

**SUSTAINABILITY INDICATORS FOR MONITORING TOURISM ROUTE
DEVELOPMENT IN AFRICA**



Francois Viljoen

Thesis presented in partial fulfilment of the requirements for the degree of Master of Arts
at the University of Stellenbosch.

Supervisor: Dr. SLA Ferreira

December 2007

DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature:

Date:

SUMMARY

Tourism routes or networks have been identified as a tool for local economic development and could also contribute towards social development of communities, and conservation of the natural environment. In order to determine whether the development of routes have the desired effects on the economy, society and the environment, a set of sustainability indicators (SIs) needs to be developed to measure the possible effects.

The aim of this study is to identify appropriate SIs that could be applied to tourism route development in Africa; to identify a suitable method of identifying route-specific indicators; and to test the suitability of these indicators in two case studies, namely the Caprivi Wetlands Paradise route and the Barotse Trails Route. The study area comprises part of the proposed Kavango-Zambezi (KAZA) Transfrontier Conservation Area and includes the south-western part of Zambia and the Caprivi region in north-eastern Namibia.

The objectives of the study are to determine the elements of a sustainable tourism route from existing literature; to identify a framework for selecting both generic and route-specific SIs; to select appropriate indicators for tourism route development in the African context; and to do a baseline assessment for the two case study routes to determine the suitability of the selected methods and indicators. Data were collected by making use of structured interviews and focus groups. Collected data on individual businesses are combined and presented collectively for each route by making use of sustainability assessment maps (SAMs). In addition, a method of identifying route-specific indicators was selected which makes use of the pressure-state-response (PSR) framework previously used for identifying environmental indicators.

The results of the study show that the identified indicators provide a means of determining overall sustainability of routes or networks based on the principle of the triple bottom line. SAMs are a good way of presenting data to stakeholders in a

simplified way. The results also indicate that the PSR framework can be adequately adapted to identify indicators in conjunction with communities in a participative manner.

Recommendations are made for improving the overall sustainability of routes or networks and for increasing their network functionality. Recommendations include the possibility of investigating the use of geographic information systems in mapping SIs.

KEYWORDS: Sustainability indicators; tourism routes; monitoring; pressure-state-response; sustainability assessment maps; tourism networks; route development.

OPSOMMING

Toerisme roetes of netwerke is al geïdentifiseer as 'n manier om plaaslike ekonomiese ontwikkeling te bevorder, dit kan tot die sosiale ontwikkeling van gemeenskappe bydra en ook bewaring van die omgewing bevorder. Om te kan bepaal of die ontwikkeling van roetes egter die beoogde uitwerking op die ekonomie, gemeenskappe en die omgewing het, moet 'n stel volhoubaarheidsaanwysers geïdentifiseer word om die aspekte te kan meet.

Die mikpunt van die studie is om gepaste volhoubaarheidsaanwysers te identifiseer wat toegepas kan word op toerisme roete ontwikkeling in Afrika; om 'n metode te vind wat generiese en roete-spesifieke aanwysers kan identifiseer; en om die toepaslikheid van die aanwysers en metodes te toets deur 'n grondslag peiling te doen waar twee toerisme roetes as gevalle studies gebruik word. Die studiegebied is deel van die Kavango-Zambezi (KAZA) Oorgrenspark en sluit dele van suid-westelike Zambië en Caprivi strook in noord-oostelike Namibië in.

Die doelwitte van die studie is om die boustene van 'n volhoubare toerisme-roete te identifiseer deur bestaande literatuur oor die onderwerp te bestudeer; om 'n raamwerk te bepaal waardeur generiese en roete-spesifieke volhoubaarheidsaanwysers geïdentifiseer kan word; om toepaslike volhoubaarheidsaanwysers vir toekomstige roete-ontwikkeling te selekter wat gebruik kan word in die konteks van Afrika; en om 'n grondslag te bepaal vir die twee roetes wat as gevalle studies gebruik word, naamlik die Caprivi Wetlands Paradise roete en die Barotse Trails Route. Data is ingesamel deur gestruktureerde onderhoude en fokus groepe. Die data wat ingesamel is oor individuele besighede is saamgestel en kollektief aangebied per roete deur van volhoubaarheids-skattings-kaarte gebruik te maak. 'n Metode om roete-spesifieke aanwysers uit te wys is bepaal deur van die "pressure-state-response" raamwerk gebruik te maak wat al voorheen gebruik is om omgewingsaanwysers te identifiseer.

Die resultate wys dat die volhoubaarheidsaanwysers wat in die studie geïdentifiseer is gebruik kan word om die algehele volhoubaarheid van toerisme roetes of netwerke te bepaal gebaseer op die ekonomie, gemeenskappe en die omgewing. Volhoubaarheids-skattings-kaarte is 'n goeie manier om inligting voor te stel aan rolspelers in 'n eenvoudige formaat wat maklik verstaan kan word. Die resultate wys ook dat die “pressure-state-response” raamwerk aangepas kan word om met die deelname van gemeenskappe volhoubaarheidsaanwysers uit te wys.

Aanbevelings om die algehele volhoubaarheid en die funksionaliteit van roetes of netwerke te verbeter word gemaak. Die aanbevelings sluit die moontlike gebruik van geografiese inligting stelsels (GIS) om volhoubaarheids aanwysers te karteer in.

ACRONYMS

AMOEBa: General method for ecosystem description and assessment (Dutch)
ATSI: Amoeba of tourism sustainability indicators
BTS: Barometer of tourism sustainability
CBD: Convention on Biological Diversity
CCC: Carrying capacity concept
CETRA: Centre for Tourism Research in Africa
CPP: Caprivi Promotional Project
CTD: Community tourism development
CWP: Caprivi Wetlands Paradise
EA: Environmental assessment
ECA: Environmental Conservation Act
EIA: Environmental impact assessment
FTTSA: Fair Trade in Tourism South Africa
GIS: Geographic information system
GNP: Gross national product
GPS: Global positioning system
HTTI: Hotel and Tourism Training Institute
IRDNC: Integrated Rural Development and Nature Conservation
IUCN: International Union for Conservation of Nature and Natural Resources
KAZA: Kavango Zambezi
LAC: Limits of acceptable change
LED: Local economic development
LRT: Leisure, recreation and tourism
M&E: Monitoring and evaluation
MET: Ministry of Environment and Tourism
NACOBTA: Namibia Community Based Tourism Association
NEMA: National Environmental Management Act
NGO: Non-governmental organization
OUZIT: Okavango Upper Zambezi International Tourism

PSR: Pressure-state-response
RF: Route forum
SAM: Sustainability assessment map
SBSTTA: Subsidiary Body on Scientific, Technical and Technological Advice
SD: Sustainable development
SI: Sustainability indicator
SME: Small and medium enterprise
SMME: Small, medium and micro enterprise
SoER: State of environment report
STD: Sustainable tourism development
TFCA: Transfrontier conservation area
UNDP: United Nations Development Programme
UNEP: United Nations Environment Programme
UNESCO: United Nations Educational, Scientific and Cultural Organization
WCED: World commission on Environment and Development
WTO: World Tourism Organization
WTTC: World Travel and Tourism Council
ZAWA: Zambia Wildlife Authority

ACKNOWLEDGEMENTS

I would like to thank the following people:

- My study leader, Dr. Sanette Ferreira, for her guidance;
- Mr. Noel de Villiers, director of Open Africa, for his mentorship and continued support;
- My girlfriend, Maryna, for all her support over the past three years;
- My parents for their support towards my studies;
- Dr. Pieter de Necker for his inputs; and
- All the participants in the research for their valuable input.

CONTENTS

DECLARATION	ii
SUMMARY	iii
OPSOMMING	v
LIST OF ACRONYMS	vii
ACKNOWLEDGEMENTS	ix
TABLES, FIGURES AND BOXES	xiv
CHAPTER 1: TOURISM ROUTE DEVELOPMENT IN AFRICA	1
1.1 INTRODUCTION	1
1.2 BACKGROUND TO THIS RESEARCH TOPIC	4
1.2.1 The role of Open Africa	5
1.2.2 The researcher	6
1.2.3 Preliminary reading	6
1.3 THE RATIONALE FOR THE STUDY	8
1.3.1 The research problem	8
1.3.2 The overarching aim of the research	8
1.4 RESEARCH DESIGN AND METHODOLOGY	9
1.5 STRUCTURE OF THE THESIS	10
1.6 THE STUDY AREA	12
1.6.1 The Caprivi – Namibia’s wetland paradise	12
1.6.2 The Barotse Trails Route	16
CHAPTER 2: TOURISM AND SUSTAINABILITY	18
2.1 GEOGRAPHERS AND TOURISM RESEARCH	18
2.2 TOURISM AND SUSTAINABLE DEVELOPMENT	19
2.2.1 The tourism/sustainability nexus	19
2.2.2 The application of sustainable development principles in tourism	21
2.2.3 Hunter’s sustainable tourism scenarios	22
2.2.4 Tourism sustainability criteria	23
2.3 RESPONSIBLE TOURISM	26

2.4	TOURISM AND LOCAL ECONOMIC DEVELOPMENT _____	29
2.5	TOURISM NETWORKS AS A VEHICLE FOR LOCAL ECONOMIC DEVELOPMENT _____	33
2.6	COMPONENTS OF A SUSTAINABLE TOURISM NETWORK _____	39
2.7	SUSTAINABILITY INDICATORS FOR TOURISM _____	42
2.7.1	Origins of sustainability indicators _____	43
2.7.2	The role of indicators _____	45
2.7.3	The Delphi approach to developing indicators _____	47
2.8	SUMMARY _____	48
CHAPTER 3: METHODOLOGY: IDENTIFYING SUSTAINABILITY		
	INDICATORS _____	50
3.1	RESEARCH DESIGN _____	50
3.2	RESEARCH METHODOLOGY _____	50
3.2.1	Generic sustainability indicators for monitoring tourism routes _____	51
3.2.1.1	Identify the systems – the human system and natural ecosystem _____	52
3.2.1.2	Identify the dimensions for sustainable tourism development _____	52
3.2.1.3	Identify the main indicators _____	54
	<i>a) Preliminary list of sustainability indicators _____</i>	<i>54</i>
	<i>b) Refined list of sustainability indicators _____</i>	<i>55</i>
3.2.1.4	Data collection _____	57
3.2.1.5	Determining the measurement scale of sustainability indicators _____	58
3.2.1.6	Determining gradations of sustainability _____	59
3.2.1.7	Develop tourism sustainability assessment maps _____	60
3.2.1.8	Evaluation of sustainability assessments _____	64
3.2.2	Route-specific sustainability indicators _____	64
3.2.2.1	The pressure-state-response framework _____	65
3.2.2.2	Focus group meetings _____	66
3.3	SPECIFICATION OF SUSTAINABILITY INDICATORS _____	67
3.3.1	Indicators of social sustainability _____	70
3.3.2	Indicators of economic sustainability _____	73
3.3.3	Indicators of environmental sustainability _____	75

3.3.4 Indicators of network functionality _____	79
3.4 ROUTE-SPECIFIC MONITORING _____	81
CHAPTER 4: APPLICATION OF THE SUSTAINABILITY INDICATORS _____	83
4.1 THE TARGET GROUP PROFILE _____	83
4.2 DATA PROCESSING AND ANALYSIS _____	84
4.3 BASELINE ASSESSMENT OF GENERIC INDICATORS _____	87
4.3.1 The Caprivi Wetlands Paradise route _____	90
4.3.2 The Barotse Trails Route _____	92
4.3.3 Social issues _____	94
4.3.4 Economic issues _____	97
4.3.5 Environmental issues _____	101
4.3.6 Network functionality _____	104
4.4 FOCUS GROUP MEETINGS _____	105
4.4.1 Tourism features _____	106
4.4.2 The PSR exercise _____	108
CHAPTER 5: RECOMMENDATIONS AND CONCLUSION _____	114
5.1 GENERIC SUSTAINABILITY INDICATORS _____	114
5.1.1 Social development _____	114
5.1.2 Economic development _____	118
5.1.3 Environmental protection _____	119
5.1.4 Network effectiveness _____	121
5.2 ROUTE-SPECIFIC INDICATORS _____	122
5.3 SUITABILITY OF THE MONITORING SYSTEM _____	123
5.4 RECOMMENDATIONS FOR FURTHER RESEARCH _____	125
5.5 CONCLUSION _____	126
REFERENCES _____	127
APPENDICES _____	146
APPENDIX A: Refined list of sustainability indicators _____	147
APPENDIX B: The participant questionnaire _____	151
APPENDIX C: The community questionnaire _____	154
APPENDIX D: The customer questionnaire _____	156

APPENDIX E: Participant list - Caprivi Wetlands Paradise _____	158
APPENDIX F: Participant list – Barotse Trails Route _____	160

TABLES, FIGURES AND BOXES

TABLES

Table 2.1 Features of routes and networks	37
Table 2.2 The uses of routes and networks by the various main participants	39
Table 3.1 Generic sustainability indicators for monitoring tourism routes	56
Table 3.2 Social indicators of sustainability	70
Table 3.3 Economic indicators of sustainability	74
Table 3.4 Environmental sustainability indicators	76
Table 3.5 Network functionality indicators	79
Table 4.1 Results of the questionnaire survey	89
Table 4.2 Product types offered on the routes	98

FIGURES

Figure 1.1 The research design	11
Figure 1.2 The study area	13
Figure 1.3 The Caprivi wetlands Paradise route - eastern Caprivi	15
Figure 1.4 The Caprivi Wetlands Paradise route - western Caprivi	15
Figure 1.5 The Barotse Trails Route	16
Figure 2.1 Key elements of responsible tourism	27
Figure 3.1 Framework for the assessment of results of networking for sustainable development	53
Figure 3.2 The barometer of tourism sustainability (BTS) using hypothetical data	62
Figure 3.3 A hypothetical AMOEBA	62
Figure 3.4 The pressure-state-response framework	66
Figure 3.5 Collecting and manipulating data on the sustainability indicators	69
Figure 4.1 Processing the generic sustainability- and route-specific indicator data	84
Figure 4.2 The monitoring system	87
Figure 4.3 AMOEBA for the Caprivi Wetlands Paradise route	90
Figure 4.4 Barometer of Sustainability – Caprivi Wetlands Paradise route	91

Figure 4.5 AMOEBA for the Barotse Trails Route	92
Figure 4.6 Barometer of sustainability – Barotse Trails Route	93
Figure 4.7 Participant responses on the social sustainability indicators	95
Figure 4.8 Seasonality of businesses on the routes	97
Figure 4.9 Product Types – Barotse Trails Route	98
Figure 4.10 Product Types – Caprivi Wetlands Paradise	99
Figure 4.11 Annual turnover of businesses on the two tourism routes	100
Figure 4.12 Full-time and part-time seasonal employment on the two routes	101
Figure 4.13 The use of environmentally friendly technologies, techniques and practices on the two routes	102
Figure 4.14 Recycling behaviour on the two routes	103
Figure 4.15 Tourism features – Mwandu	106
Figure 4.16 Tourism features – Lusu Area	107
Figure 4.17 Tourism features – Livingstone	108
Figure 4.18 PSR framework – Mwandu	109
Figure 4.19 PSR Framework – Lusu area	111
Figure 4.20 PSR Framework – Livingstone	112

BOXES

Box 2.1 Characteristics of successful clusters	40
Box 2.2 Guidelines for clarifying the goals of sustainable tourism development	47

CHAPTER 1: TOURISM ROUTE DEVELOPMENT IN AFRICA

1.1 INTRODUCTION

Tourism is a major sector of the world economy (WTO 2004); it generates more than a trillion dollars annually and plays a key role among the instruments to fight poverty, thus becoming a primary tool for sustainable development (WTO 2007a). Declining economic activity, restructuring of the agricultural sector, dwindling rural industrialization and out-migration of higher-educated youth, have led to the adoption of tourism in many western nations as an alternative development strategy for the economic and social regeneration of rural areas (Briedenhann & Wickens 2004; Meyer 2004). Given the fact that sub-Saharan Africa has only a small share (5%) of world travel and tourism (WTO 2006a), and the tourism sector is expected to continue growing dynamically worldwide, these African countries can realistically expect to increase their share of the market off such a low base (Christie & Crompton 2001). The World Tourism Organization (WTO 2007b) projects almost 1.6 billion international tourism arrivals worldwide by 2020, representing a \$2 trillion tourism economy. Although Africa has been the fastest growing region in tourism for the second consecutive year (WTO 2007b) and sub-Saharan Africa is leading the continent, it still attracts only a small share of the total market (WTO 2005a). The region's tourist arrival numbers increased from 1% in 2004 (WTO 2005a) to 5% in 2006 (WTO 2005b) and it still contributes less to the regional economy than what is possible. South Africa's tourism sector is a major contributor to the economy. According to the World Travel and Tourism Council (WTTC 2002: 6), South Africa's travel and tourism was expected to "generate R108.5 billion of economic activity (total demand) for 2002 and accounts for 1,148,000 jobs, representing 6.9% of total employment." Tourism can thus contribute significantly to development and its role in development has evolved considerably in the past 15 years (Elliot & Mann 2005). "It is increasingly considered a stimulant not just for economic growth, foreign exchange and employment, but also an opportunity for host community participation in biodiversity conservation, urban growth and development, infrastructure overhaul and planning, rural development,

environmental restoration, coastal protection and cultural heritage preservation (Elliot & Mann 2005: 1).”

The positive feature that (international) tourism does not depend on preceding developments in other sectors (like agriculture or mining) makes it a potential force to break the development impasse of many African economies (Wahab & Pigrim 1997). Developing countries, and Africa in particular, possess a rich resource base of pristine natural and cultural treasures and has a significant comparative advantage in its potential to attract tourists in search of authentic new experiences (Open Africa 2002; Wahab & Pigrim 1997). It would be naïve to assume that tourism, be it international or domestic, can overcome all the obstacles in the path of African economic development. In the less-developed countries of sub-Saharan Africa, afflicted by debilitating rural poverty, tourism is perceived to be one of the few feasible options for development (Wahab & Pigrim 1997). Compelled by the pressures of restructuring, and driven by demands for economic growth and job creation, governments in developing countries frequently fall prey to the dangers of random, ad hoc development, without due regard to the economic and cultural well-being of rural communities, the conservation of the environment or the inclusion of local residents in decision-making (Briedenhann & Wickens 2004). In addition to this, there may be a danger that too much is expected of the tourism industry in general, and as the vehicle to activate or accelerate economic development in African cities, regions or rural areas (CETRA 2005).

Tourism routes or networks have been identified as a possible means to encourage development that includes communities in the planning for tourism at the local level (Meyer 2004). Broadly speaking, a tourism route can be seen as a network of tourism stakeholders in a given geographical area with the common goal of increasing the numbers of tourists to a region. The prime objectives of such routes are the marketing of tourism products in the given area, setting up of collaborative networks for tourism, and using tourism as a means of stimulating social, economic and cultural development, thus contributing to local economic development and improving the quality of life of local people (Briedenhann & Wickens 2004; Hall 2005; Moulin & Boniface 2001; Open Africa 2005). Although the potential of tourism routes has long been realized in developed

countries (Meyer 2004), the concept of route development in Africa is now steadily gaining recognition as a means of encouraging sustainable tourism development (STD). This is shown by the number of projects initiated to establish such routes in Africa:

- The Ksour Route, Algeria - UNDP/UNESCO (UNESCO s.d.);
- The 1000 Hills Experience Route, South Africa - Local Government Project (The Deloitte & Touche Consortium 2002);
- Slave Route cultural programme, Senegal-Gambia-Guinea - WTO/UNESCO (UNESCO 2006a)
- The Ghana National Slave Route Project, Ghana - UNESCO/Ministry of Tourism and Modernization (UNESCO 2006b)
- The Cape to Namibia Route – Cape Town Routes Unlimited and the Namibian Tourism Board (Allie 2006)

“STD guidelines and management practices are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche tourism segments” (WTO 2004: 8). Sustainability principles refer to the environmental, economic and socio-cultural aspects of tourism development, and according to the WTO (2004) a suitable balance must be established between these dimensions to guarantee its long-term sustainability. Thus, sustainable tourism should:

- 1) 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.
- 2) 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.
- 3) 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 that contribute to poverty alleviation.
- 4) Sustainable tourism should also maintain a high level of tourist satisfaction and ensure a meaningful experience to the tourists, raising their awareness about

sustainability issues and promoting sustainable tourism practices amongst them (WTO 2004).

STD requires the participation of all relevant stakeholders, as well as strong political leadership to ensure wide participation and consensus building (Choi & Sirakaya 2006; WTO 2004). Achieving sustainable tourism is a continuous process and it requires constant monitoring of impacts, introducing the necessary preventive and/or corrective measures whenever necessary (Green, Hunter & Moore 1990). Various tools exist to measure the sustainability of tourism. One of these tools is the development of indicators to measure sustainability against a specified set of criteria. It is against this background that the research is focused on developing a set of sustainability indicators (SIs) for monitoring tourism route development in Africa.

1.2 BACKGROUND TO THIS RESEARCH TOPIC

The research was commissioned by Open Africa, a South African non-governmental organization (NGO) that develops tourism routes in Africa. The organization makes use of a participatory approach to developing tourism in predominantly rural areas in Africa, through linking tourism, job creation and conservation in a mutually sustainable way (The African Dream Project 2000 in Briedenhann & Wickens 2004). Open Africa's vision is *to link the splendours of Africa in a continuous network of tourism routes from the Cape to Cairo* (Open Africa 2005). The system, which was devised through interactively linking geographical information systems (GIS) technology with the Internet, has resulted in a fully inclusive and community-participative workshop method for developing tourism routes. The website (www.africandream.org) provides a platform for marketing what each route has to offer. To prevent any barriers to entry no charge is levied for this online exposure.

1.2.1 The role of Open Africa

According to Open Africa (2006a: 1), the organization has six primary activities:

1. “To respond to community requests regarding the formation of routes by facilitating the route development process;
2. To assist in raising the funds necessary to cover the cost of establishing routes;
3. To develop and act as custodian of the website on which the routes are loaded;
4. To market the Open Africa brand for the network;
5. To facilitate the management and dissemination of the hands-on knowledge that builds up within the network; and
6. To act as a support base for the established routes and to deliver proof to them of the value of being part of the network.”

Open Africa has developed a systemized method of developing tourism routes that has been recognized by authors such as Briedenhann & Wickens (2004) for its true bottom-up approach to the development of tourism. If the model Open Africa has developed is successful for developing tourism routes or networks in a sustainable manner it can be replicated in other developing countries that are facing similar challenges with regard to community participation in tourism. Tosun (2000) states that a participatory development approach to tourism would encourage the implementation of principles of STD by creating better opportunities for local people to secure benefits from tourism development taking place in their localities. This can result in more positive attitudes to tourism development and conservation of local resources (Inskeep 1994) and development of the local economy (Rogerson 2002b). In order to confirm that this is a successful and replicable model however, Open Africa needs a set of indicators that can measure the impacts of these routes on sustainable development (SD).

