuring and managing limits of capacity and site use intensity (UNWTO 2004a). This study was therefore interested in investigating the trend of visitor numbers. However, due to poor record keeping or reluctance of site managers to allow access to the available records about the number of visitors received (both day and overnight visitors), the visitor trend could only be established qualitatively. Both local residents and site managers were asked whether the sites had registered any visitor growth. Visitors were deliberately omitted because, as short-time visitors, they were not expected to know the visitor trend over the years. Results obtained are presented in Table 5.2

**Table 5.2 Responses of site managers and local residents on the trend of number of visitors received at the sites**

Site category	Respondent category		Site has had an increasing number of visitors over the years							X <sup>2</sup> <sub>obs</sub>	df	P
			NR	SD	D	N	A	SA	Total			
Beach hotels	Site managers	<i>f</i>	0	0	0	0	1	1	2	0.715	5	.982
		%	0.0	0.0	0.0	0.0	5.9	5.9	11.8			
	Local residents	<i>f</i>	1		1	2	6	5	15			
		%	5.9	0.0	5.9	11.8	35.3	29.4	88.2			
	Total	<i>f</i>	1	0.0	1	2	7	6	17			
		%	5.9	0.0	5.9	11.8	41.2	35.3	100.0			
Beach resorts-with accommodation	Site managers	<i>f</i>	0	0	1	0	1	2	4	6.215	5	.286
		%	0.0	0.0	1.8	0.0	1.8	3.6	7.1			
	Local residents	<i>f</i>	2	1	2	6	31	10	52			
		%	3.6	1.8	3.6	10.7	55.4	17.9	92.9			
	Total	<i>f</i>	2	1	3	6	32	12	56			
		%	3.6	1.8	5.4	10.7	57.1	21.4	100.0			
Beach resorts-without accommodation	Site managers	<i>f</i>	0	0	0	0	1	3	4	2.735	5	.434
		%	0.0	0.0	0.0	0.0	3.8	11.5	15.4			
	Local residents	<i>f</i>	0	0	1	1	13	7	22			
		%	0.0	0.0	3.8	3.8	50.0	26.9	84.6			
	Total	<i>f</i>	0	0	1	1	14	10	26			
		%	0.0	0.0	3.8	3.8	73.1	19.2	100.0			
Conversation Area	Site managers	<i>f</i>	0	0	0	0	2	0	9.1	0.489	5	.434
		%	0.0	0.0	4.5	0.0	0.0	4.5	15.4			
	Local residents	<i>f</i>	0	0	0	0	16	4	20			
		%	0.0	0.0	0.0	0.0	72.7	18.2	90.9			
	Total	<i>f</i>	0	0	1	0	18	4	22			
		%	0.0	0.0	4.5	0.0	81.8	18.2	100.0			

Abbreviations: NR-None response; SD-Strongly disagree; D-Disagree; N-Neutral; A-Agree; SA-Strongly agree, X<sup>2</sup><sub>obs</sub>-Observed chi square; df-degrees of freedom; P-Level of significance. Chi Square value is significant at P < 0.05

A critical examination of the response pattern in Table 5.2 reveals that the majority in both categories of respondents agreed (agree and strongly agree) that the sites are receiving an increasing number of visitors. Moreover, considering the levels of significance (P), results indicate that the observed chi square values (X<sup>2</sup><sub>obs</sub>) were all below levels of statistical significance. This means that there was no significant difference in the way both site managers and local residents reported about the increase in visitors received over the years at beach hotels (X<sup>2</sup><sub>obs</sub> = 0.715, P = 0.982); beach

resorts-with accommodation ( $X^2_{obs} = 6.215$ ,  $P = 0.286$ ); beach resorts-without accommodation ( $X^2_{obs} = 2.735$ ,  $P = 0.434$ ); and conservation areas ( $X^2_{obs} = 0.489$ ,  $P = 0.434$ ). Table 5.2 indicates further that conservation areas and beach resorts-without accommodation were reportedly receiving an increasing number of visitors than beach hotels and beach resorts-with accommodation.

### (c) Physical growth (expansion) of sites

As a measure of temporal trend, this study was interested in identifying the rate at which the sites have been expanding in size. As in the case of visitor numbers, poor record keeping and/or reluctance on the part of site managers to permit access to the available records, physical growth trend was established qualitatively. Local residents and site managers were asked whether the sites had expanded in size over the years. Visitors were again omitted because, as short-time guests, they were not expected to know how the sites had grown over time. Results obtained are shown in Table 5.3

**Table 5.3 Responses of site managers and local residents on physical growth trend**

Site category	Respondent category	Site has physically grown/expanded over the years since its establishment								$X^2_{obs}$	df	P
		NR	SD	D	N	A	SA	Total				
Beach Hotels	Site managers	<i>f</i>	0	0	0	0	1	1	2	0.715	5	.949
		%	0.0	0.0	0.0	0.0	5.9	5.9	11.8			
	Local residents	<i>f</i>	1		1	2	6	5	15			
		%	5.9	0.0	5.9	11.8	35.3	29.4	88.2			
	Total	<i>f</i>	1	0.0	1	2	7	6	17			
%		5.9	0.0	5.9	11.8	41.2	35.3	100.0				
Beach resorts-with accommodation	Site managers	<i>f</i>	0	0	1	0	2	1	4	0.536	5	.970
		%	0.0	0.0	1.8	0.0	3.6	1.8	7.1			
	Local residents	<i>f</i>	0	1	11	4	27	9	52			
		%	0.0	1.8	19.6	7.1	48.2	16.1	92.9			
	Total	<i>f</i>	0	1	12	4	29	10	56			
%		0.0	1.8	21.4	7.1	51.8	17.9	100.0				
Beach resorts-without accommodation	Site managers	<i>f</i>	0	0	0	0	0	1	4	9.504	5	.223
		%	0.0	0.0	0.0	0.0	0.0	1.8	7.1			
	Local residents	<i>f</i>	0	0	1	1	18	2	22			
		%	0.0	0.0	3.8	3.8	69.2	7.7	84.6			
	Total	<i>f</i>	0	0	1	1	19	5	26			
%		0.0	0.0	3.8	3.8	73.1	19.2	100.0				
Conversation Area	Site managers	<i>f</i>	0	0	1	0	0	16	4	12.320	5	.202
		%	0.0	0.0	4.5	0.0	0.0	4.5	15.4			
	Local residents	<i>f</i>	0	0	0	0	16	4	20			
		%	0.0	0.0	0.0	0.0	72.7	18.2	90.9			
	Total	<i>f</i>	0	0	1	0	16	5	22			
%		0.0	0.0	4.5	0.0	72.7	22.7	100.0				

Abbreviations: NR-None response; SD-Strongly disagree; D-Disagree; N-Neutral; A-Agree; SA-Strongly agree,  $X^2_{obs}$ -Observed chi square; df-degrees of freedom; P-Level of significance. Chi Square value is significant at  $P < 0.05$

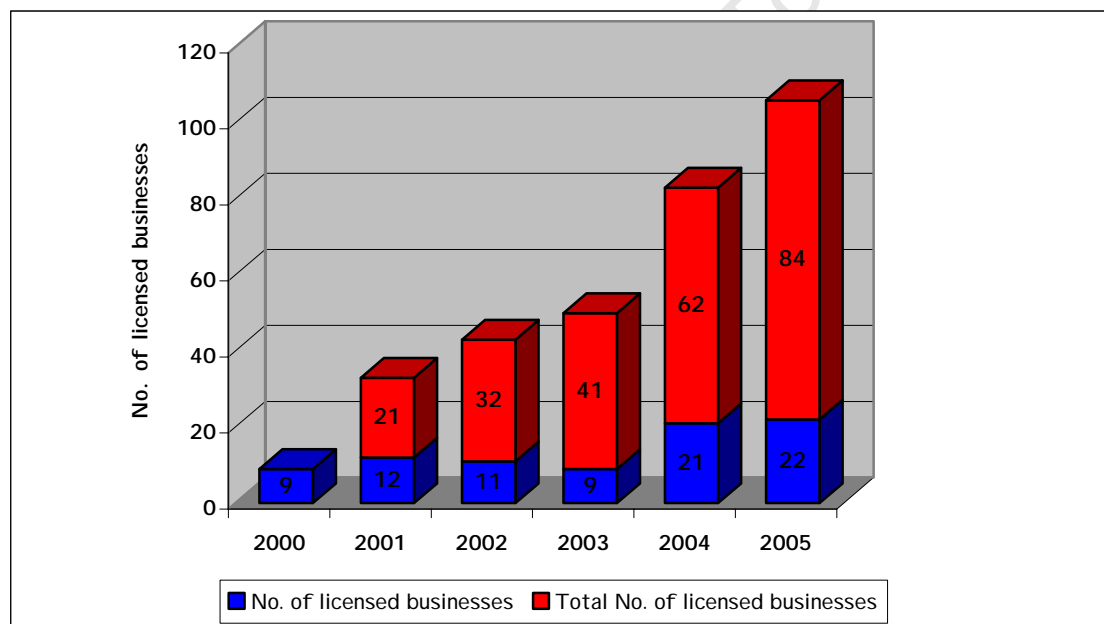
The response pattern in Table 5.3 reveals that the majority in both categories of respondents generally agreed and therefore showed that all the site categories had been physically expanding since their establishment. A critical look at the responses reveals further that conservation areas and beach resorts-without accommodation have reportedly experienced the highest level of physical growth. Looking at the levels of

significance (P), it is clear that the observed chi square values were not significant. This means that there was no significant difference in the way both site managers and local residents reported about the physical growth trend of beach hotels ( $X^2_{obs} = 0.715$ ,  $P = 0.949$ ); beach resorts-with accommodation ( $X^2_{obs} = 0.536$ ,  $P = 0.970$ ); beach resorts-without accommodation ( $X^2_{obs} = 9.504$ ,  $P = 0.223$ ); and conservation areas ( $X^2_{obs} = 12.320$ ,  $P = 0.202$ ) in the lakeshore region.

**(d) Level of investment in tourism sector**

As a result of failure to access the actual investment figures, number of licensed tourism investments was used as a proxy for the level of investment in the tourism sector. Data compiled from UIA records (Appendix 6) led to results shown in Figure 5.3

**Figure 5.3 Number of licensed tourism businesses in Uganda per year**

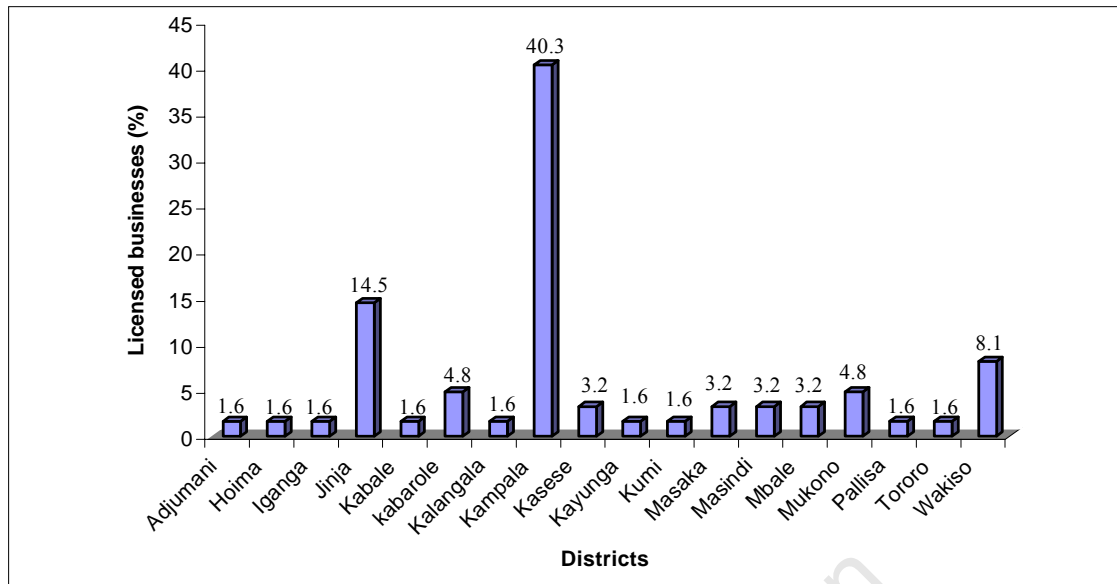


Source: UIA (2006)

Figure 5.3 shows that the total number of licensed companies in Uganda’s tourism industry has steadily been increasing over the years since 2000. To note is that, the number of business licensed per year drastically increased in 2004 and 2005.

Furthermore, data obtained from the UIA records indicate that the districts within which the study area is located (Kampala and Wakiso) have been characterised by a high number of licensed tourism investments when compared to other districts. This is demonstrated in Figure 5.4

**Figure 5.4 Distribution of licensed tourism businesses in Uganda by district (%)**



Source: UIA (2005) [Data is for total businesses licensed between 2000 and 2004]

Figure 5.4 indicates that, of the total licensed tourism businesses in Uganda, Kampala district has the highest percentage (40.3%) of licensed businesses. Wakiso district stood at 8.1% and was third to Kampala after Jinja district (14.5%). The expected total investment in Kampala district was US \$ 48.9 million and US \$ 18.9 million for Wakiso district.

In general, results obtained concerning temporal trends regarding development of sites indicate that over the years the number of sites and the visitors they receive have been increasing. This has been accompanied by the physical expansion of sites and increasing investment in terms of licensing tourism-related businesses. This trend has implications for planning for sustainable tourism development as later elucidated in chapter six.

### **5.1.3 Characteristics of tourism sites**

The third research question dealt with establishing the characteristics of the tourism sites in the lakeshore region. As noted in chapter three, the characteristics emphasised were those that could provide a basis for planning for sustainable tourism development. These were: attractiveness of features and services offered at the sites, perceived quality of the services or features, size of the site, location, site category and potential to attract more visitors. These characteristics were selected because they are key in determining the level of visitor satisfaction. For instance level of attractiveness and perceived quality of the features and services offered is central in determining whether

visitors will return or recommend others to visit or stay away. Visitor satisfaction is therefore a leading indicator of the longer-term sustainability of a destination (UNWTO 2004a) hence the need to be considered in planning. The data collected for each of the characteristics are presented below.

**(a) Attractiveness of site features and services**

To begin with, the attractiveness of a site features and services was established through visitors’ assessment. Only visitors were considered here because they are the ones who are attracted (or otherwise) by the features and services. They are therefore in a position to provide the most reliable assessment of such attractiveness. Accordingly, they were asked to rate each of the services and features at the site and the results obtained are shown in Table 5.4

**Table 5.4 Visitors’ perceived attractiveness of services/features at the sites**

Services or features offered	Assessment of quality																	
	NR		VA		A		SA		NAU		SU		U		VU		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Lakeshore scenery	27	13.6	80	40.2	41	20.6	23	11.6	8	4.0	6	3.0	5	2.5	9	4.5	199	100.0
Sand beach	61	30.7	26	13.1	16	8.0	20	10.1	21	10.6	12	6.0	5	2.5	38	19.1	199	100.0
Bar/restaurant	64	32.2	15	7.5	16	8.0	16	8.0	13	6.5	23	11.6	15	7.5	37	18.6	199	100.0
Entertainment/music recreation	56	28.1	17	8.5	22	11.1	25	12.6	15	7.5	11	5.5	14	7.0	39	19.6	199	100.0
Swimming pool	145	72.9	9	4.5	2	1.0	14	7.0	7	3.5	4	2.0	2	1.0	16	8.0	199	100.0
Hotel/resort accommodation	119	59.8	9	4.5	14	7.0	6	3.0	7	3.5	8	4.0	5	2.5	31	15.6	199	100.0
Environment setting	42	21.1	47	23.6	32	16.1	20	10.1	13	6.5	8	4.0	10	5.0	27	13.6	199	100.0
Sports recreation	88	44.2	8	4.0	12	6.0	15	7.5	12	6.0	14	7.0	8	4.0	42	21.1	199	100.0
Quietness/calmness of the environment	54	27.1	46	23.1	28	14.1	14	7.0	19	9.5	6	3.0	7	3.5	25	12.7	199	100.0
Average	73	36.8	29	14.6	20	10.0	17	8.5	13	6.5	10	5.0	8	4.0	29	14.6	199	100.0

Abbreviations: NR-Non Response; VR-Very Attracting; A-Attracting; SA-Somewhat Attracting; NAU-Neither Attracting Nor Un-attracting; SU-Somewhat Un-attracting; U-Un-attracting; VU-Very Un-attracting; f-frequency

From Table 5.4, the visitors who indicated ‘very attracting’ or ‘attracting’ are considered to have appreciated the services or features most. Those who indicated ‘somewhat attracting’ are considered to have had an average or moderate liking of the services or features. The ‘neither attracting nor un-attracting’ rating indicated that the visitors were undecided. Those who rated them as ‘somewhat un-attracting, un-attracting or very un-attracting’ are considered to have disliked the services or features. If non-response is ignored (basically because nothing meaningful can be concluded on the basis of response), Table 5.4 indicates that from visitor’s assessment, on average a

total of 24.6% of visitors liked the services or features most, 8.5% liked them somehow, 6.5% were undecided and 23.6% did not like them. A critical examination reveals that results depict a bimodal response distribution in which the lake scenery and the calm/quiet environment were the most liked (attracting) features, while sand beach, bar and restaurant, hotel/resort accommodation, entertainment and sports facilities were the least liked (un-attracting) features.

### (b) Quality of features and services of the sites

As the case was with attractiveness, the quality of site features and services was established through visitors' assessment. This was because the consumers, who in this case were the visitors, could be assumed to reliably assess the quality of services or features at the site. The assessment results are shown in Table 5.5

**Table 5.5 Visitors' assessment of the quality of services/features at sites**

Services offered or features	Assessment of quality															
	NR		E		VG		G		P		VP		N/A		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Lake scenery	16	8.0	56	28.1	60	30.2	64	32.2	3	1.5	0	0.0	0.0	0.0	199	100.0
Beach sand	37	18.6	9	4.5	31	15.6	60	30.2	45	22.6	17	8.5	0.0	0.0	199	100.0
Bar/restaurant	38	19.1	7	3.5	37	18.6	86	43.2	24	12.1	7	3.5	0.0	0.0	199	100.0
Swimming pool	6	3.0	9	4.5	10	5.0	26	13.1	11	5.5	1	0.5	0.0	0.0	199	100.0
Hotel/resort accommodation	40	20.1	10	5.0	25	12.6	36	18.1	10	5.0	4	2.0	74	37.2	199	100.0
Environment setting	33	16.6	38	19.1	42	21.1	65	32.7	16	8.0	5	2.5	0	0.0	199	100.0
Sports recreation	65	32.7	5	2.5	20	10.1	58	29.1	35	17.6	16	8.0	0	0.0	199	100.0
Quietness/calmness of the environment	28	14.1	60	30.2	42	21.1	46	23.1	21	10.6	2	1.0	0	0.0	199	100.0
<b>Average</b>	<b>33</b>	<b>16.6</b>	<b>24</b>	<b>12.1</b>	<b>33</b>	<b>16.6</b>	<b>55</b>	<b>27.6</b>	<b>21</b>	<b>10.6</b>	<b>7</b>	<b>3.5</b>	<b>19</b>	<b>9.5</b>	<b>199</b>	<b>100.0</b>

Abbreviations: NR-None response; E-Excellent, VG-Very good; G-Good; P-Poor, VP-Very poor; N/A-Not applicable; f-frequency

From Table 5.5 the visitors who rated quality as 'excellent' or 'very good' are considered to have derived a high satisfaction from the services or features. Those who rated the quality as 'good' are considered to have derived average or moderate satisfaction. Yet those who rated them as 'poor' or 'very poor' are considered to have had no satisfaction at all. Accordingly, ignoring the non-response proportion, Table 5.5 shows that, on average, 28.7% of the visitors were highly satisfied with the quality of the services or features, 27.6% moderately satisfied and 14.1% had not been satisfied. These results suggest that most sites provided services and facilities that satisfied most of the visitors.

Scrutinising the pattern of the visitors' responses, Table 5.5 reveals that services or features that were accorded a higher satisfaction rating were similar to those rated as attractive, that is, the clam/quiet environment and the lake scenery. Those that did not satisfy most of the visitors were sand beach and sports recreation facilities, which were

also rated as unattractive. This implies that the quality of the features/services offered and perceived attractiveness of the sites were highly correlated as later discussed in detail in chapter six.

**(c) Size of tourism sites**

Based on the researchers experience, tourism sites were categorised on the basis of size. Information concerning the size of a particular site was collected from site managers and the results obtained are presented in Table 5.6

**Table 5.6 Responses of site managers on the size of lakeshore sites**

Size of the site (in hectares)	Frequency	Percentage
<1	9	37.5
1-2	4	16.7
3- 4	2	8.4
5-6	0	0.0
7-8	1	4.1
9 – 10	1	4.1
>10	7	29.2
<b>Total</b>	24	100.0

The sites that were 2 hectares and below were categorised as small-scale sites, those between 3 and 8 hectares as medium scale sites and those 9 and above hectares as large-scale sites. Consequently, Table 5.6 indicates that small-scale sites (54.2%) and large-scale sites (33.3%) dominate in the lakeshore region. On closer inspection it becomes clear that the small-scale sites are mostly comprised of beach resorts-without accommodation and camping sites. Large-scale sites are mostly comprised of beach hotels, conservation areas and beach resorts-with accommodation. This has implications for spatial planning of the sites in question. It should, however, be noted that size constitutes the total land area owned or managed by the site irrespective of whether or not they fully occupied/utilised the entire area.

**(d) Location in relation to other land uses**

As noted in chapter two, surrounding land uses may have an external influence on site characteristics. Through observation, this study identifies the location of each site and categories it according to the predominant surrounding land use. Four broad categories were generated – commercial or residential, administrative, educational and agricultural land uses. Results obtained appear in Figure 5.5

**Figure 5.5 Location of sites in relation to major land uses**

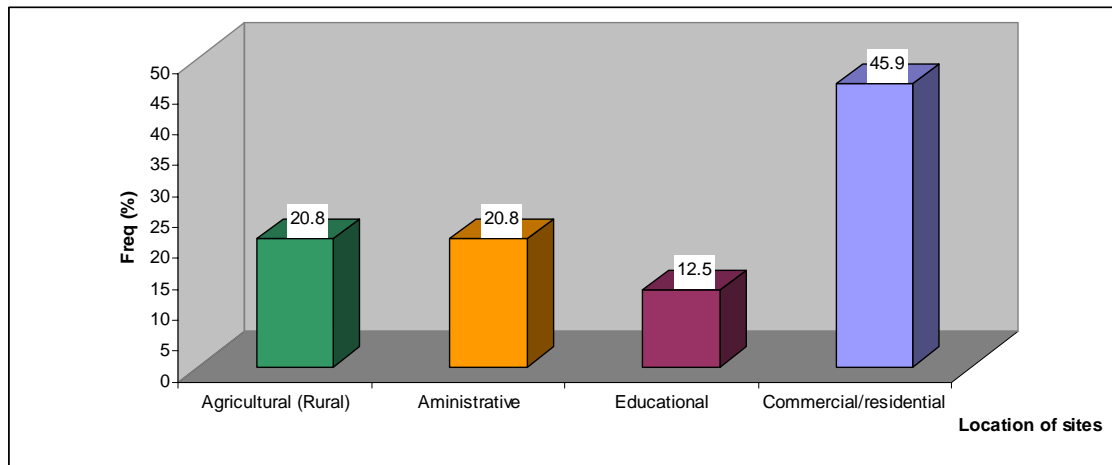


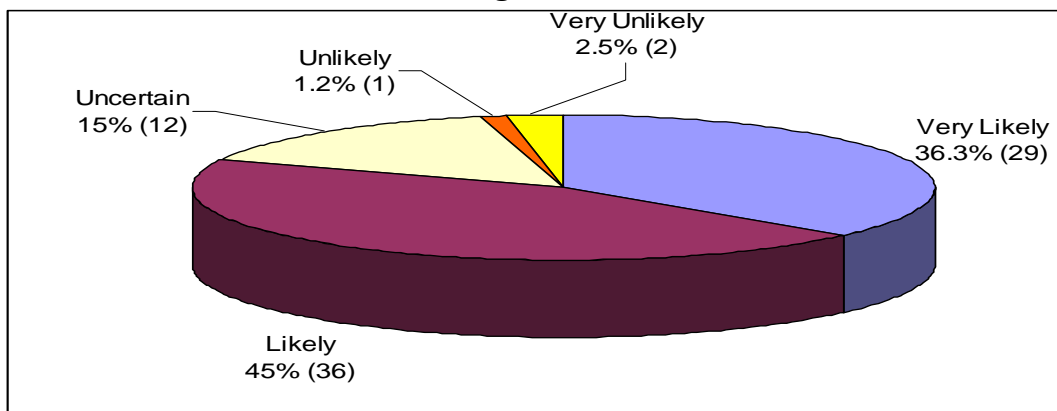
Figure 5.5 shows that most of the sites in the lakeshore region are located in commercial/residential areas (no clear boundary could be demarcated between the two land uses), followed by agricultural (mainly subsistence mixed farms and few commercial farms), administrative (mainly offices) and educational (secondary and theological schools) land uses. The results therefore reveal that most sites are located near urban areas, an aspect which should be of interest to planning.

**(e) Potential of sites to attract visitors**

The potential of sites to attract visitors was established using three parameters: likelihood of first-time visitors to come back; frequency of repeat visitors; and visitors willingness to recommend others to visit or stay away from the site. These parameters are in a way influenced by the characteristics of visitors (detailed in section 5.1.4). As earlier noted these parameters are central in the reflecting level of visitor satisfaction.

The likelihood of returning was established by asking first time visitors (40.3% of the sample, n = 80) about their likelihood of returning to the site. The results obtained from their responses are presented in Figure 5.6.

**Figure 5.6 Visitor likelihood of returning to a site**



Visitors who responded ‘very likely’ or ‘likely’ are considered to have expressed willingness to come back hence are regarded as potential ‘repeat visitors’. Those who responded as ‘uncertain’ were undecided and those who responded ‘unlikely’ and ‘very unlikely’ are considered unwilling to come back. Based on this interpretation, Figure 5.6 shows that the majority of the first time visitors (81.3%) are willing to come back and are potential ‘repeat visitors’. It is only a small minority (3.7%) who appear to be unwilling to come back. The potential of the sites to attract visitors has planning implications, especially when considered in relation to the responses that visitors gave when they asked whether they would recommend other visitors to come to the site.

In order to further understand the potential of the sites to continue attracting visitors, the remaining 59.7% of the sample (n = 119) who were not visiting for the first time (most likely who were domestic visitors) were asked to indicate how frequently they visited the sites in a year. The responses are presented in figure 5.7

**Figure 5.7 Visitor responses on the frequency of visiting a site in a year**

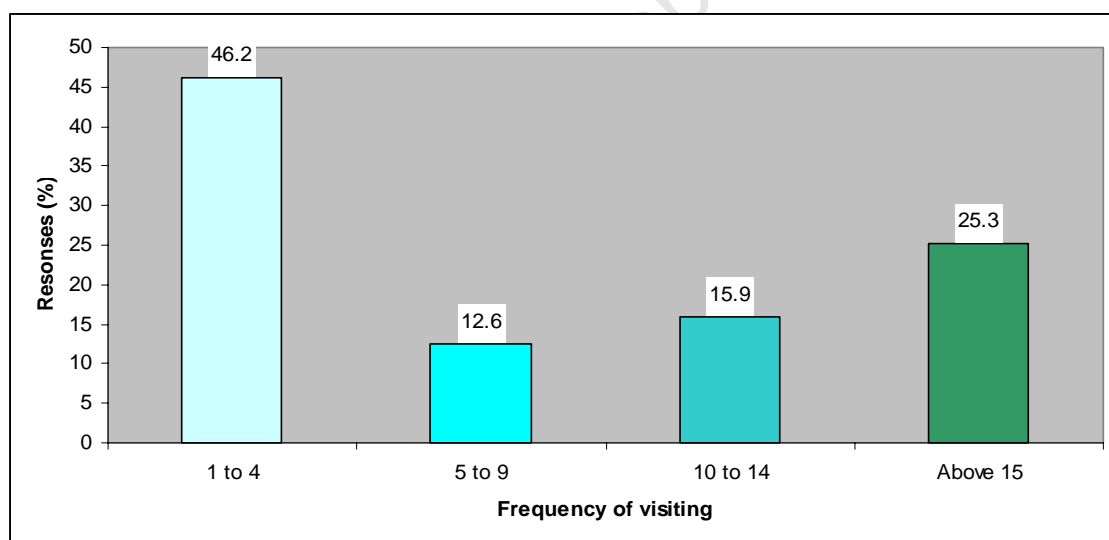


Figure 5.7 indicates that the majority of visitors (46.2%) visit the sites between 1 – 4 times in a year, followed by those who visit more than 15 times (25.3%) in a year. This suggests that the repeat visitors, who are most likely domestic visitors, do come back to the sites but only a few times a year.

To further establish the sites’ potential to attract more visitors, ‘first time’ and ‘repeat’ visitors were both asked whether they would recommend other visitors to come visit the same site. They responded as shown in Figure 5.8.

**Figure 5.8 Potential of visitors to recommend the sites to others**

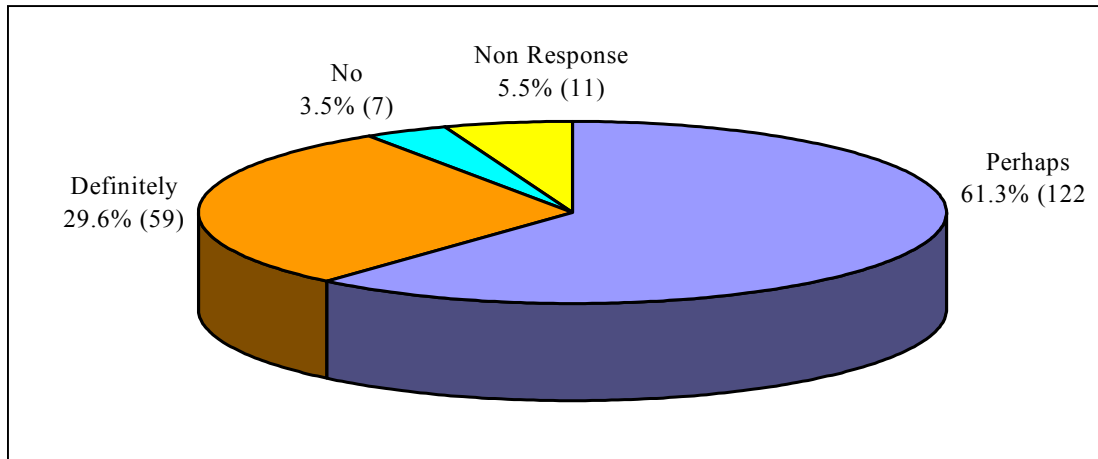


Figure 5.8 indicates that the majority of the visitors (61.3%) said they would perhaps recommend the sites. This implies that most of the visitors were not sure as to whether or not they would recommend the sites to other visitors. This has implications regarding the potential of the lakeshore sites to attract and retain more visitors.

**(f) Tourism site category**

The category of tourism sites was the final variable to be considered under characteristics of sites. Categorisation of sites is important since this study is interested in finding out if site environment performance varied in relation to site categories. However, since there is neither a standard national tourism classification system nor guidelines to follow, this study, based on attributes the sites had in common, categorised the sites into five. Names of the sites could not reliably be used to classify them since some did not reflect the facilities and services offered. For instance it was common to find a site referred to as a beach hotel when it did not have accommodation facilities or indeed any other services that hotels should offer. The attributes used were agreed upon with site managers and they included; the number of accommodation rooms, and the type and nature of services offered. The site categories generated are presented in Table 5.7 below.

**Table 5.7 Categorisation of tourism sites**

Category of sites	Names of sites in each category	Criteria used for categorisation	
		Accommodation	Facilities / services
<b>Beach Hotels</b>	-Speke Resort and Conference Centre*  -Imperial Botanical Beach Hotel  -Imperial Resort Beach Hotel	Above 50 rooms	-Hotel Restaurant & bar - 24 hour hotel room service -Conference Halls -Swimming pool -Children's play park -Leisure gardens - Indoor sports facilities
<b>Beach Resorts- with accommodation</b>	-Lutembe beach* -Ranch on the Lake* -Nabinonya beach* -Ssesse Gate way Beach -Anderita Hotel - New Beach	Less than 50 Rooms	- Room service - Garden bar & restaurant -Children's play area -Camping - Picnic grounds
<b>Beach Resort – without accommodation</b>	-Gaba beach hotel -Lido beach -K.K beach -Entebbe Sailing Club -Water Front Club -Garuga Golf and Country Club -Kisubi beach -Victoria Café -Aero Beach -Penile Beach Restaurant	No rooms	-Garden bar & restaurant - Picnic grounds -Children's play area
<b>Conservation sites</b>	-Botanical gardens -Uganda wildlife Education Centre (UWEC) **	No rooms	-Garden bar & restaurant -Nature walk -Bird viewing - Plant and Animal viewing (with information labels on plants and animals and with interpretation centre)
<b>Camping sites</b>	-Kaazi camping site -Kisubi camping site -Kitubulu camping site	Camping tents	-Self Catering services - Guided walks

\* Site had cottages    \*\*site had a hostel

From the above categorisation of all the sites along the lakeshore, it transpires that there were ten beach resorts - without accommodation and that these form the majority (41.6%) of sites. These were followed by beach resorts - with accommodation (n=6, 25%), beach hotels and camping sites (n=3, 12.5% respectively), and conservation areas (n=2, 8.4%). This indicates that most the lakeshore tourism sites are beach resorts - with or without accommodation.

From all the total mentioned sites, twelve of them were sampled and they belonged to various categories as shown in Figure 5.9.