Open Africa has developed over 40 community-driven tourism routes to date and the need is now apparent to develop a monitoring and evaluation (M&E) system that can track the results these routes have on the areas and communities they aim to assist

through tourism development. The organization identified the need for an M&E system for the following reasons:

- They need to be able to show donors and corporate funders the effects of establishing these routes on the economy, environment and social systems of the areas in which they are developed;
- They need to show route participants the benefits of being part of the route in order to secure their ongoing involvement and commitment; and
- To identify potential negative effects of tourism on the economy, environment and social systems so that mitigation measures can be taken in time to avert them (Open Africa 2007).

The results of an effective monitoring system can help the organization to raise additional funds and to strengthen the network of already developed routes.

1.2.2 The researcher

The researcher is a full-time employee of Open Africa and the research is done as part of the fulfilment of the requirements for a Master of Arts in Geography and Environmental Studies. The research was undertaken as part of the development of two new tourism routes in southern Africa. The researcher conducted all the development workshops and the research was done in conjunction with these workshops. The literature review highlighted a few important issues with regard to monitoring and informed the research.

1.2.3 Preliminary reading

The review of literature revealed that STD is not a new concept and although it is often discussed and contained in many policy documents, few practical methods of implementation have emerged over the years (Ko 2005). The literature that was surveyed helped to determine and define the different concepts involved in research of this nature. The origins of SD were identified and the link with tourism ascertained. Different methods of measuring STD were investigated to help decide what method would be best

suiting to tourism routes or networks. The concept of responsible tourism was explored as an outcome of sustainable tourism before looking at the link between tourism and local economic development. The key principles of local economic development (LED) and tourism, as identified by Rogerson (2002a), provided insights into how tourism can contribute to LED in a meaningful way and also highlighted some of the pitfalls of LED programmes. Rogerson (2002a) also stresses the importance of monitoring and especially the inclusion of local communities in such efforts. This led to the idea of developing a method of compiling route specific indicators as part of the study. The purpose would be to get communities to be more involved themselves by asking them to identify the issues that concern them that they would like to monitor.

In trying to further understand the role of tourism in LED, existing literature helped to explore the link between tourism networks and LED, and their role as a vehicle for LED. Open Africa also makes use of the network approach for developing tourism to ensure participation and collaboration among tourism role players. The literature contributed to understanding this approach and revealed definite benefits associated with a network approach to LED and tourism development in general.

If developing tourism routes can contribute to development, the research needs to determine what constitutes a sustainable tourism network. The work of Porter (1998) in Jackson (2006) was instrumental in understanding the optimal functioning of a network. The potential link between tourism networks and sustainability and the identification of suitable indicators of measurement were investigated through the work of Spenceley (2001) on responsible tourism.

Finally, the literature led to the origins and the role of indicators in measuring sustainability and the investigation of sustainability assessment through the use of indicators. The work of McCool & Moisy (2001) proved useful in determining criteria for indicators, while Ko's (2005) work provided insights into issues of concern regarding previous studies on sustainability assessment. The work of Ko (2005) was instrumental in determining the design of the research, as a conceptual approach for sustainability assessment was developed by the author that could be used here as a framework.

1.3 THE RATIONALE FOR THE STUDY

Although many authors have investigated, proposed and applied different methods of assessing sustainability of tourism development (Ahn, Lee & Shafer 2002; Buckley 1999; Choi & Sirakaya 2006; Gossling et al. 2002; Ko 2005; Kuo, Hsiao & Yu 2004; Li 2004; Miller 2001; WTO 2004), little research has been done on assessing the sustainability of tourism routes or networks within the African context.

1.3.1 The research problem

In order to determine if the development of routes has the desired effects on the economy, society and the environment, a set of SIs are needed to monitor and evaluate the sustainability of routes. Rogerson (2002a) has pointed to the importance of including communities in any monitoring efforts. The monitoring system must also take into account the contexts in which these predominantly rural African routes operate, and make sure that the community is part of the monitoring efforts.

1.3.2 The overarching aim of the research

The research's purpose is to develop a participatory procedure or method for assessing the sustainability of two rural tourism routes in Africa. In order to reach this aim the following objectives were identified, namely:

- i) Establish a link between the concepts of sustainable/responsible tourism and tourism route development by screening the appropriate literature;
- ii) Identify, through desktop research, all possible generic SIs that could assist in the monitoring and evaluation of existing tourism routes in Africa;
- iii) Develop or adapt a procedure for the selection of the most appropriate generic and route-specific SIs by involving local participants; and
- iv) Test the suitability of the selected SIs in two case study applications.

The desired outcomes of the research are to provide a set of generic indicators that can be used as a base for monitoring tourism route development, including a method for identifying route-specific indicators, and also to make recommendations for future monitoring efforts to measure the impact of tourism route development in the African context.

1.4 RESEARCH DESIGN AND METHODOLOGY

In order to select and test the generic indicators, the research methodology draws on the work of Ko (2005). He developed a conceptual approach for conducting a sustainability assessment in which he identified eight steps, namely:

1. Identify the systems—the human system and the natural ecosystem;
2. Identify the main dimensions—eight dimensions for sustainable tourism development;
3. Identify the main indicators—indicators for sustainable tourism development;
4. Assess the scale of sustainability;
5. Determine gradations (sectors of scale) of sustainability;
6. Compile tourism sustainability assessment maps;
7. Extend the barometer of tourism sustainability (BTS) and amoeba of tourism SIs (ATSI) over time; and
8. Evaluate sustainability.

Unfortunately, due to time constraints, all the steps could not be completed as proposed by Ko.

The literature study also revealed a useful method of Hammond et al. (1995) for the selection of route-specific indicators. Consequently, the pressure-state-response (PSR) framework was selected for this research. In this framework the researcher selected indicators by using focus group meetings with all participants in a tourism route. The suitability of this method in selecting indicators is evaluated later.

The research procedure comprised an introduction to the study, the overarching aim and objectives that were set out, the review of literature, empirical data collection methods and procedures, the processing and ordering of the data collected in the field, analysis of this data, the interpretation of the data, the results and findings of the research, and lastly conclusions derived from the research. Figure 1.1 sets out the methodology diagrammatically and is treated in more detail in chapter three. The following section outlines the structure of the study.

1.5 STRUCTURE OF THE THESIS

Chapter one sets the scene for the thesis by explaining the context of the study, the design and structure, and the study area. The second chapter reviews the appropriate literature. Chapter three explains the methodology followed. First, the key concepts and variables are introduced, followed by the instruments that were used to collect empirical data. Second, the sample design is discussed as well as the sampling techniques, the data collection methods employed and the general procedure for conducting the fieldwork is described. Third, the procedure used in capturing and editing data is recorded, followed by details on the rationale behind the selection of data analysis procedures and the indicators. The chapter is ended with a discussion on the quality of the data collected and their shortcomings.

Chapter four presents the results of the fieldwork. The results of the study are then structured according to the different themes that were identified and the chapter is concluded by interpreting the main findings.

Chapter five deals with recommendations and conclusions of the research and starts with a summary and discussion of the main findings by drawing on the detailed results set out in previous chapters. The findings of the study are related to those in the existing body of literature. This is followed by a discussion on gaps and anomalies in the data and in the results in general. The relevance of the study is pointed out before recommending further research possibilities. Lastly a general conclusion to the study is given, followed by a reference list and appendices.

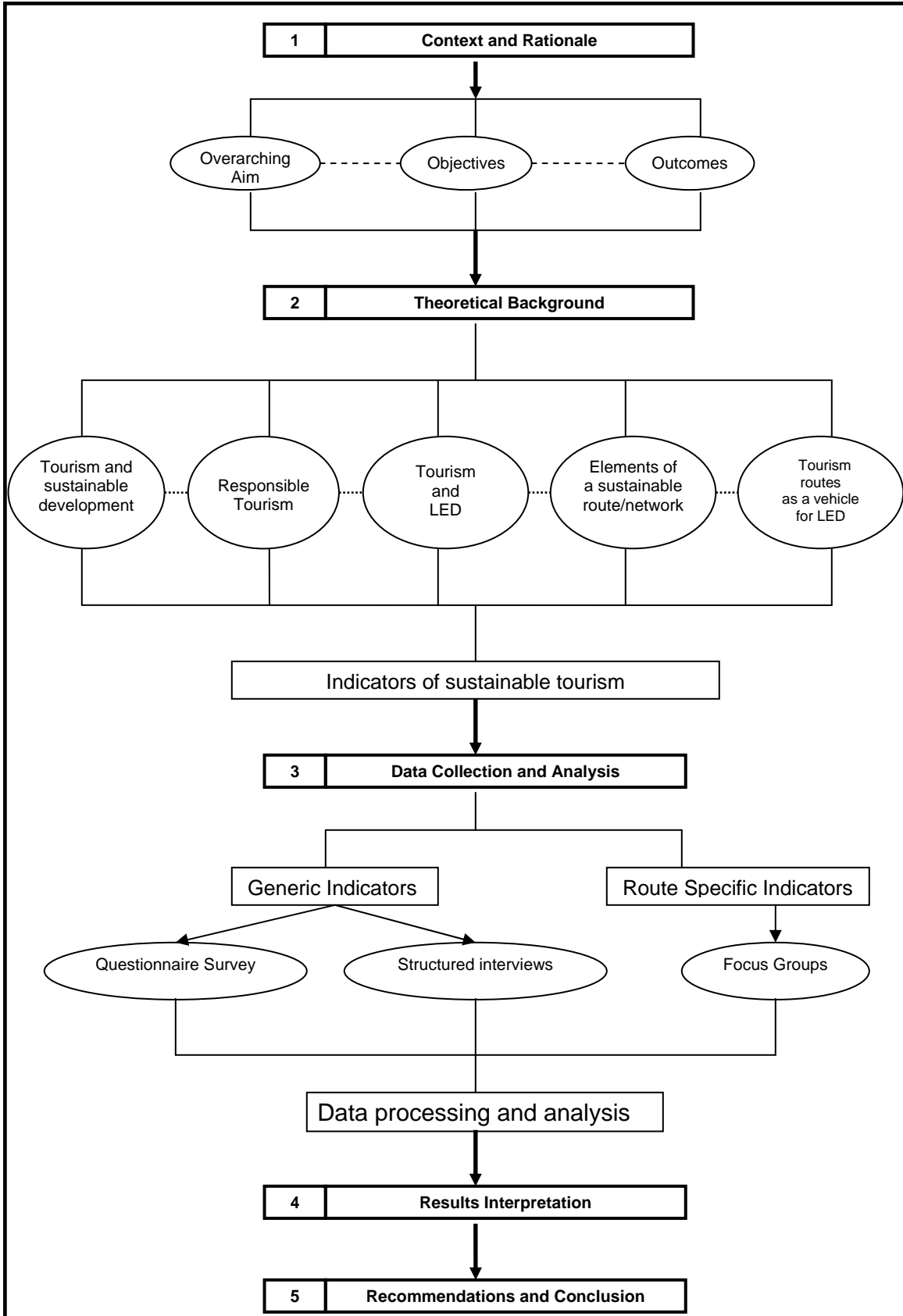


Figure 1.1 Research design

1.6 THE STUDY AREA

The testing of the SIs was done on two tourism routes known as the Caprivi Wetlands Paradise Route and the Barotse Trails Route. These routes are located in the north-eastern corner of Namibia known as the Caprivi and in the south-western corner of Zambia respectively (see Figure 1.2).

1.6.1 The Caprivi – Namibia’s wetland paradise

Projecting eastwards from Namibia, Caprivi lies in the centre of southern Africa. It is bordered by four countries i.e. Angola (west), Zambia (north), Botswana (south) and Zimbabwe (east). Three perennial rivers cross Caprivi, making it a wetland paradise in the otherwise arid Namibia. The total population of Caprivi was recorded as 80 000 in the 2001 population census carried out by the Namibian Central Bureau of Statistics (Caprivi Promotional Project 2006).

Most of this population lives a traditional, rural existence in villages located along the main roads. Agriculture is the most important livelihood activity in Caprivi and there is also a strong reliance on the use of natural resources such as wood for fuel and building, grass for thatching, veld foods (including waterlily bulbs) and fish. Typical of Africa, wealth in these rural areas is traditionally invested in cattle, which also have a strong social value (Mendelsohn & Roberts 1997).

Katima Mulilo is the main town in the region, with Kongola, Bukalo, Linyanti and Ngoma being much smaller centres. Due to its unique, linear (finger) shape which gives Caprivi vast international borders, the region has an interesting ethnic history with ties to neighbouring Zambia, Botswana and Angola. The Mafwe and Subia are the two main ethnic groups in East Caprivi, where Silozi (a Zambian language) is the predominantly spoken, and only written indigenous language of the region.

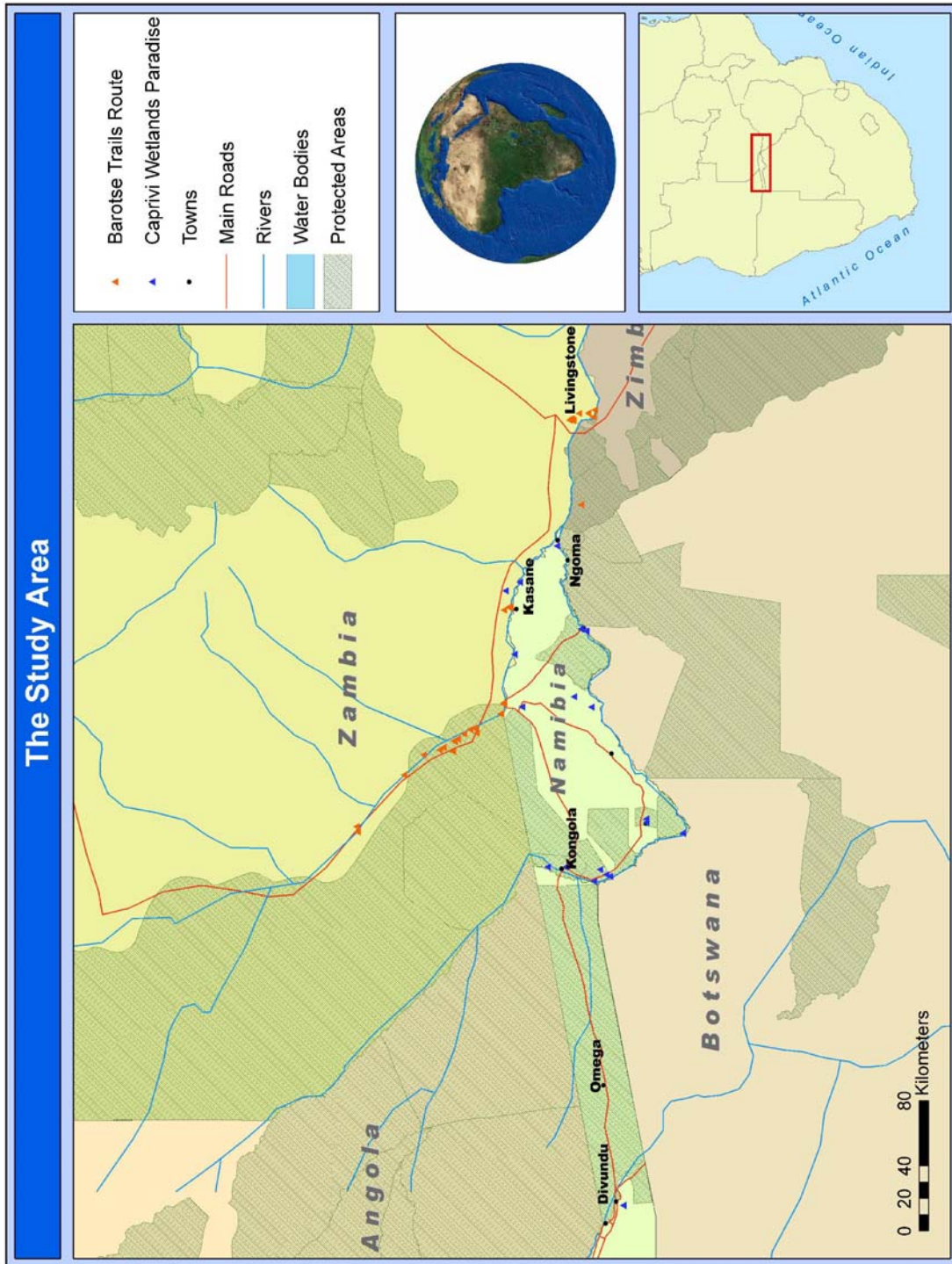


Figure 1.2 The study area

In the Bwabwata National Park there are villages housing a majority population of Khwe San who form the remnants of a much larger San (or Bushmen) population that extends from Botswana to Angola (Caprivi Promotional Project 2006). The continued residence of so many indigenous people in a state-protected area is an unusual feature in southern Africa and a testament to the Namibian government's commitment to co-management and benefit sharing (Mendelsohn & Roberts 1997).

The Caprivi's climate is more tropical than the rest of Namibia, with a higher rainfall (average annual rainfall is between 550mm and 700mm per year) and warmer winters. Rainfall can be very variable and drought years are common. Most rain falls in summer, peaking in January and February (Mendelsohn & Roberts 1997).

Development of the Caprivi Wetlands Paradise (CWP) route started in October 2005 with workshops held in Katima Mulilo. The route starts in the western part of the Caprivi at the Popa Falls and follows the Trans-Caprivi Highway for approximately 500km to Katima Mulilo, making detours into the surrounding areas (see Figures 1.3 and 1.4). The route comprises a variety of community-based and well established products and aims to promote tourism to this remote corner of Namibia paradoxically known better for the war that took place here than for tourism (Pauw 2006). At the time of conducting the research in October 2005, the route was still being developed, but has since been launched (November 2006) to the media and other stakeholders in tourism.



Figure 1.3 The Caprivi Wetlands Paradise route - eastern Caprivi (Source: Berensford 2007)

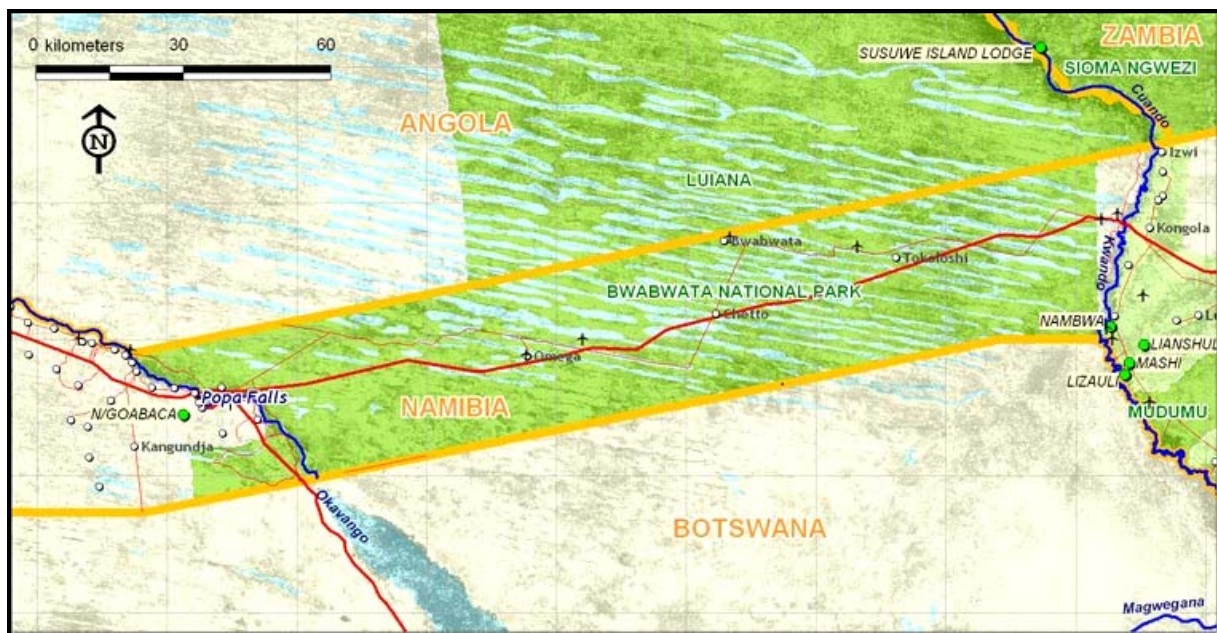


Figure 1.4 The Caprivi Wetlands Paradise route - western Caprivi (Source: Berensford 2007)

1.6.2 The Barotse Trails Route

The second case study route is located in south-western Zambia and starts in the town of Livingstone (see Figure 1.5). From Livingstone, the route follows the newly constructed Livingstone-Sesheke Road for approximately 72km to a small village, Mwandi, that is famous for being the seat of Senior Chief Inyambo Yetta IV and home to the Barotse Royal Establishment. From Mwandi, the route carries on another 64km to the small town of Sesheke. Sesheke is linked to Katima Mulilo by means of the Katima Mulilo bridge, which was completed in May 2004. The town of Sesheke has basic amenities including a few guesthouses, a bank, police station and a number of trading stores. From Sesheke the route enters the rural areas and roughly follows the banks of the Zambezi River for approximately 130km to the Ngonye Falls and the village of Sioma. This is a remote corner of Zambia with poor road conditions that can only be traversed by four-wheel drive vehicles. The road passes many traditional villages and offers stunning views of the Zambezi River.

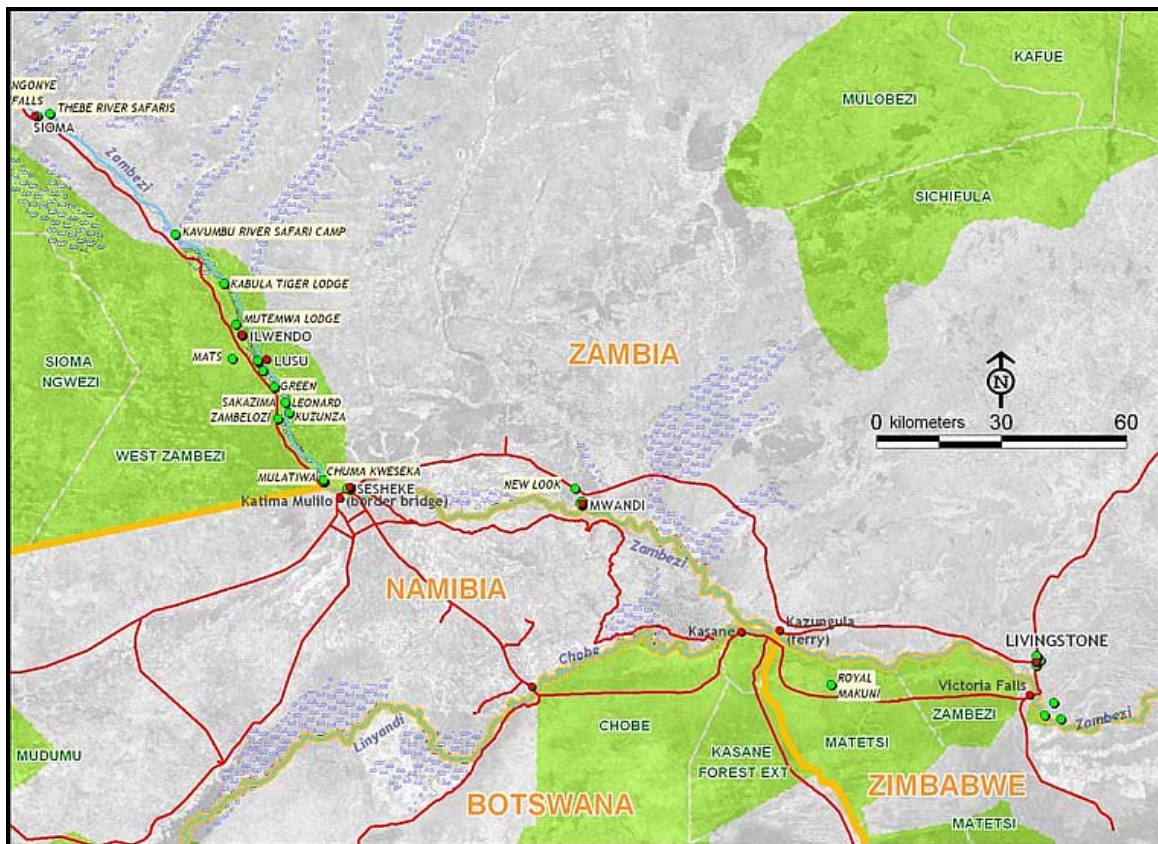


Figure 1.5 The Barotse Trails Route (Source: Berensford 2007)

The route covers part of the area commonly referred to as Barotseland. The ancient kingdom of Barotseland, located in what is western Zambia today, had its traditional heart in the fertile plains annually flooded by the Zambezi. Since Zambian independence in November 1964, the heart of this land was known first as Barotse Province and, from 1968, as Western Province. Before 1964, however, Western Province was known as Barotseland, home of the Lozi nation, whose influence spread north from Botswana and Caprivi to the present-day border between Zambia and the Democratic Republic of Congo, and from south-eastern Angola west to the Kafue. The nation comprised over 25 different peoples united by culture and ecosystems (Barotseland.com 2007).

Development of the Barotse Trails Route started in October 2005 with a series of workshops in the main nodes (Livingstone, Mwandia and Lusu). The research was conducted while the route was being developed in October 2005 but has since been launched to media and other stakeholders at a function in May 2006 in Sesheke.

While chapter one laid the foundation for the study and also placed the two case study routes into context, chapter two deals with the existing body of knowledge on the research topic. The literature review explored the origin and link between SD and tourism, the concepts of sustainable and responsible tourism, and the role of tourism routes before investigating the development of SIs for monitoring tourism.

CHAPTER 2: TOURISM AND SUSTAINABILITY

2.1 GEOGRAPHERS AND TOURISM RESEARCH

Geographers' involvement in research on leisure and tourism date back as early as 1909 with a study conducted by Bowman (Butler 2004). The initial studies mainly dealt with examinations and descriptions of patterns of supply and demand within leisure, recreation and tourism (LRT). It was much later, with Wolfe's (1964) review, 'Perspective on Outdoor Recreation', which appeared in the *Geographical Review* that the first major review of the literature on LRT by a geographer was published in a geographical journal (Butler 2004: 147). Butler (2004) points to the considerable role played by those with geographical training in moving forward the research agenda in what may be termed inter-disciplinary studies of tourism and leisure.

Geographers have as their focus the interaction between people and environments and they study the dynamics of this interaction in an integrated and holistic manner. As tourism is often an action where humans interact with the environment, whether it is in an urban or rural setting, geographers normally hold a combination of skills, expertise, experience and knowledge to contribute to overcoming the challenges in developing tourism in such a way as to have the least amount of impact on the environment and host communities. One might argue that the main area in which geographers have contributed significantly to tourism research in recent times is in the implications of tourism development (including resort morphology and development cycles, impact research and sustainable development) (Butler 2004). In the areas of sustainable development (SD) and ecotourism issues, books by geographers such as those by Cater & Lowman (1994), Fennell (2000), Hall and Lew (1998), Wahab & Pigram (1997) and Weaver (1998; 2000) have made major contributions, while Wheeler's (1993) critical review on SD and ecotourism represents cutting-edge criticism of these concepts (Butler 1999). Brown (1995: 325) quotes Squire at the Institute of British Geographers' annual conference, where she calls for "geographers to forge new links between geography and tourism studies, focusing on people, place and cultural communication, paying more attention to

the social and cultural context within which tourism occurs and making more use of qualitative techniques such as ethnographies, focus groups and open-ended questions during interviews.”

Given the traditional and long-standing interests of geographers in environmental issues, the question of limits to use and, with this, control and management of tourism, should be a major research focus according to Butler (2004). It is essential for geographers to retain a strong spatial focus and a synthesizing approach. These are the two traditional characteristics of the geographer’s trade and are unique to the discipline.

2.2 TOURISM AND SUSTAINABLE DEVELOPMENT

Sustainable development (SD) is a goal that, although often heard, has been developed only recently in relative terms (Appleton 2005). Many definitions have been developed for SD, but it was traditionally defined as development which involves the use of renewable natural resources in a way that does not degrade them (WCED 1987). Accordingly SD can be seen as resource-based or asset-led development, rather than being controlled by market forces only.

2.2.1 The tourism/sustainability nexus

Since the appearance of the *World Conservation Strategy* (International Union for Conservation of Nature and Natural Resources - IUCN), the United Nations Environment Program (UNEP), the World Wildlife Fund (WWF) and *Our Common Future* (World Commission on Environment and Development (WCED) in the 1980’s, many academics, community groups, governments, non-government organizations (NGOs) and international organizations have been attempting to convert their theoretical intentions in relation to SD into practice (Ko 2005). Thus, considerable human resources and funds are being invested to develop practical policies and assessment models for SD. Because tourism relies heavily on natural resources it lends itself well to the idea of SD (Ahn, Lee

& Shafer 2002). However, as Butler (1991) cited in Ahn, Lee & Shafer (2002:2) points out, “the enthusiasm for linking sustainable development with tourism may often be inhibited by reality.” Butler (1991) listed two aspects of the reality: (1) there are still many unknown factors about tourism's link with the environment, and (2) empirical information to clearly demonstrate that tourism can be sustainable in nature is scarce. “In spite of the lack of evidence, the SD approach to planning tourism is extremely important because most tourism development, involving stakeholders such as tourists, tourist businesses, and community residents, depends on attractions and activities related to the natural environment, heritage and culture. If these resources are degraded or destroyed, then tourism itself will have lost its own *raison d'être*” (Ahn et al 2002: 2).

In the case of tourism development, little practical methodology has been developed, although many researchers argue that tourism must contribute to SD (Ko 2005). Pigram (1990), as cited in Berry & Ladkin (1997: 435), states that sustainable tourism “has the potential to become a tangible expression of STD. Yet, it runs the risk of remaining irrelevant and inert as a feasible policy option for the real world of tourism development, without the development of effective means of translating the idea into action.”

For tourism development to be sustainable, Butler (1991), as cited in Ahn, Lee & Shafer 2002), suggested that such prerequisites as coordination of policies, pro-active planning, acceptance of limitations on growth, and commitment to a long-term vision, should be fulfilled during the early stage of planning. Berry and Ladkin (1997) reiterate other researchers' arguments and states that communication between the different tiers of government and between other role players need to be enhanced and advice needs to be forthcoming on exactly how to translate general principles into workable practice. Choi & Sirakaya (2006) indicate that community self-determination and active community involvement are essential elements of sustainable tourism. In other words, STD should be planned and managed by community stakeholders. In particular, local governments should encourage their residents' broad and direct participation, which can influence decision-making and guarantee to all stakeholders a fair distribution of benefits. In order to maximize community participation however, progression needs to be made in

increasing host residents' access to various communication channels such as Internet, e-mail, and mass and print media.

2.2.2 The application of sustainable development principles in tourism

Varying perspectives have been adopted in terms of the application of the concept of SD to tourism (Holden 2000). A differentiation can be made between 'sustainable tourism', in which the emphasis is placed on the customer and marketing considerations of tourism to sustain the tourism sector, and tourism as a vehicle to achieve SD. Therefore the goals of 'sustainable tourism' will not always be the same as the objectives of SD. Development of scientific and objective techniques for the assessment of tourism sustainability is a necessary feature of the idea of SD. If SD is one of the tourism industry's major contemporary objectives, then the industry needs to be able to measure its performance and impacts.

Measuring the impacts and sustainability of tourism has become the focus area of many researchers (see Hughes 2002; Font & Harris 2004; Buckley 1999; Kuo, Hsiao & Yu 2004; Rauschmayer & Risse 2004; Green, Hunter & Moore 1990; Ko 2005; Li 2004; Tsaor et al. 2005; Ahn, Lee & Shafer 2002; Miller 2001; Hall 1998; WTO 2004). Where most tourism academics measure sustainability in specific tourist destinations, they tend to depend on subjective judgments without reference to any standards or criteria supported by measurement (Ko 2005). Some tourism academics (e.g. Middleton & Hawkins 1998 in Ko 2005: 431) even argue that "sustainability in tourism is generally an aspiration or goal, rather than a measurable or achievable objective." The application of the concept of SD as an achievable and practical objective for tourism has not yet matured.

2.2.3 Hunter's sustainable tourism scenarios

Hunter (1996) developed three scenarios of sustainable tourism development (STD). The first is oriented towards the viability of the tourism industry in specific areas or the economic sustainability of tourism. Here the aim of development is concerned with meeting the needs of tourists and stakeholders in the industry. The development of tourism is weighed against the development of other sectors of the economy, like mining for instance. The problem with this approach is that it does not account for the fact that the negative impacts of tourism are often cumulative, and that instruments such as environmental impact assessment (EIA), often fall short in prejudging the sustainability of tourism developments.

The second scenario envisioned by Hunter (1996) is when the environmental resources for tourism are considered. In this instance the environmental resources are secondary to the growth of the tourism sector, an approach known as product-led tourism. Here the environmental and social concerns do receive more consideration than in the previous scenario, but it is still associated with maintaining the existing tourism product (Holden 1999). This is usually justified in communities that are already heavily reliant on tourism, and placing a high priority on environmental concerns may jeopardise the future of the community. The focus in this scenario is on the environmental improvements that can be made to developments.

The third scenario is termed 'environmentally led tourism'. In this scenario types of tourism are reliant on a high-quality environment. The importance here falls on making the link between the success of the tourism industry and the conservation of the environment. The protection of the environment in this case is a key component in the long-term viability of the tourism industry and the types of development that take place would not be damaging to the environment.

The final scenario is that of 'neotenus tourism'. This type of tourism occurs in some ecologically sensitive areas, where preservation of species is of paramount importance

(Holden 1999; Hunter 1996). In these areas tourism should not be permitted at all. In other areas which are viewed as ecologically significant, such as areas with a high biological diversity, the numbers of tourists need to be controlled through policy measures.

Although this is a good way of indicating the trends in tourism development, the focus is limited to the physical environment. The concept of sustainability should also be expanded to include social, cultural, political and economic dimensions (Holden 2000). Butler (1998) points out that it is not possible to separate sustainable tourism from the value systems of communities involved in tourism. Besculides, Lee & McCormick (2002) point out that providing opportunities for tourists to learn about and experience cultures requires consideration of both the positive and negative outcomes for host communities. A benefits-based approach to managing tourism considers both the benefits and disbenefits to residents and focuses on management actions that ensure community benefits (Driver 1996 in Besculides et al. 2002).

2.2.4 Tourism sustainability criteria

Mowforth & Munt (2003), realizing the shortcomings of existing research, made use of a different approach by examining or assessing tourism activities against a set of criteria for sustainability. An example of such an assessment would be to determine if a destination or tour is:

1. Sustainable
 - a) Environmentally
 - b) Socially
 - c) Culturally
 - d) Economically
2. Educational
3. Locally participatory
4. An aid to conservation

It is generally accepted that tourism practices need to have minimal impact on the environment, and sustainability is often perceived only in its ecological sense. Maldonado (1992), as cited in Mowforth & Munt (2003), suggest that the calculation of carrying capacities is a good way of assessing the environmental impact of activities and their level of sustainability. Mowforth & Munt (2003) do, however, point out that carrying capacity can be used to enclose a social or economic constraint in a cloak of scientific jargon. They also point to the fact that calculations are often dependent on assumptions which are in some cases arbitrarily chosen.

Social sustainability refers to the ability of communities to absorb the impacts of tourism. This could be in the form of extra people to the area or the opening of social divisions amongst groups (Mowforth & Munt 2003). According to Denman (2006) this also includes maintaining and strengthening the quality of life in local communities, including social structures and access to resources, amenities and life-support systems, and avoiding any form of social degradation or exploitation. Measures or tools of sustainability are meant to minimize these impacts to a level that can be seen as acceptable.

Tourism can also have an impact on the local culture within a given community. The local cultures or traditions can be affected by the introduction of visitors with different customs, traditions and styles of life. Essential elements of cultural sustainability would be the control of the harmful effects of tourism, an emphasis on responsible behaviour by tourists and the prevention of cultural distortion (Mowforth & Munt 2003). Robinson & Picard (2006) add to this by arguing that what gives meaning to the sustainability of tourism development, is bringing it within reach of all, making cultures and civilizations better known, improving daily living conditions of host communities, and reducing poverty.

Economic sustainability is no less important than any of the other criteria of sustainability. Economic sustainability refers to a level of economic gain to cover the costs incurred for catering to tourists as well as the costs incurred for mitigating the effects of tourism (Mowforth & Munt 2003). Choi & Sirakaya (2006) add that economic

sustainability should optimize the development growth rate at a manageable level while taking full account of the limits of the destination environment. It is important to note that it is not the only measure of sustainability, and it should thus not take precedence over the other effects of sustainability.

In recent times, it is also common to inject an element of educational input into the tourism activity. The degree of educational input does not necessarily have to be at a high level, but should rather develop a greater understanding of how our natural and human environments operates (Mowforth & Munt 2003). Although the education of tourists about the area they are visiting and the cultural norms and values of the local people is an important factor in sustainability, Krippendorf (1987), as cited in Mowforth & Munt (2003), and Besculides, Lee & McCormick (2002) argue that host communities also need to be informed about tourists and tourism, and need to be included in the planning of tourism activities in order to eliminate or lessen feelings of hostility against tourists. Another form of education that is necessary for sustainable tourism is the provision of technical information on how to practice more sustainable forms of tourism (Besculides, Lee & McCormick 2002).

Local participation in tourism is also seen as an important factor of sustainability and a degree of involvement by the host community has been accepted (Mowforth & Munt 2003). The recent debate is centred on the degree of inclusion and decision-making among the host community rather than the need for community involvement. The debate is thrown into sharp contrast by two standpoints - the host communities as objects of tourism versus the host communities as controllers of tourism. Tosun (2006: 493) argues that community participation can take many forms, "ranging from manipulative participation to citizen power" and suggests that the nature of community participation should be investigated. Tosun (2006) also sees NGOs as a good institutional tool to empower indigenous host communities to become increasingly involved in tourism development.

It has also been argued that tourism should contribute to the conservation of the environment or culture in some way, in order for it to be sustainable. Besculides, Lee &

McCormick (2002) argue that tourism can have a positive impact on the preservation of culture within the given area. Similarly, Budowski (1996), as cited in Mowforth & Munt (2003), maintains that conservation is an essential element in the survival of ecotourism and that a symbiotic relationship must exist between the two. On the other hand, there are researchers that believe that the benefits of tourism do not outweigh the negative effects of tourism and that conservation should reduce the number of visitors and the negative effects they bring to an area.

The set of criteria discussed here should not be seen as prescriptive, nor could a tourism establishment or regional strategy be assessed for sustainability by making use of these criteria. It would seldom happen that a tourism initiative fulfils all these criteria anyway. Mowforth & Munt (2003) argue that sustainability should be seen as a continuum and should rather be assessed on a scale of sustainability.

The concept of sustainable tourism has become associated with a very wide range of different terms which refer to tourism other than mass tourism. In many ways sustainable tourism has come to be viewed as an alternative to mass tourism (Visser 2005). Recently a new concept that is directly linked to sustainable tourism, but far more inclusive of the different types of tourism, has been introduced (Visser 2005). The following section will deal with the concept of 'responsible tourism'.

2.3 RESPONSIBLE TOURISM

According to the South African Department of Environmental Affairs and Tourism's White Paper on the development and promotion of tourism in South Africa (South Africa 1996), responsible tourism implies: "A proactive approach by tourism industry partners to develop, market and manage the tourism industry in a responsible manner, so as to create a competitive advantage." Keyser (2002) provides a summary of the key elements of responsible tourism as shown in Figure 2.1.

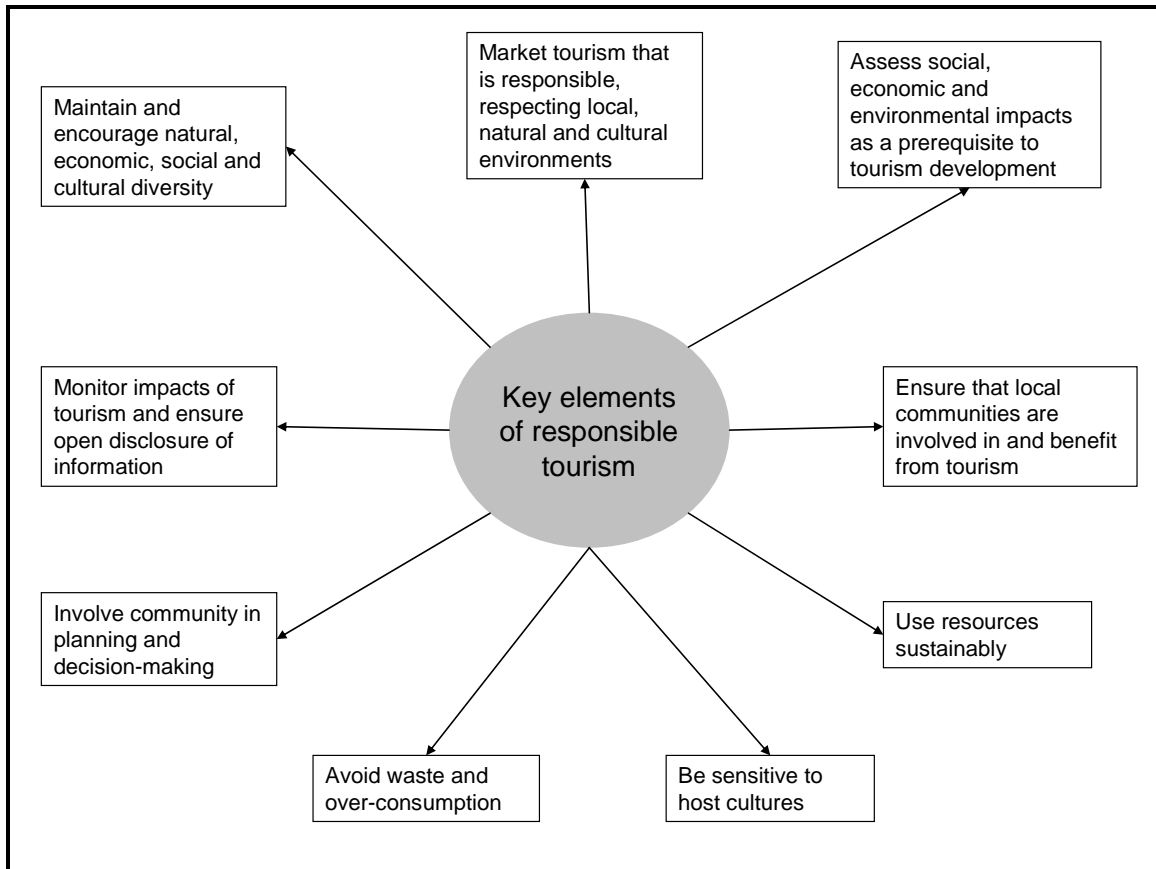


Figure 2.1 Key elements of responsible tourism

(Source: Keyser 2002: 382)

Responsible tourism implies the tourism industry's responsibility for caring for the environment through the promotion of balanced and sustainable tourism with a focus on the development of environmentally-based tourism activities (e.g. game-viewing and diving). Responsible tourism also means responsibility of government and business to involve the local communities that are in close proximity to the tourism destination or attraction through the development of meaningful economic linkages (e.g. the supply of agricultural produce to the lodges, out-sourcing of laundry, etc.). It expresses the responsibility to respect, invest in and develop local cultures and protect them from over-commercialisation and over-exploitation. It also implies the responsibility of local communities to become actively involved in the tourism industry, to practice SD and to ensure the safety and security of the visitors. Responsible tourism further calls for the responsibility of both employers and employees in the tourism industry both to each other as well as to the customer. Responsible trade union practices and responsible employment practices will be the hallmarks of the new tourism in South Africa. Finally,

responsible tourism requires responsible government as well as responsibility on the part of the tourists themselves to observe the norms and practices of South Africa, particularly with respect to the environment and culture of the country (South Africa 1996).

According to Endicott (1997), as cited in Spenceley (2001), the roots of responsible tourism lie with social activists. Endicott (1997) states that in business or industry, tourism now falls under the rubric of responsible business practices in general, and therefore 'responsible tourism'. "Originally, responsible tourism was used by the social activists with Christian and missionary roots for speaking about socially and culturally responsible tourism as humanitarians, and often without a nature component entirely or, in some cases in direct conflict with nature, a result of an anthropocentric worldview. The principles of ecology then evolved a worldview where the human species is no longer necessarily at the center of the universe" (Spenceley 2001: 12).

The so-called Cape Town Declaration developed the concept of responsible tourism to include all sectors of the tourism system, and defines responsible tourism as having the following characteristics:

- It minimizes negative economic, environmental and social impacts;
- It enhances the well-being of host communities and provides them with economic opportunities while improving working conditions and access to the industry;
- It involves local people in the decision-making process;
- It makes positive contributions to the conservation of natural and cultural heritage and thus maintains the world's diversity;
- It provides opportunities to have meaningful interaction with local people, and a greater understanding of local cultural, social and environmental issues;
- It provides access for physically challenged people; and
- It is sensitive to local cultures while stimulating respect between tourism and hosts as well as building local pride and confidence (Cape Town Declaration 2002)

Tourism needs to be economically feasible (Choi & Sirakaya 2006) as it is an economic activity and if planned and managed correctly it can contribute to local economic

development in host communities (Rogerson 2002a). The links between tourism and local economic development are explored in the next section.