**Figure 5.9 Categories of sampled tourist sites**

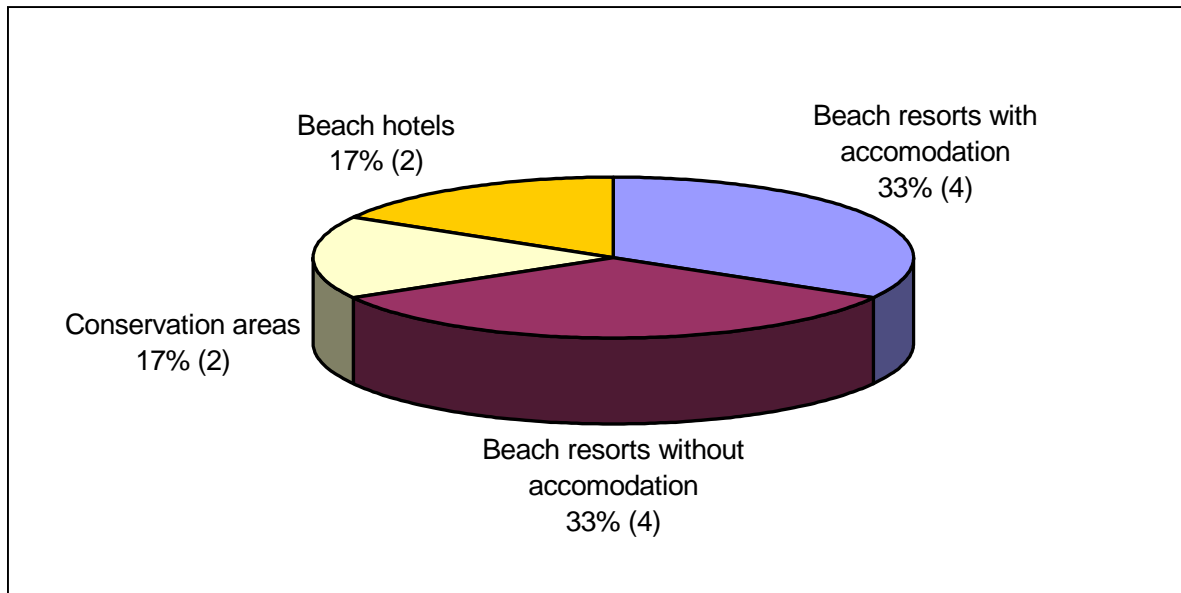


Figure 5.9 above shows that of the 12 sampled sites, four (33%) were beach resorts-with accommodation and four (33%) were beach resorts-without accommodation, two beach hotels and two conservation areas each representing 17%.

Further analysis was conducted to establish the specific types of accommodation that existed at the sites, which had been identified as offering accommodation services. They were categorised as indicated in Figure 5.10

**Figure 5.10 Categories of accommodation at the sites**

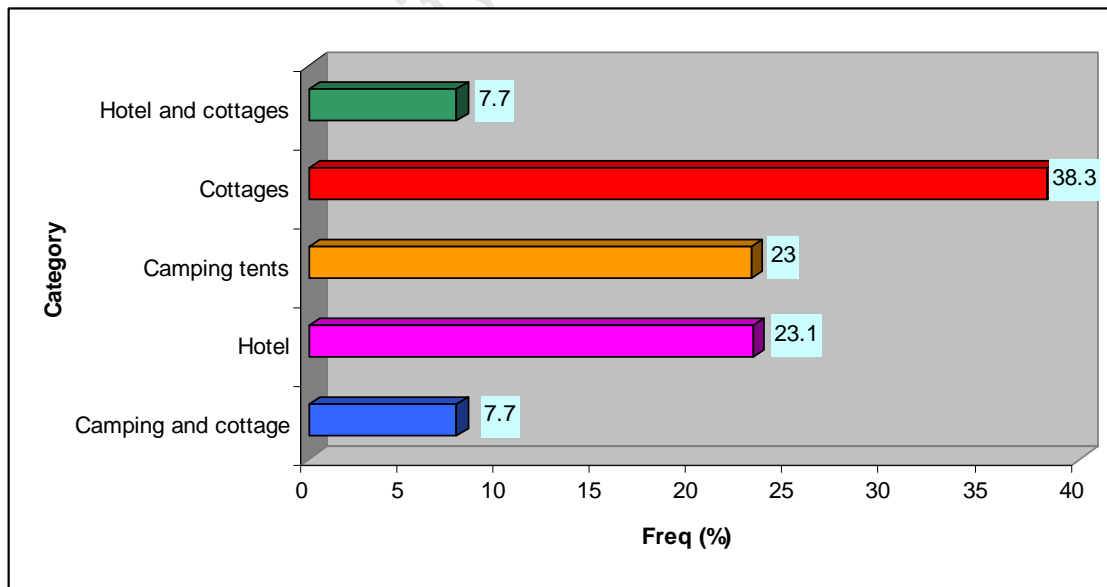


Figure 5.10 indicates that the majority of the sites had cottages (38.3%) followed by camping tents (23%). This indicates that beach resorts - with accommodation and camping accommodation, dominated lakeshore accommodation, since they are the ones that have cottages and camping tents. Sites with hotel rooms were relatively few.

In order to establish relative importance of each variable as a site characteristic measure, factor analysis was conducted. Factor analysis helped to establish which was the more important and reliable measure of site characteristics relative to others. This was determined by resultant correlation strength (factor loadings) between each of the site variables and the percentage of variance each component was responsible for. These were extracted with SPSS using the Principal Component Analysis (PCA) with the varimax rotation facility (see Appendix 7, Table 1). Results obtained reveal that the six components of site characteristics had varying levels of variance and reliability as shown in Table 5.8.

**Table 5.8 Relative importance of site characteristics\***

Components	Eigen values	% variance explained	Reliability coefficient ( $\alpha$ )
Attractiveness of features and services	4.538	12.391	.883
Quality of services/features	3.445	12.014	.879
Size of site	1.928	9.861	.832
Location	1.365	6.945	.615
Potential to attract more visitors	1.202	6.613	.589
Site category	1.148	5.409	.509

\*For analysis details see appendix 7, Table 1

Table 5.8 indicates that, of the six components, attractiveness of site features and services has the largest Eigen value (4.538), explains the largest proportion of variance (12.391) and was the most reliable characteristic (0.883). This implies that site attractiveness was the most important characteristic relative to others. Based on the same logic, site attractiveness was followed by quality of features and services offered by sites, accommodation type and size of a site; perceived quality of site environment setting; site location, potential to attract more visitors and, finally, site category. Notwithstanding this relative importance, results show that the computed reliability coefficients ( $\alpha$ ) are greater than 0.5. This implies that all these characteristics were reliable and important measures in absolute terms.

#### **5.1.4 Visitor characteristics**

The fourth research question under the first objective of the study focused on establishing the characteristics of the visitors who visit the sites. Data on visitor characteristics is vital to nearly all forms of tourism planning and management (UNWTO 2004a). This is because visitor behaviour and activities they engage in are directly related to tourism impacts (Sharpely 2005) and to environmental performance of sites as well. The considered characteristics were: visitors' demographic characteristics, behaviour, and level of observing nature conservation guidelines.

**(a) Visitors' demographic characteristics**

The considered demographic characteristics included: citizenship, gender and age of the visitors. The results of the first characteristic - visitors' citizenship, was obtained through a questionnaire administered to visitors and the results are presented in Figure 5.11

**Figure 5.11 Responses of visitors indicating their citizenship**

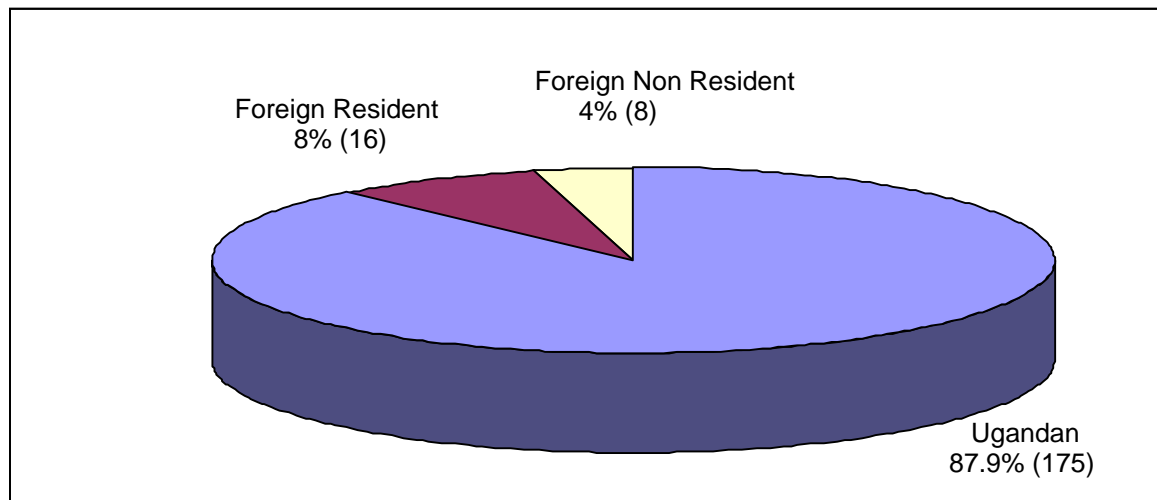


Figure 5.11 indicates that 87.9% (175) of the visitors were Ugandan by citizenship. Accordingly, the overwhelming majority of visitors received at the sites are obviously domestic visitors. Further analysis showed that 58.8% (n=117) of the total sample (n=199) were male, while 40.2% (n=80) were female.

To further understand the demographic characteristics of visitors, their age and frequency of visiting was compiled. In order to determine which age group more frequently visited, the age of visitors was cross-tabulated with frequency of visiting per year and this led to results in Table 5.9.

**Table 5.9 Visitors responses indicating the age and frequency of visiting**

Age	Frequency of visiting per year								Total	
	1 - 4		5 - 9		10 - 14		> 15			
	f	%	f	%	f	%	f	%	f	%
15 – 29	38	31.9	11	9.2	12	10.1	25	21.0	86	72.3
30 – 44	13	10.9	4	3.4	6	5.0	4	3.4	27	22.7
45 – 59	4	3.4	0	0	1	0.8	1	0.8	6	5.0
<b>Total</b>	55	46.2	15	12.6	19	15.9	30	25.2	119	100.0

$X^2_{obs} = 4.226, df = 6, P = 0.646$

Table 5.9 indicates that the majority (73.3%) of the visitors were relatively young falling in the age range 15 to 29 years and they make between one and four visits a year.

The results generally indicate that the higher the age of the visitors, the lower the frequency of visits.

**(b) Visitor behaviour**

Visitor behaviour was analysed using the sub-variables of: purpose of visiting; frequency of visiting; and length of stay of the visitors at particular sites. The purpose of visiting is cross-tabulated with frequency of visiting to find out if there is relationship between the two. This led to results shown in Table 5.10

**Table 5.10 Visitors responses showing their purpose of visiting the sites**

Purpose of visit	Frequency of visiting per year									
	1-4		5-9		10-14		>15		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
None response	.00	.00	1	.8	.00	.00	.00	.00	1	.8
Pleasure/Holiday	45	37.8	12	10.1	14	11.8	20	16.8	91	76.5
Business/Official	2	1.7	.00	.00	1	.8	6	5.0	9	7.6
Conference/	3	2.5	1	.8	1	.8	3	2.5	8	6.7
Visit friends/relatives	1	.8	1	.8	2	1.7	.00	.00	4	3.4
Other reasons	4	3.4	.00	.00	1	.8	1	.8	6	5.0
<b>Total</b>	<b>55</b>	<b>46.2</b>	<b>15</b>	<b>12.6</b>	<b>19</b>	<b>16.0</b>	<b>30</b>	<b>25.2</b>	<b>119</b>	<b>100.0</b>

$X^2_{obs} = 23.017, df = 15, P = 0.084$

Table 5.10 indicates that the majority of the visitors come for pleasure or holidaying. This could obviously be explained by the fact that the people in the adjacent urban areas visit the sites at weekends to relax. As can be noted, the majority who visit for pleasure and holiday, visit for an average of between one and four times in a year. For the other purposes of visiting, there seems to be no significant difference in the purpose of visiting resulting from frequency of visiting per year. It should be noted that only repeat visitors (n= 119) were considered here.

The visitors were also asked to indicate their length of stay at a site. The results obtained are shown in Table 5.11

**Table 5.11 Visitors length of stay at the sites**

Length of stay at site (hours)	<i>f</i>	%
Non Response	5	2.5
Less than 3	55	27.6
4 – 7	108	54.3
8 –12	17	8.5
12 and above	14	7.0
<b>Total</b>	<b>199</b>	<b>100</b>

Table 5.11 indicates that the majority of the visitors (54.3%) spend between 4 – 7 hours at the sites, followed by those that spend less than 3 hours (27.6%). This implies that most of the visitors are short time day visitors.

**(c) Level of following nature conservation guidelines**

The level of observing nature conservation guidelines was included as a visitor characteristic since it would help this study to evaluate if the visitors were environmentally conscious and if they were indeed following environment guidelines provided at the sites (for instance posters at sites informing visitors not to litter). The visitors were asked if they had in general observed visitors following nature conservation guidelines. The results obtained are shown in Table 5.12

**Table 5.12 Responses of visitors revealing if they followed nature conservation guidelines**

<b>Did visitors follow nature conservation guidelines?</b>	<b><i>f</i></b>	<b>%</b>
Non Response	64	32.2
Yes	76	38.2
No	59	29.6
<b>Total</b>	<b>199</b>	<b>100</b>

Table 5.12 indicates that the larger proportion of the visitors (38.2%) indicated that they observed visitors following nature conservation guidelines at sites. It should be noted that there was a substantial percentage of visitors (32.2%) who did not respond to this question. The majority, when asked during the interview why they did not respond, indicated that they were not even aware that there were any guidelines supposed to be followed. This has implications to STD as later discussed in the next chapter.

In order to establish relative importance of each of the above components as a measure of site characteristics, factor analysis was conducted. Factor analysis helped to establish which was more important and reliable measure of site characteristics relative to others. This was determined by resultant correlation strength (factor loadings) between each of the site variables and the percentage of variance each component was responsible for. These were extracted with SPSS using the Principal Component Analysis (PCA) with the varimax rotation facility applied (see Appendix 7, Table 2). Results obtained are shown in Table 5.13

**Table 5.13 Relative importance of visitor characteristics**

Components	Eigen values	% variance explained	Reliability coefficient ( $\alpha$ )
Visitor behaviour	2.320	18.249	.883
Visitors' demographic characteristics	1.928	16.635	.873
Level of observing nature conservation guidelines	1.179	12.391	.832

*For more analysis details see Appendix 7, Table 2*

Table 5.13 indicates that the most important characteristic, in relative terms, is visitor behaviour, followed by visitor demographic characteristics and then level of following nature conservation guidelines. However, the fact that all reliability coefficients ( $\alpha$ ) exceed 0.5 indicates that all the components were reliable and important measures of visitor characteristics in absolute terms.

## **5.2 Lakeshore sites performance in relation to physical environment indicators of sustainable tourism development**

The second objective of the study and the subsequently formulated research question focused on establishing the performance of lakeshore sites in relation to the physical environment indicators of STD. The approach involved acquiring information, from all categories of selected respondents, as to how the sites were performing relative to the following selected indicators: contribution to nature conservation, solid waste management, sewage management, development control, maintenance, water quality, and use-intensity control

### **5.2.1 Contribution to nature conservation**

The level at which tourism contributes to nature conservation is an important indicator of the extent to which tourism is contributing to biodiversity conservation (UNWTO 2004a). Data on this aspect were mainly collected from primary sources because as far as secondary sources were concerned, there was no specific documentation (by site management or local authorities) on the contribution of tourism sites to conservation in the lakeshore region.

According to interviews held with local government officials from the Environment and Physical Planning Departments, tourism sites have less marked negative impacts on the environment (compared to other land uses such as commercial flower farming and processing industries) since they depend on it as nature-based sites. As a result they are more likely to plant trees and maintain their sites in a natural way and in the process contribute to conservation of the environment. The Environment officer of Entebbe highlighted the need to have more conservation areas designated, since the existing

ones (Botanical Gardens and UWEC) have not only greatly contributed to the conservation per say, but also increased environment awareness among the local residents and the visitors.

However aspects where tourism sites had reportedly not contributed to nature conservation were also highlighted. For instance the physical planner of Makindye division noted that:

“ Due to our (local government) limited capacity to control and monitor tourism sites, some have been established after reclaiming wetlands; others dump their solid waste directly into the lake while others let dirty grey water to flow directly into the lake”

More views about the contribution of tourism sites to conservation were collected from site managers and local residents through administration of questionnaires. Local residents were consulted because they stay in the neighbourhood of the sites and could reliably assess the contribution. Site managers, on the other hand, were directly involved in the day-to-day running of the various sites and were also aware of such contribution, albeit from a more internal and possibly biased perspective. Responses of both these respondents to a number of conservation related statements were analysed and results obtained are shown in Table 5.14.

**Table 5.14 Responses of site managers and local residents about the performance of the sites in relation to conservation of the physical environment**

Manifest physical environment conserving practices	Respondents	Responses							X <sup>2</sup> <sub>obs</sub>	P	
			NR	SD	D	N	A	SA			Total
Site contributes to vegetation conservation	SM	<i>f</i>	0	0	0	3	7	2	12	8.896	.113
		%	0.0	0.0	0.0	25.0	58.3	16.7	100.0		
	LR	<i>f</i>	8	4	20	9	37	31	109		
		%	7.3	3.7	18.3	8.3	33.9	28.4	100.0		
	Total	<i>f</i>	8	4	20	12	44	33	121		
		%	6.6	3.3	16.5	9.9	36.4	27.3	100.0		
Does not decrease swamp area by reclaiming it	SM	<i>f</i>	0	0	0	0	4	8	12	13.494*	.019
		%	0.0	0.0	0.0	0.0	33.3	66.7	100.0		
	LR	<i>f</i>	7	11	7	57	22	5	109		
		%	6.4	10.1	6.4	52.3	20.2	4.6	100.0		
	Total	<i>f</i>	7	11	7	61	30	5	121		
		%	5.8	9.1	5.8	50.4	24.8	4.1	100.0		
Does not reclaim swamps to lead to flooding in the area	SM	<i>f</i>	1	1	1	1	1	7	12	19.301*	.002
		%	8.3	8.3	8.3	8.3	8.3	58.3	100.0		
	LR	<i>f</i>	4	0	5	10	63	27	109		
		%	3.7	0.0	4.6	9.2	57.8	24.8	100.0		
	Total	<i>f</i>	5	1	6	11	64	34	121		
		%	4.1	0.8	5.0	9.1	52.9	28.1	100.0		
Does not encroach on areas reserved for wildlife sanctuary	DM	<i>f</i>	0	0	0	0	4	8	12	47.799**	.000
		%	0.0	0.0	0.0	0.0	33.3	66.7	100.0		
	LR	<i>f</i>	5	23	53	8	14	6	109		
		%	4.6	21.1	48.6	7.3	12.8	5.5	100.0		
	Total	<i>f</i>	5	23	53	8	18	14	121		
		%	4.1	19.0	43.8	6.6	14.9	11.6	100.0		
Improves scenic beauty	SM	<i>f</i>	0	0	3	2	1	6	12	52.143**	.000
		%	0.0	0.0	25.0	16.7	8.3	50.0	100.0		
	LR	<i>f</i>	6	30	57	7	8	1	109		
		%	5.5	27.5	52.3	6.4	7.3	0.9	100.0		
	Total	<i>f</i>	6	30	60	9	9	7	121		
		%	5.0	24.8	49.6	7.4	7.4	5.8	100.0		

**Table 5.14 continued...**

Was not established by grading the area hence destroying landscape	SM	f	0	0	3	2	1	6	12	12.325*	.031
		%	0.0	0.0	25.0	16.7	8.3	50.0	100.0		
	LR	f	3	6	14	42	28	16	109		
		%	2.8	5.5	12.8	38.5	25.7	14.7	100.0		
	Total	f	3	6	17	44	29	22	121		
		%	2.5	5.0	14.0	36.4	24.0	18.2	100.0		
Site management restricts access to lakeshore as measure of conservation	SM	f	0	3	2	1	5	1	12	5.472	.361
		%	0.0	25.0	16.7	8.3	41.7	8.3	100.0		
	LR	f	4	8	39	10	38	10	109		
		%	3.7	7.3	35.8	9.2	34.9	9.2	100.0		
	Total	f	4	11	41	11	43	11	121		
		%	3.3	9.1	33.9	9.1	35.5	9.1	100.0		
There is a community conservation programme	SM	f	0	5	4	0	3	0	12	26.229**	.000
		%	0.0	41.7	33.3	0.0	25.0	0.0	100.0		
	LR	f	5	5	26	49	15	9	109		
		%	4.6	4.6	23.9	45.0	13.8	8.3	100.0		
	Total	f	5	10	30	49	18	9	121		
		%	4.1	8.3	24.8	40.5	14.9	7.4	100.0		
There is a conservation committee in the area	SM	f	0	8	2	0	1	1	12	43.118**	.000
		%	0.0	66.7	16.7	0.0	8.3	8.3	100.0		
	LR	f	4	6	19	45	32	3	109		
		%	3.7	5.5	17.4	41.3	29.4	2.8	100.0		
	Total	f	4	14	21	45	33	4	121		
		%	3.3	11.6	17.4	37.2	27.3	3.3	100.0		
Site management supports the community in conserving the environment	SM	f	1	1	0	1	4	5	12	35.801**	.000
		%	8.3	8.3	0.0	8.3	33.3	41.7	100.0		
	LR	f	3	13	35	25	31	2	109		
		%	2.8	11.9	32.1	22.9	28.4	1.8	100.0		
	Total	f	4	14	35	26	35	7	121		
		%	3.3	11.6	28.9	21.5	28.9	5.8	100.0		
Contributes to training local community members in aspects of conserving the environment	SM	f	0	7	4	1	0	0	12	11.778*	.043
		%	0.0	58.3	33.3	8.3	0.0	0.0	100.0		
	LR	f	2	20	40	26	19	2	109		
		%	1.8	18.3	36.7	23.9	17.4	1.8	100.0		
	Total	f	2	27	44	27	19	2	121		
		%	1.7	22.3	36.4	22.3	15.7	1.7	100.0		
The effects of site activities on the environment are discussed in village/parish meetings	SM	f	0	2	4	2	4	0	12	10.326	.067
		%	0.0	16.7	33.3	16.7	33.3	0.0	100.0		
	LR	f	2	8	58	31	8	2	109		
		%	1.8	7.3	53.2	28.4	7.3	1.8	100.0		
	Total	f	2	10	62	33	12	2	121		
		%	1.7	8.3	51.2	27.3	9.9	1.7	100.0		
The site follows the environment conservation laws and guidelines	SM	f	0	1	0	0	7	4	12	10.361	.066
		%	0.0	8.3	0.0	0.0	58.3	33.3	100.0		
	LR	f	2	3	16	29	46	13	109		
		%	1.8	2.8	14.7	26.6	42.2	11.9	100.0		
	Total	f	2	4	16	29	53	17	121		
		%	1.7	3.3	13.2	24.0	43.8	14.0	100.0		

\*\* *Significant at P < 0.01*; \* *significant at P < 0.05*. Abbreviations: SM-Site managers; LR-Local residents; f-frequency; %-Row percentage; NR-None response; SD-Strongly disagree; D-Disagree; N-Neutral, A-Agree, SA-Strongly agree. Note: The degrees of freedom for each practice equal to five.

From Table 5.14, the majority of the site managers reported a commendable performance in each practice, whereas the overwhelming majority of local residents regarded the performance as poor. Respondents who selected 'agree' to the various items were considered to have generally indicated that the performance of the sites in conserving the physical environment was commendable but moderate. However, those who strongly agreed showed that the performance was highly commendable. Respondents who disagreed (selected either disagree or strongly disagree) indicated the performance was poor. Those who neither agreed nor disagreed to the items indicated that they were undecided.

Accordingly, Table 5.14 indicates that both site managers and local residents did not significantly differ in showing that the sites achieved a commendable performance with regard to vegetation conservation and restriction of local residents' access to the sites as a means for nature conservation. They also did not significantly differ in indicating that site performance was poor with respect to discussing the effects of site activities on the environment in village/parish meetings and on following environment conservation laws and guidelines. For all other conservation practices, both respondent categories significantly differed in their reporting pattern with majority of the site managers reporting commendable performance, while majority of local residents reporting poor performance.

Although site managers reported commendable performance, results from further investigation through field observations and informal interviews with site managers, did not seem to match. Field observations revealed that apart from conservation sites, there was absence of areas deliberately set aside for conservation purposes. Although some site managers identified such reserved conservation areas, further probing revealed that they were not actually reserved for conservation purposes but rather for future expansion. Indeed, when asked about the plans for areas that appear as conservation areas, one of the site managers said:

“Such areas exist because of lack of money to clear and develop them as planned.”

Furthermore, apart from conservation sites, managers of other sites revealed that they did not have a formal environment conservation guideline, programme or policy they were following.

In general, results obtained in response to contribution to nature conservation show that such contribution is generally minimal, especially if the site is not a conservation site. Implications of this are discussed in Chapter six.

### **5.2.2 Solid waste management**

The level of solid waste management is one of the physical environment indicators of site performance as far as achieving sustainable tourism development is concerned. It was investigated by considering the solid waste characteristics, collection services and management practices at the various selected sites. The investigation of management practices focused on attempts to ensure availability, adequate distribution and emptying

of litterbins, evidence of accumulated or unsightly dumped litter, litter counts (especially along the beach) and presence of garbage recycling.

From observation and interviews with site managers, waste characteristics and collection services were identified. In particular, observation revealed that a great deal of solid waste is generated at the tourism sites consisting of a mixture of plastics (bottles, cups and polythene bags), broken cups, broken glass (plates, glasses, bottles) food residue, packaging material (paper boxes, paper plates and cups), cans (for beer, sodas) and vegetation litter (leaf litter, cut grass etc).

From the interviews with site managers, it was revealed that, at many sites, generated solid waste is not measured and no records are kept. Efforts to estimate the amount of waste generated proved futile, since most of the sites (especially beach resorts) burn most of their waste (including plastics) at an open spot on the site. Although beach hotels use municipal garbage skips, the surrounding residential or office blocks sometimes also use them. Thus it is difficult to estimate the solid waste generated specifically by the sites. Only two sites reported using private waste collection companies, but even then, no records were properly kept and the site managers were not sure if these companies deposit the solid waste at authorised landfills.

Investigation of solid waste management at the sites revealed that 68% of the sites manage all their waste on-site. However findings suggest that the waste is not efficiently managed. For instance only 38% of the sites had litter bins placed around the site (see Plate 1: a, f, g, h), 21% of the sites had unsightly litter dumping sites - some very near the beach (see Plate 1: c, d) and 54 % of the sites had evidence of beach litter (see Plate 1:e). Only 21 % of the sites have environment conservation signage displayed for visitors (for instance 'Don't litter' posters). Furthermore, none of the sites indicated that they recycle their solid waste. Most of it is either burnt or left to decompose. Fewer than 20% of the sites mentioned that they donated food remains to neighbouring local residents who rear pigs.

Generally, the findings suggest that solid waste is not properly managed at most of the tourism sites in the Lake Victoria shore area. Most efforts of site management were more concentrated on how to dispose off the waste generated than trying to reduce or recycle the waste generated. Apart from UWEC and Botanical Gardens, the other sites

could not confirm having a formal solid waste management policy or guidelines they were following.

More data on solid waste management were obtained through questionnaires administered to site managers, local residents and visitors. Results obtained from site managers and local residents appear in Table 5.15.

**Table 5.15 Site managers and local residents responses on the performance of sites in relation to solid waste management**

Manifest management practices	Respondents	Responses							Total	X <sup>2</sup> <sub>obs</sub>	P
		NR	SD	D	N	A	SA				
Ensures that site compound and surroundings are clean	SM	f	0	0	0	0	4	8	12	8.467	.132
		%	0.0	0.0	0.0	0.0	33.3	66.7	100.0		
	LR	f	2	1	5	14	57	30	109		
		%	1.8	0.9	4.6	12.8	52.3	27.5	100.0		
	Total	f	2	1	5	14	61	38	121		
		%	1.7	0.8	4.1	11.6	50.4	31.4	100.0		
Contributes to garbage generated in the area, which is not properly disposed	SM	f	0	4	6	2	0	0	12	18.697**	.002
		%	0.0	33.3	50.0	16.7	0.0	0.0	100.0		
	LR	f	4	8	23	12	45	17	109		
		%	3.7	7.3	21.1	11.0	41.3	15.6	100.0		
	Total	f	4	12	29	14	45	17	121		
		%	3.3	9.9	24.0	11.6	37.2	14.0	100.0		
Site allows local residents to use its collection and disposal facilities	SM	f	0	2	2	1	4	3	12	23.423**	.000
		%	0.0	16.7	16.7	8.3	33.3	25.0	100.0		
	LR	f	4	21	69	5	6	4	109		
		%	3.7	19.3	63.3	4.6	5.5	3.7	100.0		
	Total	f	4	23	71	6	10	7	121		
		%	3.3	19.0	58.7	5.0	8.3	5.8	100.0		
Site does not cause bad smell in the community resulting from the garbage it generates	SM	f	0	0	0	0	4	8	12	20.348**	.001
		%	0.0	0.0	0.0	0	33.3	66.7	100.0		
	LR	f	5	3	12	7	67	15	109		
		%	4.6	2.8	11.0	6.4	61.5	13.8	100.0		
	Total	f	5	3	12	7	71	23	121		
		%	4.1	2.5	9.9	5.8	58.7	19.0	100.0		
Does not dump garbage in neighboring areas	SM	f	0	0	2	0	3	7	12	14.862*	.011
		%	0.0	0.0	16.7	0.0	25.0	58.3	100.0		
	LR	f	3	8	10	11	60	17	109		
		%	2.8	7.3	9.2	10.1	55.0	15.6	100.0		
	Total	f	3	8	12	11	63	24	121		
		%	2.5	6.6	9.9	9.1	52.1	19.8	100.0		
Garbage dumped by the Site is not a threat to health	SM	f	0	1	2	1	1	7	12	20.903**	.001
		%	0.0	8.3	16.7	8.3	8.3	58.3	100.0		
	LR	f	4	7	12	19	55	12	109		
		%	3.7	6.4	11.0	17.4	50.5	11.0	100.0		
	Total	f	4	8	14	20	56	19	121		
		%	3.3	6.6	11.6	16.5	46.3	15.7	100.0		
Site educates local residents on how to properly manage garbage in the community	SM	f	0	1	4	0	5	2	12	13.374*	.020
		%	0.0	8.3	33.3	0.0	41.7	16.7	100.0		
	LR	f	3	15	53	17	19	2	109		
		%	2.8	13.8	48.6	15.6	17.4	1.8	100.0		
	Total	f	3	16	57	17	24	4	121		
		%	2.5	13.2	47.1	14.0	19.8	3.3	100.0		
Site contributes to improving garbage collection and disposal in the area	SM	f	0	0	4	1	4	3	12	16.857*	.005
		%	0.0	0.0	33.3	8.3	33.3	25.0	100.0		
	LR	f	4	20	31	11	41	2	109		
		%	3.7	18.3	28.4	10.1	37.6	1.8	100.0		
	Total	f	4	20	35	12	45	5	121		
		%	3.3	16.5	28.9	9.9	37.2	4.1	100.0		

\*\* Significant at P < 0.01; \* significant at P < 0.05. Abbreviations: SM-Site managers; LR-Local residents; f-frequency; %-Row percentage; NR-None response; SD-Strongly disagree; D-Disagree; N-Neutral, A-Agree, SA-Strongly agree. Note: The degrees of freedom for each practice equal to five.

Table 5.15 indicates that, whereas site managers suggested that site performance in each of the solid waste management practice is commendable, the locals indicated that this performance is poor. The two respondent categories therefore significantly differed in the manner in which they reported about solid waste management. This is supported by the chi square values shown in Table 5.15 for all the practices except in the first statement, which is, 'sites ensure that their compounds and surroundings remain clean'.

### **5.2.3 Sewage management**

Under sewage management as an indicator of sustainable tourism development, the focus was mainly on three components:

- Type of sewage treatment systems at sites
- Amount of sewage generated, amount treated and treatment measures used at the sites
- Approval and monitoring of sewage systems

Data on sewage management were collected from both secondary and primary data sources.

#### **(a) Type of sewage treatment systems at sites**

Both field observations and interviews held with site managers revealed that most of the lakeshore tourism sites are not connected to a sewage grid system managed by National Water and Sewage Cooperation (NWSC) which collects, treats sewage and maintains the required sanitation standards. This is especially the case with sites located away from the urban centres. However many sites near or in urban centres are also not connected to the existing sewage grid. This was illustrated in the interview held with the Entebbe Municipality environment officer, which revealed that tourism sites in Entebbe Municipality were not connected to the sewage network. He noted that they were located beyond the reach of the current network that relies on gravity and therefore is not suited to properties on the lower slope side of the system. It was, however, noted by the officer that a new sewage system was under construction (in Entebbe municipality) to which tourism sites can be connected in future since the grid will be able to pump their sewage into the network for treatment.

Due to the fact that most sites were not connected to the grid, it was established that individual sites had constructed private sewage systems. In particular, one of the site managers had this to say:

“We have to construct our private sewage holding and treatment system, which mainly consists of septic tanks and pit latrines as the major sewage management methods”

Further analysis of the interview responses obtained from site managers revealed that 83% of them constructed their own septic tank sewage systems and 17% had pit latrines

### **(b) Amount of sewage generated, amount treated and treatment measures**

Attempts to retrieve data from secondary sources regarding the amount of sewage generated, treated and treatment measures used at the sites proved futile since none of the sites kept up to date records. Nevertheless, from the interviews held with site managers, one of them had this to say:

“I see no need to keep records regarding the amount of sewage generated at this site. What we do is simply to ensure that the sewage system works properly and the sewage holding tanks are regularly emptied”.