2.4 TOURISM AND LOCAL ECONOMIC DEVELOPMENT

Local economic development (LED) concerns communities who are continually developing their business environments to enhance their competitiveness, retain jobs and improve incomes (World Bank 2006). LED can be defined as “a process in which partnerships are established between local government, the private sector and community-based groups in order to manage existing resources for job creation as well as the stimulation of local economies” (Rogerson 2002a: 95).

Hall (2005: 151-152) describes local development components in the food and wine tourism sector that are somewhat similar to local economic development factors in tourism generally. These can be summarized as follows:

- Reduction of leakages by a sustainable use of local resources (i.e. Buy local campaigns);
- Recycling of financial sources within the system by buying local goods and services (i.e. local hotels buying local food and using local banking services);
- Adding value to local produce before it is exported (i.e. local brand and packaging);
- Connecting up of local stakeholders (i.e. alliances, co-operatives and local marketing networks);
- Attracting external resources (i.e. finance, skills and technology) and reaching customers outside the region (i.e. use of the Internet and e-mails);
- Emphasising local identity and authenticity in branding and promotional strategies;
- Selling directly to consumers via farm shops, direct mailing, farmer’s markets, local festivals and events, etc.; and
- Creating a relationship to be maintained in time between the consumer and the producer.

LED as a development strategy has been common practice in the countries of the North for several decades now (Nel 2001). In the South, it appears to be a relatively recent phenomenon and one which, in an era of economic crisis, needs to be evaluated in terms of its potential to address the challenges of poverty and unemployment and simultaneously to encourage growth.

Changes in consumer preferences, increasing wealth and mobility among locations have stimulated significant growth in service-based economic sectors (Binns & Nel 2002). This has implications for local economic development, which aims to “diversify the local economic base into sectors other than those in which recent hardships have been experienced” (Binns & Nel 2002: 185). Some of the most notable successes have been found in the expansion of tourism. Agarwal et al. (2000) and Binns & Nel (2002) detect that tourism is widely recognized as a means of LED and Rogerson (2002a) perceives a trend across many developed countries to use LED initiatives to promote localities as centres of consumption rather than production. Despite this favourable view of tourism as an important source of local economic development, tourism can only contribute significantly to employment creation and entrepreneurship development if the nature and location of the tourism project, the size and source of investment, the policy intentions accompanying the investment (if any), and the levels of support available to entrepreneurs, are favourable (Kirsten & Rogerson 2002). Pigeon (1994) adds that municipal partnerships can lead to explicit advantages and benefits for local economic development, particularly in areas of marketing and attractions development.

There are, however, a number of areas of concern regarding tourism and LED and Rogerson (2002a) identifies nine core areas for discussion:

- Questions of democracy
- Community involvement
- Resource allocation
- Distribution of costs and benefits
- The concept of partnership
- Sustainability

- The relationship of tourism with other economic sectors
- Monitoring
- Poverty alleviation

These nine areas should not be seen in isolation to each other, but rather as complimenting each other and part of an integrated strategy for tourism-led LED (Rogerson 2002a). The first two points are closely related as many tourism-led LED initiatives have been criticized for being undemocratic in terms of implementation, without any meaningful participation by, or recognition of, the communities involved. This can lead to negative attitudes towards new developments. The next two points also coincide, as arguments have been put forward that funds could be better used on more pressing issues such as housing or health. While the benefits from tourism developments tend to go to the private sector, the costs are carried by communities as they receive less in relation to other areas of concern such as housing. Partnerships established for tourism and LED are often seen as uneven, with the private sector providing most of the resources, but also receiving most of the financial benefits while excluding communities from the process. Sustainability of such tourism-led LED initiatives has also been questioned and a case has been made to rather spend finances on revitalizing traditional industries than focusing on tourism. Tourism is often developed in isolation from other industries and potential synergies with other economic activities have been lost in the process. Monitoring procedures need to be established to measure the success of such initiatives so that remedial action can be taken or initiatives can be abandoned if satisfactory outcomes are not obtained. Poverty issues need more attention in these initiatives. Once again this ties in with earlier points as community involvement, democracy and issues of distribution of benefits must be seen as interlinked. Communities need to be encouraged to become active participants in LED initiatives, but even more so, barriers to entry in LED initiatives should be removed. Sustainable LED initiatives will promote local ownership and employment (especially in marginalized communities), prevent economic leakages, and ensure equitable distribution of benefits (Rogerson 2002a). Sustainable LED initiatives have much in common with the principles of pro-poor tourism.

Pro-poor tourism is not a specific tourism product; it is an approach to tourism development and management which ensures that local poor people are able to secure economic benefits from tourism in a fair and sustainable manner (International Centre for Responsible Tourism 2004). Pro-poor tourism aims to unlock tourism-related opportunities at all levels and scales of operations, including eco-tourism and community-based tourism initiatives (Binns & Nel 2002), and should be at the core of any government activity related to tourism. However, it is often difficult to ensure the participation of the poor in practice. Rogerson (2002b) cites lack of knowledge, poor human capital, non-existent support structures, a lack of training and physical assets as the main constraints on tourism-orientated local economic development initiatives to reach the poor.

Rogerson (2002a) has investigated the issues related to tourism-led LED and identified ten key principles to take into account when dealing with LED programmes:

1. Policymakers need to evaluate areas critically to determine if tourism-led LED is a viable option. If an area does not possess an adequate range of tourism products or does not possess the basic requirements for tourism (access, infrastructure and security), tourism-led LED might not be a viable option.
2. Economic development cannot be sustained without adequate social development and environmental protection. Tourism-led LED needs a capable and willing community that buys into the process. Apart from being committed, the community also needs the necessary skills to be able to take part in tourism initiatives.
3. LED initiatives can only be truly successful in developing countries if they bring tangible benefits to poor communities. LED initiatives must be strongly linked to pro-poor strategies and focus on involving local communities from the outset. Tourism levies or taxes can be used on other projects like upgrading of schools and clinics.
4. Successful tourism-led LED programmes will seek to form partnerships or linkages with other sectors of the economy. Such linkages are important to sustain programmes and develop other sectors of the economy.

5. Attempts should be made to limit the polarization of tourism. Often tourism enclaves develop, but by encouraging tourists to venture into new areas and participate in different experiences, new destinations can be developed, distributing benefits to other, less developed areas. Tourists should also be encouraged to meet and interact with the local people in order to bridge cultural gaps.
6. There is a strong argument for developing less large-scale resort type developments and to focus on small-scale, locally managed projects that focus on small, medium and micro enterprise (SMME) development.
7. Constant and objective monitoring and evaluation indicators need to be implemented. Where possible, local communities need to be included in the monitoring process and their inputs can be valuable as to what should be measured.
8. Community participation at all levels should be encouraged. In developing countries the task might be more difficult, but efforts should nonetheless be made to overcome difficulties. Community buy-in, in tourism initiatives can play an important role in the overall success of the initiatives because in the end communities need to become the drivers of such initiatives (Rogerson 2002a: 113-114).

Tourism routes can be used as a way to link different communities on the local level into a network of small clusters or nodes in order to promote local development (Briedenhann & Wickens 2004). Importantly, different clusters need to be identified at the local level before they can be linked into a network.

2.5 TOURISM NETWORKS AS A VEHICLE FOR LOCAL ECONOMIC DEVELOPMENT

Tourism routes are networks formed by a variety of industry stakeholders with a common vision or goal (Open Africa 2005). Networks, much similar to what some authors refer to as clusters, are formed according to geographic concentrations of interrelated companies, specialized suppliers, firms in related industries, or associated institutions in particular

fields that compete but also cooperate (Jackson 2006; Porter 1998 in Jackson & Murphy 2002; The Cluster Consortium 1999). The researcher uses the term network when referring to clusters in the context of tourism routes. A route can also link distinct clusters of development in a type of ribbon development. Networks span entire industries, capturing linkages, complementarities, skills, marketing, and customer needs that cut across firms. This attribute of cutting across and linking firms and industries enhances the global competitiveness of businesses within the network. While traditionally competition between firms is seen as a threat, it has been shown that incorporating competition between related firms facilitates increased productivity, increases the capacity for innovation and productivity growth, and stimulates new business formation that supports innovation (Porter 1998 in Jackson 2006; The Cluster Consortium 1999). According to Halme (2001), the network approach to sustainability is necessary within an industry such as tourism where a relatively large number of small actors with few resources cannot pursue SD in isolation. Furthermore, Lowe, Murdoch & Ward (1995), as cited in Saxena (2005), argues that the close-knit nature of many rural communities in a region suggests that personal knowledge and trust relationships are significant in shaping the quality of the tourism product. Saxena (2005) adds that interdependency of tourism operators and products provides a basis for the development of cooperative structures that recognize that two or more actors involved in tourism provision, can collectively achieve more than the sum of each individual's own efforts. Novelli, Schmitz & Spencer (2006) sees clustering or networking as a process that enables the participants to exploit their synergies and the complementarities between their outputs, especially when operating at SMME level. Benefits of networking could include partnership based marketing, knowledge building and transfer, preservation of community values and lifestyles improvement (Huxham 1996; Novelli, Schmitz & Spencer 2006; Pavlovich 2003).

While some tourism-related networks may coincide geographically, they are distinct entities. A network is usually formed where there is a spatial concentration of developments, a reflection of the tendency for human activities to be centralized in locations with favourable site and situation attributes. A network can also be formed by linking different clusters of development while incorporating any developments between them (Open Africa 2007).

Investigation of the South African tourism sector using the network approach reveals that the country does possess a sufficiently strong range of interrelated key and supporting businesses to build future success and development of the tourism industry (The Cluster Consortium 1999). The tourism distribution system (travel agents and tour operators) and component providers (accommodation, attractions, transportation, etc.) show that further development and integration is required to achieve either satisfactory or optimal levels of functioning, particularly as they relate to product development, delivery and marketing. An investigation of the South African tourism sector also shows that tourism growth is hampered by fundamental limitations in the country's economic foundations, including human resources (Kaplan 2004), safety and security (Khanya 2001), and inadequate marketing of the South African tourism product (The Cluster Consortium 1999). Keys to tapping Africa's tourism potential are to develop more efficient linkages and synergies between role players in the industry and invest in critically needed economic infrastructure as well as providing adequate training (The Cluster Consortium 1999). Developing linkages requires coordination and collaboration and this is what networking is about. Collaboration is a logical response to the turbulent conditions of changes in a complex industry (Kernel 2005). The instability of the industry creates interconnections between organizations as the ability of one organization to accurately plan for the future is limited by consequences of (unpredictable) actions by other organizations. Collaboration creates a capacity to reduce unintended consequences and thus plan more effectively.

Gray (1989), as cited in Kernel (2005: 152), describes the collaborative approach as “a process of joint decision-making among key stakeholders of a problem domain about the future of that domain.” Due to the complex structure of the tourism industry, stakeholders need each other to further their own interests towards SD. By focusing on a common vision, each stakeholder's interest turns into an advance of the collective good. Networking provides an opportunity for stakeholders to establish a common goal and to collaborate in achieving this goal.

The establishment of tourism routes is a good example of tourism networks and some countries, including South Africa, have adopted the route-based approach to the

development of tourism. This is exemplified by the fact that the South African Department of Trade and Industry recently commissioned research into backpacking and community-based tourism routes in order to better understand the trends, challenges, size and the potential of such routes in South Africa (South Africa 2005).

Wine routes are well known examples of types of tourism routes or networks and researchers like Bruwer (2003) and Correia, Passos Ascensão & Charters (2004) have done research on the subject. Wine routes have become important tourism products worldwide as well as acting as a tourism promotional tool (Getz 2000; Telfer 2000 in Bruwer 2003). Although wine routes are a good example of a tourism route there are also other types of routes such as cultural, heritage, township or community based tourism routes. Tourism routes, similar to networks, are formed by stakeholders in the industry with the common objective, to provide mutual support amongst the participants. The common goal of the participants on the route will often be the development of tourism and the local economy in the region. One key aim of these routes, apart from attracting tourists to an area, is to group several attractions that would independently not have the potential to entice visitors to spend time and money in the region (WTO 2004). Using a synergy effect promises to have greater pulling power, and it also disperses visitors' money among a larger number of recipients (Meyer 2004). Although developing networks can be advantageous to small business development and the achievement of other economic goals (Pavlovich 2003 in Horn 1998), they frequently include social aims (Moulin & Boniface 2001). Routes and networks create the environment for participating groups and individuals to develop improved knowledge and understanding among one another (Moulin & Boniface 2001; Open Africa 2005).

Frequently, tourism initiatives are set in motion by government institutions or large organizations (Moulin & Boniface 2001). Their general aim is to come up with strategies to achieve their objectives and to find vehicles of implementation that are usually applied from the top by a trickle-down effect - an often very bureaucratic process - to arrive eventually at the tourism product and its surrounding community along with outside visitors (Moulin & Boniface 2001; Rogerson 2006; Tosun 2000). Due to the nature of tourism initiatives, two-way dialogue between the grassroots participants and the big

organizational actors above, may be non-existent or lacking in adequate understanding for the achievement of the objectives (Moulin & Boniface 2001). Routes and networks provide alternative methodologies, and may be chosen if appropriate for achieving the given aims. It has been shown how their style is essentially that of equality and linearity. They can be seen as having vital assets suitable to immediate needs and as being in tune with society (Moulin & Boniface 2001). The features of tourism routes and networks are outlined in Table 2.1. Networks cross various boundaries and make connections across a wide plane, bringing often disparate groups together, and can also facilitate flatter organizational styles with wider representation of different stakeholders.

Table 2.1 Features of routes and networks

They can cross <i>boundaries</i>:
➤ Geographical
➤ Political
➤ Cultural
➤ Organizational
➤ Operational
They can make <i>connections</i>:
➤ Professional
➤ Social
➤ Thematic and promotional
➤ Towards obtaining financial assistance
➤ Of advice training, information and ideas
➤ Of resource maximisation
➤ Between sectors and disciplines
➤ Of power, support and solidarity
They can show <i>flatter organizational styles</i>

Source: Moulin & Boniface (2001: 239)

Routes and networks can be delineated as serving a useful role, as mechanisms for using heritage for the direct aims of conservation, cultural preservation and tourism, and for the

additional objective of socio-economic development (Open Africa 2005; Meyer 2004). Their capacities as devices are (1) to allow flexibility of modes of use and a degree of complexity of use, and (2) to encourage co-operation and adequate communication among the necessary range of participants and stakeholders (Meyer 2004).

Though the benefits of routes and networks can be shown across a range of situations, they can perhaps be perceived as of the most potential help in those situations where resources are limited. The process of sharing expertise and experience, and constructing a pool of information for use can allow any one place or operative to effect a great deal more than if it were working alone. In rendering more power to those usually unable to obtain it when working alone, a network ought to provide more strength of voice and control. A network or route is a productive factor that harnesses the energies of all the stakeholders involved in regional development, for the benefit of creating jobs and accelerating economic and cultural development (Europäische Weinstrassen 1999 in Bruwer 2003; Open Africa 2005).

In terms of the objectives attained, or those hoping to be attained by them, routes and networks have some key differences along with certain similarities. The uses of routes and networks by the various main participants are presented in Table 2.2. It can be seen that routes have a predominantly marketing focus while networks have the additional aspect of sharing of knowledge and the dissemination of information by the participants. Routes have a conservation agenda, however, as it is often used to lobby support for conservation and sharing information on best practice examples.

Although there are definite benefits associated with participating in a tourism route, there are routes that are more successful than others. The next section looks at the elements that make up a sustainable tourism network.

Table 2.2 The uses of routes and networks by the various main participants

	Routes	Networks
Tourists	<ul style="list-style-type: none"> ▪ For getting somewhere ▪ For the journey along the way 	<ul style="list-style-type: none"> ▪ For wider informational access
Residents	<ul style="list-style-type: none"> ▪ To deliver sources of economic, social and cultural benefit to their door 	<ul style="list-style-type: none"> ▪ For social contact ▪ For exchange of information
Presenters and stakeholders	<ul style="list-style-type: none"> ▪ For reach and presence to be extended commercially, politically and in terms of status 	<ul style="list-style-type: none"> ▪ For exchange of best practice knowledge ▪ For efficient and cost-effective use of resources through co-operation ▪ For extended opportunities for promotion
Place	<ul style="list-style-type: none"> ▪ For gaining tourist attention for revenue and support of opinion towards conservation ▪ For sharing the load in terms of best conservation 	<ul style="list-style-type: none"> ▪ For widespread dissemination of information about it for its better care and maintenance

Source: Moulin & Boniface (2001: 240)

2.6 COMPONENTS OF A SUSTAINABLE TOURISM NETWORK

Although it is clear that there are distinct advantages in establishing tourism networks, it needs to be determined if there are identifiable characteristics of a sustainable network. Porter (1998), as cited in Jackson (2006), has identified properties that clusters need to possess in order to be successful (see Box 2.1). Although Porter's (1998) focus is on business clusters, many of the points raised can also be applied to tourism networks.

In sum, the network highlights the importance of location, partnerships between organizations and the synergies achieved through competition, alongside cooperation amongst businesses. Box 2.1 highlights issues that relate to the functionality of the network, but what elements need to be included in order to make the network sustainable according to the principles of the 'triple bottom line'? The triple bottom line refers to sustainability of social, environmental and economic aspects of development.

- *Extensive involvement of participants and associated institutions and deciding on appropriate network boundaries.* Tourism networks should include all elements of the tourism blend, including accommodation providers, food and beverage, travel and tours, attraction coordinators, event promoters and developmental projects. Geographic boundaries should also reflect economic, not political reality; hence networks should not be confined by regional or local boundaries. Participants should decide on the appropriate boundaries of the network in order to encourage participation. A crucial element is also the ability to meet regularly. If distances prohibit this it could impact on the functionality of the network.
- *A shared understanding of the competitive business ethic* implies that participants in the network understand that gains in productivity and innovation will contribute more to competitive advantage than will price cutting. Competition between firms producing the same product is more likely to lead to innovation and differentiation than is consent to limit competition or seek government subsidies.
- In promoting an attitude to competition based on differentiation and innovation rather than price, *close attention needs to be paid to personal relationships and trust in sustained collaboration* and this represents the tacit business-to-business understanding that goes beyond written contracts. As a result of long-term business relationships, trust builds up between the various parties.
- *Strong private sector leadership.* While initially public sector authorities may be involved in facilitating network development, the leadership for the established network should come from participants in the network. Strong leadership is needed to drive the process forward and to motivate participants in the network.
- *Institutionalisation of concepts, relationships, and linkages.* Government and local trade and business development organizations may take an important facilitation role in formalising and institutionalising linkages and relationships between tourism businesses to ensure the longer-term survival of the network.

Box 2.1 Characteristics of successful clusters (Source: Jackson 2006: 699-700)

In their work on sustainable community development, Rogers & Ryan (2001) point out that, in order to embrace the concept of sustainability, communities require guiding principles. According to the authors, in considering the principles of SD, a community needs to keep the following points in mind. “A sustainable community:

- utilises nature's ability to provide for human needs, without undermining its ability to function over time;
- ensures the well-being of its members, offering and encouraging tolerance, creativity, participation and safety;
- empowers people with shared responsibility, equal opportunity and access to expertise and knowledge, with the capacity to affect decisions which affect them; and
- consists of businesses, industries and institutions which collaborate as well as compete, are environmentally sound, financially viable and socially responsible, investing in the local community in a variety of ways" (Rogers & Ryan 2001: 282).

Tourism networks form part of the community and Wellman, Carrington & Hall (1988) define social networks as personal communities. Thus the points raised above, although applied to communities, could also be applied to tourism networks.

The Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), at its 4th Meeting in Montreal from 21 to 25 June 1999, adopted recommendations entitled "Development of approaches and practices for the sustainable use of biological resources, including tourism" (Gündling, Korn & Specht 2000). The document they adopted spelt out a number of principles of sustainable use of biodiversity. Some of the principles that were proposed at the conference can similarly be applied to tourism networks. Sustainable tourism networks should:

- contribute to conservation and sustainable use of biodiversity either by serving as incentive for conservation and sustainable use or by generating financial means allocated to conservation and sustainable use activities;
- respect the integrity and carrying capacity of ecosystems and habitats;
- rely on environmentally friendly technologies, such as no-waste or low-waste technologies or public transport;
- mobilize the responsibility of all stakeholders involved, such as business, governments at all levels, local communities, NGOs; use economic instruments

- and incentives to stimulate responsibility; generate financial means and allocate it to conservation and sustainable use;
- be planned and carried out so that it allows for the effective participation of local communities;
 - ensure that benefits go to local communities (the local economy, local labour force etc.);
 - respect the values, lifestyles, cultures, and interests of indigenous and traditional communities. Where these communities may be affected by tourism activities they should be effectively involved in the planning and carrying out of such activities;
 - be managed and controlled, especially in protected areas and other sensitive or vulnerable areas; and
 - make the general public aware of the requirements of sustainable tourism, conservation and sustainable use of biodiversity (Gündling, Korn & Specht 2000).

Measuring the sustainability of tourism networks can become a critical factor in the success of these networks. For example, by measuring how network participants invest in local linkages and thus strengthen the network will contribute to the overall sustainability of the network. Indicators have been used in many instances to monitor and evaluate sustainability on different levels. The World Tourism Organization (WTO 2004) has produced guidelines for the development of sustainability indicators (SIs) for tourism destinations, while Ko (2005) has developed a conceptual approach to assess sustainability which also makes use of indicators. Li (2004) developed environmental indicators for nature reserves and Miller (2001) has listed indicators that consumers can use in the selection of their holidays to promote a more sustainable form of tourism. The subsequent section examines the development of SIs in more detail.

2.7 SUSTAINABILITY INDICATORS FOR TOURISM

Sustainable tourism has become one of the keywords in the debate on environmentally integrated tourism development, largely as a result of the realization that the

environmental consequences of this rapidly growing industry can no longer be ignored (e.g. Hunter & Green 1995 in Gössling et al. 2002).

2.7.1 Origins of sustainability indicators

In the past, a number of concepts have been suggested (i) to evaluate the environmental consequences of tourism, such as environmental impact assessments (EIA) e.g. Green & Hunter (1992), as cited in Gössling et. al. (2002); or (ii) to understand which levels of change can be tolerated, such as the carrying capacity concept (CCC) and the limits of acceptable change system (LAC) (Gössling et. al. 2002). EIA, CCC and LAC focus on changes occurring in the local environment while ecological footprinting also considers the global consequences of travel (Hunter & Shaw 2007).

Sustainability indicators are the youngest of all the tools of sustainability (Mowforth & Munt 2003). According to Weaver & Lawton (1999), as cited in Choi & Sirakaya (2006), indicator studies in tourism are still in their infancy. The World Tourism Organization, 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 (Holden 2000; Hughes 2002; Mowforth & Munt 2003). Various definitions exist for indicators of sustainability and a few will be examined here. Hart (1997), in Miller (2001: 351), simply describes an indicator as "something that helps you to understand where you are, which way you are going and how far you are from where you want to be." Another definition states that "It is a mark or measure that helps you to know if you are succeeding in reaching your goal" (City of Cape Town 2000: 2). Indicators are measures of the existence or severity of current issues, signals of upcoming situations or problems, measures of risk and potential need for action, and a means to identify and measure the results of our actions. Indicators are information sets which are formally selected to allow us to better organise, synthesize and use information on a regular basis. Indicators are used to measure changes that are of importance for development and management (Walmsley & Pretorius 1996; WTO 2004). Bakkes et al. (1994), as cited in Morrison et al. (2001), state that indicators are pieces of information

which have wider significance than their immediate meaning. They also mention that indicators are useful if they are of fundamental interest in decision-making, if they simplify or summarize important properties, visualize phenomena of interest, and quantify and communicate relevant information. Indicators today have an increasing resonance in politics, with a seemingly endless desire to measure the previously unmeasured and to compare the performance of different providers of service. In addition to their essential quantifying function, indicators also assess conditions and trends (sometimes in relation to goals or targets), provide information for spatial comparisons, provide early warning information and anticipate future conditions and trends (Morrison et al. 2001).

According to Mowforth & Munt (2003: 111) indicators can measure:

- a) Changes in tourism's own structures and internal factors;
- b) Changes in external factors which affect tourism; and
- c) The impacts caused by tourism.

It is now commonly accepted that conventional indicators such as gross national product (GNP) give a restricted and one-sided view of development (Mowforth & Munt 2003). Indicators which show the relationship between social, environmental and economic issues and the power relationships that exist between them have given rise to the development of SIs. An indicator is normally chosen from a range of possible data sets or information sources because it is meaningful with regard to the key issues to which tourism managers must respond. Use of such indicators can lead to actions to anticipate and prevent undesirable (or unsustainable) situations at destinations (WTO 2004).

Traditionally, indicators could be categorized as being either 'objective' or 'subjective'. Objective indicators generally refer to quantitative data and the majority of these indicators could be described through various equations. Subjective indicators are based on personal feeling and attitude, and are usually qualitative in nature. Objective indicators have been widely used in the past because these were seen as more rigorous. However, Schneider & Donaghy (1975), as cited in Tsaur, Lin & Lin (2006: 640), warn that "... the use of objective measures alone as quality of life indicators is highly suspect." The WTO

(1995), quoted in Miller (2001: 352), reveals the true position of qualitative measures, stating that “indicators of sustainability are not always quantifiable and may necessarily be somewhat subjective.” This constraint does not in any way detract from their value as management information in promoting sustainable practice (Miller 2001).

2.7.2 The role of indicators

According to McCool & Stankey (1999), in McCool & Moisy (2001), indicators have three specific functions: (1) they serve as an indication of the state or condition of some entity such as a community or region; (2) measure the effectiveness of a particular management practice, for example a development plan; (3) provide information on changes over a given time period.

For indicators to be useful they must also meet certain criteria. Examples of such criteria are accordingly that they:

- Should contain an output orientation;
- Should hold construct validity;
- Should be quantitatively measurable;
- Should have inter-observer reliability;
- Should be relatively easy to collect or measure; and
- Should be sensitive to change across space or time (Livermann et al. 1988 in McCool & Moisy 2001).

Ko (2005) examined 12 case studies of sustainability assessment in tourism and identified a number of issues of concern. (1) The indicators (issues, problems, and concerns) for sustainable tourism development (STD) vary from one tourist destination to another. (2) Most judgments about sustainability are arrived at by the authors themselves without the participation of stakeholders. (3) Generally, only a small number of indicators are examined to arrive at the authors’ conclusions regarding the sustainability of given tourist destinations. (4) Indicator selection procedures are generally not presented. (5) Data-gathering procedures are not presented, or not made clear in the case studies. (6) Scaling

(quantification) of sustainability maintained by tourist destinations is not attempted in the case studies. Ideally, when the term *sustainable* in terms of system quality is mentioned, the state of system quality must be presented clearly (e.g. 80% out of 100% or 50% out of 100%). (7) None of the authors demonstrate gradations (sectors or bands of scaling) of sustainability. All authors, unconsciously and automatically, use two categories (sustainable and unsustainable) to define sustainability. However, the modes of sustainability may vary, as suggested by the International Union for Conservation of Nature and Natural Resources (IUCN) and Prescott-Allen (1997) in Ko (2005). (8) sustainability assessment maps (SAMs) are not employed in the case studies. One of the policy objectives of STD is to present the current or past trends of the community's quality situation clearly to the general public and other stakeholders. For this purpose, documents or written statements, which nobody understands except certain experts, are not appropriate. The outputs from a tourism sustainability assessment exercise, using scales of sustainability levels, can be presented in graph form. SAMs are a graphic tool for displaying the system quality of a tourist destination. Their purpose can be summarized as follows:

- to help to identify the current situation in a community;
- to generate possible future scenarios from the situation;
- to clarify the trade-offs that are implicit in indicator selection;
- to make tourism issues or concerns more accessible to stakeholders;
- to assist stakeholders to define their goals and objectives;
- to make all parts of the sustainability assessment process clear and explicit; and
- to serve as an educational tool (Clayton & Redcliffe 1996 in Ko 2005)

Choi & Sirakaya (2006) argue that indicators for community tourism development (CTD) should be treated differently from traditional indicators and should be placed in an adequate development process framework. Based on the work of a number of researchers Choi & Sirakaya (2006: 1277-1278) propose guidelines (see Box 2.2) regarding sustainable tourism and its indicators.

1. Sustainable-tourism strategies must entail ways and means to create adequate policies and proper decision-making processes at all levels of government.
2. Sustainable-tourism policies should provide workable definitions, principles, implementation strategies, action plans and a monitoring system of sustainable development for CTD with consideration of the entire spectrum of economic, social, cultural, natural, technological and political environments.
3. The context of sustainable tourism is a highly political one involving many stakeholders. Thus, political support in the form of legally binding commitments at the national and regional level is a critical element in obtaining information, funding, education and expertise.
4. In order to reflect the visions and values of a community-based destination, the transparent process of using and evaluating sustainability indicator (SI) development to enable full community participation of all stakeholders must be articulated. These stakeholders should be allowed to influence the direction of current and future CTD.
5. SIs require an organizational body (structure and process) to ensure the long-term sustainability of the community-based destination.
6. SIs should be based on a sustainability framework rather than a traditional development framework, since the latter is either inadequate or inappropriate to measure sustainable growth accurately.
7. The number of indicators must be manageable either quantitatively or qualitatively and be easily implementable and in a timely manner at the destination and community level.
8. The SI development process requires a systematic approach that has a high degree of reliability, predictive capacity and integrative ability.
9. Clear guidelines on how to select and use SIs in destinations should be proposed and tested.
10. SIs should be robust, measurable, affordable and should provide an integrated view of overall and specific awareness and understanding of past and current performance of CTDs. SIs should also guide future development and reflect the community's goal.
11. SIs must serve as an early warning system, not only to prevent the potentially negative impact of tourism development but also to promote sustainable growth.

Box 2.2 Guidelines for clarifying the goals of sustainable tourism development (Source: Choi & Sirakaya 2005)

2.7.3 The Delphi approach to developing indicators

A number of researchers, such as Choi & Sirakaya (2005), Green, Hunter & Moore (1990), Kuo, Hsio & Yu (2005), Miller (2001) and Tsaur, Lin & Lin (2006) have made use of the Delphi survey approach to develop indicators. The Delphi method was developed in the 1960s as one of the many techniques used in decision analysis, probability estimates and long-range forecasts (Linstone & Turoff 1975 in Kuo, Hsiao &

Yu 2005). In brief, this technique uses a questionnaire that is circulated among a panel of experts who are not aware of the identity of fellow members of the panel, because the Delphi method aims to encourage independent and unbiased assessments from each individual. The method has been widely used for environmental assessment and for monitoring programs (Kreisel 1984 in Kuo, Hsiao & Yu 2005). The Delphi technique is described by Kaynak and Macauley (1984), in Tsaur, Lin & Lin (2006), as a unique method of drawing out and refining group judgment based on the foundation that a group of experts is better than one expert when exact knowledge is not available. The Delphi technique is traditionally used as a forecasting tool, whose closely adaptive approach has the benefits of being able to generate opinions and move toward consensus on any issue (Miller 2001). Green, Hunter & Moore (1990), who used the Delphi technique as a way to assess the environmental impact of future developments, proposed that iterations of three rounds are sufficient to achieve group consensus and suggest that any extra stages would incur diminishing returns of increased convergence against declining response rates.

2.8 SUMMARY

Tourism is a major sector in the world-economy and it is projected to grow even more in future. Africa, to date, has received fewer tourists than other parts of the world, despite the fact that it possesses a rich natural and cultural resource base for tourism. The potential for tourism in Africa is largely underutilized but can play a prominent role in the economic development of the continent. It should however not be seen as a panacea for all Africa's problems, especially if it is allowed to develop in an uncontrolled manner.

SD in general, but also within the tourism sector, is receiving much attention following the Rio Earth Summit in 1992. Although the concept is widely used, many authors however noted that little practical methodology has been developed to apply the concept in practice.

The review of the appropriate literature indicates that the establishment of tourism networks can have definite benefits for the various role players. Tourism routes are good examples of a network approach to tourism. Numerous researchers have pointed out the advantages to belonging to tourism networks and they also list the characteristics of successful networks. However, the establishment of tourism networks in Africa is a relatively new concept, but the potential to develop these networks could be a viable option to enhance economic development on a local scale. Development needs to be well planned and monitored so that the benefits are distributed among all role players in the industry and to ensure that development happens in a responsible manner. Through the development of tourism networks, a broad range of role players can be brought together to facilitate the wider distribution of benefits that can ensure sustainability.

Although research on measuring sustainability in tourism is not scarce, many researchers point out that there are pitfalls that need to be considered when attempting to measure sustainability. Various tools exist to measure sustainability. SIs are one of these tools now gaining prominence. Indicators need to meet specific criteria and the selection of appropriate indicators needs to take account of all the stakeholders involved in the destination or tourism network. The Delphi technique is proposed as an unbiased way to select indicators and has been widely applied in the tourism sector.

By selecting and applying indicators of SD to tourism routes or networks, it should be possible to monitor the success of such routes, make sure that their activities are not harmful to the environment and ensure that communities experience the benefits, but not the negative impacts of tourism development.

The next chapter deals with the methodology for identifying both generic sustainability indicators and route-specific indicators for tourism routes. The methodology uses the work of Ko (2005) as a framework, but is adapted for the purpose of this study.

CHAPTER 3: METHODOLOGY - IDENTIFYING SUSTAINABILITY INDICATORS

3.1 RESEARCH DESIGN

Tourism and tourism routes in particular are seen as a vehicle for local economic development (LED) (Briedenhann & Wickens 2004; Rogerson 2002b). SIs are one of the tools that can be used to measure the impact of tourism on LED, social systems, and the environment. Many studies make use of the triple bottom line approach to measuring the impact of tourism (Choi & Sirakaya 2006; Green, Hunter & Moore 1990; Kuo, Hsiao & Yu 2005; Miller 2001; Tsaur, Lin & Lin 2006; WTO 2004). When dealing with tourism routes or networks however another element needs to be incorporated. To monitor the success or functionality of the network, indicators that relate specifically to the network need to be incorporated. The research aims to firstly develop a set of generic indicators for monitoring tourism routes from existing literature and secondly to develop a method of determining route-specific indicators by making use of a participatory approach. The set of generic indicators are tested on two pilot routes in order to gauge the scale of sustainability on the social, environmental and economic aspects and the added dimension of network functionality. The process is illustrated diagrammatically in Figure 1.1 (p.11) to which the reader can refer for an overall view.

3.2 RESEARCH METHODOLOGY

The research methodology draws on the work of Ko (2005) in which he developed a conceptual approach for conducting a sustainability assessment. His work is used as a basis for the research, but it is expanded on by testing the approach on two tourism routes in the African context.

3.2.1 Generic sustainability indicators for monitoring tourism routes

Much research has been conducted on the development of indicators to monitor tourism development at various scales. During 2001 responsible tourism guidelines were designed in South Africa to provide national guidance and indicators to enable the tourism sector to demonstrate progress towards the principles of responsible tourism embodied in the 1996 White Paper on the Development and Promotion of Tourism in South Africa (Kotze 2002).

Namibia developed a set of national tourism indicators as part of their State of the Environment Report (SoER) process between 1998 and 2001 (MET 2006). It can be expected that other countries in Southern Africa will follow suit. At the provincial level, provinces in South Africa generally lack specific SIs for tourism. Some provinces include it as part of their SoERs, whereas others have yet to develop a basic set of indicators. At the local scale only a few local municipalities possess a dedicated set of SIs for tourism.

This study was prompted by the lack of suitable SIs for tourism at the local and provincial scales in Africa. It is suggested here that a set of indicators be developed at the meso-scale to bridge the gap between local and provincial initiatives in developing SIs. By developing SIs for tourism routes or networks, communities and local authorities can work together to monitor the success and impacts of tourism in their areas.

Ko (2005) proposes eight steps in the sustainability assessment procedure:

- Identify the systems;
- Identify dimensions;
- Identify indicators;
- Scale the indicators;
- Determine gradations of sustainability;
- Develop sustainability assessment maps (SAMs);
- Extend sustainability over time; and
- Evaluate the outcome.

For the purpose of this study, one step has been added (data collection) and one of Ko's steps (extend sustainability over time) were left out, as the aim of this study is to conduct the baseline sustainability assessment and not subsequent assessments. These steps are elaborated on in the following subsections.

3.2.1.1 Identify the systems – the human system and natural ecosystem

Traditional Western intellectualism (dualism), whereby human beings and the natural environment are separated, and people have the right to develop or exploit the environment, has been criticized and is now changing (Mannion & Bowlby 1992 in Ko 2005; Purdon 2003) so that alternative ideas about the relationship between human beings and the natural environment are becoming more widespread. Human beings are recognized as being part of the natural environment and not as separate entities. A tourism route or network should thus contribute to the well-being of both the natural environment and the communities in which it is established. According to Ko (2005), the process of assessing sustainability should focus on both the human and the natural ecosystems.

3.2.1.2 Identify the dimensions for sustainable tourism development

Although Ko (2005) proposes eight dimensions of sustainable tourism development (STD), in the scope of this study only four dimensions are used. The reason for using only four dimensions is to simplify the assessment procedure so that route participants can conduct their own assessments in future. The three dimensions - economic, social and environmental, associated with the triple bottom line and the added dimension of network functionality is used to assess the sustainability of a tourism route or network. Within Ko's framework, the economic, social and network functionality dimensions fall within the human system while the environmental dimension is contained in the natural ecosystem.

The added dimension of network functionality is assessed according to the framework of Fadeeva (2004). Halme and Fadeeva (2000), as cited in Fadeeva (2004), believe that the application of two complementary assessment angles on tourism networks brings a better understanding of the networks' results. According to them, networks should first be assessed on the value added to the triple bottom line of sustainable development (SD) and second on the benefits to individuals, businesses, the region and society in general. Attention also needs to be given to the applicability of the results. Fadeeva (2004) proposes the framework shown in Figure 3.1 for assessing results of networking for SD.

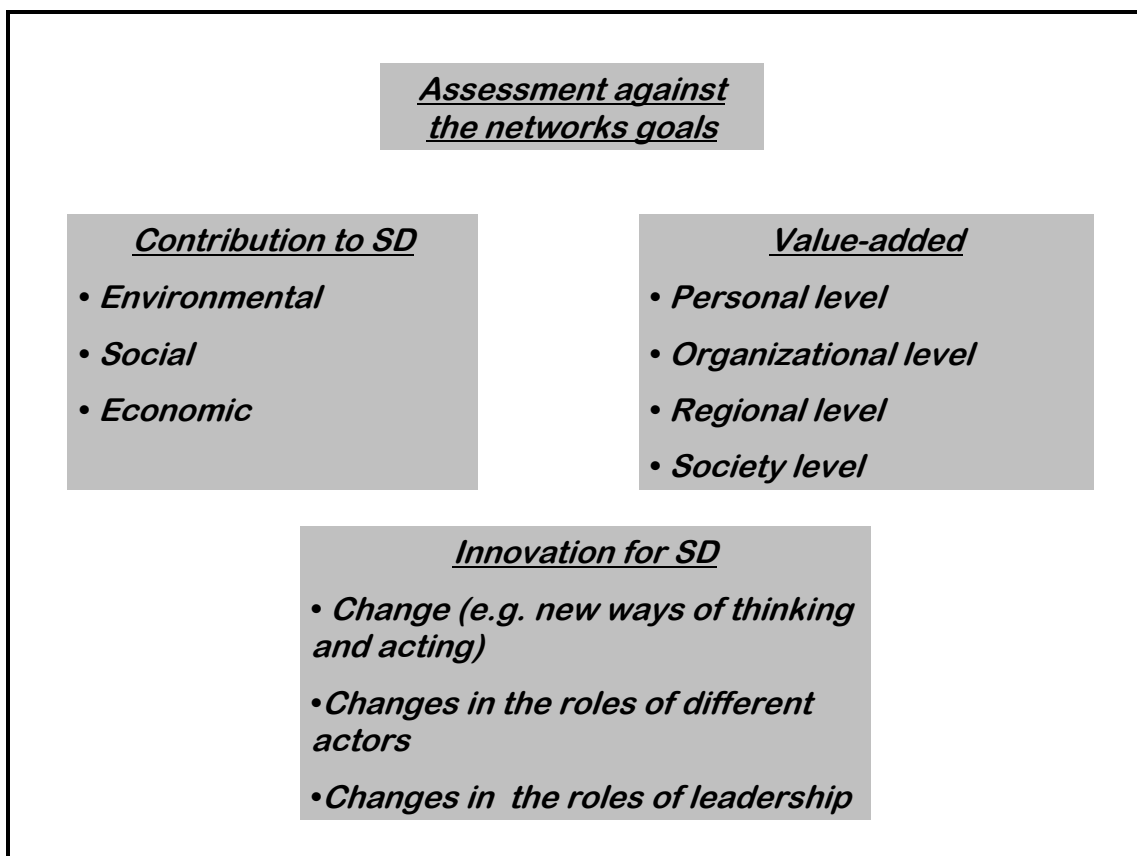


Figure 3.1 Framework for assessing results of networking for sustainable development (Source: Fadeeva 2004: 192)

The following elements are crucial in assessing the contribution of networks to SD:

- Obtaining an understanding of the innovative performance of the network;
- The contribution of the network to SD; and
- The value-adding role of the network.

Once the dimensions for sustainable tourism development have been defined, the next step is to identify the indicators. A preliminary list of sustainability indicators was identified first before refining the list to apply directly to tourism routes.

3.2.1.3 Identify the main indicators

According to Ko (2005: 438) “it may not be necessary or possible to use all the indicators in all cases. Thus, it is important for a tourist destination to select a mostly appropriate group of dimensions and indicators for the assessment.” Hence the scope of this study called for only three of Ko’s eight dimensions to be included for assessment plus the added dimension of network assessment. Each dimension of the framework is composed of a cluster of indicators from which pertinent indicators can be chosen. The first step is to select a preliminary set of indicators which are reviewed in terms of their potential to assess tourism routes or networks before being included in the revised or final set of indicators. The indicators need to be generic so that they can be applied in different situations and areas often with diverse features and resources.

a) Preliminary list of sustainability indicators

Drawing from the literature and the researcher’s experience as a tourism route developer, a list of indicators was compiled. The list (see Appendix A) contains 44 indicators in total i.e. 17 social-, 11 economic-, and 16 environmental indicators. In addition to these the list also contains indicators that relate to the functionality of the network itself. The list serves as an assessment hierarchy with its foundation being the human system and the natural ecosystem. The hierarchy expands by introducing the four dimensions, followed by the specific issues and the SIs. The list also includes the collection method for each of the indicators that need to be measured. According to Hodge (1996), cited in Ko (2005), the assessment hierarchy is a powerful tool by providing a map of the assessment process and explicitly showing what factors are being considered in the assessment process. Each

of the preliminary indicators was assessed on their applicability to tourism networks or routes for inclusion in the final list of indicators.

b) Refined list of sustainability indicators

Many of the indicators included on the preliminary list related to destinations and were thus not applicable to tourism routes or networks. Each indicator was assessed and either adapted to suit tourism networks or excluded from the list. The list was thus refined to focus on elements that are applicable to tourism networks (see Table 3.1). Some of the indicators would still relate to issues at the destination level, but would have an impact on the network in some way. The set of generic indicators is intended to be applicable to tourism routes or networks in any area or region and it focuses on issues that generally occur anywhere. The refined list of indicators aims to address four main issues, namely social, environmental and economic issues, and network functionality. Each of these main issues has sub-issues and specific indicators that measure their outcomes. The indicators are used to assess the current situation in the route area and subsequent assessments measure the progress of the route on each one of selected indicators. Every route or network is established in a specific location and each location has issues that are specific to that area. Following the selection of indicators the relevant data must be collected. In this research three survey instruments were used.

3.2.1.4. Data collection

The researcher employed three questionnaires to collect primary data from route participants (tourism suppliers), community members, and tourists on each route under investigation. The participant questionnaire (Appendix B) was used in an interview survey where the researcher asked the questions and recorded the answers on the questionnaire. The interviews with participants elicited baseline information. In the future Open Africa will carry out follow-up surveys on an annual basis to monitor changes on the route. The participant questionnaire collected the following:

- Personal details of participants;
- Background information on their establishment or activity;
- Clientele or market share;
- Business information;
- Capacity and training needs;
- Environmental and community issues;
- Community involvement; and
- Conservation.

The community questionnaire (see Appendix C) gauged residents' perceptions regarding the effects of tourism in their community. The questionnaire is administered at the establishment of the route and will in future be administered on an annual basis by Open Africa and the Route Forums (RFs) to monitor changes in perceptions. A RF is an organizational body for the route consisting of persons elected from the local community and other relevant stakeholders (Open Africa 2007). The community questionnaire contains 18 perception statements, measured on an ordinal scale and two open-ended questions regarding residents' perceptions of tourism.

The customer exit questionnaire (see Appendix D) was used to collect information on the tourists' perceptions and experiences of the route. The questionnaire was administered by route participants with their customers when the latter departed. The questionnaire covers aspects like marketing (how respondents found out about the route), types of activities

undertaken, and it also includes 21 perception statements measured on an ordinal scale relating to respondents' experience of the route. In addition, the questionnaire provided for predictor variables like biographical information and length of stay in the region.

The participant questionnaire survey was conducted to collect baseline data for two tourism routes that were in the process of being established. Route participants are defined as all tourism suppliers listed as members of a route (Open Africa 2007). The Caprivi Wetlands Paradise route had 22 participants and the survey was conducted with either the owner(s) or manager(s) of the tourism business (see Appendix E). The Barotse Trails Route had 53 participants and the survey was once again conducted with the owner(s) or manager(s) of businesses (see Appendix F). The respondents attended focus group meetings in October 2005 for the establishment of the routes and the survey was conducted in a two-week period after the meetings by visiting each respondent and carrying out a structured interview using the appropriate questionnaire. All members/participants on these routes were part of the survey. As the two case study routes were then in the process of being established, the intention was to establish baseline data that can be compared with future assessments conducted by Open Africa and the RFs. The data acquired from the above survey instruments was entered into a statistical software program for analysis before being used to scale the sustainability of the route or network.