Attempts to estimate the quantity of sewage generated from the amount and frequency at which they were emptied also proved futile. Neither the sites nor the cesspool evacuation truck drivers kept up to date records.

Interviews with various site managers revealed that sewage is treated on-site but only at primary level where anaerobic bacteria decompose the solids in septic tanks. All sites use various privately owned cesspool evacuation trucks that take the sewage for further treatment off-site. However, most site managers were not aware whether the sewage collected from their sites was eventually disposed of at an authorised treatment site. Meanwhile, none of the sites recycle its wastewater from the laundry, bathrooms and the kitchen. Most of this wastewater on beach hotels flows into septic tanks and soak pits but on most beach resorts (with and without accommodation) wastewater especially from the kitchen, is left to flow directly into the lake (see Plate 2: f)

Photographic details regarding how sites managed their sewage especially wastewater were taken and results appear in Plate 2. Furthermore, observation revealed that of the selected sites, 71 % allow their storm water and run-off to flow directly into the lake. Some outlets discharge run-off water at localities where beach swimming takes place. Photographs taken to illustrate this scenario are shown in Plate 2 (a, b, c and d).

### **(c) Approval and monitoring of sewage systems**

Data were also sought about the approval and level of monitoring of sewage systems. In the interview held with a senior official from the National Water and Sewage

Cooperation (NWSC), he was asked whether sites had approved and regularly inspected sewage systems. He replied:

“Despite the fact that NWSC is in charge of sewage in Uganda, it only manages sewage connected to the sewage grid. Facilities and sites (including all lakeshore tourism sites) un-connected to the grid are not supervised or monitored by the cooperation. It is the district local government planning authorities that oversee the approval of private sewage systems”.

When the physical planners from the local governments in the study area were asked about the approval and level of monitoring of the sites’ sewage systems, they mentioned that it was the Engineering Department directly charged with approving and ensuring that the construction of sewage systems standards are adhered to by all the sites in the area. The Health Department also comes in to monitor the sites to ensure they maintain health-wise acceptable sewage and sanitation standards.

Attempts were made to access records from relevant departments on the number of sites with approved sewage systems. Local authorities are expected to maintain such records since they are directly responsible for approving sewage systems, as stated in the Public Health Act 1964, drainage and sanitation rules (section 59):

*“No person shall construct any septic tank, storage tank, sewage filter installation, or other works for the treatment, reception or disposal of sewage, except with the written permission of the local authority”.*

However, comprehensive records could not be accessed due to the fact that a number of the sites had constructed their systems without approval from the local authorities. This was especially the case with sites that had been established many years ago. Records of approval mainly existed for a few recently established sites, but even then, there was no specific database where a comprehensive list could be compiled.

In general, the local government officials admitted that they carry out only limited field inspections to monitor sewage systems to ensure that they comply with the set standards during and after construction. They attributed this to limited funding and inadequate manpower in their respective departments. Indeed, field observation revealed that 83% of the sewage systems at the sites were constructed within the restricted 200-meter lake protection zone. Among the constructed systems are pit latrines, which are likely to pollute the lake water through seepage of waste, since the water table is close to the surface at the lakeshores. According to National Environment (Wetlands, River Banks and Lakeshore Management Regulations, 2000) no construction or activity is allowed in the lake protection zone without permission form

NEMA. As later found out (see section 5.2.5), most of the sites had not been approved by NEMA.

Clearly, the results above show that all the authorities expected to be in charge of sewage management control do not do so effectively. Approval, supervision, inspection and monitoring of the sewage system are all ineffectively carried out. This leaves tourism sites to individually manage their sewage in any way they deem appropriate or convenient.

Site managers and local residents were further consulted about how sites were performing as far as sewage management was concerned. They responded as shown in Table 5.16

**Table 5.16 Site managers and local residents responses showing the performance of the sites in sewage management**

Manifest management practices	Respondents	Responses							Total	X <sup>2</sup> <sub>obs</sub>	P
		NR	SD	D	N	A	SA				
Site increases sewage generation in the area	SM	f	0	0	2	0	5	5	12	4.001	.549
		%	0.0	0.0	16.7	0.0	41.7	41.7	100.0		
	LR	f	5	5	21	8	47	23	109		
		%	4.6	4.6	19.3	7.3	43.1	21.1	100.0		
	Total	f	5	5	23	8	52	28	121		
		%	4.1	4.1	19.0	6.6	43.0	23.1	100.0		
Sewage generated from the site is properly disposed	SM	f	0	2	0	0	8	2	12	27.348**	.000
		%	0.0	16.7	0.0	0.0	66.7	16.7	100.0		
	LR	f	5	22	56	7	16	3	109		
		%	4.6	20.2	51.4	6.4	14.7	2.8	100.0		
	Total	f	5	24	56	7	24	5	121		
		%	4.1	19.8	46.3	5.8	19.8	4.1	100.0		
There is a bad smell from sewage generated at the site	SM	f	0	0	2	1	3	6	12	8.579	.127
		%	0.0	0.0	16.7	8.3	25.0	50.0	100.0		
	LR	f	5	1	6	5	67	25	109		
		%	4.6	0.9	5.5	4.6	61.5	22.9	100.0		
	Total	f	5	1	8	6	70	31	121		
		%	4.1	0.8	6.6	5.0	57.9	25.6	100.0		
Sewage from the site does not overflow and spill over to the neighborhood	SM	f	0	1	4	0	5	2	12	28.842**	.000
		%	0.0	8.3	33.3	0.0	41.7	16.7	100.0		
	LR	f	4	20	69	9	5	2	109		
		%	3.3	18.3	63.3	8.3	4.6	1.8	100.0		
	Total	f	4	21	73	9	10	4	121		
		%	3.3	17.4	60.3	7.4	8.3	3.3	100.0		
Sewage is not left to flow directly into the lake to pollute water	SM	f	0	0	4	1	4	3	12	23.736**	.000
		%	0.0	0.0	33.3	8.3	33.3	25.0	100.0		
	LR	f	4	15	53	18	18	1	109		
		%	3.7	13.8	48.6	16.5	16.5	0.9	100.0		
	Total	f	4	15	57	19	22	4	121		
		%	3.3	12.4	47.1	15.7	18.2	3.3	100.0		
Sites educates residents on how to properly manage sewage in the community	SM	f	0	5	5	0	2	0	12	8.760	.119
		%	0.0	41.7	41.7	0.0	16.7	0.0	100.0		
	LR	f	3	19	53	25	6	3	109		
		%	2.8	17.4	48.6	22.9	5.5	2.8	100.0		
	Total	f	3	24	58	25	8	3	121		
		%	2.5	19.8	47.9	20.7	6.6	2.5	100.0		

\*\* Significant at P < 0.01; \* significant at P < 0.05. Abbreviations: SM-Site managers; LR-Local residents; f-frequency; %-Row percentage; NR-None response; SD-Strongly disagree; D-Disagree; N-Neutral, A-Agree, SA-Strongly agree. Note: The degrees of freedom for each practice equal to five.

Table 5.16 indicates that, generally, site managers depicted a good performance, while the local residents indicated it was ranging from average to poor. For instance, whereas most of the site managers agreed that sewage from the sites does not overflow and spill over to the neighbourhood, most of the local residents disagreed. Both respondents however significantly concur that sites increase sewage generation, which sometimes produces a foul odour in the surrounding areas. They both also significantly agree that sites do not educate local residents about proper sewage management. This is because the Chi square values corresponding to these sewage management practices are not significant. The implication of these results to planning is discussed in chapter six.

#### **5.2.4 Water quality control**

The fact that the selected tourism sites are located along the lakeshore, points to the importance of water quality and its control as a very important indicator of sustainable tourism development. Under Section 26 of the National Environment Statute (1995), NEMA is mandated to: establish criteria and procedures for measurement of water quality, set minimum water quality standards for all waters in Uganda. This includes water for drinking, industries, agriculture, recreation, fisheries, wildlife and any other water use prescribed. However, as of 2007, the only water quality standards set were for drinking water and effluent discharges.

To establish the quality of the water at the sites, attempts were made to consult both secondary and primary sources. Since there are no particular standards in Uganda set for water quality for recreational use, most of the existing data are for general water quality. The State of the Environment Reports for Uganda (1995, 2002, 2005) indicate that the quality of surface water has been deteriorating in Uganda over time. Lake Victoria has been pointed out as being among the most polluted by industrial and domestic discharge. The major sources of water pollution identified include industrial waste, municipal waste, agricultural waste, and gaseous emissions.

Further information in regard to this issue was gleaned from the *Regional Water Quality Synthesis Report* (2005) on water quality for the whole Lake Victoria, which was prepared by Lake Victoria Environment Management Programme (LVEMP). The report also indicates high levels of water pollution in Lake Victoria. It however reveals that critical pollution “hot spots” are near the major urban centers along the shoreline of Lake Victoria. Among them are; Entebbe, Kampala, Kisumu, Mwanza and Musoma.

Pollution loadings are more concentrated in Kenya's municipal areas followed by Uganda then Tanzania.

The report mainly attributes this to the high municipal waste discharges and urban run-off that ends up in the lake. More so, the report points to the fact that urban wetlands, which would further filter and reduce some of the loads from the urban run-off have been encroached on to allow urban farming, settlements and industries. Also identified are the poor sanitary conditions along the lakeshore which result faecal contamination. The report makes recommendations which include: having continued monitoring of water quality to determine trends and rates of change; to develop clear standards and consistent enforcement of water quality; upgrade of existing treatment facilities and investment in appropriate technology for waste water treatment plants; and enhance public education and sensitisation in order to reduce point source loading.

The foregoing findings show that, although some studies have been carried out on water quality, they are still limited and none of them specifically addresses water quality from the perspective of recreation use. To gather more information about water quality from primary sources, interviews were held with site managers and district environment officers. They all admitted that there was no water quality monitoring carried out for recreational purposes along the lakeshore.

Asked if they had noted changes in the water quality, one of the site managers noted:

“Yes, the water is becoming dirty and sometimes smelly. That adjacent fish-processing factory dumps its waste directly into the lake, making the situation worse”.

Another site manager also complained of poor water quality. He noted that an adjacent site was being developed and the soil from the construction site had been washed into the lake causing all the surrounding water to be dirty. As a precautionary measure, site management had prohibited visitors from swimming at the beach during the time of this study (See Plate 4 – c for field photographic illustration).

The district environment officers attributed the lack of water quality monitoring to: absence of a law to compel site management to test the quality of the water along their beaches, and limited or no resources to facilitate their departments to do so. However, they noted that, based on water colouration, the water quality along the beaches was becoming poorer. They attributed this is to presence of waterweeds like water hyacinth. This weed causes water to be discoloured and to have a foul smell – especially when the weed begins to decompose. Soil erosion, storm water run-off from sites, car

washing on the beach, and watering cattle in the lake, were among the other factors cited - (See Plate 4 – a, b, d, e and f for field photographic illustration)

Faced with this situation of lack of recreation-based water quality data, attempts were made by this study to collect and analyse water samples from beaches at tourism sites. Five beaches were purposively selected based on the observation that swimming frequently took place. Following water sampling procedures recommended by Blue Flag and WHO (earlier explained in section 3.6.2), two water samples were collected from the selected beaches at two points in time and analysed. The first water sample was collected after a rainstorm and results obtained are shown in Table 5.17

**Table 5.17 Beach water quality test results (sample 1 taken March 2006)**

Site Code*	Water Quality Parameters												
	Total Colibacteria / 100 ml			Faecal Colibacteria (E.coli) /100 ml			Faecal Entrococci /100 ml		pH				
	Blue flag Grading			Blue flag Grading			Blue flag Grading						
	Field test sample results	Good <500 ☺	Average 500-10,000 ☹	Poor >10,000 ☹	Field test sample results	Good <100 ☺	Average 100 - 2,000 ☹	Poor >2,000 ☹	Field test sample results	Good <100 ☺	Average to poor >100 ☹	Field Sample Results	Blue Flag Recommended Values 6 to 9
A	16,000			√	120		√		270		√	7.0	√
B	600		√		20	√			2	√		8.8	√
C	1,200		√		6	√			180		√	8.7	√
D	10,000		√		0	√			0	√		8.5	√
E <sub>1</sub>	14,000			√	700		√		72	√		7.9	√
E <sub>2</sub>	360,000			√	16,000			√	1200		√	7.5	√

*E<sub>1</sub> - water sample collected at site E was from the lake*

*E<sub>2</sub> - water sample was collected from a water run-off trench discharging water into the beach area (see Plate 2 - b)*

*\*Site identities are not revealed due to promised confidentiality and ethical considerations for the likely impacts on the tourism business at the sites*

From Table 5.17, results from the Total Colibacteria (TC) test indicate that water quality at all the sites is rated as either average or poor and none is rated as good. Results from the grading of Faecal Colibacteria (FC), Faecal Entrococci (FE) and pH levels indicate that the water quality at majority of the beaches can be rated as good or average. This suggests that the general water quality is not very satisfactory at all the sites since none of them was rated ‘good’ in all the parameters.

However, it should be noted that some sites, for instance site ‘A’, and ‘E<sub>1</sub>’ had higher bacterial levels. Further analysis of the water run-off discharged into the beach at point ‘E<sub>2</sub>’ indicated the highest bacteria levels (TC=360,000; FC=16,000; and FE=1200) suggesting that this run-off was a significant cause of contamination. Indeed field

observation indicated that site 'A' also has a run-off outlet, which directly discharges water into the beach area where swimming takes place.

The effect of water run-off was further confirmed by the analysis of the second water sample that was collected during a dry spell - when there was no water run-off at the beaches. Results obtained from the analysis are shown in Table 5.18.

**Table 5.18 Beach water quality test results (sample 2 taken in May 2006)**

Site Code*	Water Quality Parameters												
	Total Colibacteria / 100 ml				Faecal Colibacteria (E.coli) /100 ml				Faecal Entrococci /100 ml			pH	
	Field test sample results	Blue flag Grading			Field test sample results	Blue flag Grading			Field test sample results	Blue flag Grading		Field Sample Results	Blue Flag Recommended Values 6 to 9
		Good <500 ☺	Average 500-10,000 ☹	Poor >10,000 ☹		Good <100 ☺	Average 100 - 2,000 ☹	Poor >2,000 ☹		Good <100 ☺	Average to poor >100 ☹		
A	160	√			0	√			0	√		7.6	√
B	33	√			1	√			0	√		9	√
C	360	√			6	√			0	√		7.7	√
D	13	√			0	√			0	√		7.5	√
E	180	√			15	√			0	√		7.5	√

\*Site identities are not revealed due to promised confidentiality and ethical considerations for the likely impacts on the tourism business at the sites

Results in Table 5.18 reveal that, generally, the TC, FC FE and pH levels are generally low at all beaches indicating that the water quality was generally good at all the sites. Compared to results from the first sample it means that water quality was generally better in periods when there is less or no runoff.

Site managers and local residents were further asked about site management practices related to water quality control. They responded as shown in Table 5.19

**Table 5.19 Responses of site managers and local residents on performance of lakeshore sites in water quality control**

Manifest management practices	Respondents	Responses								Total	X <sup>2</sup> <sub>obs</sub>	P
		NR	SD	D	N	A	SA					
Storm water from the site does not flow directly into nearby water bodies causing water to be dirty	SM	f	0	2	0	0	8	2	12			
		%	0.0	16.7	0.0	0.0	66.7	16.7	100.0			
	LR	f	3	14	37	17	20	18	109			
		%	2.8	12.8	33.9	15.6	18.3	16.5	100.0			
	Total	f	3	16	37	17	28	20	121			
		%	2.5	13.2	30.6	14.0	23.1	16.5	100.0	17.301*	.004	
Site educates local residents on good quality water	SM	f	0	6	3	1	2	0	12			
		%	0.0	50.0	25.0	8.3	16.7	0.0	100.0			
	LR	f	7	26	52	14	6	4	109			
		%	6.4	23.9	47.7	12.8	5.5	3.7	100.0			
	Total	f	7	32	55	15	8	4	121			
		%	5.8	26.4	45.5	12.4	6.6	3.3	100.0	7.446	.190	
Site does not face a problem of maintaining good quality of beach water	SM	f	1	1	2	4	4	0	12			
		%	8.3	8.3	16.7	33.3	33.3	0.0	100.0			

\*\* Significant at P < 0.01; \* significant at P < 0.05. Abbreviations: SM-Site managers; LR-Local residents; f-frequency; %-Row percentage; NR-None response; SD-Strongly disagree; D-Disagree; N-Neutral, A-Agree, SA-Strongly agree. Note: The degrees of freedom for each practice equal to five.

Table 5.19 indicates that site managers and local residents did not significantly differ in agreeing that sites do not educate local residents on how to ensure good water quality in the community. This notwithstanding, the two respondent categories significantly differed in reporting about site performance regarding ‘control of the flow of storm water from sites directly into nearby water bodies’ was concerned. Whereas most of the site managers agreed that they did control the flow of water, most of the local residents disagreed.

### **5.2.5 Development control**

As noted in chapter two, controlling the process of development of the tourism industry is important if the desired outcomes at a destination are to be achieved. This study revealed that the control of developments (including tourism sites) along the lakeshore region was under the jurisdiction of the local governments of Makindye Division, Wakiso District as well as the Entebbe Municipality. Both secondary and primary data sources were used to examine the level at which development control was being applied with specific reference to tourism.

Among the secondary data sources analysed were the three-year development plans of the fore-mentioned local governments. The plans were reviewed to establish the nature and level of development control exercised especially over tourism related activities.

The following were the main results noted:

- The development control function falls mainly under the Physical Planning and Engineering departments of district or division local governments
- Makindye Division and Entebbe Municipality (which cover about 20% of the lakeshore study area) have physical/structural plans since they are located in municipal areas
- Wakiso district (which covers about 80% of the lakeshore study area) does not have a physical/structural plan. It had just applied to be declared as a planning area hence lacked an appropriate framework for enforcing development control
- Even in areas where structural plans exist, they are not strictly being followed and enforced
- In the structural plans (and in the development plans) tourism is not specifically identified as a sector (or land use); hence there are no planning or development control standards specific for tourism
- Although the physical/structural plans identify open green/recreation areas land use, the definition is limited to open space and public parks; hence it does not take care of all tourism sites like hotels, resorts, camping areas and beaches.
- Environment planning is catered for under the environment sub sector/department with a main emphasis on environmental mainstreaming in all development projects

The above results reveal that, although development control measures exist, they neither fully cover tourism nor are there specific standards that can be effectively applied to ensure sustainable tourism development. In order to obtain further information about development control, legislation related sources were also consulted.

National Laws, Acts and regulations relevant to control of developments in the lakeshore region were reviewed. It was revealed that there are no specific sections on tourism in the existing laws and regulations regarding development control. What do exist are various general legal instruments that deal with control of the utilisation of resources and control of developments (some related to tourism but not directly specified) so as to ensure sustainable development. Extracts from some of these instruments include the following:

**Constitution of the Republic of Uganda 1995**

- The utilisation of the natural resources of Uganda shall be managed in such a way as to meet the development and environmental needs of present and future generations of Ugandans; and in particular, the State shall take all possible measures to prevent or minimize damage and destruction to land, air and water resources resulting from pollution or other causes. (Chapter XXVII :2)

**National Environmental statute 1995**

NEMA shall ensure that principles of environment management are observed as follows

- Use and conserve the environment and natural resources of Uganda equitably and for the benefit of both present and future generations taking into account the rate of population growth and productivity of the available resources (section 3: c)
- Establish adequate environmental protection standards and to monitor changes in environmental quality (section 3: g)

**Wetlands Policy 1995**

- All wetlands are a public resource to be controlled by the government on behalf of the public. There shall be no leasing of any wetland to any person or organisation in Uganda at any given moment and for whatever reason
- All planned new wetland developments will be subjected to an EIA process to determine the required environmental controls

**Land Act 1998**

- Control of environmentally sensitive areas: The central government or local government shall hold in trust for the people and protect natural lakes, rivers, ground water, natural ponds, natural streams, wetlands, forest reserves, national parks, and any other land reserved for ecological and touristic purposes for the common good of the citizens of Uganda (Section 45: 1)

**National Environment (Wetlands, River Banks and Lakeshores Management) Regulations 2000**

- Resources on river banks and lake shores shall be utilised in a sustainable manner (Section 20: 1a)
- Lakes shall have a protection zone of two hundred meters (200) measure from the low water mark and no activity shall be permitted within the zone without written authority from NEMA (Section 30:1)

The above findings show that various laws are in place to ensure environmental resources are properly utilised. As a control measure no developments are allowed to take place in environmentally sensitive areas (lakeshore study area falls under this category) without the permission of NEMA. As to whether this was the case with tourism sites on the Lake Victoria shore became a point of interest for this study.

Information was collected on how the central and local government exercised development control in terms of approving tourism sites. This involved seeking data on

how many sites had been approved by NEMA – a body in charge of clearing development projects based on the likely environment impacts. Analysis of the NEMA approval database (as at April 2006) revealed that only four (17%) of the total twenty-four sites along the Lakeshore region were formally approved. This means that twenty sites (83%) were operating without clearance from NEMA. Indeed, field observations indicated evidence of weak development control. For instance, 18 (75%) of the sites had developments (like buildings, concrete pavilions, sewerage holding tanks) within the prohibited 200-meter lakeshore protection zone. In some cases the beach shoreline, that should be an open public area, was fenced off – to restrict access of locals and other people (see field photographic illustration in Plate 3).

The general view from the above findings is that there has been limited control and monitoring of developments along the lakeshore region. This therefore suggests that authorities with designated responsibility to control tourism developments in an environmentally sensitive manner are not effectively performing the role. This as a result has significant implications to planning for STD in the Lake Victoria region as later discussed in chapter six.

Interviews were further held with various officials from the institutions that are designated to control developments to find out why they were not effectively performing their role. An interview with a Wetland Inspector from the Wetland Inspection Division (WID) - an institution under the Ministry of Water Lands and Environment in charge of ensuring wetlands are conserved and protected from illegal developments - revealed that such ineffectiveness is due to a number of factors:

“The WID is limited financially and in terms of human resources needed to effectively monitor the whole lakeshore. As a result, quite a number of developments (including tourism) are taking place in the region without following the existing laws. In addition, most wetlands are not demarcated and it becomes difficult to legally control encroachment. However, a wetland mapping and boundary demarcation is in progress”

Another interview was held with a NEMA official (from the Natural Resource Division) concerning the limited development control. The official pointed out that some districts are not fully playing their role. He argued that, although NEMA has the mandate to manage the environment, it only plays a coordinating and supervisory role since environment management powers are fully decentralised to the districts. He also cited ambiguous sections in some laws. For instance, the 200 meters lake protection zone is measured from the low water mark, however the level of the lake has been fluctuating over the years – hence making enforcement of law difficult. He further

observed a contradiction between government operations and some laws. For instance, the Wetlands Policy (1995) states that ‘there shall be no leasing of any wetland to any person or organisation for whatever reason’, but in some instances central government, through organs such as the Uganda Land Commission has leased, issued land tiles or even ignored individuals who sell and buy wetlands.

In separate interviews held with district Physical Planners (who are responsible for development control), they acknowledged that their departments had not been very efficient in carrying out their roles. They attributed this to lack of detailed parish and village structural plans to enforce development control – they noted that existing district plans are too general. As a result developments are always ahead of planning. Moreover, they highlighted lack of a specific tourism development regulatory framework – the existing Acts, such as Public Health Act (1964) and Hotels Act (1969) are outdated. Lack of coordination and coherent following of control procedures was also cited. For instance, a situation was referred to in Makindye Division where NEMA approved a tourism site (which was to partly reclaim a wetland), contradicting the planned land use as specified in structural plan. Such action was attributed to lack of political will from central government and policy makers and political interference from high level political circles. The physical planner noted that in such cases, the planning department has limited powers to stop, control or monitor such projects. Inadequate equipment, transport and personnel, limited community participation in planning and inadequate database and information, were also cited among the reasons behind the limited development control along the lakeshore region.

Furthermore, the views of site managers and local residents about the nature and level of development control were also collected through a questionnaire. Site managers were selected since they are the ones directly involved in implementing the development control standards at their sites. Local residents (local council and opinion leaders) were considered because they are part of the lower local government structure supposed to monitor and ensure tourism sites’ compliance with the development guidelines and standards in place. The site managers and local residents’ responses regarding the performance of sites in relation to development control are presented in table 5.20.

**Table 5.20 Responses of site managers and local residents on the performance of lakeshore sites in regards to development control**

Manifest development control management practices	Respondents		NR	SD	D	N	A	SA	Total	X <sup>2</sup> <sub>obs</sub>	P
Community leaders are consulted before new tourism sites are established	SM	f	0	1	1	0	6	4	12		
		%	0.0	8.3	8.3	0.0	50.0	33.3	100.0		
	LR	f	3	4	24	40	14	24	109		
		%	2.8	3.7	22.0	36.7	12.8	22.0	100.0		
Total	f	3	5	25	40	20	28	121			
		%	2.5	4.1	20.7	33.1	16.5	23.1	100.0	15.910**	.007
Tourism development issues are discussed in our village or parish meetings	SM	f	0	1	3	2	5	1	12		
		%	0.0	8.3	25.0	16.7	41.7	8.3	100.0		
	LR	f	2	10	50	35	9	3	109		
		%	1.8	9.2	45.9	32.1	8.3	2.8	100.0		
Total	f	2	11	53	37	14	4	121			
		%	1.7	9.1	43.8	30.6	11.6	3.3	100.0	13.594*	.018
Community needs to formulate environmental bye laws guide development	SM	f	0	1	0	0	5	6	12		
		%	0.0	8.3	0.0	0.0	41.7	50.0	100.0		
	LR	f	3	2	1	7	56	40	109		
		%	2.8	1.8	0.9	6.4	51.4	36.7	100.0		
Total	f	3	3	1	7	61	46	121			
		%	2.5	2.5	0.8	5.8	50.4	38.0	100.0	3.758	.585
Septic tank or pit latrine used was approved by relevant district authorities	SM	f	0	0	1	3	4	4	12		
		%	0.0	0.0	8.3	25.0	33.3	33.3	100.0		
Site was fully approved by the relevant district/municipal authorities	SM	f	0	0	0	0	5	7	12		

\*\* Significant at P < 0.01; \* significant at P < 0.05. Abbreviations: SM-Site managers; LR-Local residents; f-frequency; %-Row percentage; NR-None response; SD-Strongly disagree; D-Disagree; N-Neutral, A-Agree, SA-Strongly agree. Note: The degrees of freedom for each practice equal to five.

Table 5.20 shows that respondents did not significantly differ in expressing the need to formulate environmental byelaws to guide tourism developments. However, respondents significantly differed as far as consulting community leaders before sites were established, and discussing tourist development issues in village and parish meetings were both concerned. Meanwhile, site managers showed that the sites' performance in these practices was commendable, local residents showed that it was poor.

In general, results indicate that development control specifically directed to tourism development in the lakeshore region is very limited and inconsistent. This is a worrying situation especially in the wake of the increasing number and size of tourism developments along the ecologically sensitive lakeshore region. The implications of this scenario have to be addressed if STD is to be achieved.

**Plate 1 solid waste management at various tourism sites along the lakeshore**



**(a) Uncollected litter near a litterbin**



**(b) Litter dumping site near the beach**



**(c) Unightly litter dumping site**



**(d) Unightly litter dumping site**



**(e) Beach litter (circled)**



**(f) Improvised litterbins fastened on trees**



**(g) Modern litterbins**



**(h) Litter bin with inscription "Dust bin-use me"**

**Plate 2 Surface water run off and Sewage management**



**(a) Storm water drain provision at a beach**



**(b) Waste water flowing through the sand beach into the lake**



**(c) Waste water draining in lake as swimming takes place**



**(d) Storm water flowing into the lake**



**(e) Kitchen wastewater freely flowing from a tourism site to the neighbourhood**



**(f) Wastewater flows to the lake through a Kitchen drain pipe**

**Plate 3 Development control**



**(a) Retention walls under construction after a decline in lake water levels**



**(b) Infilling and landscaping of part of the lakeshore originally under water**



**(c) Accommodation rooms being constructed right on a sand beach**



**(d) Construction within the 200-meter lake protection zone**



**(e) Sites fence off their premises right into the lake**



**(f) Beach fenced off to restrict access of local residents**

**Plate 4. Water quality**



**(a) Car washing in the lake and litter collection site next to a beach hotel**



**(b) Cattle watering in the lake next to a resort beach**



**(c) Swimming prohibited at a beach due to dirty water caused by construction at adjacent plot**



**(d) Waste water flowing from a site into the lake**



**(e) Phyto-plankton weed (a) on a beach causing clear water to greenish/ brown colour (b) and to be smelly**



**(f) Water hyacinth covering sand beach which later starts rotting affecting water quality**

### 5.2.6 Use-intensity Control

In respect of use-intensity control, the focus of data collection was primarily on establishing: the total visitor numbers; identifying peak and low visitor periods; measuring how intensively site facilities are used and identifying any use control measures in place. Efforts to collect data from secondary sources were futile since the number of received visitors were not recorded at most sites and where records existed attempts access to them was denied citing management policy requirements. As a result it was not statistically possible to determine the visitor trend over the years, site carrying capacity or use intensity levels.

When site managers were asked about the pattern of visitors received at their sites, they indicated a similar patterns of visitors. One of managers precisely responded:

“We receive visitors almost everyday but our peaks are witnessed mainly on weekends and during festive or public holidays such as Iddi, Easter, Christmas and new years’ period”

More data on use-intensity control at sites were obtained by administering questionnaires to site managers and local residents. The analysis of the data led to results presented in Table 5.21

**Table 5.21 Responses of site managers and local residents on the performance of lakeshore sites in use-intensity control**

Manifested use intensity management practices	Respondents		NR	SD	D	N	A	SA	Total	X <sup>2</sup> <sub>obs</sub>	P
Site has had an increasing number of visitors over the years	SM	f	0	0	1	0	5	6	12	5.452	.363
		%	0.0	0.0	8.3	0.0	41.7	50.0	100.0		
	LR	f	3	2	4	8	66	26	109		
		%	2.8	1.8	3.7	7.3	60.6	23.9	100.0		
	Total	f	3	2	5	8	71	32	121		
		%	2.5	1.7	4.1	6.6	58.7	26.4	100.0		
Local residents visit the site	SM	f	0	0	2	1	8	1	12	5.452	.363
		%	0.0	0.0	16.7	8.3	66.7	8.3	100.0		
Local residents who are not customers are not restricted entry to avoid disturbances	SM	f	0	2	1	1	4	4	12		
		%	0.0	16.7	8.3	8.3	33.3	33.3	100.0		

\*\* Significant at P < 0.01; \* significant at P < 0.05. Abbreviations: SM-Site managers; LR-Local residents; f-frequency; %-Row percentage; NR-None response; SD-Strongly disagree; D-Disagree; N-Neutral, A-Agree, SA-Strongly agree. Note: The degrees of freedom for each practice equal to five.

Table 5.21 shows that both types of respondents did not significantly differ in agreeing that sites recorded an increasing number of visitors over the years. In addition, most site managers agreed that local residents visit their sites without restriction, even when they are not customers. In general, all sites - apart from conservation sites, use-intensity levels are not monitored and there are limited control measures in place.

### 5.2.7 Visitors response about site performance relative to selected indicators

This section presents views of visitors who were also asked about the performance of

sites in relation to specific performance indicators. They were only asked about those aspects whose on-the-spot assessment they could reliably assess. The indicators included: tourism contribution to nature conservation, solid waste management; sewage management; and water quality. Results obtained are shown in Table 5.22

**Table 5.22 visitor's responses on the performance of lakeshore sites**

Performance indicators		Responses												X <sup>2</sup> <sub>obs</sub>
		Non-response		Yes		No		Don't know		N/A		Total		
		f	%	f	%	f	%	f	%	f	%	f	%	
Contribution to nature conservation	Have seen or been informed about nature conservation guidelines	10	5.0	88	44.2	101	31.5	0	0.0	0	0.0	199	100.0	56.136**
	Environment conservation guidelines at the sites are adequate	69	34.7	97	48.7	26	13.1	7	3.5	0	0.0	199	100.0	
	Visitors follow nature conservation guidelines	64	32.2	76	38.2	59	29.6	0	0.0	0	0.0	199	100.0	
	Natural habitat for wildlife well managed *	86	43.2	66	33.2	34	17.1	7	3.5	6	3.0	199	100.0	
	Natural vegetation cover well managed*	83	41.7	76	38.2	16	8.0	12	6.0	12	6.0	199	100.0	
	Wetlands well managed*	108	54.3	55	27.6	19	9.5	5	2.5	12	6.0	199	100.0	
	Soils in the sites are well managed*	99	49.7	51	25.6	24	12.1	25	12.6	0	0.0	199	100.0	
	General proper waste management*	82	41.2	66	33.2	38	19.1	16	8.0	0	0.0	199	100.0	
	Scenic beauty well managed*	79	39.7	42	21.1	60	30.2	10	5.0	0	0.0	199	100.0	
	Created wildlife sanctuary, if any, well managed*	108	54.3	39	19.6	30	15.1	10	5.0	11	5.5	199	100.0	
	Noise pollution*	110	55.3	52	26.1	28	14.1	7	3.5	0	0.0	199	100.0	
<b>Average</b>	<b>82</b>	<b>41.2</b>	<b>64</b>	<b>32.2</b>	<b>40</b>	<b>20.1</b>	<b>9</b>	<b>4.5</b>	<b>4</b>	<b>2.0</b>	<b>199</b>	<b>100.0</b>		
Solid waste management	Have not seen litter/rubbish bins	17	8.5	70	35.2	112	56.3	0	0.0	0	0.0	199	100.0	9.417**
	Number of litter/rubbish bins adequate	41	20.6	67	33.7	91	45.7	0	0.0	0	0.0	199	100.0	
	Litter/rubbish bins are conveniently/strategically located for use	45	22.6	73	36.7	81	40.7	0	0.0	0	0.0	199	100.0	
	Have deposited litter/rubbish in the bins	73	36.9	58	29.3	67	33.8	0	0.0	0	0.0	199	100.0	
	Rubbish/litter collected by staff	80	40.4	66	33.3	52	26.3	0	0.0	0	0.0	199	100.0	
	There is (no) evidence of scattered/uncollected litter/rubbish	30	15.1	88	44.2	81	40.7	0	0.0	0	0.0	199	100.0	
	Waste (solid) is properly managed at the site	33	16.7	123	62.1	42	21.3	0	0.0	0	0.0	199	100.0	
	<b>Average</b>	<b>46</b>	<b>23.1</b>	<b>78</b>	<b>39.2</b>	<b>75</b>	<b>37.7</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>199</b>	<b>100.0</b>	
Sewage management	There is (no) evidence of surface flowing liquid	35	17.6	148	74.4	16	8.0	0	0.0	0	0.0	199	100.0	119.889**
	No smell of raw sewage in the air	34	17.1	145	72.9	20	10.1	0	0.0	0	0.0	199	100.0	
	Waste (Sewage) is properly managed	33	16.7	123	62.1	42	21.3	0	0.0	0	0.0	199	100.0	
	<b>Average</b>	<b>34</b>	<b>17.1</b>	<b>139</b>	<b>69.9</b>	<b>26</b>	<b>13.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>199</b>	<b>100.0</b>	
Water quality	Water quality at the beach shore well managed*	115	57.8	20	10.1	41	20.6	4	2.0	13	6.5	199	100.0	461.256**
<b>Overall average</b>		<b>69</b>	<b>34.7</b>	<b>75</b>	<b>37.7</b>	<b>46</b>	<b>23.1</b>	<b>3</b>	<b>1.5</b>	<b>6</b>	<b>3.0</b>	<b>199</b>	<b>100.0</b>	<b>116.251**</b>

\*\*Significant at P < 0.01 level of significance. Each Scale was transformed as follows: very adequate, adequate and moderately adequate were transformed into "Yes". Very inadequate, inadequate transformed into "No"

\*Scale transformed as follows: Strongly agree and agree were transformed into "Yes". Strongly disagree and Disagree into "No". Neither agree nor disagree transformed into "Don't know". N/A- represents not applicable

Table 5.22 indicates that, on average, the majority of the visitors (37.7%) responded affirmatively, thereby showing that most sites perform satisfactorily in each practice. Accordingly, looking at the chi square values, the Table indicates that most visitors agreed that most lakeshore sites recorded a significantly commendable performance in sewage management ( $X^2_{obs} = 119.889$ ,  $P < 0.01$ ), solid waste management ( $X^2_{obs} = 9.417$ ,  $P < 0.01$ ), contribution to nature conservation ( $X^2_{obs} = 56.136$ ,  $P < 0.01$ ), and water quality ( $X^2_{obs} = 461.256$ ,  $P < 0.01$ ). The overall performance of the sites in all the practices was also reportedly satisfactory to visitors ( $X^2_{obs} = 116.251$ ,  $P < 0.01$ ). This observation notwithstanding, results show that according to visitors, site performance was least commendable in solid waste management.

Furthermore, visitors were asked about site maintenance as an indicator of site performance relative to the physical environment. Site managers were deliberately omitted in the survey because it was felt that they were likely to adopt a defensive attitude. Local residents were also omitted because, unless they had visited a site (in which case they would be regarded as visitors), they could not tell whether the site was well maintained or not. This meant that only visitors could validly assess the sites in respect of maintenance. The analysis of their assessment led to results shown in Table 5.23

**Table 5.23 Visitors' rating of the maintenance of tourism sites**

Indicators of maintenance performance	Rating																		$X^2_{obs}$	P
	NR		VWM		MM		PM		VPM		NM		Don't know		N/A		Total			
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%		
General site maintenance	29	14.6	29	14.6	84	42.2	22	11.1	1	0.5	24	12.1	10	5.0	0	0.0	199	100		
Gardens	36	18.1	61	30.9	67	33.7	13	6.5	7	3.5	13	6.5	2	1.0	0	0	199	100		
Beach sand	41	20.6	19	9.5	59	29.6	31	15.6	11	5.5	32	16.1	6	3.0	0	0	199	100		
Walkways	25	12.6	49	24.6	83	41.7	15	7.5	5	2.5	19	8.4	3	1.5	0	0	199	100		
Sanctuary/ reserve area	69	34.7	31	15.6	53	26.6	7	3.5	4	2.0	16	8.0	19	9.5	0	0	199	100		
Swimming pool	12	6.0	14	7.0	18	9.0	6	3.0	3	1.5	9	4.5	2	1.0	135	67.8	199	100		
Sports facility/area	70	35.2	16	8.0	48	24.1	13	6.5	8	4.0	24	12.1	20	10.1	0	0	199	100		
Other features/ facilities at the sites	186	93.5	3	1.5	3	1.5	2	1.0	1	0.5	0	0.0	4	2.0	0	0	199	100		
<b>Average</b>	<b>59</b>	<b>29.6</b>	<b>28</b>	<b>14.1</b>	<b>52</b>	<b>26.1</b>	<b>13</b>	<b>6.5</b>	<b>5</b>	<b>2.5</b>	<b>17</b>	<b>8.5</b>	<b>8</b>	<b>4.0</b>	<b>17</b>	<b>8.5</b>	<b>199</b>	<b>100</b>	<b>36.027**</b>	<b>.000</b>

\*\*Significant at  $P < 0.01$  level of significance. Abbreviations: NR-None response, VWM-very well maintained, MM-moderately maintained, NM-not maintained, PM-poorly maintained, VPM-very poorly maintained, P-level of significance,  $X^2_{obs}$ - observed chi square value

Ignoring non-response (because nothing can be deduced from it), Table 5.24 indicates that, on average, the largest proportion of visitors (26.1%) indicated that tourism sites are moderately and significantly maintained ( $X^2_{obs} = 36.027$ ,  $P < 0.01$ ). In particular,

most visitors showed that the moderately maintained site features were: gardens, beach sand, walkways, sanctuary or reserve areas, and sports facilities or areas

### 5.2.8 Overall view of site performance relative to physical environment indicators

To establish whether the selected respondent categories differed, on average, in their assessment of site performance relative to each physical environment indicator, the one-way ANOVA test was applied. This test is powerful in establishing whether or not there are mean differences in given categories of a normally distributed population relative to a studied variable. ANOVA ascertains this by comparing the between-group differences to the variation within each group (Rubin and Babbie 2008). Accordingly, results obtained are presented in Table 5.24

**Table 5.24 Performance of sites as assessed by all respondent categories**

Performance indicators	Category of respondents	N	Mean	df	F	Sig.
Contribution to nature conservation	Site managers	12	4.75	2	9.072**	.000
	Visitors	199	2.99			
	Local residents	109	2.90			
	Total	320	3.03			
Solid waste management	Site managers	12	4.50	2	10.631**	.003
	Visitors	199	2.70			
	Local residents	109	2.71			
	Total	320	2.77			
Sewage management	Site managers	12	4.50	2	11.037**	.000
	Visitors	199	2.75			
	Local residents	109	2.66			
	Total	320	2.78			
Development control	Site managers	12	4.58	2	11.622**	.000
	Visitors	199	2.83			
	Local residents	109	2.66			
	Total	320	2.84			
Site maintenance	Site managers	12	4.50	2	10.155**	.000
	Visitors	199	2.85			
	Local residents	109	2.66			
	Total	320	2.85			
Water quality control	Site managers	12	4.00	2	5.795**	.003
	Visitors	199	2.77			
	Local residents	109	2.66			
	Total	320	2.78			
Use-intensity control	Site managers	12	3.83	2	9.240**	.005
	Visitors	199	2.73			
	Local residents	109	2.66			
	Total	320	2.75			
<b>Overall performance</b>	Site managers	12	4.00	2	6.009**	.003
	Visitors	199	2.82			
	Local residents	109	2.65			
	Total	320	2.81			

\*\*significant at 0.01

Table 5.24 summarises the manner in which the selected respondent categories assessed the performance of the selected sites relative to each physical environment indicator of sustainable tourism development. The further from zero the F-value, the more significant is the difference in the assessment of site performance across the different respondent categories. For F-values equal or nearer to zero imply that the

difference in the mean assessment is negligible. Accordingly, Table 5.25 indicates that all the F-values were greater than zero at the 1% ( $P < 0.01$ ) level of significance. This indicates that respondents significantly differed in their assessment of the performance of the sites relative to each indicator. From the scoring of the ‘strongly agree - strongly disagree’ response scale used to assess this performance, the higher the mean value, the better the assessed performance. Accordingly, a critical comparison of the mean values of the respondent categories reveals that the grading of assessment of site performance lowered progressively from site managers to visitors and then to local residents.

A second one-way ANOVA test was conducted to establish whether there was variation in the respondents’ assessment of performance across the different categories of the sites. Results obtained in this case are shown in Table 5.25

**Table 5.25 Performance of selected sites as viewed according to their categories**

Performance indicators	Category of sites	N	Mean	df	F	Sig.
Contribution to nature conservation	Beach Hotels	19	1.41	3	32.287**	.000
	Beach resorts-with accommodation	68	2.63			
	Beach resorts-without accommodation	126	3.92			
	Conservation Area	107	4.55			
	Total	320	3.08			
Solid waste management	Beach Hotels	19	1.41	3	23.202**	.000
	Beach resorts-with accommodation	68	2.59			
	Beach resorts-without accommodation	126	3.15			
	Conservation Area	107	4.45			
	Total	320	2.88			
Sewage management	Beach Hotels	19	1.41	3	19.272**	.000
	Beach resorts-with accommodation	68	2.61			
	Beach resorts-without accommodation	126	3.12			
	Conservation Area	107	4.23			
	Total	320	2.84			
Development control	Beach Hotels	19	1.41	3	19.322**	.000
	Beach resorts-with accommodation	68	2.61			
	Beach resorts-without accommodation	126	3.15			
	Conservation Area	107	4.23			
	Total	320	2.85			
Site maintenance	Beach Hotels	19	1.35	3	20.784**	.000
	Beach resorts-with accommodation	68	2.61			
	Beach resorts-without accommodation	126	3.15			
	Conservation Area	107	4.23			
	Total	320	2.84			
Water quality control	Beach Hotels	19	1.41	3	20.175	.000
	Beach resorts-with accommodation	68	2.50			
	Beach resorts-without accommodation	126	3.19			
	Conservation Area	107	4.14			
	Total	320	2.79			
Use-intensity control	Beach Hotels	19	1.41	3	18.132**	.000
	Beach resorts-with accommodation	68	2.48			
	Beach resorts-without accommodation	126	3.19			
	Conservation Area	107	4.09			
	Total	320	2.78			
Overall performance	Beach Hotels	19	1.35	3	21.156**	.000
	Beach resorts-with accommodation	68	2.55			
	Beach resorts-without accommodation	126	3.12			
	Conservation Area	107	4.09			
	Total	320	2.79			

\*\*Significant at 0.01

\*Significant at 0.05

Looking at the F-value values and levels of significance, Table 5.25 shows that, with the exception of performance in water quality control, the assessment of performance significantly differed across the different categories of sites. From the scoring of the ‘strongly agree – strongly disagree’ response scale used to assess this performance, the higher the mean value the better the performance. Accordingly, a critical comparison of the mean values reveals that conservation areas were perceivably better performers in all the physical environment indicators of STD shown in Table 5.26. This is the case even when the mean scores for conservation areas are compared with the overall mean of each performance indicator. Second to conservation areas were beach resorts-without accommodation, followed by beach resorts-with accommodation. Beach hotels had the poorest assessed performance. In specific terms, a comparison of the mean for each category with the overall mean reveals that beach hotels poorly performed in regard to the contribution to nature conservation indicator than beach resorts-with accommodation and beach resorts-without accommodation. This was closely followed by development control. For each of these indicators, the mean scores are greater than the total mean score. The implications of these results are presented in Chapter 6 in light of the results obtained in response to the third objective of the study.

Based on the respondents’ overall assessment, further analysis was conducted to establish which of the physical environment indicators was relatively more reliable and critical in measuring site performance in relation to STD. This was carried out using the factor analysis technique since this technique helps to reduce the various administered questionnaire items about site performance in a few independent indicators. Results obtained are shown in Table 5.26

**Table 5.26 Relative importance of physical environment indicators of site performance as assessed by all respondent categories**

Components	Eigen values	% variance explained	Reliability coefficient ( $\alpha$ )
Contribution to nature conservation	68.394	36.038	.694
Solid waste management	8.129	26.829	.586
Sewage management	4.805	9.031	.577
Development control	2.295	5.293	.571
Maintenance	1.599	3.935	.566
Water quality	1.465	1.854	.562
Use-intensity control	1.234	1.645	.509

*For analysis details see Appendix 7 Table 3*

Table 5.26 shows that, of the seven physical environment indicators of site performance, contribution to nature conservation was assessed as the most reliable

measure of indicator of site performance in relation to STD. This is because this indicator had the largest reliability coefficient ( $\alpha = 0.694$ ) and measured up to 36.038% of site performance relative to STD. This indicator was followed by solid waste management; sewage management; development control; site maintenance; water quality control; and the least important was use-intensity control. It should be noted however, that since all the reliability coefficient values were greater than 0.5, all the indicators were reliable in showing site performance relative to the physical environment. Looking at the Eigen values and percentage of variance explained, Table 5.26 shows that contribution to nature conservation accounted for the greatest proportion of variation in this performance. The percentage of variation for the various parameters has implications to the planning of tourism in the study area as discussed later in chapter six.

### **5.3 Factors influencing the performance level of the tourism sites**

This section addresses the third objective of this study, which is centred on examining the factors explaining the environment performance level of the lakeshore sites. The considered factors were: quality of site features or services, site location, visitor-related factors, awareness of environment conservation and level of development control. Results about the assessed quality of site features and services, location and visitor-related factors have already been presented under site and visitor characteristics (section 5.1.3 and 5.1.4). They need not be presented again. The implications of their consideration as factors influencing site performance are discussed in Chapter 6.

For the remaining factors, both secondary and primary sources were used to collect data about them. Key respondents from the local government, MTTI and NEMA were interviewed. A questionnaire was also administered to site managers, visitors and local residents who were each asked a number of questions that essentially focused on what exactly influenced lakeshore sites to perform the way they did. The various views and responses collected from the interviews and secondary data sources were compiled under the following themes: awareness of environment conservation, level of development control and environment monitoring.

#### **5.3.1 Awareness of environment conservation**

Awareness was considered for both the local residents around the sites and the visitors to the sites. As far as local residents were concerned, information was collected from

interviews with community leaders who expressed the view that there was limited awareness about environment conservation among the community. The Local Council 1 (LC1) chairpersons acknowledged that even the local council environment committees were non-operational due to limited resources and mobilization. The chairman of the Lutembe Tourism Association (the only organised community tourism group identified in the study area) noted that the communities are not organised in community tourism associations or environmental advocacy groups which would sensitise the people on how to harness the natural resources for tourism and ensure that the resources are not misused or over used in their areas. He also noted that most the communities are less empowered to question operations of tourism sites and demand for 'green' management operations. Similar views were expressed by the director of 'Nature Uganda', an NGO working with local residents in raising environment awareness especially on how they can manage and benefit from community based avitourism.

The above findings about the local community in the lakeshore region are indeed a reflection of the whole country. The Uganda National Tourism Policy (2003 -2015) acknowledges that communities have not played a significant proactive role in respect of protection of natural and cultural resources in Uganda. The policy attributes this to: lack of awareness and appreciation of their tourism resources and development potential; lack of collaboration of the community associations; and inadequate communication between local communities and the central/national organisations.

While administering questionnaires to visitors about site performance, it was observed that most of them seemed not to be aware of environment related aspects being investigated. This to a great extent explains the relatively high percentage of non-response especially in relation to the 'contribution to nature conservation' variable (see table 5.22). This level of non-response can be interpreted as an indication of general low level of awareness of visitors with regard to environmental conservation.

In general, the results show that both local residents and visitors were less aware of environment conservation hence they are less empowered to influence or demand tourism sites to maintain high environment standards. This means sites are more likely to have poor performance since their clients (visitors) and the host community is not aware of what environment standards they expect sites to have.

### **5.3.2 Level of development control and environment monitoring**

Results obtained from interviews with officials from NEMA, MTTI and local government indicated that development control and environmental monitoring were also major determinants of site performance. However, as noted in section 5.2.5, departments that are supposed to ensure monitoring and law enforcement are constrained by several factors. As a result, tourism establishments (including lakeshore sites) are not regularly monitored and may not be following the existing laws; this clearly lays fertile ground for poor site performance. The factors identified as influencing level of development control and environmental monitoring included; outdated laws, limited environmental monitoring and level of self-regulation.

The most commonly cited factor influencing performance was out-dated laws, weakness in existing laws and some laws being silent about tourism facilities and activities. An analysis of secondary sources reveals overwhelming evidence of the described situation. The Hotel Act (1969), which was often referred to by respondents as an illustration, was made in 1953 and has since been amended only once - in 1969. It is meant to regulate the management of hotels in Uganda and also control their licensing.

However, the Act has been overtaken by events and it less useful in guiding sustainable tourism. In the first instance, the Act limits itself to hotels and does not cater for other forms of accommodation like cottages, hostels tented camps, service apartments and lodges. Nonetheless, licensing principles set for hotels are very basic and not specific enough to enhance performance. For instance, there is no systematic hotel licensing system stated and the Act does not provide for grading and classification of hotels. More so, no environment performance standards are mentioned as part of the conditions for licensing of hotels. Above all, the fine prescribed (not more than 2000 Uganda shillings or US\$ 1.10) for a breach of the Act has been overtaken by inflation, as such it is ridiculously low and clearly inadequate to ensure conformity with the Act. Accordingly, the Act is outdated and does not reflect the current trends and developments in the tourism (accommodation) sector that have taken place over the years (Obel 2001). It also means that such an Act cannot effectively be used to ensure effective monitoring of tourism sites in lakeshore region hence encouraging poor performance.

The other area highlighted by the respondents as being responsible for the poor level of performance was extent of environmental monitoring. From the interview held with an official from NEMA (in charge of environmental monitoring) it was found out that environmental monitoring in the lakeshore region is limited and in some areas non-existent. As a result, the performance of various sites in relation to the physical environment in the lakeshore is unknown even to the organisations that are supposed to monitor them. This he attributed it to non-functionality of lower local government environment institutions. He noted:

“There is low awareness among the local community and site management on laws and policies governing natural resource use. Yet the lower government institutions are not fully playing their role of educating them and enforcing the existing laws”.

He however noted that district development planning has started emphasising environmental mainstreaming of all sector plans and development projects, including tourism related projects. He expressed the need for local governments to pass byelaws on environment management and set up environment committees to ensure compliance.

The study went further to examine the level of tourism self-regulation since it is an important element in sustainable development and environment control. Self-regulation is a voluntary instrument, which helps to achieve sustainable development of the industry. In respect of the application of self-regulation mechanisms, site managers were interviewed and they revealed that there were no formal mechanisms in place especially as regards to the environment. They did not have standard environmental codes of conduct to follow so as to create environmental awareness among the visitors and local residents. In other words they do not apply the concept of ‘best practice’. Few sites had included environmental information in their websites and brochures. Only conservation sites had environmental management guidelines and designated staff handling environmental management issues.

At a national level there is no framework to encourage self-regulation. For instance there is no specific department or organisation within the tourism sector responsible for designing codes of conduct. Furthermore, no national environment certification system exists and none of the sites in the lakeshore region have acquired international environment certification (such as Green Globe 21 or Blue Flag, among others). There is no coordinating organisation or association bringing together lakeshore tourism establishments in the district or municipality through which self-regulation could be exercised. Existing national umbrella associations in the tourism sector are more of

private sector lobby groups for central government assistance, than self-regulation organs with environmental standards, for instance Uganda Hotel Owners Association (UHOA).

More information was collected about the factors explaining the performance of the lakeshore tourism sites through questionnaires. It was obtained from site managers, visitors and local residents. Each of these respondents was asked a number of questions that essentially focused on what factors explain site performance. When site managers were asked, they responded as shown in Table 5.27

**Table 5.27 Responses of site managers about factors explaining site performance**

Indicators of the factors	Responses													
	NR		SD		D		N		A		SA		Total	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Site is duly approved by the relevant district /municipal authorities	0	0.0	0	0.0	0	0.0	0	0.0	5	41.7	7	58.3	12	100.0
Community leaders are consulted whenever there is an activity or aspect at the site that affects the local community	0	0.0	1	8.3	1	8.3	0	0.0	6	50.0	4	33.3	12	100.0
Am aware of the environmental laws and guidelines that tourism site are supposed to follow	0	0.0	1	8.3	0	0.0	0	0.0	7	58.3	4	33.3	12	100.0
Site harmoniously exists and fits well in the community	2	16.7	0	0.0	0	0.0	0	0.0	6	50.0	4	33.3	12	100.0
Tourism at this site is beneficial to the surrounding local community	0	0.0	0	0.0	0	0.0	1	8.3	4	33.3	7	58.3	12	100.0
Improves scenic beauty of the area	0	0.0	0	0.0	0	0.0	0	0.0	4	33.3	8	66.7	12	100.0
<b>Average</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>6</b>	<b>50.0</b>	<b>6</b>	<b>50.0</b>	<b>12</b>	<b>100.0</b>

Abbreviations: f-frequency; %-Row percentage; NR-None response; SD-Strongly disagree; D-Disagree; N-Neutral, A-Agree, SA-Strongly agree.

On average, Table 5.27 indicates that all site managers agreed (agreed or strongly agreed) and therefore showed that their sites' performance was commendable since they indicated that: their sites are duly approved to operate, they consult community leaders and discuss the effects of the sites, they are aware of environmental conservation laws and guidelines, and the sites improve scenic beauty, are beneficially and harmoniously exist with the local communities.

Attempts to establish additional factors involved asking visitors about what attracted them to particular sites. The ability of a site to attract visitors was considered to be a function of the performance of the site. Results obtained from the analysis (see Table 5.4) reveal that on average a total of 24.6% of visitors liked the services or features most, 8.5% liked them somehow, 6.5% were undecided and 23.6% did not like them. Percentages of visitors who were attracted are remarkably similar to those who were not attracted by the sites – hence a bimodal response distribution. This indicates that

their performance rating was mixed. A closer inspection of the results indicates that lake scenery and the calm/quiet environment were the most liked (attracting) features. Sand beach, bar and restaurant, hotel/resort accommodation, entertainment and sports facilities were the least liked (un attracting) features.

In order to establish which of the identified factors was relatively critical and most reliable in explaining the performance of lakeshore sites, factor analysis was carried out using all the questionnaire items administered to all respondents. Results obtained are presented in Table 5.28

**Table 5.28 Relative criticality and reliability of factors explaining the performance of lakeshore sites**

Components	Eigen values	% variance explained	Reliability coefficient ( $\alpha$ )
Quality of site features/services	4.772	41.957	.776
Location	3.309	21.186	.691
Visitor-related factors	2.964	10.836	.683
Awareness of environment conservation	2.161	1.882	.609
Development control	1.498	1.773	.600

For analysis details see Appendix 7, Table 4

Examining the proportions of variance and reliability coefficients, Table 5.28 indicates that of the five factors, the quality of site features and services is the most critical and reliable factor in explaining the level of site performance. This is followed by site location; visitor-related factors; awareness of environment conservation laws and guidelines; and last but not least, development control.

#### **5.4 Evaluation of how areas planning caters for Sustainable Tourism Development (STD)**

The fourth objective of the study and the resultant research question focused on evaluating how the existing planning for the lakeshore region caters for sustainable tourism development. The objective was responded to by consulting both secondary and primary sources. In particular, a critical review of secondary sources revealed that the planning for the Lake Victoria shore region was merely a small part of the entire national planning framework for tourism in Uganda. Specifically, the sources indicated that this planning was carried out at three levels: Central government, local government and site level planning. Each of these three levels was examined to evaluate the level to which STD was considered.

### **(i) Central government tourism planning**

The review of the national tourism planning in Uganda revealed that such planning is fairly recent having begun only in the 1980's. A major national tourism plan and a policy have been formulated in Uganda *viz.* the Integrated Tourism Master Plan, ITMP (1993) and the Uganda National Tourism Policy (2003). In this section the two are evaluated in respect of the extent to which each caters for sustainable tourism development.

However, the earlier planning efforts of the Ministry of Tourism are reviewed first. The ministry set up the Tourism Rehabilitation and Development Project (TRDP) in 1988 with sponsorship from UNDP and UNWTO. The main objective of TRDP was to plan for development and institutional improvements and by 1990 this was expanded to ensure that there was effective tourism marketing, tour operations and National Park planning. Central government planning was essentially focused on rehabilitation and reconstruction the tourism sector that had tremendously declined during the long period of political instability (see section 4.3.5). Efforts were mainly centered on carrying out a situational analysis – to find out the existing tourism facilities, their capacity, existing attractions and their conditions and find out the tour operators in the sector. Therefore at this time there was little or no emphasis on sustainable tourism development since indeed there was no substantial tourism development.

The Integrated Tourism Master Plan (ITMP) for Uganda was later formulated in 1993. Tourism planning placed more emphasis on the 'traditional' tourism areas – the National Parks, where rehabilitating accommodation facilities and improving transport accessibility was the major priority. The major aim of the plan was to develop the tourism to the maximum economic extent possible, as a means of generating wealth, foreign earnings, employment, but in consistence with the protection of environment and cultural values. Under the plan, Uganda was zoned into primary, secondary and tertiary tourism zones, based on the scenic interest, natural features, wildlife, forest reserves, game reserves and cultural heritage. Zoning was intended to accord priority to areas considered potent for tourism investment, planning and promotion. The major National Parks (Murchison fall, Kidepo, Queen Elizabeth parks and the Mt Rwenzori region) were zoned as Primary areas, while Kabale-Kisoro and Kampala-Jinja areas (where study area is found) were zoned as secondary areas. Mt Elgon, Lake Mburo and Ssesse Islands were zoned as Tertiary zones. Furthermore, the ITMP proposed the

restructuring of the Ministry of tourism, establishment of the Uganda Tourism Board (UTB) and Uganda Wildlife Authority (UWA).

In general, the results show that, while sustainable tourism planning efforts do exist at the central government level, they are largely aimed at areas in the primary zone – that is National Parks. This therefore means that the lakeshore study area (which is part of the secondary zone) is not given high priority under the ITMP.

The latest planning effort by government was the formulation of the Uganda National Tourism Policy (2003 –2015). The policy underscores the need for central government planning to transform the sector into a major economic sector and ensure that tourism becomes a vehicle for poverty reduction taking into consideration the resource base and market limitations. It also places emphasis on ensuring that tourism forms a basis for protection of environment and tourism develops in a socially and culturally acceptable way, both in and outside protected areas. Indeed the policy highlights the need to develop a ‘green profile’ where sustainability is the focus through community development, sustainable conservation and use of the environment. Strategies through which a green profile could be achieved are highlighted under the environmental objective as follows:

- Encouraging nature friendly tourism product development,
- Ensuring that conservation programmes between different government agencies (UWA, Forest Department, Wetlands) were well-coordinated
- Developing facilities and products in national parks in an environmentally sustainable, and ensuring that revenue generated was channelled towards the protection of the natural resource base and benefit of the communities.
- Promoting Eco-tourism to enhance sustainable use of natural resources
- Implement and further develop protected area management plans
- Ensure that environmental impact assessment (EIA) procedures are enhanced in respect of all developments in sensitive tourism areas within and outside protected areas
- Enhance the local government capabilities to protect and develop sustainable use for the valuable natural and cultural resources

For better planning, the National Tourism Policy adopts a zonal planning process whereby ten focal districts – (including Kampala district) are identified to undergo planning, sensitisation and development process based on interlinked zone plans. The other 22 districts (including Wakiso district) have been identified as ‘districts for future tourism development’.

In the implementation strategy, the policy identifies central government, local government, private sector and development partners as the major stakeholders. The highlighted central government roles include the following:

- Fully supporting the development of tourism in Uganda and the implementation of the tourism policy
- Providing adequate financial fiscal support for tourism development
- Providing support for decentralisation of tourism activities at the district and municipality level
- Enhancing tourism planning at the district and the zone level
- Providing support to environmental protection and development
- Ensuring tourism to be a priority sector with priority backing within relevant ministries
- Outlining and implementing the Tourism Act

For the local government, under the implementation strategy, the policy emphasises the following roles:

- Include a position of district tourism focal officer in organisational structure
- Provide district tourism plans including identification of cultural and natural resources for protection and possible development
- Provide a tourism committee to coordinate private and public sector efforts in ensuring sustainable tourism development
- Initiate the compilation of districts tourism statistics
- Designate tourism focal points in key districts to initiate local tourism coordination and establish links with the central administration and central tourism bodies
- Initiate local stakeholder collaboration and support private sector initiatives
- Undertake registration within categories and licensing of tourism establishments at the local level
- Establish tourism development links to the central administration and private sector bodies and initiate local coordination
- Support the protection of district level natural and cultural resources as the basis for tourism development
- Give priority to infrastructure development in relation to tourism development areas and provide road signage

The National Tourism Policy however also highlights issues that act as constraints to achieving STD planning. They include among others:

- Limited institutional capacity of the tourism ministry to enable effective planning – its understaffed with limited financial and human resources
- Limited private sector and local community involvement in tourism planning
- Limited support from central government for decentralisation of tourism activities to the district and municipality levels

In general, the National Tourism policy lays foundation for developing tourism in a sustainable way both inside and outside protected areas. For the first time specific emphasis is given to planning for STD at the district level. However it should be noted that this policy is still being implemented, therefore whether all what is mentioned will be achieved is yet to be seen.

## **(ii) Local government planning**

A number of secondary data sources were analysed, among them was the Local Governments Act (1997) and the three-year development plans of each district, division or municipality. The Local Government Act indicates that districts have all powers to

carry out development planning for activities within their areas. Sections of the Act state that:

- The District Council is the planning authority of the district and through the District Technical planning committee has the full powers to plan for the area under its jurisdiction - section 36 (1)
- The District councils shall prepare a comprehensive and integrated development plan incorporating plans of the lower level governments for submission for National planning - Section 36 (3)
- The District Councils have legislative planning powers and can promulgate bye-laws (section 39 (1))

Apart from the Local Government Act, the district development plans for Entebbe Municipal Council (2005/06 – 2007/08), Wakiso District (2006/2007 – 2008/2009), and Makindye Division (2003/04 – 2005/2006) were analysed. This was to evaluate how local government planning caters for sustainable tourism development. Based on the criteria used by the panel of experts (see chapter three), to generate indicators of STD, the researcher selected relevant planning aspects and analysed each of the plans. The results obtained are summarised in table 5.29.

**Table 5.29 Rating of the extent to which the three-year development plans catered for STD in the lakeshore region**

Aspects considered from the development plans	Development plans		
	Makindye	Wakiso	Entebbe
Tourism recognised as a sector	-	-	-
There is a department/focal person in charge of tourism activities	-	-	-
Tourism is recognised/mentioned as contributor to development in area	*	-	*
Plan identifies/describes key tourism sites in area	**	-	**
There is tourism related data presented in plan (e.g number of visitor arrivals, length of stay etc)	-	-	-
There is mention of a tourism development association/organization in the plan	-	-	-
There is a sector/sub sector in charge of environment	*	***	**
Plan caters for solid waste management	**	**	**
Plan caters for sewage management	*	*	*
Plan caters for water quality control	*	**	***
Plan caters for physical environment (wetlands, forest) conservation	**	***	**
EIA and environmental screening of developments mentioned / highlighted	*	**	**
Environment related conservation bye-laws been formulated	*	**	*
Environment education/sensitization programmes/activities planned for	**	**	*
Measures to ensure proper land management are mentioned	**	**	**
Guide and control developments in area (i.e. approval of building plans, control illegal construction)	**	**	**

*Symbols used: - not evident, \* somewhat evident, \*\* evident, \*\*\* highly evident*

From Table 5.29, analysis of the plans indicates that, tourism was not recognised as a sector of its own. Despite the fact that some plans recognised that tourism facilities and activities were increasing in the region hence contributing to socio-economic

development, there was no local government with a department or focal person responsible for tourism development. Notwithstanding the failure to recognise tourism as an independent sector, further analysis of the plans showed that various environmental and development control aspects, directly or indirectly addressed sustainable tourism development. However, in general, local government development planning does not specifically focus on tourism and no particular standards existed to ensure sustainable tourism development.

To understand more about tourism planning at local government level, both site managers and local residents were asked if tourism issues were discussed in the village or parish planning meetings. They responded as shown in Table 5.30

**Table 5.30 Response of site managers and local residents on the extent of local governments' involvement in tourism planning**

Respondents		Tourism issues are discussed in village / parish meetings						Total
		NR	SD	D	N	A	SA	
Site Manager	<i>f</i>	0	1	3	2	5	1	12
	%	0	8	25	17	42	8	100
Local residents	<i>f</i>	2	10	50	35	9	3	109
	%	1	9	46	32	8	3	100

Abbreviations: *f*-frequency; %-Row percentage; NR-None response; SD-Strongly disagree; D-Disagree; N-Neutral, A-Agree, SA-Strongly agree.

$X^2_{obs} = 13.594$ ,  $P = 0.018$ ,  $df = 5$

Table 5.30 indicates that there was a significant difference in the way site managers and local residents regard discussions of tourism issues in village or parish meetings ( $X^2_{obs} = 13.594$ ,  $P < 0.05$ ). Indeed, whereas 42% of the site managers agreed and therefore showed that such discussions were taking place, most of the local residents (46%) dissented.

Further data were obtained from interviews held with local government planning officials. They confirmed that there is no specific tourism planning at the districts. They argued that tourism was a cross cutting sector which is already catered for under the general planning framework. They acknowledged the need for specific tourism planning if sustainable tourism is to be achieved, but pointed to the fact that they have limited human and financial resources to do so. They also indicated that the ministry in charge of tourism has not actively involved local governments in tourism planning – they only set up *ad hoc* collaboration structures when need arises.