3.2.1.5 Determining the measurement scale of sustainability indicators

According to Ko (2005), a clear scale is required to be able to compare and evaluate different factors against each other and therefore argues that indicators needs to be transformed into some measurable form. Lee-Smith (1997) suggests making use of an ordinal or interval scale. Interval scales like Prescott-Allen's (1997) barometer of sustainability, which uses an interval scale of 1-100, can be mapped onto the ordinal scale: bad-poor-medium-OK-good. Ko (2005) suggests measuring the perceptions of the main stakeholders in tourism (residents, tourists and experts) by making use of a 10-point interval scale.

Ko (2005) has put forward five reasons why perception studies may be justified in the development of tourism indicators:

- Existing technical and scientific data cannot always be used in tourism sustainability assessment as it is difficult to prove the contribution of tourism to the technical data;
- Perception studies have been widely employed, among others, in examining tourism impacts, the quality of service and marketing (see for example Andereck et al. 2005; Besculides, Lee & McCormick 2002; Burns & Sancho 2003; Cater 2006; Hillery et al. 2001; Ko 2005; Tsaur, Lin & Lin 2006);
- Participation of stakeholders is one of the key elements of STD;
- Perception studies are one of the most appropriate methods to assemble the different opinions of various stakeholders and to suggest average scores for their opinions. This implies that a perception study is a relatively easy mechanism to measure diverse opinions; and
- Because sustainability has an element of uncertainty, we are still not sure about the best methods to achieve SD.

There are numerous tourism indicators that are difficult to measure numerically. Consequently, the level of perception or attitude of stakeholders can be used to provide information to measure the quality of indicators. Where technical data are unobtainable, a perception study may be a useful alternative tool for tourism sustainability assessment.

3.2.1.6 Determining gradations of sustainability

Grading of sustainability is necessary for ease of communication and comparing different networks on the same scale. Ko (2005) proposes four different scales of gradation ranging from a two-class scale up to a five-class scale depending on the level of detail required. The two-class scale consists of only two categories with 50 points each (sustainable or unsustainable), while the five-class scale contains five sectors with 20 points each (sustainable, potentially sustainable, intermediate, potentially unsustainable

and unsustainable). The other two scales fall within the outermost scales and consist of a three-class scale with 33.3 points each, and a four-class scale with 25 points each. This study makes use of a five-class scale. A five-point scale was selected for the baseline assessment as many of the indicators will have low scores initially. A five-point scale will enable subsequent assessments to capture even slight progress, or decline on the aspect being measured. The scale is divided into the following categories:

- Sustainable: 81-100%
- Potentially sustainable: 61-80%
- Intermediate: 41-60%
- Potentially unsustainable: 21-40%
- Unsustainable: 0-20%

The next step entails representing the results in graphical form by making use of sustainability assessment maps (SAMs).

3.2.1.7 Develop tourism sustainability assessment maps

The results from the assessment can be usefully presented in graphical forms. Systemic representations (such as SAMs) illustrate the interrelations between the components of a complex system (Simon 2003). They can be constructed collectively, hence inviting participation in debates and in decision-making.

Ko (2005), drawing on the work of Clayton & Redcliffe (1996), summarizes the purpose of SAMs as follows:

- To help identify the current situation in the community;
- To generate possible future scenarios from the situation;
- To clarify the trade-offs implicit in indicator selection;
- To make tourism concerns or issues more accessible to stakeholders;
- To assist stakeholders to define their goals and objectives;
- To make all parts of the sustainability assessment clear and explicit; and
- To serve as an educational tool.

Ko (2005) uses two different SAMs for displaying the results of an assessment:

(i) The *barometer of tourism sustainability* (BTS) is helpful when illustrating a broad level of tourism sustainability in a tourist destination, thereby providing stakeholders with an immediate picture of where they are and where they are going (Ko 2001). The BTS is the only performance scale designed to measure human and natural ecosystem well-being together without submerging one in the other (Prescott-Allen 2001). It provides a way of systemically combining and organizing indicators so that conclusions can be drawn about both the human system and the natural ecosystem.

An example of the barometer making use of hypothetical data, a 5-class scale and indicating scores of 6.4 and 3.8 for the human system and natural ecosystem respectively, is given in Figure 3.2. The BTS uses a matrix to illustrate the relationship between the human system and the natural ecosystem. Each system's sustainability score is plotted on an axis graded from 'unsustainable' to 'sustainable'. The intersection of the plots indicates the sustainability level of the destination. It follows that the BTS can have many different combinations of sustainability levels for a tourist destination.

(ii) The second SAM that can be applied is the *AMOEBAs of tourism sustainability indicators* (ATSI). The ATSI focuses on individual indicators and thus overcomes some of the shortcomings of the BTS. AMOEBA, is an acronym in the Dutch language that stands for 'general method for ecosystem description and assessment' (Wefering, Danielson & White 2000: 159).

Figure 3.3 is an ATSI illustrating the sustainability levels of individualized tourism indicators by making use of hypothetical data in which the number of tourism sustainability indicators (SIs) totals 32. Four indicators are used for each of the dimensions in the human system (political, economic, socio-cultural and service quality) and four each in the natural ecosystem (environmental policy and management, biodiversity, ecosystem quality and general environmental impacts), and a sustainability scale value is given to each indicator.

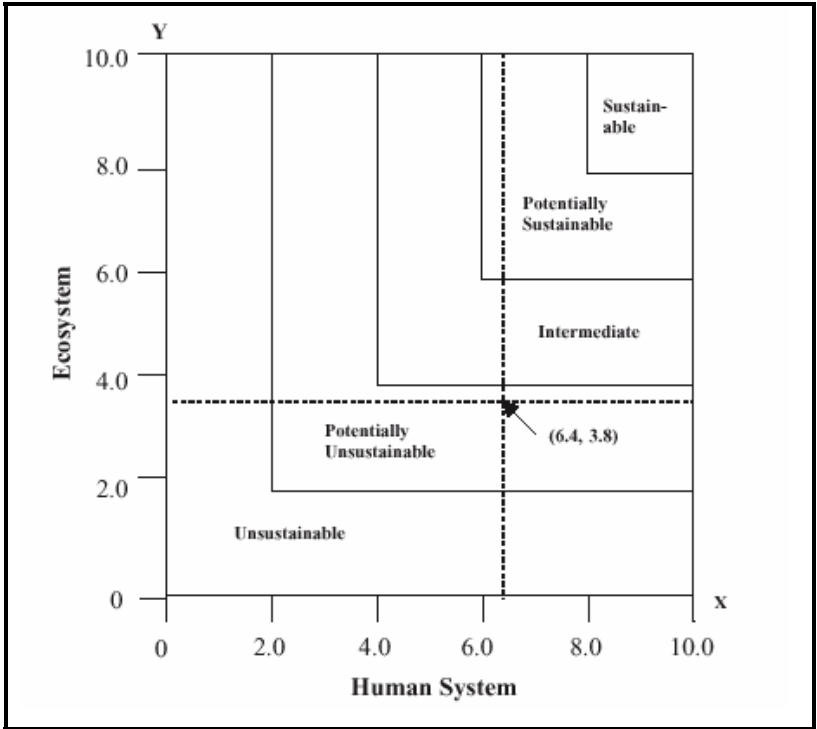


Figure 3.2 The barometer of tourism sustainability (BTS) using hypothetical data
 Source: Prescott-Allen (1997:7)

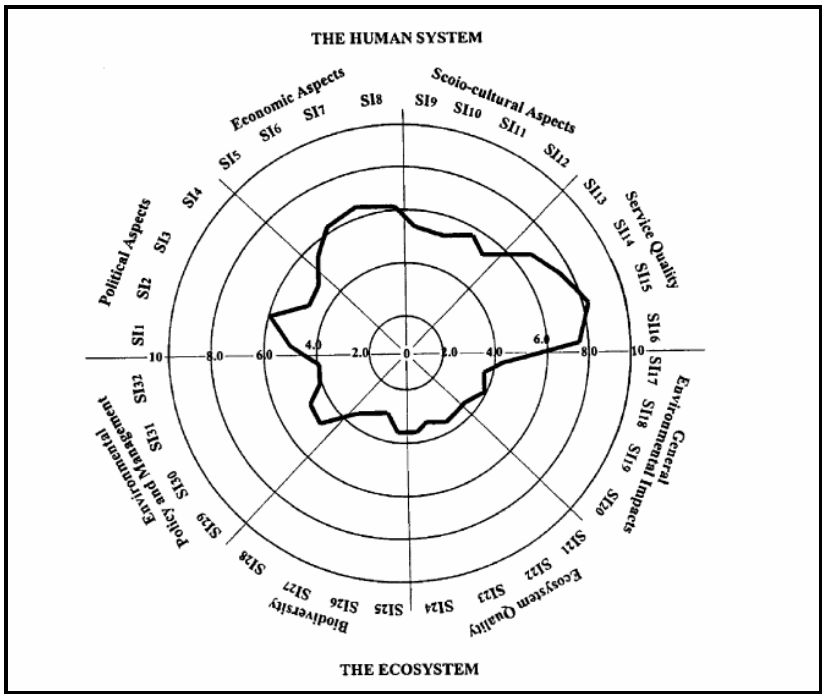


Figure 3.3 A hypothetical AMOEBA (Source: Ko 2005: 441)

Grading for the ATSI making use of a five-class scale will have the following sectors:

- Sustainable: 8.1 to \leq 10.0
- Potentially sustainable: 6.1 to \leq 8.0
- Intermediate: 4.1 to \leq 6.0
- Potentially unsustainable: 2.1 to \leq 4.0
- Unsustainable: 0.0 to \leq 2.0

According to Ko (2005: 441) the implications of the ATSI models are as follows:

- Individual levels of sustainability are presented in a diagram;
- The level of sustainability is represented by quantitative data;
- The quantitative data may be obtained by primary or secondary sources;
- The sector of the sustainability scale is clearly defined with numerical sources;
- Four types of sustainability gradations (ATSII –4) are suggested;
- In the process of data gathering and analysis, a holistic (systemic) and reductionist approach are adopted; and
- The larger the AMOEBA, the more sustainable is the system, while the smaller the AMOEBA the less sustainable the system.”

The benefit of models like the BTS and ATSI is that when uniform indicators are used, the statistical results of different networks or routes can be compared to determine the difference between them. The next step in the assessment procedure is to extend the BTS and ATSI over time. The scope and time-frame of this study did not allow for the models to be extended over time and only a one-off assessment will be conducted. Ongoing monitoring of the routes' progress can be done by periodically compiling the BTS and ATSI models. After compiling the models repeatedly, an assessment of the results will enable an overall evaluation of the sustainability of the route.

3.2.1.8 Evaluation of sustainability assessments

Evaluation of the results of the assessment is important and consideration should be given to the 'evaluative' component of the research process (Ko 2005). The process can either be evaluated technically, in terms of the efficiency and effectiveness of the data, or in terms of its usefulness to stakeholders. The models can be presented to stakeholders to determine whether they help with decision-making and to warn stakeholders of possible negative impacts.

While the BTS and ATSI models are useful in comparing different routes in general, every route has elements that are route-specific. Because routes are established under different circumstances, in different locations and with different spatial scales, a set of route-specific indicators needs to be developed to deal with these differences.

3.2.2 Route-specific sustainability indicators

In addition to the set of generic indicators, route-specific SIs needed to be developed to be able to monitor issues that relate to the specific area in question. A thorough review of the literature provided no usable results from previous research on this topic. The researcher was nevertheless convinced that the development of route-specific indicators must make use of a participatory method to capture the local and indigenous knowledge inherent in rural communities. This conviction springs from the following accusations: "It is increasingly claimed that (sustainability) indicators provide few benefits to users" (e.g. Carruthers & Tinning 2003 in Reed, Fraser & Dougill 2006: 406), and that "...millions of dollars and much time...has been wasted on preparing national, state and local indicator reports that remain on the shelf gathering dust" (Innes & Booher 1999 in Reed, Fraser & Dougill 2006: 406). According to Riley (2001) this can partly be attributed to the approach taken and the scale of development since the majority of existing indicators are based on a top-down definition of sustainability that is fed by national-level data. This may miss critical SD issues at the local level and may fail to measure what is important to local communities (Reed, Fraser & Dougill 2006). After examining different frameworks

for developing indicators, the PSR framework (OECD 1993) was selected as a promising method of developing route-specific indicators that make use of a participatory approach.

3.2.2.1 The pressure-state-response framework

The PSR model was first proposed by Canadian researchers in the early 1990s, and was approved by the Organization for Economic and Cooperation Development (OECD) and United Nations Environment Programme (UNEP) in 1995 (Hammond et al. 1995). The PSR framework has been suggested as a mechanism for addressing causal linkages between issues, especially in SoERS (OECD 1993). Several large international development organizations have adopted (or have considered it) this framework or a very similar framework for the presentation of indicators (Hardi & Pinter 1995).

Hammond et al. (1995) summarise the PSR framework for developing environmental indicators in a simple set of questions:

- What is happening to the state of the environment or natural resources?
- Why is it happening?
- What are we doing about it?

According to Li (2004), in the PSR model (see Figure 3.4), indicators are collected and classified as pressure indicators, state indicators and response indicators. The state indicators reflect the environmental state of tourist destinations, the pressure indicators reflect the tourism activities and their impacts on the environment, and the response indicators show what responses society makes in the form of actions to mitigate impacts. By making use of a participatory approach in the form of focus group meetings, guided by the PSR framework, communities are engaged in developing indicators for monitoring their own tourism resources.

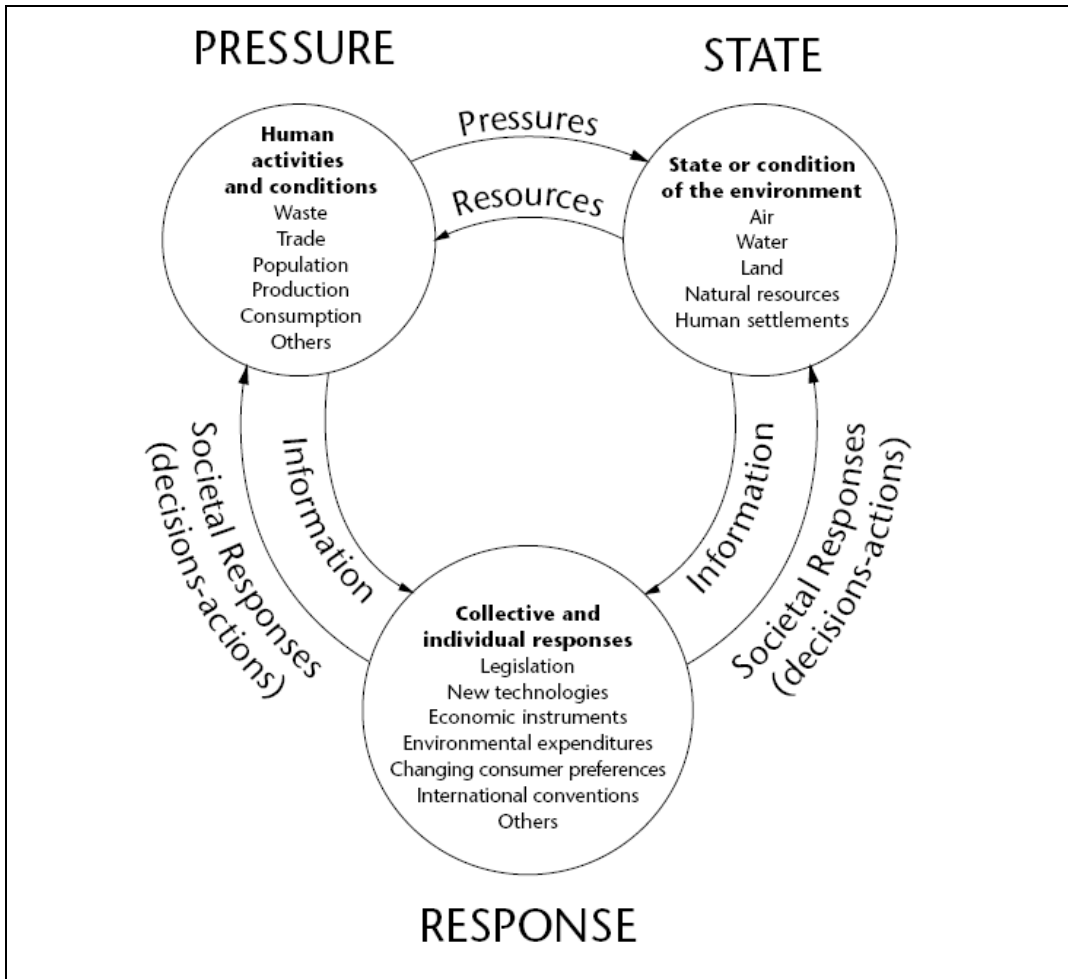


Figure 3.4 The pressure-state-response framework (Source: Pinter, Cressman & Zahedi 1999: 6)

3.2.2.2 Focus group meetings

The focus group research method is used to gather data from a small group of participants brought together for a defined purpose (Elhard & Jin 2004). There is a specific topic on the agenda and the discussion is guided by a neutral moderator using open-ended questions. It is an efficient method to quickly gain information and an in-depth understanding of a topic from the point of view of a particular group of stakeholders.

After the main features of an area have been identified and participants have an understanding of the tourism resources in their area, they are guided through the pressure-

state-response model for each of the features listed. The focus group participants are asked to indicate the pressures on the resources identified, the current state of these resources and how they as participants in the tourism network could contribute to mitigating the impacts on their resources. This method relies on the indigenous knowledge of the local population and could serve to supplement scientific data, if necessary. By making use of a participatory approach, a community takes ownership of monitoring its tourism resources. The community benefits from the process, as they have some degree of control over the resources they need in order to attract tourists to their area, and it also contributes to sustaining the resource base for future generations.

The framework developed by Ko (2005) and discussed in this section was applied to the two case study routes. The PSR method was applied to one of the case study routes in order to identify route-specific indicators to monitor the route's tourism resources. The next section will deal with the identification of both the generic- and route-specific indicators.

3.3 SPECIFICATION OF SUSTAINABILITY INDICATORS

The data collected in the survey consisting of three questionnaires, is used to measure the sustainability of tourism routes and to determine the baseline from where subsequent measurements will take place. Figure 3.5 sets out the procedures followed for collecting and manipulating the data to form sustainability indicators (SIs). The study makes use of primary and secondary data and comprises three data components. The primary data was collected in the field by means of questionnaire surveys, and the secondary data was acquired by surveying existing literature on SIs and from focus group proceedings.

The initial set of indicators had to be revised due to the focus and time constraints of this study. The study serves as a baseline from which subsequent assessments can be made to measure progress in terms of sustainability. The analysis of data is based on the framework of Ko (2005) which provides an uncomplicated method to analyse and present data. If the route members are to undertake sustainability assessments themselves, a

simple method of analysis had to be used that leads them through the assessment procedure.

Ko (2005) sets out the procedure in a systemized way that can be followed easily from start to finish. Open Africa or similar organizations, and government departments involved in the development of routes or networks should be involved in the baseline assessment and also lead route participants through the process so that they can do subsequent assessments themselves.

It is important for route members to become involved in the monitoring process, as this aids them in obtaining a degree of ownership in the planning process and also provides the necessary knowledge of the impacts of their businesses on the economy, community and the environment. In order to cultivate positive links with conservation initiatives, local residents must be able to feel a sense of control and ownership over the planning process that involves resource use and nature tourism development (Brandon 1993).

Tourism relies heavily upon the support and cooperation of local residents, because this is essential for the development, successful operation and sustainability of the industry (Yoon, Gursoy & Chen 2001). The following sections aim to give some insights into the analysis of the social, economic and environmental SIs that make part of this study.

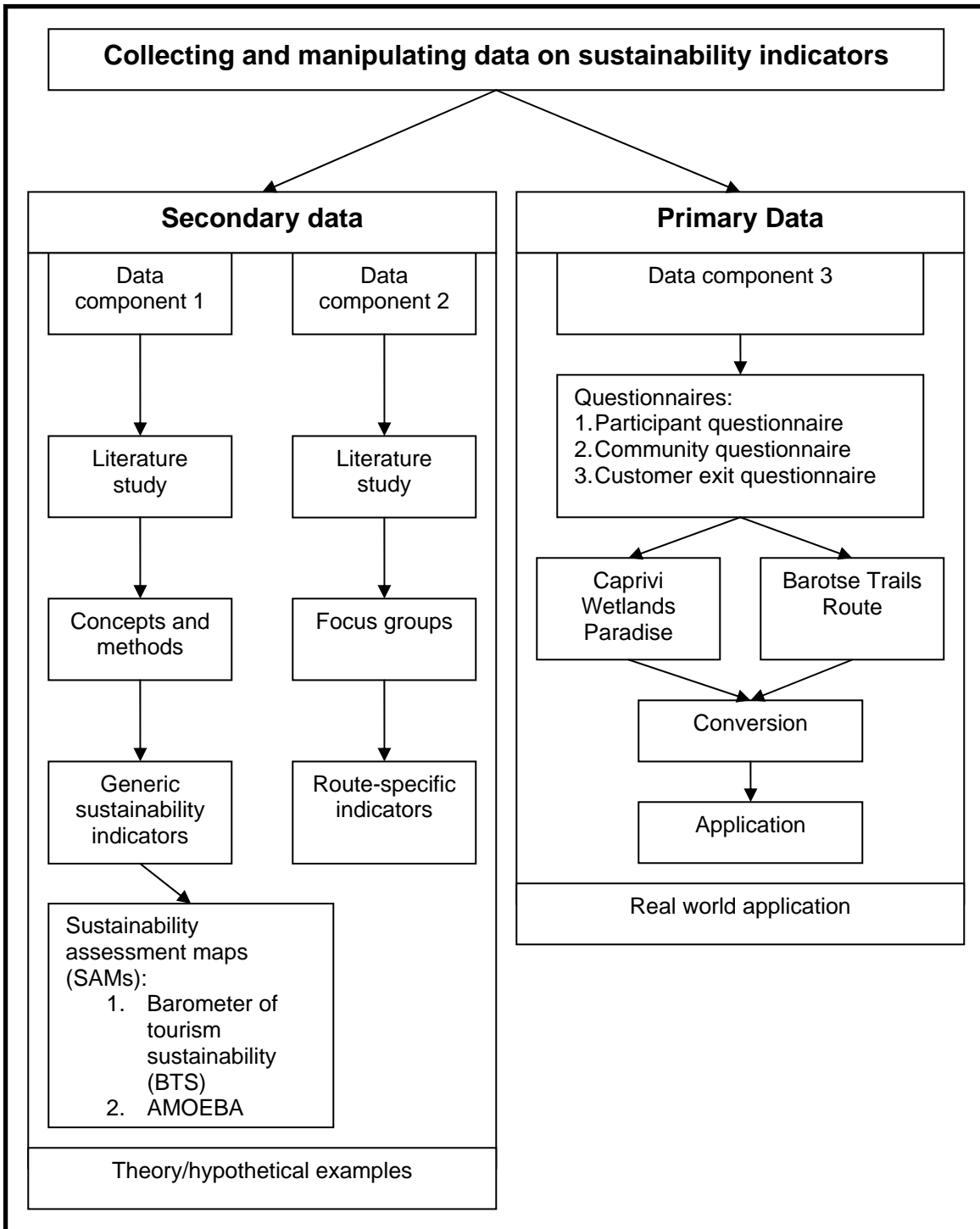


Figure 3.5 Collecting and manipulating data on the sustainability indicators

3.3.1 Indicators of social sustainability

For the purpose of measuring the social impacts of routes or networks, six issues were chosen to be measured (see Table 3.2). The first issue is *community attitudes towards tourism*. As noted above, tourism relies on the cooperation and support of local residents in order to be successful and sustainable. The indicator measures the extent to which a multi-stakeholder or community tourism plan is in place on the route or for the area where it operates. Multi-stakeholder processes that seek to engage stakeholder groups for planning help to develop a common vision, build ownership, and secure buy-in from various stakeholder groups for plans and projects (APEIS 2003), and if this includes a focus on communities, it can have a positive impact on local attitudes towards tourism. The indicator is measured by assigning a score of 1-10 to indicate a) the existence of a plan by multiple stakeholders in the area and b) the extent to which this plan has a focus on developing and promoting community-based tourism in the area through initiatives like cross-marketing or mentorship programmes.