### (iii) Site planning

Data on site planning was largely not available from secondary data sources, so most of the information was collected during interviews with site managers. They indicated that site management predominantly influences site planning. They develop their sites according to their own preference since no tourism specific building standards or criteria exist for site design, architecture, height of buildings, number of beds, landscaping etc. They draw up building plans that are submitted to the local government authorities for approval.

Irrespective of the kind of planning policies that sites had, attempts were made to establish whether site planning was perceived to have been carried out in line with sustainable tourism development. This involved asking visitors to rate the general planning of the site as a whole and its individual facilities. They responded as shown in Table 5.31

**Table 5.31 Visitor responses showing the evaluation of planning for sustainable tourism development at site level**

Evaluation of planning a site's facilities and features	Evaluation of planning of a site as a whole											
	Non response		Excellent		Good		Average		Poor		Total	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
None response	12	6.0	0	0.0	1	0.5	2	1.0	0	0.0	15	7.5
Very well planned	0	0.0	3	1.5	1	0.5	1	0.5	0	0.0	5	2.5
Fairly well planned	0	0.0	0	0.0	9	4.5	7	3.5	0	0.0	16	8.0
Well planned	0	0.0	0	0.0	8	4.0	20	10	2	1.0	30	15
Poorly planned	1	5.0	3	1.5	58	29	50	25	1	0.5	113	56
Very poorly planned	0	0.0	8	4.0	10	5.0	1	0.5	1	0.5	20	10
Total	13	6.5	14	7.0	87	43	81	40	4	2.0	199	100

$X^2_{obs} = 222.359, P = 0.000, df = 20$

Table 5.31 indicates that, whereas most of the visitors (43%) felt that the planning of the site as a whole was good, the majority of them (56%) felt that the sites' facilities and features were poorly planned. As such, there is a significant difference in the way visitors rated the planning of facilities at the sites and the overall planning of the site itself ( $X^2_{obs} = 222.359, P < 0.01$ ).

Further attempts were made to establish the extent to which site planning caters for sustainable tourism development at a site level. This involved asking site managers whether site had policies that catered for environment conservation issues. They responded as shown in Table 5.32

**Table 5.32 Responses of site managers on whether sites planning address environment conservation**

Site has a planning policy		Environment conservation issues are adequately addressed in the site policy				
		No response	Neutral	Agree	Strongly Agree	Total
Agree	<i>f</i>	1	0	7	0	8
	%	8.3	0	58.3	0	66.7
Strongly Agree	<i>f</i>	0	1	1	2	4
	%	0	8.3	8.3	16.7	33.3
Total	<i>f</i>	1	1	8	2	12
	%	8.3	8.3	66.7	16.7	100

$$X^2_{\text{obs}} = 8.063, P = 0.450, df = 3$$

Table 5.32 indicates that most of the managers (58.3%) agreed and only 16.7% strongly agreed that their sites had policies which catered for environment conservation issues. The majority responding to ‘agree’, in the presence of a ‘strongly agree’ option meant that environment issues were not strongly considered in site planning. Indeed when further probed most sites managers did not have environment management plans and they could not point out evidence, which shows that site planning caters for environmental aspects. Although most of them mentioned that they follow environmental laws, most were not aware of specific standards they had to follow in order to pursue environmentally friendly tourism business. It is therefore realised that site management, which dominates site planning, is not fully trained and equipped with sustainable tourism planning tools. The implications of all these are discussed in Chapter 6.

Apart from evaluating the extent to which the area’s planning caters for Sustainable Tourism Development (STD), the study went further to collect data on whether the respondents felt there was need to plan for sustainable tourism development at all levels. By use of questionnaires, site managers and local residents were asked whether there was need to formulate policy guidelines to direct the development and management of tourism sites and whether more tourism developments should be allowed to develop in their region. Site manager’s responses to the two questions were cross-tabulated and results are shown in Table 5.33

**Table 5.33 Responses of site managers on whether there is need for sustainable tourism development and allowing more tourism sites to develop**

		More tourism sites should be allowed to develop in this community			Total
		Neutral	Agree	Strongly Agree	
<b>There is need to formulate policy guidelines to direct the development and management of tourism sites</b>					
Neutral	<i>f</i>	0	1	0	1
	<i>%</i>	0	8.3	0	8.3
Agree	<i>f</i>	1	3	0	4
	<i>%</i>	8.3	25	0	33.3
Strongly Agree	<i>f</i>	1	2	4	7
	<i>%</i>	8.3	16.7	33.3	58.3
<b>Total</b>	<i>f</i>	2	6	4	12
	<i>%</i>	16.7	50	33.3	100

Table 5.33 indicates that most of the site managers (58.3%) strongly agree and therefore indicate that there is indeed a strong need for planning for sustainable tourism development through formulating policy guidelines for directing the development of tourism in the lakeshore region. However, the majority of them (50%) plainly agree, thereby showing reluctance to allow more tourism developments. This suggests that most managers are more eager to have planning for the existing developments than allowing any additional developments. Indeed, when they (and this time with the local residents) were asked if more tourism developments were needed in the lakeshore region, they were still reluctant to suggest as such, as indicated in Table 5.34.

**Table 5.34 Site managers and local residents responses on whether more tourism developments are needed in the lakeshore region.**

Respondents		I would like to see more tourism developments in our region						Total
		No Response	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	
Site managers	<i>f</i>	1	0	0	1	8	2	12
	<i>%</i>	8.3	0	0	8.3	66.7	16.7	100
Local residents	<i>f</i>	1	2	6	3	28	69	109
	<i>%</i>	0.9	1.8	5.5	2.8	25.7	63.3	100
Total	<i>f</i>	2	2	6	4	26	71	121
	<i>%</i>	1.7	1.7	5.0	3.3	29.8	58.7	100

$$X^2_{obs} = 15.604, P = 0.008, df = 5$$

Clearly, the majority of the site managers agree with the need for planning but maintain their reluctance to call for more tourism developments. However, most of the local residents strongly agree to this need, thereby indicating that they want more tourism developments in their communities. This explains why there is a significant difference in the opinion of site managers and local residents ( $X^2_{obs} = 15.604, P < 0.01$ ). This difference can be explained by the fact that, whereas site managers may be mindful of competition that would ensue from the establishment of more tourism developments,

local residents take a more-development-minded opinion. This interpretation notwithstanding, both opinions have implications for planning.

In summary, the questionnaire responses of site managers and local residents were factor analysed to establish which of the forms of planning was relatively more reliable and critical to underscore in efforts to pursue STD in Lake Victoria shore region. Results obtained are shown in Table 5.35.

**Table 5.35 Criticality and reliability of the forms of planning for sustainable tourism development in the lakeshore region**

Components	Eigen values	% variance explained	Reliability coefficient ( $\alpha$ )
Site planning	4.866	59.904	.988
Local government planning	2.407	26.257	.912
Central government planning	0.376	9.444	.893

*For analysis details see Appendix 7, Table5*

The eigen and variance values show that site planning was the most critical component followed by local government planning and then central government planning. The alpha values indicate that each of these components was a reliable form of planning for sustainable tourism development. Basing on the proportions of variance claimed by each form and the reliability coefficients, Table 5.35 indicates that of the three forms of planning, site planning (percentage variance = 59.904%, reliability coefficient = 0.988) is the most critical and reliable form of planning to consider if STD is to be realized in the Lake Victoria shore region. This shows that planning for sustainable tourism development could reportedly be achieved if emphasis was placed more on site and local government planning. This is further discussed in Chapter 6.

In conclusion, all the findings above indicate that various measures and strategies to enhance sustainable tourism development exist in varying strength at the three levels of planning. However, tourism planning is still mainly concentrated at the national level with inadequate and limited tourism planning at the lower levels yet that is where it is critically needed. This raises concern as to whether a planning approach can be developed from the variables used in this research in order to achieve STD in the lakeshore region. This is analysed in the next section.

## **5.5 Developing a planning approach to sustainable tourism development (STD) in the Lake Victoria shore region**

The fifth and final objective and related research question of the study centres on developing an approach to planning for sustainable tourism development in the Lake Victoria shore area based on the spatial distribution of tourist sites, their characteristics, those of the received visitors, site performance relative to the physical environment indicators of STD, and factors behind such performance. This objective and the research question were both approached by hypothesising as follows:

### **Null Hypothesis**

*A planning approach to sustainable tourism development in the lakeshore region cannot be developed based on the analysis of the spatial distribution of the established tourist sites, their characteristics and those of the visitors they receive; site performance relative to the physical environment indicators, and factors behind such performance.*

To establish whether a planning approach can be developed, the null hypothesis was tested by establishing whether relationships exist between planning (dependent variable) and each of the stated independent variables, as well as between the variables and each of the forms of this planning. This was based on the rationale that if there is a meaningful relationship between any two given variables, this means that one variable can influence the other either positively or negatively.

Accordingly, the relationships were established using correlation analysis based on the Pearson product-moment method. This method was selected since it helps identify the correlation between the variables and the probability of the null hypothesis being true for the entire population (Rubin and Babbie 2008). It was used to test if there are significant relationships between each of the independent variables and planning. For positive relationships, the Pearson correlation values are considered statistically significant when they fall within 0.0 and 1.0. The results obtained when the Pearson product-moment was applied are presented in Table 5.36.

**Table 5.36. The relationship between the independent variables and planning**

		Spatial distribution	Site characteristics	Visitor characteristics	Site performance	Site planning	Local government planning	Central government planning	Planning
<b>Spatial distribution</b>	Pearson correlation Level of significance	1.000							
<b>Site characteristics</b>	Pearson correlation Level of significance	.098 .167	1.000						
<b>Visitor characteristics</b>	Pearson correlation Level of significance	.214** .002	.772** .000	1.000					
<b>Site performance</b>	Pearson correlation Level of significance	.388** .000	.471** .000	.532** .000	1.000				
<b>Site planning</b>	Pearson correlation Level of significance	.259** .000	.196** .006	.303** .000	.330** .000	1.000			
<b>Local government planning</b>	Pearson correlation Level of significance	.018 .751	.432** .000	.360** .000	.296** .000	.336** .000	1.000		
<b>Central government planning</b>	Pearson correlation Level of significance	.089 .111	.277** .000	.165* .016	.172** .002	.060 .288	.259** .000	1.000	
<b>Planning</b>	Pearson correlation Level of significance	.461** .000	.506** .000	.575** .000	.700** .000	.284** .000	.219** .000	.129* .021	1.000

\*\* Correlation significant at the 0.01 level (2-tailed)

\* Correlation significant at the 0.05 level (2-tailed)

Table 5.36 indicates that there are significant positive relationships between each independent variables and planning in general. Significant relationships also exist between the variables and the specific forms of planning (site, local and central government planning). The existence of these significant relationships implies that planning for STD in the Lake Victoria shore region can be achieved based on each of the independent variables.

Therefore the null hypothesis of the study may be rejected in favour of the alternative – that is:

*A planning approach to sustainable tourism development in the lakeshore region can be developed based on the analysis of the spatial distribution of the established tourist sites, their characteristics and those of the visitors they receive; site performance relative to the physical environment indicators, and factors behind such performance.*

Further correlation analysis was conducted to establish whether relationships existed between the sub-variables of the independent variables and planning, as well as between the sub-variables and the sub-components of planning. Still significant relationships existed as shown in Appendix 7, Table 6.

### 5.5.1 Linear regression model-based planning approach for sustainable tourism development in the Lake Victoria shore region

The rejection of the null hypothesis forms the basis for developing the planning approach. The approach is developed on the premise that the independent variables are related to planning in a linear fashion. Accordingly, a linear approach to planning for STD was developed using the linear regression model. This model is used because it goes a step further from correlation analysis to determine how variable(s) can be used to predict the other (Veal 2006). In this study, the focus is on the extent to which the independent variables (site performance, visitor and site characteristics etc) can be used to predict the dependent variable (planning).

The standard linear regression model equation is used as given below:

$$y = \sum_{i=1}^n a_i x_i + e$$

Where

$y$  represents the dependent variable (planning)

$x_i$  represent independent variables (site performance, visitor and site characteristics etc)

$a_i$  represents the coefficient relating  $x_i$  to  $y$ . This coefficient gives the extent to which a variable influences planning ( $y$ ). The larger the coefficient, the greater is the influence and therefore the more critical to consider is the variable in question.

$i$  is the counter of the independent variables and their respective coefficients

$e$  is the error term, included to cater for the fact that the variables may not determine planning for STD in a linearly perfect manner.

It should, however, be noted that the model is qualitative in the sense that the variables are included in a qualitative form. None of them can take up numerical values. For instance, it is not possible to tell how many units of say, visitor characteristics, site characteristics, or factors behind site performance, are needed to achieve so and so much units of planning. The interpretation of the model is therefore based on coefficients and proportionate variation caused in planning (the dependent variable) either by all the independent variables put together or by the independent variables individually.

Based on the foregoing explanation, linear regression was conducted using the SPSS 10.0 computer programme and results obtained are shown in Table 5.37.

**Table 5.37 A linear approach to planning STD in Lake Victoria shore region based on the study variables**

Dependent variable	Independent variables	Standardized coefficients		Sig.	R Square	Adjusted R Square	F	Sig. P
Planning for sustainable tourism development		<b>Beta</b>	<b>t</b>		0.563	0.551	49.635	0.000
	(Constant)		1.301	.002				
	Visitor characteristics	.190	2.417	.017				
	Site characteristics	.311	3.798	.004				
	Site performance	.389	6.136	.000				
	Factors behind performance	.302	5.089	.000				
Spatial distribution of Sites	.215	4.040	.000					

*For analysis details see Appendix 7 Table 6*

From Table 5.37 above, the extent to which each independent variable (visitor characteristics, site characteristics, site performance, factors behind this performance and the spatial distribution of the sites) predicts the dependent variable (planning for sustainable tourism development) is explained by the standardized beta coefficient of each component. Variation in the dependent variable caused by the independent variables is explained by the coefficient of determination (R-square). The extent to which all the independent variables predict the dependent variable is explained by the adjusted R-square. The F-value explains whether the independent variable is linearly related to the dependent variable or not. At a given level of significance, the larger the F-value the more linear is the relationship. The t-value shows the linearity of each independent variable component in predicting the dependent variable. The higher the t-value the more linear is the prediction.

Accordingly, results in Table 5.37 indicate that the independent variables explain 56.3% (R-Square = 0.563) of the variation in planning for sustainable tourism development. The results also show that at  $P < 0.01$  level of significance, the variables linearly predict 55.1% of this planning (Adjusted R Square = 0.551). Looking at the individual predictor variables, site performance accounts for the largest variation in this planning (Beta = 0.389,  $t = 6.136$ ,  $P < 0.01$ ). This is followed by site characteristics, as the second most variable influencing STD planning (Beta = 0.311,  $t = 3.798$ ,  $P < 0.05$ ). The informing effect of other independent variables is similarly interpreted.

Further regression analysis was conducted to establish how the specific sub-components of the independent variables could also explain and predict planning for sustainable tourism development. Results obtained are shown in Table 5.38.

**Table 5.38 Detailed linear approach to planning for STD in Lake Victoria shore region based on the sub-components of the study variables**

Dependent variable	Independent variables	Sub-components of the independent variables	Standardized coefficients		Sig.	R Square	Adjusted R Square	F	Sig. P
			Beta	t					
Planning	(Constant)			1.974	.005	0.701	0.652	14.237	.000
	<b>Visitor characteristics</b>		<b>.190</b>	<b>2.417</b>	<b>.017</b>				
		-Demographic characteristics	.200	2.785	.006				
		-Behavioral characteristics	.072	1.103	.027				
		-Following nature conservation guidelines	.096	1.434	.015				
	<b>Site characteristics</b>		<b>.311</b>	<b>3.798</b>	<b>.004</b>				
		-Quality of features & services	.298	3.613	.000				
		-Attractiveness	.059	.819	.414				
		-Quality of environment setting	.011	.196	.845				
		-Potential to attract visitors	.068	1.033	.030				
		-Site location	.088	1.045	.027				
		-Site size	.021	.436	.663				
		-Site category	.038	.544	.047				
		-Site time trend	.130	1.680	.049				
	<b>Site performance</b>		<b>.389</b>	<b>6.136</b>	<b>.000</b>				
		-Nature conservation	.112	1.195	.002				
		-Solid waste management	.055	.870	.038				
		-Sewage management	.065	.811	.045				
		-Development control	.116	1.918	.037				
		-Maintenance	.085	1.030	.030				
		-Water quality control	.086	1.318	.020				
		-Use-intensity control	.054	.753	.453				
	<b>Factors behind performance</b>		<b>.302</b>	<b>5.089</b>	<b>.000</b>				
	-Site features and services	.257	1.412	.016					
	-Visitor related factors	.070	.556	.579					
	-Awareness of conserving laws	.278	1.509	.011					
	-Site development control	.050	.235	.481					
	-Site location	.160	.597	.044					
<b>Spatial distribution</b>		<b>.215</b>	<b>4.040</b>	<b>.000</b>					

Table 5.38 indicates that all the sub-components of the independent variables linearly predicted 65.2% of planning for sustainable tourism development (Adjusted R-Square = 0.652, F = 14.237, P < 0.01). Looking at the Beta values, the sub-components that largely accounted for variation in this planning included: the quality of site features and services (Beta = 0.298, t = 3.613, P < 0.01); site managers being aware of nature conservation laws and guidelines (Beta = 0.278, t = 1.509, P < 0.05); and attractiveness of site features and services (Beta = 0.257, t = 1.412, P < 0.05).

The implications of these model results especially on they can be used to plan for sustainable tourism development in the Lake Victoria shore region are discussed in details in the next chapter.

In conclusion, this chapter presents the findings from the different sources of data about the spatial distribution of tourism sites, their performance in relation to physical environment indicators of sustainable tourism development and the factors influencing the performance level. Different planning levels are evaluated on the extent they cater for Sustainable Tourism Development (STD) in the lakeshore region. Finally a planning approach to Sustainable Tourism Development (STD) in the Lake Victoria shore region is developed based on the linear regression model. It is from the results presented in this chapter that the discussion in chapter six is based on.

University of Cape Town

## **CHAPTER SIX**

### **DISCUSSION OF RESULTS**

#### **6.0 Introduction**

This chapter focuses on elaborating on the results presented in chapter five. For comprehensive and better understanding, the sub-components of the results have been combined and discussed under four central themes. They are, temporal and spatial characteristics of the sites, performance of tourism sites in relation to physical environmental indicators, tourism planning in Lake Victoria region and linear regression and incremental based planning approach

#### **6.1 Temporal and spatial characteristics of lakeshore tourism sites**

This study (in Section 5.1.) highlights the temporal and spatial characteristics of tourism sites along the shores of Lake Victoria. The results on temporal characteristics indicate that tourism sites in the lakeshore region are steadily increasing in terms of: their frequency, number of visitors received, spatial (physical) growth and number of licensed tourism businesses. The increase in the number of sites and their physical expansion imply that more and more of the physical environment resources (such as vegetation, wetlands, soils) and the related scenic landscape along the lakeshore are being exploited. More space has to be created in order to develop more facilities to cater for increasing number of visitors. This implies more visitor density and pressure on the physical environment at the sites in particular and the lakeshore region in general. Although all categories of sites were reportedly expanding, faster growth was reportedly taking place at beach resorts without-accommodation. They form the majority of the sites (Table 5.7) hence their fast growth implies greater consumption of resources and occupation of more space.

Furthermore, results indicate a steady growth in number of tourism businesses licensed to operate in Uganda. Kampala and Wakiso (where the study area is located) have the highest share of the licensed investments. Although the data (Figure 5.4) does not indicate where exactly in the districts the investments are to be made, the fact that some of the projects are recorded as resorts and planned to offer activities such as canoeing and water surfing, suggests that they are indeed to be established in the lakeshore region. Increased investment implies that, more tourism sites are continuously being

established in the lakeshore region, resulting in further pressure on the physical environment.

The increasing number and size of tourism sites implies that the lakeshore region is likely to develop a clustered spatial distribution pattern. Indeed, results reveal a tendency of clustering within the regular spatial pattern especially in the urban areas of Entebbe Municipality and Makindye Division. The close proximity indicates that these areas have attracted a high concentration of tourism sites, resulting into tourism 'hot spots' along the lakeshore region. The large urban population, infrastructure (such as good road network) and availability of services (such as piped water, public transport, police) are among the factors that have favoured areas in urban regions to have a high tourism potential. As a result the sites in urban areas have continued to increasingly attract visitors irrespective of their proximity to each other. These findings are consistent with Plog's (1973) theory, which suggests that resorts tend to develop more close to major population areas (referred to as generating regions), than to distant remote areas. This, according to the theory, is mainly based on the fact that majority of tourists prefer to travel short distances to take holidays (Plog 1973), than to travel to isolated attractions which requires more time and effort (Gunn 2002). Indeed, results indicate that majority of visitors to the lakeshore sites are nationals from the adjacent urban residences and day visitors who travel mainly over the weekend to the sites for leisure, where they spend an average of four to seven hours only.

From the trend described above, it can be predicted that, the hotspot areas are likely to become more clustered and eventually congested in the near future as existing sites expand and as new sites are established in the gaps between the existing ones. Indeed, evidence in the hot spot areas shows that potential sites are already fenced off and in some cases landscaping is already underway. However, such close proximity is a potential recipe for depletion of the natural resource base that supports tourism. Clustering would imply that the sites compete for the available tourism resources and space so as to have an edge in serving and attracting more visitors. This may result into over-utilisation of the resources and, if not controlled, degradation of the environment in general and the physical environment in particular will surely result. The physical environment is even more adversely affected because it is not only *within* it that the sites are established, but also *from* it that most resources are obtained. Indeed, to establish a tourism site means to clear natural vegetation, landscape the area, and cover natural space with human-made structures such as buildings and the like. It also implies

using resources (e.g. water, building materials) from the natural environment to erect and maintain the sites in operational existence.

This is not to suggest that clustering is necessarily detrimental. In fact some tourism researchers advocate for clustering. For instance, Goeldner and Ritchie (2006), argue that, by clustering tourist facilities (such as hotels) in reasonable close proximity, the natural environment can be conserved and fully appreciated. They argue that this is a superior way of spatial planning as opposed to spreading them all over the wide natural environment. More so, Gunn (2002) and Papatheodorou (2004), argue that clustering of tourism sites has greater promotional impact and justifies the provision of infrastructure (such as roads, sewage systems) and services (such as power, police and fire protection). However, the aforementioned benefits from clustering seem to only be realised if there is systematic planning, strict development monitoring and adequate resources to provide the facilities and services when needed. Results of this study reveal that this is not the case in the lakeshore region. The existing facilities and infrastructure such as roads, sewage and solid waste management systems are already under great strain from increasing urban population. Clustering of tourism sites, which implies more visitors, will obviously exacerbate the situation and most likely cause serious damage, especially to the physical environment. In support of Sharpely (2005), in such a scenario there is need to emphasise planning strategies that encourage tourism development in some areas while relieving pressure on sensitive, congested or degraded sites. Indeed, the spacious distribution of lakeshore sites in areas distant from the urban regions, offer an opportunity in which future lakeshore tourism developments can be directed to. Equally so, some tourism sites in the hot spot areas can be encouraged to shift to these more spacious regions.

There is therefore an obvious need for tourism planning in the lakeshore region. It is even more urgent considering the fact that this lakeshore region is ecologically sensitive and that tourism in the region is mainly nature-based. Environmental degradation in this region would imply destruction of the very natural environment that supports the existence of tourism. This is obviously tantamount to self-destruction, since tourism in the lakeshore is clearly reliant on its nature-based attractions. Results from this study indeed indicate that visitors are more attracted by the natural settings within which the sites are found. Furthermore, from the results, a relationship between quality of features at the sites and level of attractiveness to visitors is established. Findings indicate that, visitors rated lake scenery and the tranquil natural environment

as being of very good quality and at the same time rated them as the most attractive to them. This points to the assertion that quality of the features at the sites greatly influences the attractiveness of the sites, which in turn determines the continued existence of the tourism. Previous tourism studies support this view. Research in well-established tourist resorts in the Mediterranean region - faced with stagnation or even decline – demonstrates that resorts attempt to improve the quality of existing attractions and develop new ones as a means to attract visitors (Morgan 1998, cited by Lui 2003:463). In Austria and northern Italy, improving the quality of tourism products and services was considered among the ways of addressing the declining attractiveness of ski resorts (Weiermair and Fuchus 1999). In Tanzania, Wade and Eagles (2003) determined that satisfaction of visitors to National Parks was based on how they perceived the quality of services and facilities at various sites. In New Zealand, Pan and Ryan (2007) identify ‘Pull’ and ‘Push’ factors in determining visitor attraction and satisfaction. They note a link between visitor attraction, satisfaction and the quality of attributes that generate a sense of relaxation. For instance, high quality mountain scenery was identified among the main pull factors. Results of this study therefore suggest that sites can be more attractive to visitors if attention is devoted to maintaining and improving their natural sceneries and environmental tranquillity. This would contribute conserving the environment and at the same time improving the potential of the sites to attract more visitors - which according this study’s findings is low.

Generally, in support of Voultzaki’s (2000) study, spatial and temporal aspects need to be incorporated in the planning of tourist sector in order for STD to be achieved. Results of this study suggest that without appropriate planning for tourism in the lakeshore area, the resultant uncontrolled developments will lead to competition for and over-utilisation of the physical environment resources. This therefore calls attention to careful and pro-active tourism planning in order for sites’ attractiveness and the natural resources themselves are to be maintained in an environmentally sustainable way. Hence, tourism planning should be carried out in such a way that tourism development enhances rather than jeopardises the efforts to achieve STD. In order for this to be carried out, there is need to assess the performance of sites in relation to the sustainable tourism development indicators, so as to inform tourism planning. Analysis of performance of lakeshore sites is presented in the next section.

## **6.2 Performance of tourism sites in relation to physical environment indicators of sustainable tourism development**

In spite the limitations (especially of poor or no record keeping) this study was able to examine the performance of the tourism sites in the lakeshore region in relation to the physical environment indicators of sustainable tourism development. Results indicate that sites performance was generally poor. At most of the sites, contribution to nature conservation is minimal. Whatever conservation exists is more by default rather than a result of deliberate conservation planning. Both solid and sewage waste is not efficiently managed, with site management efforts concentrated more on how to dispose it off, than trying to reduce and recycle it. As a result of poor waste and storm water management, the water quality at the beaches is below recommended bathing standards especially during wet periods. Furthermore, results indicate that there is limited use-intensity and development control of tourism activities.

Although performance was generally poor, the ANOVA test results (Table 5.25) indicate that performance significantly varied according to the categories of sites. Of all the site categories, conservation sites were perceivably better performers in all the physical environment indicators of STD. Critical comparison between conservation sites and the other sites (beach hotels, beach resorts with and without accommodation) suggests that a relationship exists between site planning perspective and site performance. Management at conservation sites puts more emphasis on nature conservation and they have formal planning mechanisms. For instance they are the only sites that have waste management policies, and they to a large extent regulate facilities and resource use-intensity. More so, conservation sites not being profit oriented, means that they focus more on conservation measures. Unlike other sites, operation and survival of conservation sites highly depends on the natural environment as their major attraction, hence they have put in place measures to ensure that any development and activities are not insensitive to nature. Generally, results suggest that, deliberate conservation based tourism planning can help other tourism sites to improve performance, hence contribute more to nature conservation and to STD in general.

A number of previous tourism studies in various countries [Winson (2006) in the Sierra del Rosario region of Cuba, Okello and Kiringe (2004) in Kenya, Sharpely (2007) in Northumberland UK, Gezici (2005) in Turkey, Spenceley (2005) in South Africa, Puppim de Olivera (2005) in Brazil, Kavanagh Warnkena *et al.* (2005) and

Keller (2007) in Australia] support the view that a relationship exists between conservation based tourism planning and the level of site or destination performance. The aforementioned studies highlight how deliberate tourism planning has particularly contributed to improved destination nature conservation performance and STD in general. On the contrary, other tourism studies indicate poor destination performance as a result of limited or no conservation based tourism development planning and control. For instance, rapid and poorly planned tourism development has resulted in increased pollution from inadequate waste management in: Sochi region – Russia (Lukashina *et al.* 1996); Mombasa – Kenya (CDA-K 2001); Cancun - Mexico (Fennell and Ebert 2004); Beruwala - Sri Lanka (UNWTO 2004a); Vietnam (Le *et al.* 2006); Ankara – Turkey (Erdogan and Baris 2006); Okavango Delta - Botswana (Mbaiwa 2005); Himalaya mountains - India (Kuniyai 2005); and Bagamoyo – Tanzania (Elin *et al.* 2007).

Tourism-water quality studies also support the existence of a relationship between tourism planning and site performance in relation to bathing water quality. Findings of this study indicate that poor storm water discharge management at beaches, especially during rainy periods, is a major contributor to poor bathing water quality. These findings are consistent with the Brownell *et al.* (2007) study on Siesta Key Beach in Florida, USA, that indicates a relationship between higher concentration of microbes (*E.coli* and Total coliforms) during wet periods, and storm water discharge that flowed into the beach area. An earlier study by Shibata *et al.* (2004) at Hobie and Crandon beaches in the same state supports the premise that adequate site planning ensures high environment performance. Shibata *et al.*'s study indicated good bathing water quality both in wet and dry periods, which was attributed to good storm water discharge management in the beach area. In the UK a study by Crowther and Wyer (2002) on Staithes and Newport coastal resorts indicate bathing water contamination by faecal inputs from catchments around the resorts characterised by pastoral land use. This seems consistent with findings from this study, which attributes poor bathing water quality at the beaches to grazing cattle near the beaches and watering cattle from the lake, among other factors.

The results of this study and review of various tourism studies suggests that if planning especially at site level is improved, site performance also improves. Since most of the sites in the lakeshore region seem to be more profit than conservation oriented, there is need for a planning approach that can help integrate physical environment planning

strategies in tourism development. This planning is necessary in the lakeshore region given the results, which indicate sites' minimal contribution to nature conservation and limited potential of these sites to sustainably attract visitors. However, to develop a planning model for the lakeshore region, this study needs to evaluate and understand nature of tourism planning in the region. Discussion of the findings are presented in the section below.

### **6.3 Tourism planning in Lake Victoria shore region**

Results indicate that planning controlling tourism in the lakeshore region exists at three levels: central government, local government, and site level. A critical analysis of the results reveals that planning for tourism was largely underscored at central government level and it waned very conspicuously at local government and site level. Even then, central government planning efforts seem to be concentrated on gazetted areas only, implying that little emphasis is placed on tourism outside such areas. In such circumstances, central government planning achieves little as far as controlling and directing tourism developments in areas such as the lakeshore region. This situation has mainly been a result of the unstable socio-economic and political history of Uganda (as earlier explained in section 4.3.5), which created unfavourable conditions not only for tourism development but also for tourism planning.

In order to fill the planning vacuum at lower levels, the government of Uganda established the decentralised system of governance, where local governments (i.e. districts) have the responsibility to plan for the areas under their jurisdiction. However, most local governments lack a tourism-planning framework. This implies that, to a large extent, tourism in various areas such as the lakeshore region develops with minimal environmental monitoring and supervision. As a result, private tourism developers have been left to plan for their individual tourism sites, irrespective of the fact that most of them are not equipped with the skills and tools to do so. In the absence of self-regulation mechanisms, leaving development control in the hands of the very individuals who should be controlled is equivalent to no control at all. This seems to explain why most sites performed poorly with respect to sewage management, solid waste management, use-intensity and water quality control.

Inadequate tourism planning, both at central and local government level, has resulted into the lakeshore region being characterised by ineffective development control

mechanisms, limited self-regulation by the sites, and low level of local residents and visitor awareness and participation in tourism. This has promoted tourism, which is more commercial than conservation oriented. In fact, most private tourism developers in the lakeshore region engage in tourism activities that enable them to maximise profits at the minimum cost and time possible. Conservation activities, that are most likely to increase the costs of operation and therefore reduce profits, tend to be ignored by site management. Few if any of the tourism proprietors in the lakeshore region are willing to venture into putting up conservation control measures, unless directed or given incentives to do so by the central or local government authorities. This finding is more or less similar to Jackson's (2007) study in the UK, where tourism tour operators have showed reluctance to adopt environment related ecotourism principles especially if they interfere with their business operations. However, in support of Erdogan and Baris's (2006) argument, tourism managers should understand that long-term economic sustainability and growth depend upon the nature of their environmental policies, since they determine the quality of products and services they offer. The foregoing observations imply that planning in the lakeshore region should strive to enhance effective national and local level monitoring and development control mechanisms.

In general, results indicate a gap between central and local government planning which creates a vacuum that gives room for unsustainable tourism development. Tourism studies carried out in other countries highlight the importance of integrating tourism planning and control at all levels. For instance, Yuksel *et al.* (2005) and Tosun (1998) discuss how centralised governance with limited integrated tourism planning affected the industry in Turkey. Using the experience of Turkey - but with generalisation to other developing countries - Tosun (1998) observes that the way forward is integrating objectives and priorities of both national and local levels. He argues that ignoring this may spell a danger in terms of failing to achieve sustainable tourism development at both levels. In Botswana, limited integration and inadequate regional and site planning has resulted in uncontrolled tourism development, which not only threatens the Okavango Delta environment but also the future of tourism's viability (Mbaiwa 2005). In China, inadequate integration has resulted into a gap between tourism planning and implementation of the designed planning approaches (Lai *et al.* 2005).

Developing countries, such as Uganda, need to learn from the 'bitter' experience of coastal mass tourism in various developed countries that resulted in intense negative environmental impacts. Coastal resorts have long been areas attracting rapid tourism

development and resulted in a number of negative results hence becoming important to plan for (Williams 1999, Hall and Page 2003). To achieve this, integrated regional sustainability-based coastal resort planning has been applied to European seaside resorts some of which had been described as in 'decline' (Jennings 2004). In Spain, where most coastal tourism sites faced environmental crisis (Baidal 2004), regional tourism planning has played an essential role by enhancing broad stakeholder participation and establishing a framework for sustainably managing tourism developments. Though faced with challenges, some developing countries are implementing integrated regional tourism plans with promising degrees of success, for instance in Egypt (Helmy and Cooper 2002), in Mauritius (Christie and Crompton 2001), and in South Africa (George 2007).

In general, findings of this study and those reviewed from tourism literature indicate that inadequate planning eventually translates into poor tourism performance. This suggests that having deliberate tourism planning based on sustainable tourism indicators can greatly contribute to enhancing tourism site performance and eventually contribute to the attainment of STD. These findings reiterate the need for tourism planning in the Lake Victoria shore region as a means to achieve STD. Based on this study's sustainable indicator results, a linear regression and incremental based planning approach was developed to guide the process of tourism planning and implementation in order to increase the chances of achieving STD in the lakeshore region. The approach and how it can be applied is fully discussed in the next section.

#### **6.4 Linear regression and incremental based planning approach**

A critical examination of the results (section 5.5) obtained in response to the fifth objective, the related research question and hypothesis, indicates that a significant relationship exists between planning for STD and the spatial distribution of the sites, their characteristics and those of the visitors they receive, the sites' performance, and factors behind such performance (Table 5.36). Based on this relationship, the hypothesis of the study was rejected in favour of its alternative, for the relationship meant that all the aforementioned variables could, indeed, be utilised to develop a planning approach to enhance STD in the lakeshore region. The results also show that not only is each variable a significant explanatory variable of this planning, but also a significant predictor of the same. This implies that tourism planning could use each of

these variables to plan for lakeshore tourism and they would contribute significantly to efforts to achieve STD. It is on this basis that a linear regression model-based planning approach is developed as discussed below.

#### 6.4.1 Linear regression model-based planning approach

Results in Chapter 5 indicate that the key variables or features to consider in planning for STD in the study area are: visitor characteristics, site characteristics, site performance, factors behind performance, and spatial distribution of the sites. Regression analysis results (Table 5.37) indicate that site performance is most significant and plays a key role in planning to achieve STD in the study area. This is followed by site characteristics, factors behind performance, spatial distribution of the sites and visitor characteristics. Based on the linear regression formula (see section 5.5.1), the model presents how each of these independent variables influence planning (which is the dependent variable). The level of influence is determined by the corresponding coefficients. In other words, with the variables arranged according to the level of influence, when substituted in the formula the model in a simplified form appears as:

$$\text{Planning for STD} = \sum \left( \begin{array}{l} \text{Site performance} \quad * .389 \\ + \\ \text{Site characteristics} \quad * .311 \\ + \\ \text{Factors behind performance} * .302 \\ + \\ \text{Spatial distribution of sites} \quad * .215 \\ + \\ \text{Visitor characteristics} \quad * .190 \end{array} \right) + \text{other variables (e)}$$

However, as noted in chapter 5, the variables in the above model are included in a qualitative form. The coefficients merely indicate the proportionate variation each variable causes in planning. This helps planning to know which variables contribute more to STD planning. Site performance emerges as the key variable that planning should emphasise. This is followed by site characteristics, factors behind performance, spatial distribution of the sites and visitor characteristics. With planning addressing each of the variables it will contribute to the efforts of attaining STD in the lakeshore region. However, as earlier highlighted, the model appreciates that there are other

variables that contribute to STD (represented by ‘e’) in the model), but which were beyond the scope of this study.

#### **6.4.2 Linear regression and incremental based planning approach**

This section discusses how incremental planning can be useful when applying the linear regression based planning model in the lakeshore region. As discussed in Chapter 2, incremental planning was found suitable to help inform this study when developing a planning approach for the lakeshore region. Incremental planning highlights the fact that, since all ‘options’ cannot be explored at the same time, only a limited number are considered, using familiar and better-known ‘experiences’ (Mitchell 2002). The results in chapter 5 provide data on the ‘experiences’ in the study area and linear regression provides the ‘options’ from which incremental planning can choose from in order to achieve STD in the Lake Victoria shore region.

In practice, it means that, lakeshore planning already constrained by limited financial and human resources should not exceed its capacity by trying to address *all* variables of tourism planning at once. Instead, planning can address individual variables beginning with the most significant, in this case, site performance as per the linear regression model. In accord with the views of Lindblom (1974) and Mitchell (2002), tourism planning in the lakeshore region would be applying the piecemeal approach: sequentially tackling one ‘small’ part of the ‘large’ problem one after the other. Depending on the amount of time, financial and human resources available, tourism planners can determine how many other variables they can incrementally take on, following the sequence given in the linear regression model.

Important to note is that the linear regression model goes further to identify the sub-variables under each of the main variables, indicating the significance of each to planning for STD in the lakeshore region (Table 5.3.8). The sub-variables are useful in two ways. In the first instance, they enable incremental tourism planners to identify sub-components of each variable which planning should address. Secondly, even when incremental tourism planning cannot afford to tackle a single variable at once, the coefficients help clearly identify the sequence in which planning can address the sub-variables. The coefficient indicates how each sub-variable contributes to the main variable and, eventually, to the general planning of STD. The model therefore indicates where emphasis should be placed when addressing each of the planning variables.

In case of the Lake Victoria shore region, the linear regression model results identify the main variables and sub-variables that incremental tourism planner should put emphasis on, in order to effectively plan for STD. For instance 'site performance' is identified as the most significant variable and its' sub-variables (beginning with the most significant) are: development control, nature conservation, water quality, site maintenance, sewage management, solid waste management, and use-intensity control (Table 5.3.8). In other words, this calls attention to planning to sequentially focus on developing or employing mechanisms through which sites development control can be strengthened, contribution to nature conservation enhanced and bathing water quality, waste management, sites attractiveness and use-intensity control improved. As a result addressing the various sub-variables one by one, incremental tourism planning could significantly contribute to improving site performance and in turn contribute to the achievement of STD in the lakeshore region.

The 'site characteristics' is the second most significant variable in the planning for STD in the lakeshore region. This means that planning should incrementally pay attention to the sites attractiveness and their potential to attract more visitors. Planning should incrementally focus on improving the quality of the sites natural environment attractions, and the facilities and services they offer. This should be done taking into consideration location, size, and category of sites being planned for.

The third most significant variable to planning for STD is 'factors behind site performance'. As discussed in section 6.3, poor site performance is mainly attributed to weak development control and limited awareness by local residents, visitors and managers about what sites had to do in order to operate in an environmentally friendly way. Therefore planning attention has to be devoted to ameliorating each of them. This would improve not only the quality of the sites features and services but also the general performance of the sites. As a result the adverse effects tourism activities would have had on the physical environment are minimised.

Spatial distribution is the fourth significant variable in planning for STD in the lakeshore region. Indeed, although the distribution of lakeshore sites was found to be regular, the majority of sites were in close proximity to each other and some tending to clustering. Therefore, there is need for tourism planning to ensure that sites spatial distribution is not environmentally straining. Attention should especially be given to

the tourism hot spot areas to avert the likely negative effects of clustering. New tourism developments should be authorised to operate only if it has been established that their location will be consistent with and supportive of sustainable tourism.

The last and least significant variable is visitor characteristics. This indicates that planning for the lakeshore region needs to put into consideration the nationality, age, gender of visitors and their purpose and frequency of visiting. This is especially important at site level planning. It helps site managers not only when they are formulating visitor management strategies, but also when designing destination-marketing strategies. Visitor characteristics are important to planning since they influence visitor expectations, attitude and behaviour.

In general, the linear regression-based planning approach, highlights which variables tourism planning can incrementally address in order to achieve STD in the lakeshore region. This approach can be incrementally applied depending on either the spatial distribution pattern (beginning with the clustering hot spot areas) or on how the different sites categories performed in relation to environment sustainable tourism indicators. Results (Table 5.25), indicate that on overall, conservation sites are assessed to have the best performance, followed by beach resorts-without accommodation, beach resorts-with accommodation and beach hotels are assessed as having the poorest performance. Under this option, tourism planning should focus attention on the sites that performed poorest, in this case beach hotels, since they urgently need it. Planning can then incrementally be rolled out to the other site categories ending with conservation sites, which also still need more planning. This approach would take into consideration the unique planning requirements the different site categories might have. This would avoid planning for tourism in the lakeshore region as though it were a homogeneous entity.

#### **6.4.3 Contribution of linear regression and incremental based planning**

Sustainability has become the organising framework for tourism planning and policy internationally (Helmy and Cooper 2002), therefore countries (especially developing ones like Uganda) need to have a framework through which sustainability indicators can be integrated into planning for tourism development. However as noted from the literature, various challenges do face sustainable tourism, right from its definition, interpretation, operationalisation and implementation. Limited literature on theories

advanced specifically for tourism planning (Reid 2003) and the cross-cutting nature of the tourism industry, has presented a major challenge to STD planning. The formulation of the linear regression and incremental based planning approach by this study is a contribution to the efforts to overcome this challenge.

The model has attempted to provide a framework in which the hitherto known indicators of sustainable tourism can be applied in the planning of a particular region to achieve STD. Indeed, most emphasis seems to be either on formulating indicators of sustainable tourism or measuring how the destinations are performing in relation to these indicators. As a step further, this study contributes an approach, which examines how these indicators can be integrated and used in tourism planning. Indeed, Helmy and Cooper (2002) note that mitigation of negative tourism impacts can be achieved through integration and implementation of sustainable development principles in tourism planning and management. In a similar observation, UNWTO (2004a) notes that, use of indicators is fundamental to overall destination planning and an integral element in efforts to achieve sustainable development for the tourism sector at all scales.

The linear regression and incremental based planning approach are relevant especially in developing countries where tourism planning is constrained by limited financial and human resources, especially at the local level. In the case of Uganda, this model is relevant to tourism planning, more specifically at the district level where government wants more planning emphasis to be put as a means to attain STD. The National tourism policy (2003-2015) states:

“Tourism planning outside protected areas will be directed towards focal districts and defined tourism zones, through the designation of Tourism Focal Points, the incorporation of tourism planning into district development plans, and the encouragement of local tourism associations”.  
(2003:9)

However, the policy does not refer to how planning at the district level could incorporate tourism planning into district planning. Furthermore, the policy does not suggest a planning framework or model to guide the districts on how tourism planning can be carried out and what variables emphasis should be placed on in order to achieve STD. The policy merely outlines the roles of the districts local government in the implementation of the policy.

As discussed in Chapter 5, planning at the district level in the lakeshore region is already constrained by a number of factors, which have implications even for

development planning in general. Therefore, loading these authorities with more responsibility to plan for tourism without providing a framework as to how it can be done could be said to be putting the 'cart before the horse'. This situation is complicated even further by the fact that the policy does not refer to how this tourism planning at the districts will be funded. It merely mentions the timing and phasing of implementing the policy. The districts and divisions in the study area mentioned limited financial resources as one of their major constraints to planning and monitoring. In such a situation, districts are not only technically ill equipped to plan for tourism, they are also, most likely not in position to finance tourism planning, let alone to establish a district tourism focal point as proposed by the policy. The linear regression and incremental based planning approach would greatly contribute to improving the aforementioned situation by providing an approach that can easily integrate tourism planning into the general development planning. Since tourism planning can incrementally be done, the districts can have piecemeal planning depending on the amount of resources available.

Furthermore, the application of this model would not only contribute to bridging the existing gap between national and local level planning, but also bridging the gap between planning and implementation. This would help fill the planning and implementation vacuum, which private tourism developers have been exploiting to establish and run unregulated and environmentally damaging tourism facilities. As a result, sustainability based planning would not be restricted to the national level but would also be implemented and understood at the district and local level. This would imply empowering of local governments in controlling and managing the tourism activities within their areas of jurisdiction. The model, in a simplified form, presents to the planners and site managers the indicators of sustainable tourism and how they can be applied in planning. Site managers, who according to the findings are very instrumental in site planning, would gain insight into how to efficiently achieve STD. For the planners, this model helps them find critical points of intervention in planning and implementing STD. This means that given the planning departments' merger financial and human resources, using the model, they can identify specific planning variables they can incrementally tackle. The model therefore does not only contribute to planning but would also make the formulated tourism plans implementable, which is a crucial factor in planning (Cooper *et al.* 1993, Gunn 2002, Lai *et al.* 2005).

In general, the linear regression based model will contribute not only to the better planning of the existing tourism areas but also to the planning of those areas along the Lake Victoria shoreline where tourism development has not yet spread. This model can therefore be used for pro-active planning, in which precautionary planning principles (suggested by Fennell and Ebert 2004) can be integrated. This would help government avoid reactive planning. As noted by Mathieson & Wall (1996, cited by Puppim de Olivera, 2005), governments often first concentrate their efforts on promoting tourism and then later, when environmental conditions deteriorate to levels that threaten tourist activity, try to mitigate tourism's impacts. By applying this model, tourism in the lakeshore region would be promoted but in line with environmental conservation principles. This obviously would enhance the efforts of attaining STD in the lakeshore region.

In conclusion, this chapter indicates that tourism in the lakeshore region is expanding yet it is not adequately being planned for. As a result, performance of most of the sites in the lakeshore region is generally poor hence threatening achievement of STD. However, results of this study indicate that it is significantly possible to apply the linear regression and incremental based planning approach to plan for the attainment of STD in the lakeshore region.

## **CHAPTER SEVEN**

### **CONCLUSIONS AND RECOMMENDATIONS**

This final chapter presents conclusions and recommendations derived from an overview of the research findings and their meaning in relation to planning for STD in the lakeshore region. Conclusions are presented according to the objectives this study set out to achieve.

#### **7.1 Conclusions**

The first objective sought to identify the spatial and temporal trend of tourism in the lakeshore region. The results reveal that the sites are regularly distributed along the shoreline but with those in or near urban areas more closely located. The sites are increasing in number, size and visitors over time. The visitors are mainly: nationals, day visitors, and are mainly attracted by the scenic lakeshore natural environment. Nevertheless, the results indicated that most sites did not have high potential to attract visitors. Spatial distribution of sites, their characteristics and those of the visitors are recognised among the important variables in the tourism planning approach developed by this study. It should be noted that, to a large extent this study was able to collect information on these variables and highlight their relevance to tourism planning. However, it should also be recognised that most of the results are derived from estimates and generalised perceptions of respondents. This was due to absence of proper record keeping, at both site and district level. Despite this limitation, this study provides vital planning information that had, prior to this study, not been collected and therefore applied in tourism planning of the lakeshore region. Nevertheless, this does not gainsay the need to have more comprehensive, regular and accurate data collected. In fact, it highlights the need for further research to examine how this can be done. Moreover, research should not be restricted only to the variables identified in this study and other variables and issues can be explored to develop a more comprehensive spatial and temporal data set.

The second objective set out to assess the performance of the sites in relation to the physical environment indicators of sustainable tourism development. Results reveal that the performance of most of the sites in the lakeshore region, particularly beach hotels and resorts, was generally poor in terms of: contribution to nature conservation,

solid waste management, sewage treatment, water quality control, use-intensity control, and development control. A relationship between planning and level of performance is established, implying that site performance would improve with adequate tourism planning. It is on the basis of this relationship that the linear regression based planning approach is later developed. Although documentation of tourism operations at the sites was limited, this study was able to adequately assess the performance of the sites by collecting and collaborating information from different respondent categories (visitors, local residents, site managers, district officials). Experimentation was also used as in the case of water quality indicator. Nevertheless, in most cases, results are based on general perceptions rather than on empirically measured performance that would require measuring them over a longer period of time. This points to the need for further research to empirically measure performance of all sites and covering a longer period of time. More so, further research should include more environmental performance indicators than what this study has been able to cover. For instance on air quality, noise levels, aesthetic contribution, energy consumption, green house gas emission, among others. This would give more representative and accurate results that would enhance STD planning in the lakeshore region.

The third objective examines the factors influencing the performance level of the sites as examined in objective 2. Results indicate weak development control, lack of self-regulation by the sites, limited visitor and local resident environment awareness, visitor and site characteristics, as the major factors influencing sites in the lakeshore region to have poor environmental performance. However, it should be noted that, this study could not be exhaustive of all the factors influencing performance since a number of them cut across social, economic, cultural and political aspects which lie beyond the scope of this study. There is therefore need for more research in that direction. Furthermore, research is needed to determine how factors beyond the lakeshore region influence tourism performance. For instance there is need to examine the impact of global environmental change, not only on site performance in the lakeshore region, but also on tourism as a whole in Uganda and Africa in general. Lake water fluctuation, currently being experience in Lake Victoria is a case in point, which needs further investigation to determine the link with global climatic change and assess its likely impacts not only on performance but also on the general sustainability of tourism in the region.

Examining the extent to which planning caters for sustainable tourism development forms the basis of the fourth objective. Results reveal that tourism planning is mainly carried out at the central government level, but even then it is largely confined to gazetted, hence ineffectual outside such areas. There is negligible planning for STD at district level, with tourism not being recognised as sector of its own. At the site level, planning was largely in the hands of individual site managers and developers, who in most cases were not adequately knowledgeable and equipped to enhance STD. This reiterated the need for tourism planning approach, especially at the local level to enable bridge the gap between central and local government tourism planning. Availability of development plans and interviews with officials from the local government planning departments enabled this study to compile substantial results. Nevertheless, more detailed study is needed to examine the competence of local governments taking up tourism planning given their unique strengths, opportunities and constraints.

The fifth and final objective established that positively significant relationships existed between planning and the indicator variables. The null hypothesis was therefore rejected, implying that a planning approach could be developed since a change in the indicator variables could influence planning. Based on this, a linear regression modelling approach to planning was developed in order to determine the extent to which the indicator variables predicted planning. Despite the limitation of the model being qualitative in nature, it provides crucial information on which variables planning should incrementally emphasise in order to achieve STD. In this case, most emphasis should be put on efforts to improve site performance, followed by site characteristics, then factors behind performance, spatial distribution of the sites and lastly on visitor characteristics.

It should however be noted that the linear regression based-planning approach was developed based on indicator variables assessed from the tourism sites only, yet some of the indicators are a function of processes beyond the control of the sites and sometimes of the local government as well. For instance, lake water quality is a function of a variety of human activities, some taking place beyond regional and national boundaries. Therefore there is need for further research that can contribute to an integrated lakeshore planning approach, not only catering for tourism, but also other human activities in the lakeshore region.

## 7.2 Recommendations

In view of the results and conclusion of this study, the following recommendations are made for purposes of enhancing planning of STD in the lakeshore region.

- Central and local government planning agencies should consider the spatial distribution of tourism sites in the region as a critical guiding factor in the success of STD planning. This requires adopting a proactive planning approach that will limit over concentration of sites in a few areas.
- Tourism sites managers and proprietors should strive to improve the performance of their sites through the following:
  - Expanding or putting up more tourism facilities in a manner that does not adversely affect the physical environment
  - Increasing their contribution to nature conservation
  - Developing efficient sewage and solid waste management systems and putting emphasis on waste generation reduction and recycling strategies.
  - Putting in place mechanism for ensuring good water quality. This can be achieved through: controlling surface water runoff; developing a water quality monitoring system; increasing visitor awareness; and adopting international accreditation standards regarding water quality.
  - Establishing appropriate use-intensity control measures that require comprehensive, consistent and accurate data collection mechanisms on visitor and site characteristics.
- Local government should adopt community-based tourism planning approaches through formation of local community tourism organisations. This will not only increase community participation but will also empower them. Community tourism organisations will act as advocacy forums and platforms through they can formally contribute to planning, supervision and monitoring of sites environmental performance.
- Central and local governments should strengthen the effectiveness of their planning and development control over tourism developments especially outside gazetted areas. This can be achieved through:
  - Ensuring that the planning gap between central and local government is bridged through integration of tourism planning in the districts three-year development plans and programs.

- Formulating tourism specific regulations at local government level to guide the supervision and monitoring of tourism sites.
- Encouraging tourism sites to put in place self-regulation mechanisms.
- Amending out dated tourism related laws to include all categories of tourism activities and address aspects of sustainability.
- Setting up site development regulations specifying size of sites, height of buildings, guidelines for landscaping etc so as to enhance sustainability based site planning.
- Having land use zoning of the entire lakeshore area where tourism should be recognised as a major land use. This will help restrict development from ecologically sensitive areas (such as wetlands) and preserve natural tourism resources that would have otherwise been destroyed by other land uses.
- Developing an Integrated Lakeshore Management Plan (ILMP) where ecosystem resources will not only be conserved for tourism but for other activities too.
- Giving ecological sensitive areas conservation status for example declaring some of them marine parks or scenery conservation areas.

On the overall, taking into consideration the aims and objectives, the data collected and analysed, and the linear regression-based planning approach developed, it is evident that this study makes a significantly contribution to the existing literature and body of knowledge. Although it does not make theoretical contributions, it does however make very substantial empirical contribution to lake tourism and lakeshore research, which as earlier noted (in section 2.1.8) is still international limited both in developed and developing countries like Uganda. The contribution is especially on issues of sustainable lake tourism development, particularly on transnational lakes in developing countries.

The study contributes to the efforts of understanding lake tourism planning, particularly how lakeshore destinations can be planned in a manner consistent with sustainable tourism principles. To this effect the linear regression-based planning approach has been developed. However, this study cannot claim that this model as a panacea for achieving STD although it does represent a contribution towards understanding the sustainable tourism concept in the context of the lakeshore regions. Rooted in the

incremental planning theory, the linear regression-based planning approach can be used to identify critical points of intervention in lake tourism planning. Through this planning framework, the understanding, operationalisation and implementation of sustainable tourism principles should be less complex to all stakeholders, hence making the achievement of sustainable tourism more feasible. In general this study contributes to what Fennell (2003) describes as the need to move beyond the rhetoric on sustainability, i.e. beyond the table and into practice.

University of Cape Town

## REFERENCES

- Akama, J.S. (1999) The evolution of tourism in Kenya. *Journal of Sustainable Tourism*, 7(1): 6-25.
- Akama, J.S. (2005) *The Efficacy of Tourism as a Tool for Economic Development in Kenya*. <http://unpan1.un.org/intradoc/groups/public/documents/idep/unpan002584.pdf>, accessed August 2005.
- Allen, S.J., Kang Shou, L. and Potts, T.D. (1999) *A GIS based analysis and prediction of parcel land-use change in a coastal tourism destination area*, conference paper presented at the World Congress on Coastal and Marine Tourism, Vancouver, British Columbia, Canada 1999.
- Andriotis, K. (2001) Tourism planning and development in Crete: recent tourism policies and their efficacy. *Journal of Sustainable Tourism*, 9(4): 298-316.
- Arthur, J.L. (2006) Spatial distribution, Cornell University. <http://www.css.cornell.edu/courses/620/lecture8.ppt>, accessed August 2006.
- Bahaire, T. and Elliott-White, M. (1999) Application of Geographical Information systems (GIS) in sustainable tourism planning: a review. *Journal of Sustainable Tourism*, 7(2): 159-174.
- Baidal, J.A. (2004) Tourism planning in Spain: evolution and perspectives. *Annals of Tourism Research*, 31(2): 313-333.
- Baud-Bovy, M. and Lawson, F. (1998) *Tourism and Recreation Handbook of Planning and Design*. Architectural Press, Oxford.
- Blue Flag (2006) *Blue Flag Beach Criteria and Explanatory Notes 2006–2007*. <http://www.blueflag.org/publicattachment/BeachCriteriaExplanatoryNotes2006.pdf>, accessed June 2006.
- Bramwell, B. and Profret, G. (2007) Planning for lake and lake shore tourism: complexity, coordination and adaptation. *Anatolia*, 18(1): 43-66.
- Bramwell, B. and Sharman, A. (1999) Collaboration in local tourism policymaking. *Annals of Tourism Research*, 26(2): 396-415.
- British Columbia Spaces for Nature (2005) *Land use planning for environmentally responsible tourism*. [www.spacesfornature.org/greatspaces/zonation2html](http://www.spacesfornature.org/greatspaces/zonation2html), accessed November 2005.
- Brownell, M.J., Harwood, V.J., Kurz, R.C., McQuaig, S.M., Lukasik, J. and Scott, T.M. (2007) Confirmation of putative storm water impact on water quality at a Florida beach by microbial source tracking methods and structure of indicator organism populations. *Water Research*, 41: 3747 – 3757.

- Burns, P. (1999) Paradoxes in planning: tourism elitism or brutalism? *Annals of Tourism Research*, 26(2): 329-348.
- Burns, P. and Holden, A. (1995) *Tourism: A New Perspective*. Prentice Hall, London.
- Butler, R.W. (1993) 'Pre- and post-impact assessment of tourism development', in D.G. Pearce and W.R. Butler (eds), *Tourism Research, Critics and Challenges*. Routledge, London, 135-155.
- Butler, R. W. (1994) 'Alternative tourism: the thin edge of the wedge' in L.V. Smith and R.W. Eadington (eds), *Tourism Alternatives: Potentials and Problems in the Development of Tourism*. John Wiley and Sons, Chichester, 31-46.
- Byaruhanga, A. (2003) Lutembe bay flower farm development, the Naturalist: *Nature Uganda Newsletter* vol. 7.2.
- Cater, E. and Goodall, B. (1997) 'Must tourism destroy its resource base?' in L. France (ed) *Sustainable Tourism*, Earthscan Publications Ltd, London.
- Carter, R.W., Baxter, G.S. and Hockings, M. (2001) Resource management in tourism research: a new direction? *Journal of Sustainable Tourism*, 9(4): 265-280.
- CDA-K (Coast Development Authority - Kenya) (1996) *Towards Integrated Management and Sustainable Development of Kenya's coast – Findings and Recommendations for an Action Strategy in the Nyali-Bamburi-Shanzu area*. Coastal Resource Center, University of Rhode Island.
- CDA-K (Coast Development Authority - Kenya) (2001) *Moving Coastal Management Forward: Kenya Progress Report 1994–1999*. Coastal Resource Center, University of Rhode Island.
- CDoT (Commonwealth Department of Tourism) 1994, *National Ecotourism Strategy*. Australian Government Publishing Service, Canberra. <http://www.environment.gov.au/biodiversity/publications/series/paper5/twoch1.html>, accessed January 2006.
- Chandra, P., Connaway, L.S., Olszewski, L. and Jenkins L.R. (2007). "What is enough? satisficing information needs." *Journal of Documentation*, 63(1): 74-89.
- Christie, I. and Crompton, D. (2001) Tourism in Africa. *Africa Region Working Paper Series* No. 12, World Bank, Washington.
- Chrysoulakis, N., Abrams, M., Feidas, H. and Velianitis, D. (2004) 'Analysis of ASTER multispectral stereo imagery to produce DEM and land cover databases for Greek Islands' in P. Prastacos, U. Cortes, J. L. De Leon, and M. Murillo (eds), *Proceedings of e-Environment: Progress and Challenge*, The REALDEMS Project: 411–424.

- Civil Aviation Authority (CAA) History of Entebbe Airport. <http://www.caa.co.ug/history.php>, accessed June 2005.
- Conroy, M.M. (2004) What makes a good sustainable development plan? an analysis of factors that influence principles of sustainable development. *Environment and Planning*, 36: 1381-1396.
- Cooper, C. (2006) 'Lakes as tourism destinations', in C.M. Hall and T. Harkonen (eds), *Lake tourism an Integrated Approach to Lacustrine Tourism Systems*, Channelview Press, Clevedon.
- Cooper, C., Fletcher, J., Gilberts, D. Wanhill, S. and Shepherd, R. (1998) *Tourism: Principles and Practice*, 2<sup>nd</sup> edn, Longman, London.
- Cooper, C., Fletcher, J., Gilberts, D. and Wanhill, S. (2005) *Tourism: Principles and Practice*, 3<sup>rd</sup> edn, Pearson Education Ltd, Essex.
- Cottrell, S. Rene van der Duim, Ankersmid, P. and Kelder, L. (2004) Measuring the sustainability of tourism in Manuel Antonio and Texel: tourist perspective. *Journal of Sustainable Tourism*, 12(5): 404 - 431.
- Crowther, J., Kay, D. and Wyer, D. M. (2002) Faecal-indicator concentrations in waters draining lowland pastoral catchments in the UK: relationships with land use and farming practices. *Water Research*, 36: 1725-1734.
- Davidson, R. (1993) *Tourism*. Longman, London.
- Davies, T. and Cahill, S. (2000) Environmental implications of the tourism industry, Discussion paper 00-14 Resources for the Future Washington <http://www.rff.org>, accessed April 2005.
- Doswell, R. (1997) *Tourism: How Effective Management Makes a Difference*. Butterworth-Heinemann, London.
- Dowling, R. (1993) An environmentally based planning model for regional tourism development. *Journal of Sustainable Tourism* 1(1): 17-37.
- Dredge, D. (1999) Destination planning and design. *Annals of Tourism Research*, 26(4): 772-791.
- Dror, Y. (1973) *Public Policymaking Re-examined*. Leonard Hill, Bedfordshire.
- Dwyer, L. and Edwards, D. (2000) Nature – based tourism on the edge of urban development. *Journal of Sustainable Tourism*, 8(4): 267- 287.
- Elin, T., Shalli M., Francis, J., Kalangahe, B. and Munubi, R. (2007) *Tanzania Biodiversity Threats Assessment: Biodiversity Threats and Management Opportunities for Fumba, Bagamoyo, and Mkuranga*. Coastal Resources Center, University of Rhode Island, Narragansett.

- Entebbe Municipal Council (2005a) *Three Year Rolled Development Plan 2005/2006 – 2007/2008*, Municipal Technical Planning Committee, Entebbe.
- Entebbe Municipal Council (2005b) *Entebbe Today: A Quick Tour of the Gateway Peninsular Town of Uganda*. Entebbe Municipal Council, Entebbe.
- Erdogan, N. and Baris, E. (2006) Environmental protection programs and conservation practices of hotels in Ankara, Turkey. *Tourism Management*, 28:604-614.
- Etzioni, A. (1967) Mixed scanning: a third approach to decision-making, *Public Administration Review*, 27: 387-392.
- Farrell, B.H. and Twining-Ward, L. (2003) Reconceptualising tourism. *Annals of Tourism Research*, 31(2): 274-295.
- Farrell, B.H. and Twining-Ward, L. (2005) Seven steps towards sustainability: tourism in the context of new knowledge. *Journal of Sustainable Tourism*, 13(2): 109-122.
- Farsari, Y. and Prastacos, P. (2000) *Sustainable tourism indicators: Case-study for the Municipality of Hersonissos*, Proceedings of the International Scientific Conference on Tourism on Islands and Specific Destinations, University of the Aegean, Chios, 2000.
- Farsari, Y. and Prastacos, P. (2001) *Indicators, a tool for sustainable tourism development. A Pilot case-study for the Municipality of Hersonissos* <http://www.iacm.forth.gr/regional/papers/XIOS-englishversion.pdf>, accessed February 2005
- Farsari, Y. and Prastacos, P. (2001b) Sustainable tourism indicators for Mediterranean established destinations. *Tourism Today*, 1(1): 103-121.
- Farsari, Y. and Prastacos, P. (2003) *GIS contribution for the evaluation and planning of tourism: A sustainable tourism perspective*. Research paper, Foundation for Research and Technology, Hellas Institute of Applied and Computational Mathematics, Heraklion, Crete. [www.iacm.forth.gr/regional/papers/HellasGI-Thess.pdf](http://www.iacm.forth.gr/regional/papers/HellasGI-Thess.pdf), accessed August 2004.
- Farsari, Y. (2003) *GIS based support for sustainable tourism planning and policy making*, Proceedings of the International Leisure and Tourism Symposium, ESADE, Barcelona 2003.
- Fennell, D. (2001) A content analysis of ecotourism definitions. *Current Issues in Tourism*, 4(5): 403-421.
- Fennell, D. (2002) Ecotourism: where we've been; where we're going. *Journal of Ecotourism*, 1(1): 1-6.
- Fennell, D. (2003) *Ecotourism*, 2<sup>nd</sup> edn, Routledge, London.

- Fennell, D. and Ebert, K. (2004) Tourism and the precautionary principle. *Journal of Sustainable Tourism*, 12(6): 461-479.
- Finn, M., Elliot-White and Walton, M. (2000) *Tourism and Leisure Research Methods*, Pearson Education, Essex England.
- Font, X. and Harris, C. (2004) Rethinking standards from green to sustainability. *Annals of Tourism Research*, 31(4): 986-1007.
- Forojalla, S.B. (1993) *Educational Planning for Development*. Macmillan, London.
- Frangialli, F. (1999) The sustainable development of tourism: crystal ball gazing, *ACP-EU Courier*, Brussels, No.175, 42-43.
- Friedmann, J. (1987). *Planning in the Public Domain: From Knowledge to Action*. Princeton University Press.
- George, R. (ed) (2007) *Managing Tourism in South Africa*. Oxford University Press, Cape Town.
- Getz, D. (1987) *Tourism planning and research: traditions models and futures*, Paper presented at the Australian Travel Research Workshop, Bunbury, Western Australia, 5-6 November 1987.
- Gezici, F. (2005) Components of sustainability: two cases from Turkey. *Annals of Tourism Research*, 33(2): 442-455.
- Gibson, P. and Power, C. (2000) *Introductory Remote sensing: Digital Image Processing and Applications*. Routledge, London.
- Globe'90 (1990) *Action strategy for Sustainable Tourism Development*, Tourism Canada, Ottawa.
- Goeldner, C.R. and Ritchie, B.R. (2006) *Tourism: Principles, Practices, Philosophies*, 10<sup>th</sup> edn, John Wiley and Sons, New Jersey.
- Gokavali, U., Bahar, O. and Kozak, M. (2006) Determinants of length of stay: a practical use of survival analysis. *Tourism Management*, 28: 736-746.
- Gonzales, G. (1996) *Sustainable tourism: the new tourism paradigm*. Hospitality and resort management consultant, Singapore. <http://gonzales.com.sg/sustour.html>, accessed October 2005.
- GoU (Government of Uganda), 1967. *Atlas of Uganda*, Entebbe, Uganda.
- Green Globe 21, (2004) *The Path to Sustainable Travel and Tourism*. [www.green.globe@greenglobe21.com](http://www.green.globe@greenglobe21.com), accessed June 2006.