Table 3.2 Social indicators of sustainability

Issues	Indicators	Collection methods
Community attitudes towards tourism	Existence of a community/multi-stakeholder tourism plan;	Identification
Local community participation	Participants acquiring goods/services locally	Participant questionnaire
Social responsibility	Existence of (route) policies aiming at support for community development	Identification
	% of participants with policies/programmes aimed at community development	Participant questionnaire
Professional and personal development	Number (%) of employees/participants qualified/certified	Participant questionnaire
	Frequency of training programmes and level of participation	Participant questionnaire
Staff capacity	Training requirements	Participant questionnaire
Community involvement	Number of community projects on route	Participant questionnaire
	Participants involved in community upliftment	Participant questionnaire

The second issue deals with *local community participation* in the tourism industry and is measured by the extent to which members of the route acquire their goods and services

locally. The indicator is also a measure of local economic development, but addresses a social issue of support for local communities. According to Rogerson (2002 b) the extent to which local linkages provide goods and services is critical in terms of enhancing the local economic impact of tourism development. Acquiring goods and services locally contributes to the social development of local communities as skills are acquired to start up and manage businesses. The businesses need support from local enterprises, however, if they are to become viable entities. When supporting local community projects, there is a direct link with social development as funds generated are often used to provide social services to the local communities. In the Caprivi, for example, a local community craft project uses its revenue to undertake community development projects like building schools or clinics (IRDNC 2005).

The third issue is *social responsibility* for which two indicators measure the extent to which the routes have policies aimed at support for community development and policies aimed at the individual/business level respectively. Lepp (2007) found that a community's attitudes change positively towards tourism when it sees improvements in community development as a result of tourism. Other studies have also shown that residents who are dependent on the tourism industry, or perceive a greater level of economic gain or personal benefit from it, tend to have more positive perceptions of the impact tourism has (Brunt & Courtney 1999; Haralambopoulos & Pizam 1996; Jurowski Uysal & Williams 1997; Lankford & Howard 1994; McGehee & Andereck 2004; Sirakaya, Teye & Sönmez 2002). By developing a policy aimed at community development a route can contribute towards development and cultivate positive attitudes and support from host communities, in turn influencing the overall sustainability of the route.

The next two indicators deal with the issue of *personal and professional development of staff* employed by businesses on the route. Tourism training and education have gained momentum as can be seen by the range and diversity of training programmes available at various levels, although most developing countries are lagging behind (Singh 1997). In countries where tourism has become a major socio-economic phenomenon, training has generally gained momentum (Mayaka & Akama 2007). This rapid growth in tourism

training is mainly driven by the fact that many governments and private institutions are increasingly recognizing the socio-economic importance of the tourism industry. Consequently, government and the private sector recognize that a professional and well-trained workforce is essential in the provision of quality service and for enhancing the overall sustainability of the industry (Mayaka & Akama 2007). The number of qualified or certified staff a tourism business thus has contributes to the sustainability of the business. In addition to the sustainability of the business, training should be done for the development of skills found in communities. According to Choi & Sirakaya (2006: 1276), socio-cultural sustainability implies “respect for social identity and social capital, for community culture and its assets, and for a strengthening of social cohesiveness and pride that will allow community residents to control their own lives.” Training staff, especially from local communities, increases the skills base and also contributes to overall community development through education. The frequency of training programmes should be regular and not one-off exercises. Staff development through regular training must not only result in higher job satisfaction for the employee but also a better experience for the customer and ultimately the increased performance of the business (Warburton 2006). Developing employees’ skills not only helps to improve performance but it also increases the likelihood that jobs remain interesting and challenging. The fourth issue, *capacity of staff to perform their job function* has an impact on job satisfaction of the employee. In a number of studies it has been shown that empowerment increases job satisfaction among employees and reduces role stress (Zeithaml, Berry & Parasuraman 1988 in Ravichandan & Gilmore 2006). Therefore it can be argued that if a business has high training requirements it would have an effect on the job satisfaction of employees as they would not necessarily possess the skills they need to perform their duties. Consequently, the indicator for this issue is the training requirements of the staff.

The sixth issue is the *extent of community involvement* in the tourism routes or networks. The first indicator is the number of community projects on the route as it is a way to determine community involvement, and the second, the number of participants involved in community development or upliftment indicates the extent to which tourism businesses invest back into their host communities. In order for communities to gain sustainable

benefits from tourism development, there needs to be a degree of community involvement and control in the development (Gunn 1988; Murphy 1985; Simmons 1994 in Nyaupane Morais & Dowler 2006). Lepp (2007: 878) contends that “positive attitudes are an indication that the social and cultural obligations of tourism development are being met.” Apart from cultivating positive attitudes towards tourism, other authors have advocated that “members of the host community should be involved in tourism planning because they have an historical understanding of how the region adapts to change; will be the ones most closely affected by tourism; and will be expected to become an integral part of the tourism product” (Simmons 1994 in Nyaupane, Morais & Dowler 2006: 1374). It is even suggested that negative perceptions of tourism development, starting with a lack of local involvement in planning, may lead to a drop in visitor satisfaction and ultimately visitor numbers and the sustainability of a route (Potts & Harrill 1998 in Reid, Mair & George 2004). The following section deals with the economic aspects of monitoring tourism sustainability.

3.3.2 Indicators of economic sustainability

The measurement of economic indicators for determining the sustainability of tourism is important as tourism is clearly an economic activity. According to Choi & Sirakaya (2006: 1276), economic sustainability implies “optimizing the development growth rate at a manageable level with full consideration of the limits of the destination’s environment.” The authors go further to point out that the benefits of tourism should not only go to a selected group in the community, but should be well distributed throughout the community. Tourism seasonality, support for SMMEs and community-based enterprises, income, tourist arrivals and employment are the five issues of economic sustainability for which indicators were developed in this study (see Table 3.3).

According to Jang (2004) *tourism seasonality* is one of the least understood yet most long-standing and worrisome aspects of the industry. Jang (2004: 819) defines tourism seasonality as “a cyclical pattern that more or less repeats itself each year.”

Table 3.3 Economic indicators of sustainability

Issues	Indicators	Collection methods
Tourism seasonality	Tourist arrivals by month	Participant questionnaire
Operation and support of micro, small, and medium-sized enterprises, or community-based enterprises	Number of participants on the route (subdivided by types, e.g. accommodation and catering, tour-guiding, transportation, tour operation, etc.)	Identification
	Number of participants making use of incentives or programmes for SMMEs:	Participant questionnaire
Income	Average annual turnover	Participant Questionnaire
Tourist arrivals	Average number of tourists per month	Participant questionnaire
Employment	Average full time employees	Participant questionnaire
	Average part-time employees	Participant questionnaire

While tourism operators may be busy, even to the extent that service delivery may be lacking, in peak seasons, off-peak season revenues are often very low during the rest of the year. The problem is that operators still have consistent fixed costs throughout the year, which signifies a lack of capital to cover the costs with the revenue earned during only one or two busy seasons (Jang 2004). By measuring seasonality and ultimately whether operators find ways to overcome the problem, the economic sustainability of the tourism operator and route can be determined. The chosen tourism seasonality indicator is tourist arrivals each month.

The issue of *support for SMMEs and community-based enterprises* plays an important role in the development of the local economy of an area. As the studied tourism routes are mostly in rural areas and don't have large international companies like hotel groups as participants on the route, the operation and support for SMMEs and community-based enterprises is measured by two indicators: the product variety, and the number of participants on the route using incentives. SMMEs can be classified according to the number of employees they have. Many authors have pointed out the local economic benefits of tourism routes, especially in terms of support of SMMEs (Briedenhann and Wickens 2004; Kirsten & Rogerson 2002; Meyer 2004; Rogerson 2002a, b).

Income generated from tourism activities is a key measure of economic sustainability as it contributes to the improvement of the quality of life of the residents (Tsauro, Lin & Lin 2006). It is measured here by the annual turnover per participant averaged for the route as a whole. The percentage growth per annum serves as an indication of growth in income on the route and thus as an indicator of economic sustainability.

Although some authors warn against the negative impacts that a massive influx of tourists can have on local communities, crime rates, the environment and other aspects of society (Choi & Sirakaya 2006; Miller 2001; Tsauro, Lin & Lin 2006), tourism is essentially an economic activity and for it to be sustainable it needs tourists to be economically viable. This implies that the growth rate needs to be optimized at a manageable level, without threatening the integrity of the environment and local population (Choi & Sirakaya 2006). The average number of tourists received per month thus gives an indication of the economic viability of the route and the annual growth rate is measured to assess growth of the route over a period, also keeping the carrying capacity of these areas in mind.

From an economic standpoint, tourist spending helps boost residents' employment opportunities and income, and further improves residents' quality of life (Tsauro, Lin & Lin 2006). The issue of *employment* is measured here as the average number of full-time and part-time jobs per route with the annual growth rate in people employed being measured to determine the impact on job creation.

3.3.3 Indicators of environmental sustainability

The list of revised indicators of environmental sustainability is contained in Table 3.4. Tourism operators can have significant impacts on the natural environment in which they operate. Operators can, however, act as stewards of natural resources to effectively care for and conserve local resources. "Excessive depletion of resources not only damages residents' living environment but also lowers tourists' willingness to revisit" (Tsauro, Lin & Lin 2006: 643).

Table 3.4 Environmental sustainability indicators

Issues	Indicators	Collection methods
Environmental management systems	Policy on environmental and sustainability issues	Participant questionnaire
	Application of environmentally friendly technologies and techniques (% of participants) *Water saving techniques or devices *Energy saving techniques or devices *Recycling: Glass Paper Plastic *Green purchasing	Participant questionnaire
Measuring potential impact of tourism on the natural environment	% of projects where tourism impact is evaluated	Participant questionnaire
Source of financing for biodiversity in protected areas	% of conservation projects where tourism financial contribution is component	Participant questionnaire
Conservation and maintenance of protected areas	% of tourism products (tours, etc) with a community levy built into the price or surcharges	Participant questionnaire
	Tourism main source of funding for biodiversity conservation	Participant questionnaire

It is therefore advisable for destinations with a goal for SD to preserve the natural status by minimizing artificial development and destruction and to contribute to conservation in any way possible. Encouraging tourism operators to adopt policies regarding environmental and sustainability issues could contribute significantly to protecting the local environment. This is the first indicator selected for the issue of the *environmental management systems* working, or ready to work.

Tourists are becoming increasingly aware of environmentally friendly destinations and Yaw (2005) points out that this awareness is also starting to influence tourist's decisions on the type of destination they visit. So, investing in environmentally friendly technologies not only contributes to the protection of the natural environment, but can also play a role in the overall sustainability of businesses. The use of environmentally friendly technologies or techniques is the second environmental management systems indicator and is measured in four different ways in this study. They are the use of water- and energy-saving devices or techniques, the recycling of glass, paper and plastic, and green purchasing. Green purchasing is the purchasing of products that are environmentally friendly (Swanson et al. 2005). In order to understand the second issue (*impacts on the natural environment*) and its indicator, a brief digression is made next to

introduce and explain the concept of environmental impact assessment (EIA) and its application.

In recent years, many countries have strengthened their legislation in terms of environmental management. South Africa, Namibia and Zambia have also moved forward in this regard. In South Africa, for example, the Environment Conservation Act (ECA), Act no. 73 of 1989 (South Africa 1989), the National Environmental Management Act (NEMA), Act no. 107 of 1998 (South Africa 1998), and other sectoral legislation have made EIA a legal requirement for a wide range of activities that may have a detrimental effect on the environment.

Namibia has signed the Convention on Biological Diversity (CBD) of which Article 14 requires each contracting party to carry out an EIA of projects that are likely to negatively affect biological diversity (Tarr & Tarr 2003). A lengthy process of stakeholder consultation, begun in 1992, was pursued during the development of Namibia's policy and legislation on EIA. Cabinet approved the Environmental Assessment Policy (EA Policy) in August 1994 (MET 1995) and, in 1996, work began on the drafting of the Environmental Management Bill. Namibia's national policies, programmes and projects require an environmental assessment (EA) procedure, depending on several factors such as the nature and size of the proposed project.

EIAs are conducted all over the world to identify the potential negative and positive impacts of a proposed project, and to recommend mitigation measures to avoid or reduce potential negative impacts and enhance positive impacts. Almost every country has its own EIA guidelines and laws or regulations. In Zambia the Environmental Protection and Pollution Control Act, No. 13 was enacted in 1994 (Chapman & Walmsley 2003). The Zambian National Conservation Strategy was updated by preparing a National Environmental Action Plan, which was completed and adopted in 1994 (Republic of Zambia 1997a). EIA regulations were formulated in 1997 through the provisions of the Environmental Protection Pollution Control Act (Republic of Zambia 1997b). The implementation of EIA in Zambia is still in its formative years. Guidelines are currently available in a draft form for the tourism sector (Chapman & Walmsley 2003). These

guidelines are meant to be used for reviewing EIAs. The Zambia Wildlife Authority also has its own EIA guidelines to review developments in protected areas (ZAWA 2007), and the National Heritage Conservation Commission has developed guidelines for developments near heritage sites (Chapman & Walmsley 2003).

Conducting EIAs are important for determining the environmental sustainability of developments before they are undertaken. This issue is measured in this study by determining the proportion of participants (projects) on the route where the environmental impact has been evaluated formally.

The last two issues in this category refer only to protected areas and conservation projects. The first one concerns the source of financial contributions to the conservation of biodiversity in the park, reserve or project, and the other to maintenance of protected areas. According to Walker & Dickson (1988), cited in Priskin (2001: 640), “the importance of revenue generated from visiting protected areas may create justification for conserving areas which otherwise may have pressures from competing land uses such as farming, mining or urban development.” Kiss (2004) states that community-based tourism can reduce the need for long-term external funding for conservation under some circumstances, although it would rarely eliminate it completely. By re-investing a proportion of the profits gained from tourism, a contribution can be made to the overall sustainability of protected areas and conservation projects. According to Dharmaratne, Sang and Walling (2000: 590), “tourism could be a major source of revenue, especially in developing countries, for self-financing of protected areas, through the recovery of use and nonuse values.” Tourism’s contribution to conservation is measured here by determining the proportion of protected areas or conservation projects on the route where tourism makes a contribution to biodiversity conservation, where community levies are raised, and where tourism is already the main source of funding for biodiversity conservation. The functioning of the route forum (RF) is seen as a key aspect in the success of tourism routes (Open Africa 2007), and the next section discusses the indicators that measure network functionality.

3.3.4 Indicators of network functionality

In order to optimize the benefits associated with a tourism route, a RF is elected from members of the community and other relevant stakeholders. The RF acts as an organizational body for the route, and serves to promote the interests of the route (Open Africa 2007). The dynamism of the RF is key to the success of such a route. The network functionality indicators (Table 3.5) measure the performance of the RF and the tourism network as a whole. There are two issues involved.

Table 3.5 Network functionality indicators

Issues	Indicators	Collection methods
Coordination among members of the network	Number of RF meetings per year	Identification
Network Benefits	Number of joint network activities (supplemented by perceived benefits)	Self-assessment
	Value added to business and community through network (supplemented by qualitative information)	Self-assessment
	Achievement of network's goals	Self-assessment

The first issue, *coordination of network members*, is measured by the number of RF meetings per year. Open Africa (2006b) states that it is crucial to the success of routes to meet regularly in order to keep the momentum going and ensure participation and sharing of information by the role players on the route (Günther & Winkler 2006; Meyer 2004; Olsen 2003). Some of the benefits associated with meeting regularly are exchanging ideas, raising funds for brochures, or other projects the route or network wishes to take on, and keeping route participants up to date with developments on the route. In order for a route or network to achieve its goals it is crucial that the forum meets and sets time frames for achieving these goals. This is also important for showing other members the benefits of being part of such a route or network. By meeting regularly the forum can discuss joint activities that the participants can take on.

The other network functionality issue is that of *network benefits* for which three indicators are used. In a study of two Swedish tourism networks, Fadeeva (2004) found that the members of the networks assessed the results of the network in terms of the

benefits delivered to them through joint activities. It is thus important for participants in the network to see joint activities undertaken that ultimately hold some benefit to them. The first indicator therefore measures the number of such joint network activities on an annual basis and could be supplemented by qualitative data on the perceived benefits the members of the network see in these activities. Although Fadeeva (2004) distinguishes between benefits brought to the business and benefits brought to the community, the network should ultimately have some impact on the business environment of the participants, as tourism is an economic activity.

Rogerson (2002a) points out that the benefits of local networks and networking contributes to minimizing local leakages and ensures that the benefits of tourism development are maximized for the local economy. Fadeeva (2004) found a number of benefits (value added) to the businesses of two Swedish networks. These include acting as a vehicle for publicity, contributing to a positive social profile, resource optimisation by jointly acquiring goods or services, and strengthening the position of tourism relative to other industries. The second network benefits indicator, value added to business through the network, is measured in this study by self-assessment recorded on a score between one and ten. This can also be supplemented with qualitative information. The ultimate measure of sustainability is to measure whether the networks, in the view of their members, have achieved the goals they set for themselves. The goals of a route or network should be identified at the time of development and reviewed and adapted regularly. The achievement of these goals can be measured on an annual basis by assigning a score and supplementing it with qualitative descriptions. As mentioned above, it is important for the members of the network to see the benefits of being part of the network, and by identifying and achieving the set goals, members can see that progress is being made. Fadeeva (2004: 193) points out that the ability of a network to reach its goals is "...a direct indication of the network's process and, is an assessment of the network's effectivity."

The list of generic indicators that was selected from existing literature was refined by adapting the indicators to suit routes, or omitted from the list. The refined list of

indicators can now be applied to the two case study routes. The route-specific indicators were selected by making use of focus group meetings and this is discussed next.

3.4 ROUTE-SPECIFIC MONITORING

Route-specific monitoring is conducted through focus group meetings with communities and makes use of the pressure-state-response (PSR) framework. The reason for using focus groups to identify indicators is that a wide range of stakeholders can be assembled (especially community members) and issues can be discussed before decisions are made on the indicators. The aim of focus group meetings is to:

- a) Identify the main tourism resources in the area. By making use of a flipchart, participants are asked to list the main tourism features (resources) in their area; and
- b) Determine what indicators can be derived for the resources that are noted as important for tourism in the respective areas. By identifying resources, participants and the meeting facilitator gains an understanding of the resources that need to be protected in each area. The features range from natural resources like rivers, waterfalls or wildlife, to cultural resources like traditions or cultural dances or dress. After the key tourism features have been identified, the participants are led through the PSR framework in order to identify indicators.

Although the PSR framework is intended mainly for developing environmental indicators, it has been found to be suitable for monitoring tourism resources, especially since many of these resources are natural or cultural resources. The PSR framework has been applied by Li (2004) for developing ecotourism indicators for China's nature reserves. The PSR framework has also formed the base of several indicator definition programmes (Farsari & Prastacos 2007). One limitation of the framework is that the linear relationships in the human activity-environment interaction cannot capture the more complex and dynamic nature of the processes (OECD 1993). However, the framework is suitable for identifying indicators with the help of communities. It is a simple framework that can be used to lead discussions and identify not only indicators on

pressures, but it also serves as an educational process for communities to learn about the negative impacts of tourism and ways to promote the positive impacts of tourism.

The generic SIs have been identified, selected and refined and so the second objective of this study is reached. Once the generic SIs has been selected they can be applied to the selected routes. The procedure for selecting the route-specific indicators was also determined which addressed the third objective of the study and the route-specific indicators can now be selected. The next chapter deals with the application of the SI's on the case study routes.

CHAPTER 4: APPLICATION OF THE SUSTAINABILITY INDICATORS

4.1 THE TARGET GROUP PROFILE

The target population is all the tourism stakeholders that are part of the two case study routes in the study area. These stakeholders are:

- Lodge/guesthouse owners;
- Tour guides;
- Tour operators;
- Tourism authorities;
- Travel agents;
- Crafters;
- Performing arts groups;
- Tourism associations; and
- Museums.

All the participants on the Caprivi Wetlands Paradise (CWP) (22 respondents) and the Barotse Trails Route (BTR) (53 respondents) were interviewed and each one filled in a participant questionnaire. The manager or owner of each project or business was interviewed, if available and if unavailable, the most senior person present deputized. Not all the tourism operators in the study area were included as only those who participated in the route development workshops could become part of the route at this stage. Suich, Busch & Barbancho (2005) found in a baseline study on tourism in the Kavango-Zambezi TFCA, that as of July 2005 there were 83 accommodation establishments in Livingstone, including guesthouses, hotels, lodges, backpacker inns, and campsites, and 20 tour operators. In the Upper Zambezi they identified 24 accommodation establishments but did not focus on any of the other operators. In the Caprivi they identified 30 accommodation establishments and also did not focus on any other types of

operators. The present study does not, however, aim to identify all tourism operators in the study area, but rather to focus on the route participants of the two case study routes. The following section describes the data processing procedure.