- Griffin, T. and DeLacey, T. (2002) 'Green Globe: sustainability accreditation for tourism' in R. Harris, T. Griffin, and P. Williams, (eds), *Sustainable Tourism: A Global Perspective*, Elsevier Ltd, Oxford, 58 – 88.
- Gunn, C.A. (1994) *Tourism Planning, Basic Concepts, Cases*, 3<sup>rd</sup> edn, Routledge Publishers, Washington D.C.
- Gunn, C.A. and Terry, R. L. (1998) *Tourism Potential - Aided by computer Cartography*. Centres des Hautes Etudes Touristiques, Aix-en-Provence, France.
- Gunn, C.A. (2002) *Tourism Planning, Basics, Concepts, Cases*, 4<sup>th</sup> edn, Routledge, London.
- Hall, C.M. and Harkonen, T. (eds) (2006) *Lake Tourism an Integrated Approach to Lacustrine Tourism Systems*, Channelview Press, Clevedon.
- Hall, C.M. (2005) 'Contemporary issues in tourism management', in L. Pender and R. Sharpely (eds), *The Management of Tourism*. Sage Publications, London, 217-231.
- Hall, C.M. (2000) *Tourism Planning: Policies, Processes and Relationships*. Pearson Education Limited, London.
- Hall, C.M. and Lew, A.A. (eds) (1998) *Sustainable Tourism Development: Geographical Perspectives*, Addison Wesley Longman, Harlow.
- Hall, C.M. and Page, J.S. (2002) *The Geography of Tourism and Recreation: Environment, Place and Space*, 2<sup>nd</sup> edn, Routledge, London.
- Hall, C.M. and Page, J.S. (2003) *The Geography of Tourism and Recreation: Environment, Place and Space*, 3<sup>rd</sup> edn, Routledge, London.
- Hardy, A.L. and Beeton, R.J.S. (2001) Sustainable tourism or maintainable tourism: managing resources for more than average outcomes. *Journal of Sustainable Tourism*, 9(3): 168-192.
- Helmy, E. and Cooper, C. (2002) An Assessment of sustainable tourism planning for archaeological heritage: the case of Egypt. *Journal of Sustainable Tourism*, 10(6): 514-535.
- Henden, E. (2006) *Is Genuine Satisficing Rational?* Springer Science, Berlin.
- Henderson, J.C. (2005) Planning, changing landscapes and tourism planning in Singapore. *Journal of Sustainable Tourism*, 13(2): 123-135.
- Hill, S. and Edge, T.A. (2007) Multiple lines of evidence to identify the sources of faecal pollution at a freshwater beach in Hamilton Harbour, Lake Ontario. *Water Research*, 41: 3585-3594

- Hiller, J. (2007) *Stretching Beyond the Horizon: A Multiplanar Theory of Spatial Planning and Governance*, Ashgate Publishing Limited, Hampshire
- Hodge, G. (1991) *Planning Canadian Communities: An Introduction to the Principles, Practice, and Participants*, 2<sup>nd</sup> edn, Scarborough: Nelson.
- Holden, A. (2000) *Environment and Tourism*. Routledge, London.
- Holden, A. (2003) In need of a new environmental ethics for tourism? *Annals of Tourism Research*, 30(1): 94-108.
- Holland, J., Burian, M. and Dixey, L. (2003) *Tourism in poor rural areas – diversifying the product and expanding the benefits in rural Uganda and Czech Republic*. Pro-poor Tourism (PPT) working paper No. 12. [www.propoortourism.org.uk](http://www.propoortourism.org.uk), accessed August 2005
- Hudson, B. (1979) Comparison of current planning theories: counterparts and contradictions. *Journal of the American Planning Association*, October: 387-398.
- Hughes, G. (2002) Environmental indicators. *Annals of Tourism Research*, 29(2): 457-477.
- Hunter, C. (1997) Sustainable tourism as an adaptive paradigm. *Annals of Tourism Research*, 24(4): 850-867.
- Hunter, C. (2003) Personal communication on sustainable tourism course, unpublished Notes.
- International Hotels Environment Initiative (1996) *Environment Management of Hotels: The Industry Guide to Best Practice*, 2<sup>nd</sup> edn, Butterworth Heinemann, Oxford.
- Inskeep, E. (1991) *Tourism Planning. An Integrated and Sustainable Development Approach*. Van Nostrand Reinhold, New York.
- Jackson, S. (2007) Attitudes towards the environment and ecotourism of stakeholders in the UK tourism Industry with particular reference to ornithological tour operators. *Journal of Ecotourism* 6(1): 34–66.
- Jafari, J. (2001) ‘The scientification of tourism’, in V.L. Smith and M. Brent, (eds), *Hosts and Guests Revisited: Tourism Issues of the 21<sup>st</sup> Century*, Cognizant Communication Corporation, New York, 28-41.
- Jafari, J. (ed) (2000), *Encyclopaedia of Tourism*, Routledge, London.
- Jamaica Sustainable Development Network (2006) *Sustainable tourism*, [www.jsdnp.org.im/sustourism.htm](http://www.jsdnp.org.im/sustourism.htm), accessed august 2006

- Jameson, S.C., Ammar, M.S.A., Saadalla, E., Mostafa, H.M. and Riegl, B. (2007) A quantitative ecological assessment of diving Sites in the Egyptian Red Sea during a period of severe anchor damage: a baseline for restoration and sustainable tourism management. *Journal of Sustainable Tourism*, 15(3): 309-323
- Janssen, L.L. and Huurneman, G.C. (eds) (2001) *Principles of Remote Sensing*, 2<sup>nd</sup> edn, of ITC Educational Textbook Series. International Institute for Aerospace Survey and Earth Sciences, Enschede, The Netherlands.
- Jennings, S. (2004) Coastal tourism and shoreline management. *Annals of Tourism Research*, 31(4): 899-922.
- Jung, E.K. and Pennington-Gray, L. (2003) *Perceptions of tourism development: the case of Micanopy*. Proceedings of the Northeastern Recreation Research Symposium, Florida. [http://www.fs.fed.us/ne/newtown\\_sqaure/publications/technical\\_reports/pdfs/2004/317papers/kim](http://www.fs.fed.us/ne/newtown_sqaure/publications/technical_reports/pdfs/2004/317papers/kim), accessed August 2006.
- Kalton, G. (1983) *Introduction to Survey Sampling*. Sage Publications, London
- Karugire, S.R. (1980) *Political History of Uganda*, Heinemann Educational Books, Nairobi.
- Kavanagh, L.J. and Keller, J. (2007) Engineered ecosystem for sustainable on-site wastewater treatment. *Water Research* 41: 1823-1831.
- KCC (Kampala City Council) 2003, *Makindye Division Council Three Year Development Plan 2003/2004 – 2005/2006*, Division Technical Planning Committee, Makindye, Kampala
- Kothari, C.R. (2005) *Research Methodology: Methods and Techniques*, 2<sup>nd</sup> edn, New Age International, New Delhi.
- Kuniyai, J.C. (2005) Solid waste management in the Himalayan trails and expedition summits. *Journal of Sustainable Tourism*, 13(4): 391-410.
- Lai, K., Li, Y. and Feng, X. (2005) Gap between tourism planning and implementation: A case of China. *Tourism Management*, 27: 1171-1180.
- Langlands, B.W. (1974) Uganda in Maps (Part 4) *The Economic Response and Land Use*. Unpublished Preliminary Non-Edition, Makerere University.
- Le, Y., Hollenhorst, S., Harris, C., McLaughlin and Shook, S. (2006) Environmental management: a study of Vietnamese hotels. *Annals of Tourism Research*, 33(2): 545-567.
- Li, W. (2005) Community decision making: participation in development. *Annals of Tourism Research*, 33(1): 132-143.

- Lickorish, L.J. and Jenkins, C.L. (1997) *An Introduction to Tourism*. Butterworth – Heinemann, Oxford.
- Light, D. (2007) Dracula tourism in Romania: cultural identity and the state. *Annals of Tourism Research*, 34(3): 746-765.
- Lindblom, C. (1959) The Science of 'Muddling Through', *Public Administration Review*, 19: 79-88.
- Lui, Z.H. (2003) Sustainable tourism development: a critique. *Journal of Sustainable tourism* 6(11): 459-475.
- Lukashina, S., Amirkhanov, M., Anisimov, V. and Trunev, A. (1996) Tourism and environmental degradation in Sochi, Russia. *Annals of Tourism Research*, 33(3): 654-665.
- LVEMP (Lake Victoria Environment Management Programme) (2005) *Regional water Quality synthesis Report*, Water Quality and Ecosystem Management Component, LVEMP, Kampala.
- MacLeod, D. (1996) *Planning Theory*, [ww3.sympatio.ca/david.macleod/PTHRY.HTM](http://ww3.sympatio.ca/david.macleod/PTHRY.HTM), accessed March 2006.
- Mann, S. (1998) *Plans to rebuild tourism, country report: Uganda on the ascent*, ACP-EU Courier, No. 170, 39-40 Brussels.
- Manson, P. (1995) *Tourism: Environment and Development Perspectives*. World Wide Fund for Nature Godalming, UK,
- Manson, P. (2003) *Tourism Impacts: Planning and Management*, Elsevier Butterworth-Heinemann publications, Oxford.
- Marion, J.L. and Reid, S.E. (2007) Minimising visitor impacts to protected areas: the efficacy of low impact education programmes. *Journal of Sustainable Tourism*, 15(1): 5-27.
- Mathieson, A. and Wall, G. (1982) *Tourism: Economic, Physical and Social Impacts*. Longman, Harlow.
- Maxwell, J.A. (1996) *Qualitative Research Design: An Interactive Approach*. Sage Publications, London.
- Mbaiwa, J.E. (2005) The problem and prospects of sustainable tourism development in the Okavango Delta, Botswana. *Journal of sustainable Tourism*, 13(3): 203-227.
- MFPE (Ministry of Finance Planning and Economic Development) (2006) *National Budget 2007/2007*, Government of Uganda, Kampala.

- Mitchell, B. (2002) *Resource and Environment Management*, 2<sup>nd</sup> edn, Pearson Education Ltd, London.
- MNR (Ministry of Natural Resources) (1995) *National Policy for the Conservation and Management of Wetland Resources*, MNR, Kampala.
- Morris, A. and Dickinson, C. (1987) Tourism development in Spain: growth versus conservation on the Costa Barva, *Geography* 72: 16-25.
- Mowforth, M. and Munt, I. (1998) *Tourism and Sustainability: Development and New tourism in the Third World*. Routledge, London.
- Mowforth, M. and Munt, I. (2003) *Tourism and Sustainability: Development and New Tourism in the Third world*, 2<sup>nd</sup> edn, Routledge, London.
- MTTI (Ministry of Tourism, Trade and Industry) (2003) *Tourism Policy For Uganda*, MTTI, Kampala.
- MTTI (Ministry of Tourism, Trade and Industry) (2004) *Ministerial Policy Statement for Financial year 2004/2005*, MTTI, Kampala.
- MTTI (Ministry of Tourism, Trade and Industry) (2006) Press Release – New vision Newspaper, October 13 2006, 36.
- MTWA (Ministry of Tourism, Wildlife and Antiquities) (1993) *Integrated Tourism Master Plan*, MWTA, Kampala.
- Murphy, P. (1985) *Tourism: A Community Approach*. Routledge, Longman, London.
- MWLE (Ministry of Water, Lands and Environment) (2001) Draft Forest bill. MWLE, Kampala.
- MWLE (Ministry of Water, Lands and Environment) (2003) *National Biomass Study* MWLE, Kampala.
- Nature Uganda (2003) Lutembe bay flower farm development, *The Naturalist Newsletter*, Vol.7.2, Kampala.
- Nairobi Railway Museum (2005) History of East African Railways <http://www.greywall.demon.co.uk/rail/Kenya/nrm.html>, accessed June 2005.
- NEMA (National Environment Management Authority) (1995) *National Environment Statute* NEMA, Kampala.
- NEMA (National Environment Management Authority) (1996) *State of the Environment Report for Uganda*, NEMA, Kampala.
- NEMA (National Environment Management Authority) (1997a) *Kampala District State of Environment Report*, NEMA, Kampala.

- NEMA (National Environment Management Authority) (1997b) *Mpigi District State of Environment Report*. NEMA, Kampala.
- NEMA (National Environment Management Authority) (2000) *Wetlands, River Banks and Lakeshore Management Regulations 2000*, NEMA, Kampala.
- NEMA (National Environment Management Authority) (2001) *State of the Environment Report for Uganda, 2000/2001*, NEMA, Kampala.
- NEMA (National Environment Management Authority) (2005) *State of the Environment Report for Uganda*, NEMA, Kampala.
- Ntiba, M., Kudoja, W. and Mukasa, C. (2001) Management issues in the Lake Victoria watershed. *Lakes and Reservoirs Research and Management*, 6: 211-216.
- OECS (Organisation of East Caribbean States) (2005) <http://www.oecs.org>, accessed December 2005.
- Okello, M.M. and Kiringe, J.W. (2004) Threats to biodiversity and their implications in protected and adjacent dispersal areas of Kenya. *Journal of Sustainable Tourism*, 12(1): 55-69.
- Omara-Ojung, P. (1992) *Resource Management in Developing Countries*, Longman, London.
- Ouma, J.P. (1982) *Evolution of Tourism in East Africa*. Literature Bureau, Nairobi.
- Page, S.J. (2007) *Tourism Management: Managing for Change*, 2<sup>nd</sup> edn, Elsevier Ltd, Oxford.
- Pan, S. and Ryan, C. (2007) Mountain areas and visitor usage – motivations and determinants of satisfaction: the case of Pirongia Forest Park, New Zealand. *Journal of Sustainable Tourism*, 15(3): 288-308.
- Papatheodorou, A. (2004) Exploring the evolution of tourism resorts. *Annals of Tourism Research*, 31(1): 219-237.
- Pearce, D. (1985) *Tourism Today: A Geographical Analysis*. Longman. London.
- Pearce, D. G. (1993) 'Comparative studies in tourism research', in D.G. Pearce and R.W. Butler (eds), *Tourism Research: Critiques and Challenges*. Routledge, London, 20-35.
- Pearce, D.G. (2001) An integrative framework for urban tourism research. *Annals of Tourism Research*, 28(4): 926-946.

- Pender, L. (2005) 'Managing the tourism system', in L. Pender and R. Sharpely (eds), *The Management of Tourism*. Sage Publications, London, 1-13.
- Pigram, J. (1994) 'Alternative tourism: tourism and sustainable resource management' in L.V. Smith and R.W. Eadington (eds), *Tourism Alternatives: Potentials and Problems in the Development of Tourism*. John Wiley and Sons, Chichester, 76-87
- Planning Aid Scotland (2006) *Development Control*  
<http://www.planning-aid-scotland.org.uk/dc.php>, accessed September 2006.
- Plog, S. (1973) *Why destination areas rise and fall in popularity*. *Cornell Hotel and Restaurant Administration Quarterly*, 12: 13-16.
- Pridham, G. and Konstadakopulos, D. (1997) 'Sustainable development in Mediterranean Europe? interactions between European, national and sub-national levels', in S. Baker *et al.* (eds), *The Politics of Sustainable Development*, Routledge, London, 127-151.
- Przeclawski, K. (1993) 'Tourism as the subject of interdisciplinary research', in D.G. Pearce and W.R. Butler (eds), *Tourism Research, Critics and Challenges*, Routledge, London, 9-19.
- Puczko, L. and Ratz, T. (2000) 'Tourist and resident perceptions of the physical impacts of tourism at Lake Balaton, Hungary: issues for sustainable tourism management'. *Journal of Sustainable Tourism*: 8(6): 458-478.
- Puppim de Olivera, J.A. (2005) 'Tourism as a force for establishing protected areas: the case of Bahia, Brazil'. *Journal of Sustainable Tourism*, 13(1): 24-49.
- Ravenscroft, N. (1992) *Recreation Planning and Development*. Macmillan Press, Hong Kong.
- Reid, D.G. (2003) *Tourism Globalization and Development: Responsible Tourism Planning*, Pluto Press, London.
- Ritchie, B.W., Burns, P. and Palmer, C. (2005) *Tourism Research Methods: Integrating Theory and Practice*. CABI publishers, Wallingford.
- Rolf, A. de By (ed) (2001) *Principles of Geographic Information Systems*, 2<sup>nd</sup> edn, ITC (International Institute for Aerospace Survey and Earth Sciences) Educational Textbook Series, Enschede, The Netherlands.
- Rubin, A. and Babbie, E.R. (2008) *Research Methods for Social Work*, 6<sup>th</sup> edn, Thomson, Belmont.
- Ryhanen, H. (2001) *The tourist profile and potential of European lake destinations*, Paper presented at the ATLAS 10<sup>th</sup> anniversary international conference, Dublin Ireland, October 2001.

- Sabins, F. (1997) *Remote Sensing: Principles and Interpretation*. Freeman and Company, New York.
- Schensul, S.L., Schensul, J.J. and LeCompte, M.D. (1999) *Essential Ethnographic Methods: Observations, Interviews, and Questionnaires*. Rowman Altamira, London.
- Schianetz, K., Kavanagh, L. and Lockington, D. (2007) Concepts and tools for comprehensive sustainability assessments for tourism destinations: a comparative review. *Journal of Sustainable Tourism*, 15(4): 369-389.
- Sharpely, R. (2005) 'Tourism and the environment', in L. Pender and R. Sharpely (eds), *The Management of Tourism*, Sage Publications, London, 259-274.
- Sharpely, R. (2007) Flagship attractions and sustainable rural tourism development: the case of the Alnwick Garden, England. *Journal of Sustainable Tourism*, 15(2): 125-143.
- Shaw, G. and Williams, A.M. (2002) *Critical Issues in Tourism: A Geographical Perspective*. Blackwell publishing Oxford.
- Shaw, G. and Agarwal, S. (eds) (2007) *Managing Coastal Tourism Resorts: A global perspective*, Channelview press, Clevedon.
- Shibata, T., Solo-Gabriele, H. M., Fleming, L. E. and Elmir (2004) Monitoring marine recreational water quality using multiple microbial indicators in an urban tropical environment. *Water Research*, 38: 3119-3131.
- Simon Fraser University (2003) Sample size determination. Department of Statistics, Simon Fraser University, British Columbia <http://www.stat.sfu.ca/handouts>, accessed August 2003.
- Sinclair, M.T. (1990) *Tourism Development in Kenya*. World Bank, Washington D.C.
- Smith, S.L.J. (1989) *Tourism Analysis: A Handbook*. Longman, London.
- Smith, S.L.J. (1990) *Dictionary of Concepts in Recreational and Leisure Studies*. Greenwood press, New York.
- Smith, S.L.J. (1995) *Tourism Analysis: A Handbook*, 2<sup>nd</sup> edn, Longman, London.
- Spenceley, A. (2005) Nature-based tourism and environmental sustainability in South Africa. *Journal of Sustainable Tourism*, 13(2): 136-170.
- Tisdell, C.A. (2001) *Tourism Economics, Environment and Development*. Edward Elgar UK
- Tivy, J. and O'Hae, G. (1981) *Human Impact on the Ecosystem*, Longman, London.

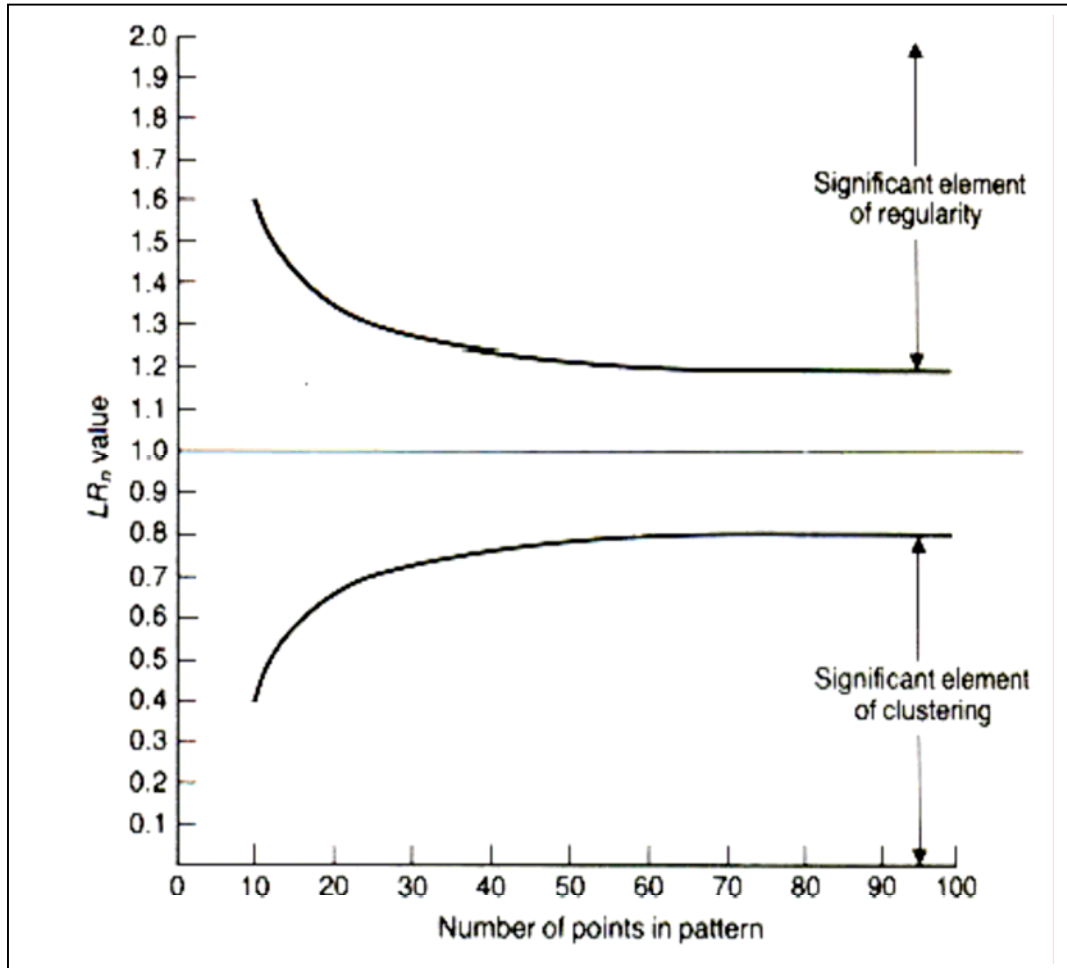
- Tosun, C. (1998) Roots of unsustainable tourism development at the local level: the case of Urgup in Turkey. *Tourism Management*, 19(6): 595-610
- Tourism Policy Forum (1991) *Interim Report: Global Assessment of Tourism Policy*, George Washington University, Washington, D.C.
- Trochim, W.M. (2006) *The Research Methods Knowledge Base*, 2<sup>nd</sup> edn, <http://www.socialresearchmethods.net/kb>, accessed May 2008.
- UBOS (Uganda Bureau of Statistics) (2004) *The 2004 Statistical Abstract*, UBOS, Entebbe.
- UBOS (Uganda Bureau of Statistics) (2005a) *Migration and Tourism Report IV (2000 – 2004)* UBOS, Entebbe.
- UBOS (Uganda Bureau of Statistics) (2005b) *The 2002 Uganda Population and Housing Census- main report*, UBOS, Kampala.
- UBOS (Uganda Bureau of Statistics) (2005c) *The 2005 Statistical Abstract*, UBOS, Kampala.
- UBOS (Uganda Bureau of Statistics) (2006) *The 2006 Statistical Abstract*, UBOS, Kampala.
- UIA (Uganda Investment Authority) (2005) *Uganda Investment Opportunities: Tourism Profile*, <http://www.ugandainvest.com/tourism.pdf>, accessed June 2005
- UN (United Nations) (2006) *Environmental Glossary*, <http://unstats.un.org/unsd/environmentgl/gesform.asp?getitem=1197>, accessed August 2006.
- UNEP (United Nations Environment Programme) (2002) *Tourism: Environmental Impacts of Tourism*, UNEP. [www.unep.org/pc/tourism/sust.tourism/env-3main.htm](http://www.unep.org/pc/tourism/sust.tourism/env-3main.htm), accessed January 2005.
- UNEP (United Nations Environment Programme) (2003) *Tourism and Local Agenda 21: The Role Of Local Authorities in Sustainable Tourism*, United Nations Publication, New York.
- UNEP (United Nations Environment Programme) and UNWTO (United Nations World Tourism Organisation) (2005) *Making Tourism More Sustainable: A Guide for Policy Makers*, UNEP, Paris and UNWTO, Madrid.
- UNWTO (United Nations World Tourism Organisation) (1991) *International Conference on Travel and Tourism Statistics*, UNWTO, Madrid.
- UNWTO (United Nations World Tourism Organisation) (1992) *Tourism Carrying Capacity*, report on the senior-level expert group meeting held in Paris, June 1990, Madrid.

- UNWTO (United Nations World Tourism Organisation) (1997) *International Tourism: A Global Perspective*. UNWTO, Madrid.
- UNWTO (United Nations World Tourism Organisation) (1998a) *Guide for Local Authorities on Developing Sustainable Tourism*, UNWTO, Madrid.
- UNWTO (United Nations World Tourism Organisation) (1998b) *Tourism 2020 Vision (Revised)* UNWTO, Madrid.
- UNWTO (United Nations World Tourism Organisation) (2004a) *Indicators of Sustainable Development for Tourism Destinations*, UNWTO, Madrid.
- United Nations World Tourism Organisation (UNWTO) (2004b) *Sustainable Development of Tourism, Conceptual Definition*, <http://www.world-tourism.org/sustainable/top/concepts.html>, accessed 2005.
- UNWTO (United Nations World Tourism Organisation) (2006) *World Tourism Barometer*, Vol. 4. No 3, UNWTO, Madrid, [www.world-tourism.org/facts/eng/barometer.htm](http://www.world-tourism.org/facts/eng/barometer.htm), accessed December 2006.
- UWA (Uganda Wildlife Authority) (2002) *Management of Wildlife Outside Protected Areas*. Workshop Report. UWA community Conservation unit and International Fund for Animal Welfare, Kampala.
- UWA (Uganda Wildlife Authority) (2006) About Uganda Wildlife Authority, <http://www.uwa.or.ug/about.html>, accessed November 2006.
- UWA (Uganda Wildlife Authority) (2006) *The Parks and Protected Areas* <http://www.uwa.or.ug/parks.html>, accessed November 2006.
- Veal, A.L. (2006) *Research Methods for Leisure and Tourism: A Practical Guide*, 3<sup>rd</sup> edn, Pearson Education Limited, London.
- Voultzaki, M. (2000) *The spatial impacts of tourism in maritime regions: The case of Thessaloniki, development perspectives for maritime regions*, paper presented at the 7<sup>th</sup> National Meeting of APDR, Azores, Portugal, 30<sup>th</sup> June – 02 July 2000.
- Wade, J.D. and Eagles, P.F. (2003) The use of importance-performance analysis and market segmentation for tourism management in parks and protected areas: an application to Tanzania's National Parks. *Journal of Sustainable Tourism*, 2(3): 196-212.
- Wakiso District (2006) *Wakiso District Three-Year Development Plan, 2006/2007 – 2008/2009*, Technical Planning Committee, Wakiso.
- Walsh, D. and Sun, D. (1998) Review of studies on environmental impacts of recreation and tourism in Australia. *Journal of Environmental Management*, 53: 323-338.

- Warnkena, J., Bradleya, M. and Guildingb, C. (2005) Eco-resorts verses mainstream accommodation providers: an investigation of the viability of benchmarking environmental performance. *Tourism Management*, 26: 367–379.
- Water technology (1996) water quality, <http://www.water-technology.net/glossary/water-quality.html>, accessed August 2006.
- Weaver, D. (2006) *Sustainable Tourism*. Elsevier Butterworth-Heinemann, Oxford
- Webster's new world dictionary (2006) [http://en.wikipedia.org/wiki/Nature\\_conservation](http://en.wikipedia.org/wiki/Nature_conservation), accessed July 2006.
- Weiermair, K. and Fuchs, M. (1999) Measuring tourist judgment on service quality. *Annals of Tourism Research*, 26(4): 1004-1021.
- White, V., McCrum, G., Blackstock, K. and Scott, A. (2006) *Indicators and Sustainable Tourism*. Macaulay Institute, Aberdeen.
- Williams, S. (1999) *Tourism Geography*. Routledge, London.
- Williams, P.W., Penrose, R.W. and Hawkes, S. (1998) Shared decision-making in land use tourism planning. *Annals of Tourism Research*, 25(4): 860-889.
- Winson, A. (2006) Ecotourism and sustainability in Cuba: does socialism make a difference. *Journal of Sustainable Tourism*, 14(1): 6-23.
- WHO (World Health Organisation) (1999) *Health Based Monitoring of Recreational Waters: The Feasibility of a New Approach*. WHO, Geneva.
- WHO (World Health Organisation) (2000) *Monitoring Bathing Waters – A Practical Guide to the Design and Implementation of Assessments and Monitoring Programmes*, F & FN Spon, London.
- Yin, R.K. (2003) *Case Study Research Design and Methods*, 3<sup>rd</sup> edn, Sage Publications, London.
- Youell, R. (1998) *Tourism: An Introduction*. Longman, New York.
- Yuksel, F., Bramwell, B. and Yuksel, A. (2005) Centralised and decentralised tourism governance in Turkey. *Annals of Tourism Research*, 32(4): 859-886.
- Zeller, A. R. and Carmines, E.G. (1979) *Reliability and Validity Assessment*. Sage Publications, London.

## APPENDIX 1

### Significance graph for testing $LR_n$ values



## APPENDIX 2

Questionnaire number.....

### Questionnaire for visitors

-----  
This survey is being carried out with the purpose of examining the environmental performance of tourism destinations and to assess the role of planning in ensuring sustainable tourism development in the of Entebbe-Kampala lakeshore region. The survey is being carried out under the auspices of Makerere University, Department of Geography (Uganda) and University of Cape Town (South Africa) for academic purposes.

The information collected from this survey will contribute to further understanding of tourism, development, inform tourism planning and highlight the tourism conservation needs in the area. The outcomes of the survey will be used for academic purposes and contribute to the information for sustainable tourism development.

***We therefore seek your views and opinions about tourism development and its related impacts and assure you that this information will be treated confidentially.*** So feel free to share with us your experience (***Research contact: Jim Ayorekire. Tel: 077401410. Email: jayorekire@arts.mak.ac.ug***)

Date.....

Name of site.....

***Please tick where appropriate***

1. What age group do you belong to?  
(1) Less than 14                      (2) 15 - 29                      (3) 30 - 44  
(4) 45 - 59                      (5) 60 - 74                      (6) 75 and above
2. Gender?  
(1) Male                                      (2) Female
3. Are you a  
(1) Ugandan citizen  
(2) Foreign Resident  
(3) Foreign Non-resident
4. What is your main purpose of visiting this site?  
(1) Pleasure or holiday  
(2) Business or official duty  
(3) Participating in conference, workshop or meeting  
(4) Visiting friends and relatives  
(5) Any other specify.....
5. Is this your first time to visit this site?  
(1) Yes                                      (2) No
6. If 'yes' what is the likelihood of you returning to visit this site?  
(1) Very likely  
(2) Likely  
(3) Uncertain  
(4) Unlikely  
(5) Very Unlikely
7. If 'No', how many times do you usually visit this site in a year?  
(1) 1 - 4 times                      (2) 5 - 9 times                      (3) 10 - 14 times  
(4) 15 + times
8. How long are you likely to stay at this site?  
(1) Less than 3 hours  
(2) 4 - 7 hours

- (3) 8 – 12 hours
- (4) More than 12 hours

9. (a) Are you staying overnight?  
 (1) Yes (2) No

- (b) If yes how many nights are you spending?
- (1) 1 – 3 nights
  - (2) 4 – 7 nights
  - (3) 8 – 20 nights
  - (4) More than 20 nights

10. How attracting to you are the following features at this site, (put a tick in the most appropriate response)

<b>Feature</b>	Very attracting	Attracting	Some what attracting	Neither Attracting nor Unattractive	Some what un attracting	Un attracting	Very unattracting	Not applicable
Lake scenery								
Sand Beach								
Restaurant/bar Services offered								
Entertainment recreation (Live Music concerts, night club etc)								
Swimming pool								
Hotel/resort accommodation facilities								
Environmental setting (gardens, plants, birds, insects etc)								
Sports facilities (Court/beach volleyball, tennis, basketball etc)								
Calm and quiet environment								
Any other specify.....								

11. How do you rate the quality of the following features at this site?

<b>Site features</b>	<b>Quality of attractions rating</b>				
	<b>Excellent</b>	<b>Very good</b>	<b>Good</b>	<b>Poor</b>	<b>Very poor</b>
Lake scenery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sand Beach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restaurant/bar Services offered	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swimming pool	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hotel/resort accommodation facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Environmental setting (gardens, plants, birds, insects etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sports facilities (Court/beach volleyball, tennis, basketball etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calm and quiet environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any other specify.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Would you recommend a friend to visit this site?

- (1) Definitely
- (2) Perhaps
- (3) No

13. Based on your general observation at this site, how would you describe the state of maintenance of the following areas at this site

Area	Very well maintained	Moderately maintained	Not maintained	Poorly maintained	Very poorly maintained	I don't know
Hotel/cottage area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gardens/lawn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sand Beach area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walk ways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sanctuary/reserve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swimming pool	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sports facility area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any other area specify .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. Have you been informed (verbal or written) or seen any environmental guidelines or codes to be observed while at this destination?

- (1) Yes
- (2) No

15. If yes, through what medium were they communicated to you?

- (1) Leaflets/ brochures
- (2) Written on notice boards
- (3) Written on litter bins, sign posts, or pinned on tress
- (4) Verbally communicated
- (5) Any other specify,

.....

16. Which guidelines or codes were/are communicated to you through the following medium (write down guidelines as communicated to you in space provided)

Medium of communication	Guidelines/codes communicated
Leaflets/ brochures	
Written on notice boards	
Written on litter bins, sign posts, or pinned on tress	
Verbally communicated	
Any other specify.....	

17. How adequate are the mentioned environmental guidelines/codes (if any) in ensuring sustainable development of this area?

- (1) Very adequate
- (2) Moderately Adequate
- (3) Adequate
- (4) Not adequate

- (5) Very inadequate
- (6) I don't know

18. (a) In your view, are the visitors following these guidelines/codes (if any)?  
 (1) Yes (2) No

(b) If 'Yes', what aspects show that they are being followed and if 'No' what aspects show that they are not being followed?  
 .....

19. Select 'Yes' or 'No' in response to the questions below about solid and sewage waste management at this site?

	Yes	No
Have you seen any litter/rubbish bins?		
Do you consider the number of litter/rubbish bins to be adequate?		
Are they easily /conveniently accessible for use?		
Have you generated any litter/ rubbish?		
Have you deposited it in the litter/ rubbish bins?		
Has it been collected by staff on the destination?		
Is there evidence of scattered/uncollected litter or rubbish?		
Is there evidence of surface flowing liquid waste (like sewage)?		
Do you smell decomposing waste in the air?		
In your opinion is the waste properly managed at this destination?		

20. The following (if any) have been managed in an environmentally friendly way at this site (*tick in the most appropriate response*)

The following have been managed in an environmentally friendly way at this site	1 Strongly Disagree	2 Disagree	3 Neither Agree nor Disagree	4 Agree	5 Strongly Agree
Natural habitat (for bird insects and other wildlife)					
Natural vegetation cover					
Wetlands					
Soils at and near the destination					
Waste management					
Scenic beauty of area					
Wildlife reserve/sanctuaries					
Water quality at beach shore					
Noise pollution					
Any other specify..... .....					

21. What environmental features do you think need to be improved at this site?  
 .....

22. What measures do you think should be put in place to ensure the environment at this site is not degraded?  
 .....

23. With regard to the state or appearance of the facilities and the physical environmental features, would you consider this site to be;

- (1) Very well planned
- (2) Well planned
- (3) Fairly well planned
- (4) Poorly planned
- (5) Very poorly planned

(6) I don't know

24. Give reasons for the choice of your response (in 23) above

.....

25. What is your general rating of this site?

- (1) Excellent
- (2) Good
- (3) Average
- (4) Poor

26. In your view what planning measures would you like to see put in place to improve this site? .....

Thank you for your cooperation

University of Cape Town

### APPENDIX 3

#### Questionnaire Local Residents

-----

This survey is being carried out with the purpose of examining environmental sustainability of tourism sites along the Entebbe-Kampala lakeshore. It is also interested in assessing the role of planning in ensuring sustainable tourism development in the region. The survey is being carried out under the auspices of Makerere University (Uganda) and University of Cape town (South Africa) for academic purposes.

The information collected from this survey will contribute to further understanding of tourism sustainability, inform tourism planning and highlight the tourism conservation needs in the area. The outcomes of the survey will be used for academic purposes and contribute to the information needed for sustainable tourism development.

*As a person who resides or works in the neighbourhood, we seek your views and opinions about tourism destinations and their related impacts and assure you that this information will be treated confidentially.* So please feel free to share with us your experience by responding to the questions below.  
(Research contact: Jim Ayorekire. Tel: 077401410. Email: jayorekire@arts.mak.ac.ug)

**Fill in or tick the most appropriate answer**

1. What is the name of the tourist site(s) nearest to you?

.....

**Tick in the box with the most appropriate response**

Question / statement	1 Strongly Disagree	2 Disagree	3 Neither Agree nor Disagree	4 Agree	5 Strongly Agree
This tourism site (.....);					
Has expanded or grown over the years since its establishment					
Has had an increasing number of visitors over the years					
Attracts more foreigners than the local people					
Locals from the community visit the site					
Site harmoniously exists and fits well in the community					
Contributes to Conservation of the vegetation in the area					
Destroys swamp area by reclaiming it					
Destroys swamps which has lead to flooding in the area					
Encroaches on areas reserved for wildlife					
Improves scenic beauty of the area					
Was established by grading the area –hence destroying landscape of area					
Ensures that its compound and surroundings are kept clean					
Contributes to the accumulation of garbage in the area					
Allows residents to their use garbage collection and disposal facilities					
Cause bad odour/smell in community from the generated garbage at the destination					
Dumps garbage in neighbouring areas					
Garbage dumped by the site is a threat to the health of the community					
Educates residents on how to properly manage garbage in the community					
Contributes to improving garbage collection and disposal in our area/community					
Increases sewage generation in the area					
Sewage generated from site is not properly disposed					
There is bad odour/smell from sewage generated at the site					
Generates sewage which over flows and spills to the neighbour hood					
Pollutes water as a result of sewage flowing in the lake from the destination					
Educates local residents on how to properly manage sewage in the community					

Site waste water from kitchen and storm drain flows into the lake causing water to be dirty					
Educates residents on how to ensure good lake water quality					
Tourism activities at the site disrupt the locals activities at the lakeshore e.g. fishing, accessing swamp resources (papyrus, clay etc), collecting water, using beach area for their leisure					
Management of the destination restricts the locals access to the destination					
Establishment of site has displaced locals from their land					
There is a community conservation programme in the area					
There is a community environment conservation committee in the area					
The management of the site supports and is involved with the community in conserving the environment					
The management encourages the community to share with it views about environment conservation					
Contributes to training community members in aspects of environmental conservation					
Community leaders are consulted before tourism sites are establishment					
Tourism development issues are discussed in the village/parish planning meetings of the community					
In village/parish meetings the community discusses the relationship between tourism sites and the environment					
I am aware of the environmental laws/guidelines that tourism establishments are supposed to follow					
Tourism sites in this community follow the environmental laws/guidelines					
The community needs to formulate environmental bye laws to guide the development and management of tourism					
Tourism in our community is good and beneficial to the locals					
I would like to have more tourism developments in our community or region					

In your opinion, what do you think would help ensure that;

- (i) Tourism develops while conserving the environment  
.....
- (ii) The community is involved in promoting environmental friendly tourism  
.....
- (iii) The community benefits from the tourism developments in the area  
.....

Gender of respondent (1) Male (2) Female

Age of respondent  
 (1) Less than 14 (2) 15 - 29 (3) 30 - 44  
 (4) 45 - 59 (5) 60 - 74 (6) 75 and above

What is your level of education  
 (1) None (2) Primary (3) Secondary (4) Tertiary (5) Other,  
 specify.....

**Thank you for your valuable comments**

## APPENDIX 4

### Nearest-neighbour distances (in km's)

$$LR_n = d_o/d_r$$

$d_r = 0.5[L/(n-1)]$ .....theoretical distance estimate between points

$d_o = \sum \text{distances} / n$  .....mean of distances

$L$ .....length of line (lakeshore) under consideration

$n$  ..... Number of observed tourism facilities (the end points are not considered in order not to bias the ratio value)

$$L = 106.8$$

$$n = 24$$

$$\begin{aligned}d_r &= 0.5 [L/(n-1)] \\ &= 0.5 [106.8/(24-1)] \\ &= 0.5 [4.64] \\ &= 2.32\end{aligned}$$

$$\begin{aligned}d_o &= \sum \text{distances} / n \\ &= 106.8 / 24 = 4.45\end{aligned}$$

$$\begin{aligned}LR_n &= d_o/d_r \\ &= 4.45/2.32 \\ &= 1.9\end{aligned}$$

University of Cape Town

## APPENDIX 5

## Questionnaire for Site managers

-----

This survey is being carried out to establish the management challenges sites face with a view to propose better planning to benefit management of the sites and development of tourism along the Entebbe-Kampala lakeshore. The survey is being carried out under the auspices of Makerere University (Uganda) and University of Cape town (South Africa) for academic purposes.

The information collected from this survey will contribute to further understanding of tourism sustainability and inform tourism planning. The outcomes of the survey will **only** be used for academic purposes.

*As a person part of the management, we seek your views and opinions about this tourism destination management practices and assure you that this information will be treated confidentially.* So please feel free to share with us your experience by responding to the questions below.

*(Research contact: Jim Ayorekire. Tel: 077401410. Email: ayorekire@arts.mak.ac.ug)*

**Fill in the most appropriate answer**

Name of this tourist site.....

Date when it was established.....

How big is this site (in hectares) – circle appropriate response

(a) <1 (b) 1-2 (c) 3- 4 (d) 5-6 (e) 7-8 (f) 9 – 10 (g) >10

**Tick in the box with the most appropriate response**

Question / statement	1 Strongly Disagree	2 Disagree	3 Neither Agree nor Disagree	4 Agree	5 Strongly Agree
This tourism site (.....);					
Has expanded or grown over the years since its establishment					
Has had an increasing number of visitors over the years					
Attracts more foreigners than the local people					
Locals from the surrounding community visit the destination					
Site harmoniously exists and fits well in the community					
Contributes to conservation of the vegetation in the area					
Site was established by reclaiming swamp area					
Exists in a gazetted conservation area					
Improves scenic beauty of the area					
Was established by levelling landscape of area					
Ensures that the compound and surroundings are kept clean					
There are adequate litter bins at this site					
Site informs visitors (by posters, signs etc) on how to properly dispose the garbage they generate					
Faces a problem uncollected garbage					
Allows local residents to use the sites garbage collection and disposal facilities					
Uncollected garbage (if any) causes bad odour/smell around the site					
Site has access to an authorised garbage disposal area					
Garbage from site is disposed at an authorised place					
Some of the garbage is recycled at the site					
Management has measures in place to reduce the amount of waste generated					
Site is threatened by the garbage dumped around it					
Site educates local residents around it on how to properly manage garbage in the community					
Site contributes to improving garbage collection and disposal in this area/community					
Septic tank (or pit latrine if any) used was approved by relevant district authorities					
Site faces a problem of regular emptying of sewage septic tanks					

Sewage from the site flows to the lake or swamp					
Sewage generated at the site is emptied and disposed at an authorised place					
There is bad odour/smell from sewage generated by the neighbouring residents					
Sewage from the neighbouring residents over flows and spills to the lake or swamp					
Site educates local residents on how to properly manage sewage in the community					
Site waste water from kitchen and storm drain flows into the lake causing water to be dirty					
Faces a problem of maintaining good quality of the beach water					
Educates residents on how to ensure good lake water quality					
Locals residents activities (e.g. fishing, collecting water, using beach area for their leisure) disrupt tourism activities at the site					
Locals residents who are not customers are restricted entry to avoid disturbance at the destination					
The management of the site is involved with the community in conserving the environment					
The management encourages the community to share with it views about environment conservation					
Contributes to training community members in aspects of environmental conservation					
Community leaders are consulted whenever there is an activity or aspect at the site that affects the community					
Management makes efforts to send staff to attend community/village meetings					
Tourism development issues are discussed in the community/village planning meetings of the community					
At the meetings the community discusses and evaluates the sites contribution to tourism and environment conservation					
I am aware of the environmental laws/guidelines that tourism sites are supposed to follow					
This site follows these environmental laws/guidelines					
This site has a management plan or policy					
Environmental issues are adequately addressed in this plan or policy					
The site is dully approved by the relevant district/municipal authorities					
There is need to formulate a policy or guidelines to direct the development and management of tourism sites on the lakeshore					
Tourism at this site is good and beneficial to the surrounding local community					
More tourism sites should be allowed to develop in this community or region					

What factors in your opinion, which influence the performance of this establishment as a tourism site in relation to sustainable tourism development indicators?  
.....

Suggest ways in which the development of tourism can be improved along the Entebbe-Kampala lakeshore region.....

*Thank you for your valuable comments*

## APPENDIX 6

### Tourism Investment data in Uganda 2001 - 2004

Business Activity	Ownership	Planned Investment (USD)	Planned Employment	Date of License	District
Hotel services	L	165,000	23	30-Aug-02	Adjumani
Hospitality & conference facilities	L	1,500,000	45	09-Jan-04	Hoima
Hotel	L	44,000	25	30-Jan-01	Iganga
Eco-tourism	J	1,448,000	61	22-Oct-04	Jinja
Adventure activities & safaris	F	215,000		11-Jan-02	Jinja
Luxury tented camp & restaurant	F	109,000	18	24-May-04	Jinja
White water rafting & lodge	J	588,000	77	10-June-02	Jinja
Motorcycle, rafting and off road tour operator	F	104,000	7	25-May-04	Jinja
Guest house	F	154,000	8	30-May-00	Jinja
Hotel	L	500,000	49	21-Jul-00	Jinja
Tour operation	F	197,000	14	17-May-04	Jinja
Canoeing and camping safaris	F	445,000	19	18-Apr-01	Jinja
Cottages & botanical gardens	L	100,000	16	15-Jul-03	Kabale
Accommodation and camping site	L	109,000	16	17-Jan-01	Kabarole
Establishment of a tented camp	L	165,000	40	05-Mar-04	Kabarole
Hotel	J	250,000	34	23-Nov-04	Kabarole
Expansion of resort & providing water transport	L	797,000	40	17-Aug-00	Kalangala
Hotel	F	950,000	57	28-Dec-04	Kampala
Tour and travel	L	54,000	21	07-Aug-02	Kampala
Hotel	L	4,250,000	29	18-Aug-04	Kampala
Establishment of a 3-star hotel	L	3,300,000	120	12-Oct-04	Kampala
Tour operator and travel agent	F	75,000	7	07-Mar-01	Kampala
Operation of hotel	F	5,100,000	65	25-Mar-04	Kampala
Leisure centre, accommodation & conference facilities	L	62,000	13	11-Dec-03	Kampala
Bowling alley	F	310,000	7	05-Mar-02	Kampala
Restaurant, resort & health club	F	286,000	44	28-May-01	Kampala
Entertainment	L	1,050,000	53	31-Oct-03	Kampala
Hotel development & management	F	163,000	14	07-May-02	Kampala
provision of hotel services	F	700,000	10	13-Sep-01	Kampala
Chain of holiday resorts	F	1,500,000	71	19-May-04	Kampala
Tours and travel agencies	J	905,000	22	27-Jul-01	Kampala
Tour and travel services	J	690,000	22	13-Sep-01	Kampala
Entertainment centres	F	272,000	89	28-Jul-03	Kampala
Hotel	L	896,000	130	13-Sep-00	Kampala
Bakery and restaurant	F	173,000	24	12-Jul-01	Kampala
Guestroom/house	L	3,500,000	15	03-Sep-00	Kampala
Renting out apartments	L	2,150,000	60	29-Jul-02	Kampala
Tour operator	F	100,000	14	22-Jul-03	Kampala
Hotel	F	600,000	42	03-Mar-03	Kampala
Hotel ownership & management	J	21,000,000	219	28-Apr-04	Kampala
Hotel services	F	843,000	60	30-May-00	Kampala
Restaurant and bar	F	184,000	21	21-Nov-00	Kampala
Hotel	J	105,000	15	09-Jul-01	Kasese
Resort hotel	L	1,000,000	49	28-Oct-02	Kasese

Campsite operation	F	131,000	60	05-Jul-04	Kayunga
Hotel	L	1,129,000	56	19-Jan-04	Kumi
Educational institution	L	967,000	26	05-Sep-01	Masaka
3 star hotel	L	4,170,000	51	12-Jun-01	Masaka
Hotel	F	1,850,000	24	27-Jan-04	Masindi
Hotel & camp site	L	385,000	26	22-Jul-04	Masindi
Hotel, accomodation & conferences	L	2,200,000	64	19-Oct-02	Mbale
Hotel	L	500,000	48	10-Oct-02	Mbale
Hotel, leisure holiday resort	J	400,000		13-Sep-00	Mukono
Tourism	F	100,000	10	25-Oct-04	Mukono
Paintball sports	F	200,000	40	06-Aug-04	Mukono
Hotel services	L	500,000	17	30-May-00	Pallisa
Hotel establishment	L	400,000	33	09-Dec-04	Tororo
Hotel construction	L	568,000	98	15-Sep-03	Wakiso
Business of hotels, restaurants & lodging	L	7,995,000	157	23-Oct-02	Wakiso
Hotel accommodation	L	10,000,000	1,083	08-Dec-03	Wakiso
Botanical gardens	L	255,000	32	13-Dec-04	Wakiso
Establishment of a resort	J	100,000	300	10-Sep-03	Wakiso

*L – local ownership*

**J – joint ownership**

**F- foreign ownership**

*Source: Uganda Investment Authority (2005)*

## APPENDIX 7

### DETAILS OF FACTOR ANALYSIS

**Table1: Non-collinear principle components generated from aspects of sites characteristics**

Site characteristics	Rotated component Matrix						
	Perceived attractiveness of features/services	Perceived quality of services/features	Accommodation type & size of site	Perceived quality of environment setting	Location	Potential to attract more visitors	Site category
Sports facilities (volley ball, tennis, basketball)	.818						
Entertainment recreation (music, night clubs)	.766						
Beach sand attraction	.714						
Bar/restaurant service	.697						
Swimming pool	.689						
Hotel/resort accommodation quality		.808					
Hotel/resort accommodation facilities		.781					
Sand beach quality		.642					
Accommodation type			.727				
Size of site			.665				
Bed capacity of site			.463				
Quality of lake scenery				-.601			
Calm and quiet environment				.544			
Environmental setting (gardens, plants birds)				.510			
Site Location					.711		
Site harmoniously exists and fits well in the community					.575		
Likelihood of returning to site						.782	
Visitors recommending others to a site						.471	
Category of Site							.614
Eigen values	4.538	3.445	1.928	1.549	1.365	1.202	1.148
Alpha	.883	.879	.832	.678	.615	.589	.509
Variance explained	12.391	12.014	9.861	7.653	6.945	6.613	5.409

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 17 iterations

**Table 2: Non-collinear principle components generated from visitor characteristics**

Visitor characteristics	Rotated Component Matrix		
	Visitor demographic attributes	Visitor behavior	Level of observing nature conservation guidelines
Type of visitor	.705		
Age of visitor	.634		
Gender of visitor	-.761		
Purpose of visiting		.696	
Frequency of visiting per year		-.559	
Length of stay at site in hours		.321	
Level of following nature conversation guidelines			.700
Eigen values	1.320	1.179	1.083
Alpha	.883	.873	.832
% Variance explained	18.249	16.635	16.301

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 4 iterations

**Table 3: Non-collinear components of site performance as assessed by all respondent categories**

Manifest performance indicators	Rotated component matrix						
	Nature conservation	Solid waste management	Sewage treatment	Development control	Maintenance	Water quality control	Use-intensity control
Improves scenic beauty of the area	.950						
Contributes to conservation of the vegetation in the area	.915						
Management of the site is involved with the community in conserving the environment	.904						
Environmental issues are adequately addressed in this plan or policy	.880						
Management encourages the community to share with it views about environment conservation	.878						
Encroaches on areas reserved for wildlife sanctuary	.865						
At meetings community discusses and evaluates the sites contribution to tourism and environmental conservation	.863						
Site contributes to training community members in aspects of environmental conservation	.862						
Site was established by leveling landscape of area	.819						
Site was established by reclaiming swamp area	.797						
Site exists in a gazetted conservation area	.785						
Conserves natural vegetation cover	-.783						
In village or parish meetings we discuss how the sites affect our environment	.779						
Improves scenic beauty	.778						
Site was established by grading the area	.776						
Management restrict access to lakeshore to carry out activities like fishing	.775						
There is a conservation committee in the area	.773						
Conserves natural habitat (for bird insects and other wildlife)	-.772						
Soils at or near destination	-.765						
Management encourages the community to share with it its views about the environment conservation	.758						
There is a community conservation programme	.753						
Reclaims swamps which lead to flooding in area	.743						
Contributes to vegetation conservation	.734						
Wetlands	-.724						
Management of the site supports the community in conserving the environment	.719						
Created wildlife reserve/sanctuaries	-.693						
Contributes to decrease in swamp area by reclaiming	.691						
Scenic beauty of area	-.961						

Contributes to training community members in aspects of environmental conservation	-617						
Other conserving impacts of the facilities	-613						
Noise pollution	-604						
informed or seen environmental guidelines	-567						
info medium used to communicated guidelines	-448						
adequacy of guidelines communicated	-359						
Ensures that the compound and surroundings are kept clean		.951					
There are adequate litter bins at this Site		.924					
Management has measures in place to reduce the amount of waste generated		.884					
Garbage from Site is disposed at an authorized place		.862					
Site informs visitors on how to properly dispose garbage they generate		.851					
Site contributes to improving garbage collection and disposal in this area		.849					
Site educates local residents around it on how to properly manage garbage in the community		.829					
Some of the garbage is recycled at the site		.818					
Uncollected garbage causes bad odor/smell around site		.812					
Site is threatened by the garbage dumped around it		.810					
Ensures that compound and surroundings are kept clean		.890					
Contributes to garbage generated in area which is not properly disposed		.871					
Site contributes to improving garbage collection and disposal in our area, community		.809					
Allows residents to use the sites garbage collection and disposal facilities		.804					
Face a problem of uncollected garbage		.796					
Allows residents to use their collection and disposal facilities		.783					
Increases sewage generation in area		.768					
Causes bad smell in community from garbage generated from site		.758					
Damps garbage in neighboring areas		.745					
Is there evidence of scattered/uncollected litter or rubbish?		-.815					
Do you consider the number of litter/rubbish bins to be adequate		.699					
Are they conveniently/strategically located for use?		.638					
Have you seen any litter/rubbish bins?		-.599					
In your opinion is the waste properly managed at this destination?		-.537					
Have you deposited it in the litter/ rubbish bins?		-.506					
Has it been collected by staff on the destination?		-.440					
Sewage generated is emptied and disposed at authorized place			.849				
Site educates local residents on how to properly manage sewage in the community			.836				
Sewage from site flows to the lake or swamp			.807				
Sewage from neighboring residents overflows and spills to the lake or swamp			.806				
There is a bad smell from sewage generated by neighboring residents			.797				
Site faces a problem of regular emptying of sewage septic tanks			.791				
Site faces a problem of regular emptying of sewage septic tanks			.819				
Pollutes water as a result of sewage directly flowing in the lake			.815				
Sewage from site over flows and spills to the neighborhood			.809				
Site educates residents on how to properly manage sewage in the community			.768				
Bad smell from sewage generated at site			.752				
Do you smell decomposing garbage or raw sewage in the air?			-.830				
Is there evidence of surface flowing liquid waste (like sewage)?			-.810				
Site is dully approved by the relevant district /municipal authorities				.950			
This site follows these environmental laws or guideline				.910			
Septic tank or pit latrine used was approved by relevant district authorities				.910			
Am aware of the environmental laws and guidelines that tourism sites are supposed to follow				.910			
Community leaders are consulted whenever there is an activity or aspect at the sites that affects the local community				.875			
Tourism development issues are discussed in our village /community planning meetings				.847			
Community needs to formulate environmental bye laws to guide development and management of tourism				.806			
Community leaders are consulted before new tourism sites are established				.799			
Tourism issues are discussed in our village or parish meetings				.789			
swimming pool maintenance					.800		

State of site maintenance						.785		
sports facility area maintenance						-.706		
sanctuary/ reserve area maintenance						-.697		
sand beach maintenance						-.648		
walkway maintenance						-.522		
other areas' maintenance						-.506		
garden maintenance						-.490		
Surface water (kitchen, rain water) at the destination flows into the lake						.849		
Educates residents on how to ensure good water quality						.830		
Faces problem of maintaining good water quality of the beach water						.810		
Rain water from the destination flows into lake causing water to be dirty						.819		
Educates residents on good water quality						.752		
Water quality at beach shore						-.650		
Locals from surrounding community visit the site								.893
Local residents who are not customers are restricted entry to avoid disturbance at the site								.837
Has had an increasing number of visitors over the years								.423
Eigen values	68.394	8.129	4.805	2.295	1.599	1.465	1.234	
Alpha	.694	.586	.577	.571	.566	.562	.509	
% variance explained	36.038	26.829	9.031	5.293	3.935	1.854	1.645	

**Table 4: Non-collinear factors explaining the performance of Lakeshore sites**

Items administered to respondents	Rotated component matrix				
	Quality of site features/ Services	Location	Visitor-related factors	Awareness of Environment conservation Laws and guidelines	Development control
Quality of available accommodation	.834				
Attractiveness of sports facilities (volley ball, tennis, basketball)	.810				
Quality of the swimming pool	.760				
Attractiveness of the swimming pool available	.749				
Attractiveness of entertainment recreation (music, night clubs)	.763				
Quality of a destination's environmental setting	.729				
Attractiveness of bar/restaurant services offered	.724				
Quality of sports facilities available	.701				
Quality of bar/restaurant services	.675				
Attractiveness of available beach sand	.649				
Attractiveness of the whole destination	.613				
Attractiveness of a sites environmental setting	.589				
Quality of beach sand	.558				
Quality of the environmental calmness and quietness	.524				
Quality of the lake scenery	.482				
Calmness and quietness of the sites environment set up	.471				
Attractiveness of the lake scenery	.396				
Attractiveness of available wildlife	.249				
Exists in an administrative area		.613			
Exists in a residential area		.609			
Exists in commercial area		.605			
Site harmoniously exists and fits well in the community		.598			
Tourism at this site is beneficial to the surrounding local community		.509			
Improves scenic beauty of the area		.501			
Number of tourist visits at a destination per a year			.963		
Level of tourist satisfaction offered by a site			.887		
Frequency of touring per year			.887		
Local residents' reasons for visiting a site			.664		
Visitor awareness of the environmental laws and guidelines that sites are supposed to follow				.953	
Am aware of the environmental laws and guidelines that tourism sites are supposed to follow				.943	
Site is dully approved by the relevant district /municipal authorities					.320
Community leaders are consulted whenever there is an activity or aspect at the site that affects the local community					.299
Eigen values	4.722	3.309	2.964	2.161	1.498
Alpha	0.776	0.691	0.683	0.609	0.600
% Variance explained	41.957	21.186	10.836	1.882	1.773

**Table 5: Non-collinear components of planning for sustainable tourism development in the Lakeshore region**

Manifest indicators of planning	Rotated matrix of principle components		
	Site planning	Local government planning	Central government planning
Site has a management plan or policy	.988		
Environmental issues are adequately addressed in this plan or policy	.969		
Site facilities versus the physical environment are well planned	.968		
Tourist rating of the planning of a destination	.921		
More tourism sites should be allowed to develop in this community or region		.982	
Tourism development issues are considered in our village /community planning committees		.952	
There is need to formulate a policy or guidelines to direct the development and management of tourism sites on the lakeshore			.985
I would want to have more tourism developments in our community or region			.809
Eigen values	4.866	2.407	.376
Alpha	.988	.912	.893
% Variance explained	59.904	26.257	9.444

University of Cape Town

**Table 6 Relationships between sub-independent variables and planning for STD**

Variables	SP	DTC	BTC	TFC	TC	QS	PA	QE	PDV	DL	DS	DCA	DC	CN	SWM	ST	DCo	DM	WQ	UIC	DP	FDP	ST	TF	ANC	DCo	DL	LGP	SPL	CGP	P				
SP P	1.0																																		
Sig.	.																																		
DTC P	.211*	1.0																																	
Sig.	.002	.																																	
BTC P	.194*	.664*	1.0																																
Sig.	.005	.000	.																																
TFC P	.249*	.589*	.628*	1.0																															
Sig.	.000	.000	.000	.																															
TC P	.214*	.618*	.487*	.532*	1.0																														
Sig.	.002	.000	.000	.000	.																														
QS P	.133	.492*	.456*	.422*	.451*	1.0																													
Sig.	.061	.000	.000	.000	.000	.																													
PA P	.164*	.427*	.401*	.457*	.459*	.712*	1.0																												
Sig.	.017	.000	.000	.000	.000	.000	.																												
QE P	.038	.287*	.240*	.368*	.372*	.512*	.562*	1.0																											
Sig.	.583	.000	.000	.000	.000	.000	.000	.																											
PDV P	.105	.447*	.304*	.329*	.361*	.603*	.598*	.528*	1.000																										
Sig.	.127	.000	.000	.000	.000	.000	.000	.000	.																										
DL P	.009	.359*	.273*	.300*	.411*	.642*	.546*	.507*	.572*	1.0																									
Sig.	.894	.000	.000	.000	.000	.000	.000	.000	.000	.																									
DS P	.017	.202*	.188*	.187*	.247*	.315*	.316*	.335*	.160*	.370*	1.00																								
Sig.	.809	.003	.006	.007	.000	.000	.000	.000	.020	.000	.																								
DCA P	.069	.404*	.313*	.312*	.470*	.670*	.579*	.502*	.583*	.662*	.349*	1.000																							
Sig.	.320	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.																							
DC P	.098	.368*	.281*	.338*	.772*	.596*	.558*	.440*	.479*	.542*	.312*	.635*	1.0																						
Sig.	.167	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.																						
CN P	.249*	.276*	.302*	.314*	.297*	.172*	.121	.117	.160*	.162*	.080	.161*	.177*	1.0																					
Sig.	.000	.000	.000	.000	.000	.015	.080	.089	.020	.018	.248	.019	.013	.																					
SW M	.186*	.182*	.207*	.313*	.260*	.120	.149*	.243*	.175*	.177*	.092	.157*	.157*	.679*	1.00																				
Sig.	.001	.008	.002	.000	.000	.090	.030	.000	.011	.010	.181	.022	.027	.000	.																				
ST P	.196*	.230*	.222*	.263*	.253*	.129	.107	.027	.078	.080	.041	.084	.186*	.798*	.572*	1.0																			
Sig.	.000	.001	.001	.000	.000	.068	.123	.697	.261	.245	.551	.225	.009	.000	.000	.																			
DCo P	.163*	.159*	.157*	.159*	.197*	.041	.004	.050	.049	.103	.019	.065	.077	.657*	.626*	.597*	1.0																		
Sig.	.003	.021	.023	.021	.004	.568	.948	.465	.478	.135	.787	.345	.277	.000	.000	.000	.																		
DM P	.277*	.349*	.380*	.349*	.331*	.274*	.153*	.126	.182*	.184*	.095	.191*	.218*	.822*	.592*	.761*	.568*	1.0																	
Sig.	.000	.000	.000	.000	.000	.000	.026	.066	.008	.007	.170	.005	.002	.000	.000	.000	.000	.																	
WQ C	.223*	.172*	.231*	.297*	.230*	.113	.049	.084	.152*	.101	-.070	.140*	.132	.745*	.581*	.601*	.473*	.623*	1.0																
Sig.	.000	.012	.001	.000	.001	.111	.482	.222	.027	.141	.313	.042	.062	.000	.000	.000	.000	.000	.																
UIC P	.201*	.204*	.230*	.204*	.178*	.072	.024	.063	.086	.059	.030	.061	.064	.777*	.697*	.661*	.660*	.683*	.666*	1.0															
Sig.	.000	.003	.001	.003	.010	.312	.725	.363	.214	.390	.665	.376	.367	.000	.000	.000	.000	.000	.000	.															
DP P	.388*	.443*	.417*	.505*	.532*	.417*	.371*	.295*	.303*	.305*	.217*	.408*	.471*	.571*	.429*	.501*	.410*	.576*	.434*	.455*	1.0														
Sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.002	.000	.000	.000	.000	.000	.000	.000	.000	.000	.														
FDP P	.386*	.203*	.230*	.307*	.257*	.212*	.169*	.102	.107	.143*	.105	.152*	.226*	.476*	.346*	.446*	.270*	.410*	.292*	.342*	.495*	1.00													
Sig.	.000	.004	.001	.000	.000	.003	.017	.153	.133	.044	.140	.033	.001	.000	.000	.000	.000	.000	.000	.000	.000	.													
SF P	.245*	.439*	.407*	.439*	.439*	.417*	.341*	.302*	.301*	.311*	.205*	.419*	.415*	.376*	.247*	.350*	.228*	.402*	.251*	.271*	.663*	.514*	1.0												
Sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.004	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.												
TF P	.172*	.360*	.333*	.422*	.369*	.341*	.314*	.255*	.297*	.281*	.204*	.333*	.350*	.257*	.126*	.225*	.106	.269*	.119*	.152*	.471*	.519*	.524*	1.0											
Sig.	.003	.000	.000	.000	.000	.000	.000	.000	.000	.000	.004	.000	.000	.000	.027	.000	.062	.000	.037	.008	.000	.000	.000	.											
ACG P	.184*	.420*	.389*	.485*	.443*	.398*	.379*	.305*	.281*	.291*	.195*	.398*	.421*	.227*	.156*	.213*	.160*	.242*	.159*	.169*	.406*	.557*	.405*	.278*	1.0										
Sig.	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.006	.000	.000	.000	.006	.000	.005	.000	.005	.003	.000	.000	.000	.000	.										
DCo P	.325*	.402*	.372*	.466*	.421*	.381*	.359*	.283*	.262*	.272*	.185*	.379*	.400*	.402*	.271*	.376*	.276*	.430*	.276*																

TFC – tourists following conservation guidelines  
TC – tourist characteristics  
QS – quality of services and facilities  
PA – perceived attractiveness  
QE - quality of environmental setting  
PDV – potential of destinations to attract visitors  
DL – destination location  
DS – destination size  
DCA- destination category  
DC – destination characteristics  
CN – conservation  
SWM – solid waste management  
ST – sewage treatment  
Dco – development control  
WQC – water quality control  
UIC – use intensity control  
DP – development performance  
FDP – factors behind performance  
ST – site factors  
TF – tourist factors  
ANC – awareness of nature conservation  
LGP – local government planning  
SPL – site planning  
CGP – central government planning  
P - planning

University of Cape Town