4.2 DATA PROCESSING AND ANALYSIS

The primary and secondary data were processed and analysed first according to the generic set of indicators, and thereafter the route-specific indicators (see Figure 4.1). The questionnaire survey data were entered into a statistical package for analysis. Two databases were set up in Microsoft Excel for each of the routes. Data fields relate to the specific indicator they measure and the databases contain 83 fields in total that can be related to the relevant sections in the questionnaires.

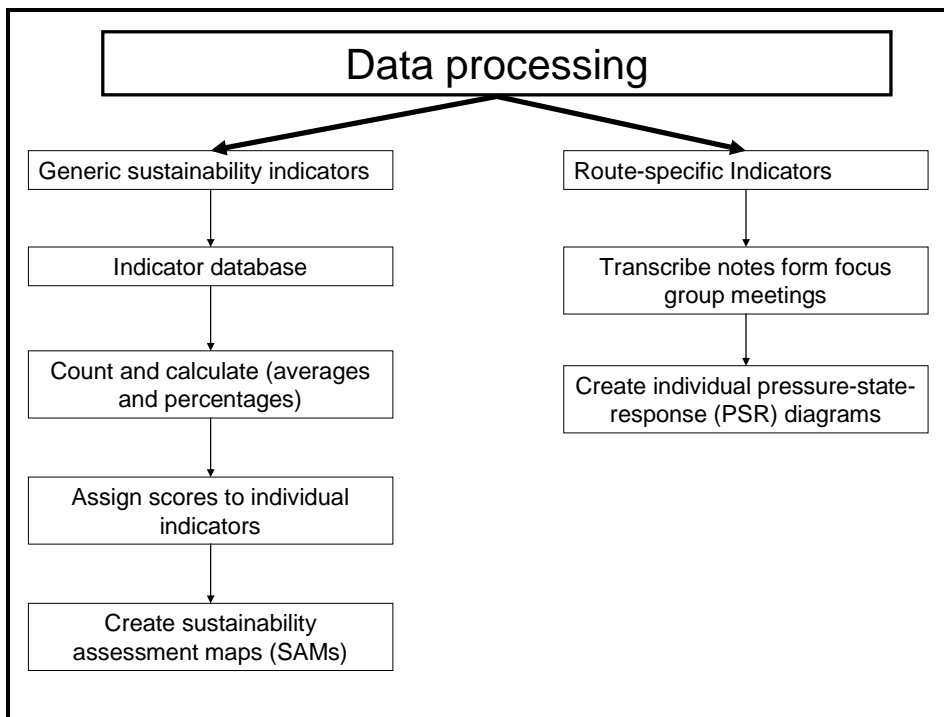


Figure 4.1 Processing the generic sustainability- and route-specific indicator data

The fieldwork revealed that some of the indicators were either irrelevant or too difficult to measure on a regular basis. According to McCool & Moisy's (2001) criteria for developing indicators, the indicators should be relatively easy to collect and measure.

Taking into account that the primary users of the indicators are rural communities that often have low levels of literacy, the indicators that were too complicated to measure or collect data on, were left out. In addition to the problem of literacy, experience has shown that expectations should not be too high in terms of actual work the community can do. This is usually due to time constraints as participants on the route have their own businesses to manage, but often motivation to do the work is also a factor. In light of this some indicators were omitted from the final list of indicators. The indicators that aim to measure community attitudes towards tourism by means of a community questionnaire were omitted as experience has shown that these surveys would not take place as intended. A community survey like this is a time-consuming task and needs to have a reasonable number of respondents in order to ensure a representative view. If the survey is not conducted in the appropriate manner, data obtained from it could misrepresent the views of the community. A suggestion in this regard would be to approach a local university or college and have post-graduate students do these surveys. A questionnaire has been developed by the researcher to measure community perceptions regarding tourism (see Appendix C).

The indicators that were omitted are:

- Local satisfaction with level of tourism;
- The percentage of people who believe tourism has brought new infrastructure or services; and
- Number of complaints from local inhabitants regarding access to key sites.

The indicators that measure customer satisfaction or perceptions were left out of the baseline survey due to time constraints. These indicators do nevertheless form an important part of the overall picture and should be included in any assessment of sustainability. The data are collected by means of a customer questionnaire. The questionnaire was developed and introduced to the routes as a means of getting feedback from customers. These indicators have been left out of the baseline survey because participants need to collect feedback over a period of time. The indicators that measure customer perceptions are:

- Percentage of tourists who are satisfied with the environmental and cultural experiences;
- Percentage of operators and visitors (inbound/outbound) who perceive the route as safe, attractive, interesting, good value etc.;
- Percentage of visitors who believe the brand values, attributes and benefits communicated were met during their trips;
- Percentage of visitors (and participants) who recall the brand name. (% recall on same day; % recall over longer term);
- Percentage of visitors who seek environmentally friendly or culturally sensitive experiences; and
- Percentage of visitors willing to pay extra amounts for these experiences of enhanced value.

In addition to these indicators, the indicators that measure network functionality were also left out of the baseline survey as both the case study routes were newly established and the benefits or effects of the networks were not measurable as they had not yet manifested. Although the above indicators were left out of this study, subsequent assessments should take all of these indicators into consideration as part of a comprehensive monitoring system. Figure 4.2 depicts this monitoring process. Data collection for the generic sustainability indicators is done through three survey instruments namely, a participant questionnaire, a community questionnaire and a customer exit questionnaire. These survey instruments measure supply, community attitudes and demand respectively. The route-specific indicators are measured in focus groups by making use of the PSR framework. After the necessary data has been collected it is processed and analyzed. The data for the generic sustainability indicators is captured in a statistical package for analysis. The analysis entails assigning a score to each of the indicators according to the survey results. For some of the indicators aggregate scores are used and these needed to be calculated. The data collected from the focus group meetings is transcribed for analysis. After all the data has been analyzed it is presented graphically by making use of sustainability assessment maps (SAMs) and PSR diagrams.

Following the revision of the list of indicators, questions contained in the questionnaire survey had to be matched with the revised list. Each indicator was given a number, i.e. SI1, SI2, etc. and tied to the question asked in the survey questionnaire. After the database is compiled the data was ready to be analysed. For the route-specific indicators, the only processing necessary was to transcribe the notes of the focus group meetings.

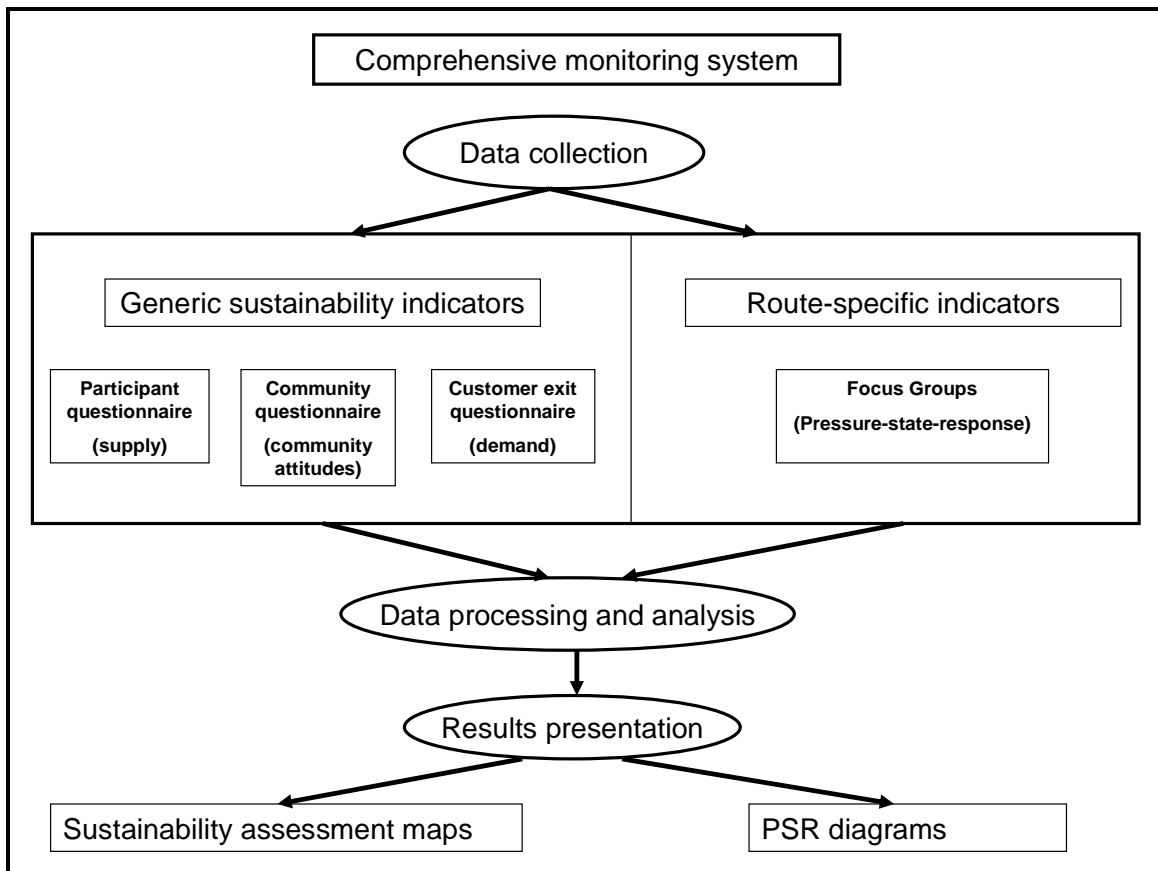


Figure 4.2 The monitoring system

4.3 BASELINE ASSESSMENT OF GENERIC INDICATORS

The following sections document the processed results of the fieldwork. The results are based on the monitoring tool that has been developed and they are organized according to themes. The results show that both the CWP and BTR scored relatively low in the sustainability assessment. However, this exercise serves only as a baseline assessment as

some indicators could not be measured. The assessment should be conducted on an annual basis and comparisons made with previous years.

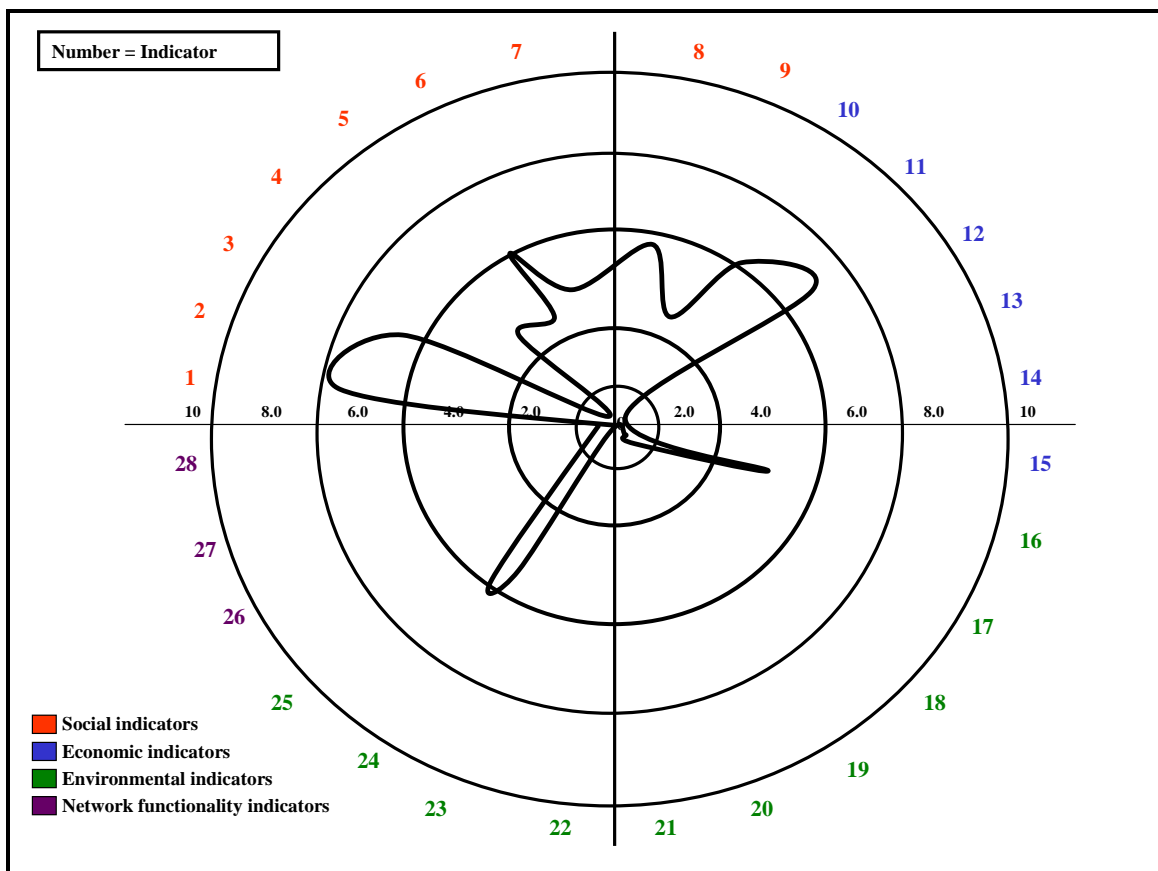
Ko (2005) proposes that the results of a sustainability assessment be visually represented in the form of sustainability assessment maps (SAMs). The two methods for doing this are the AMOEBA of tourism sustainability indicators (ATSI) and the barometer of tourism sustainability (BTS). SAMs provide a universal way of organizing and combining indicators so that stakeholders can draw conclusions about economic and social conditions in the area, the ecosystem well-being, and the effects of people-ecosystem interactions. By presenting the conclusions visually, it provides everyone - from a villager to a decision-maker - with an immediate picture of human system and natural ecosystem conditions.

The results of the questionnaire surveys conducted with respondents on the two tourism routes were analysed and the results are displayed graphically by means of AMOEBA and BTSs. Table 4.1 contains the final indicator scores for both the CWP and the BTR. Each indicator is given a number that corresponds to the number in the AMOEBA. The scores of individual indicators were plotted on the AMOEBA to represent the results visually. The final scores were averaged and plotted on the BTS to give an overall indication of sustainability. The following sections present these findings.

4.3.1 The Caprivi Wetlands Paradise route

Figure 4.3 is the AMOEBA for the CWP. Although the route scored high on a few of the indicators, scores are generally low. A number of indicators could not be measured as part of the baseline as they relate to growth of the route and individual businesses on it.

The AMOEBA shows that much still has to be done in terms of sustainability on the CWP. An area of concern in relation to the social issues is the number of participants involved in community upliftment (SI9). With regard to economic indicators, many participants indicated that their businesses are seasonal (SI10), meaning that there are less visitors during certain periods in the year. The route scored low on most of the environmental indicators with few participants making use of environmentally friendly technologies (SI17-22).



*Note: See Table 4.1 for clarification of the indicator numbers

Figure 4.3 AMOEBA for the Caprivi Wetlands Paradise route

The fact that only one participant (listed as a protected area) indicated that tourism is the main source of biodiversity conservation shows that tourism development is still needed in many of these protected areas. Most of the conservancies in the Caprivi still rely on hunting concessions as a main source of income. As the route was still being developed at the time the survey was conducted, the network functionality indicators (SI26-29) could not be measured. This accounts for the absence of scores in this part of the assessment.

Figure 4.4 is the BTS for the CWP route. The route scored 1.8 and 1.9 on the human system and the ecosystem dimensions respectively. This graphically illustrates the overall (un)sustainability of the route in the two dimensions. It is clear that both dimensions call for attention from the route forum (RF) if the route is to be sustainable. This BTS serves as a baseline assessment and improvements will hopefully manifest in subsequent assessments.

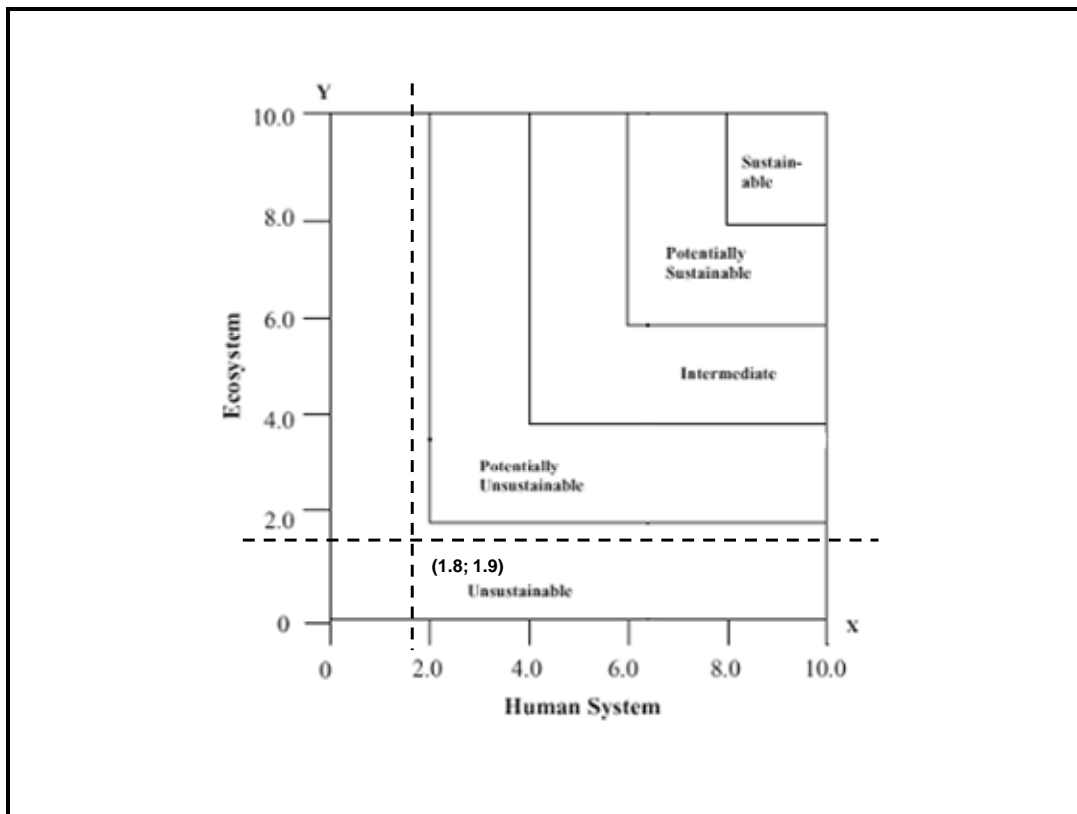


Figure 4.4 Barometer of sustainability – Caprivi Wetlands Paradise route

4.3.2 The Barotse Trails Route

The Barotse Trails Route faces many difficulties with regard to sustainability. The AMOEBA (see Figure 4.5) for the BTR indicates that areas of serious concern with regard to social issues are the non-existence of a community or multi-stakeholder tourism plan (SI1), the lack of participation in training programmes (SI6), and the lack of community projects on the route (SI8). The BTR shows a wide variety of products on offer and not many participants indicated that they experience seasonality in their business (SI10-11).

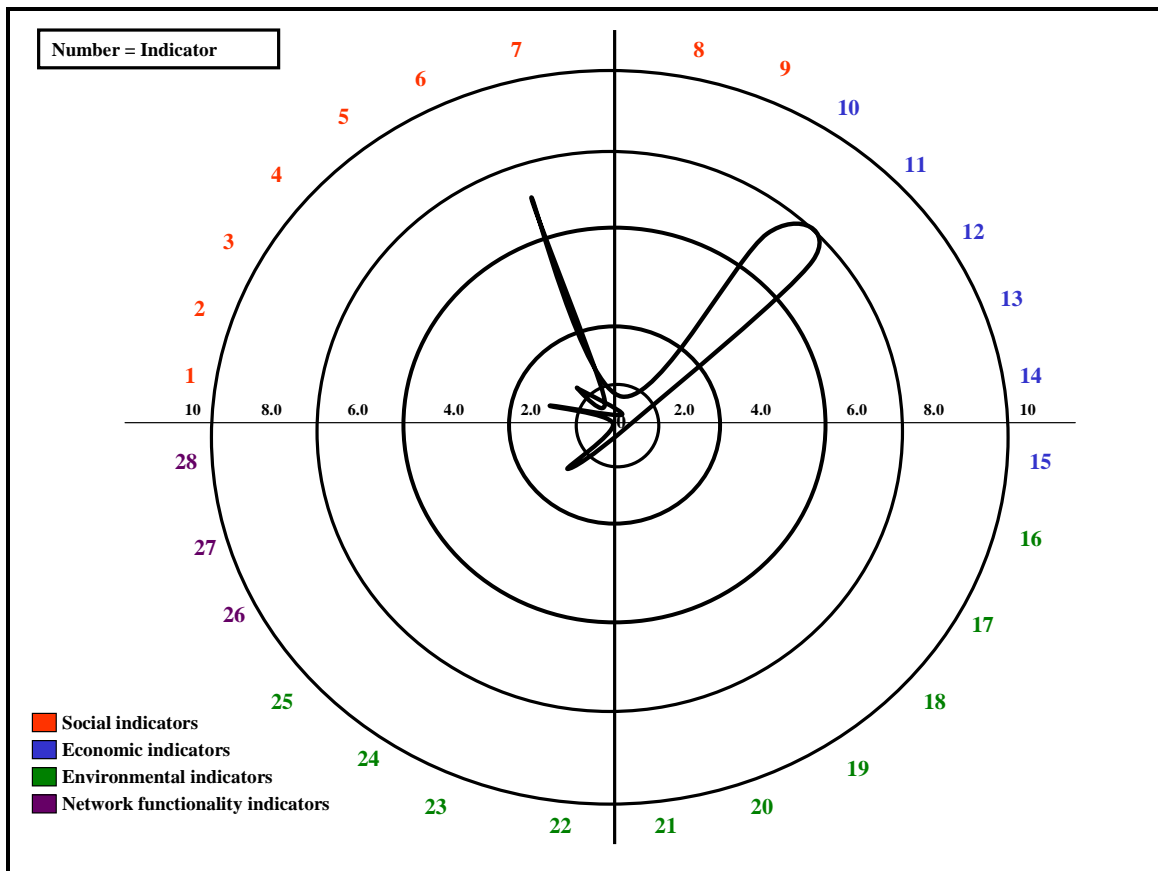


Figure 4.5 AMOEBA for the Barotse Trails Route

The BTR has low scores on the environmental aspects of the assessment with very few participants indicating the use of environmentally friendly technologies (SI17-22). There also seems to be a lack of compliance with environmental regulations as not many businesses or projects indicated that they have environmental certification. There are no

conservation projects or protected areas listed as participants on the route which accounts for zero scores in this section of the assessment. The network functionality indicators could also not be measured at this stage as the route was under development when the assessment was done. These indicators will be measured in subsequent assessments.

The BTR scored 0.9 and 1.5 respectively on the human and natural ecosystem dimensions of the BTS (see Figure 4.6). This indicated a low overall sustainability for the route. The RF will have to focus on the areas of concern if they aim to increase the sustainability of the route. It can be expected that these scores will increase in subsequent assessments as many indicators could not be measured in this assessment.

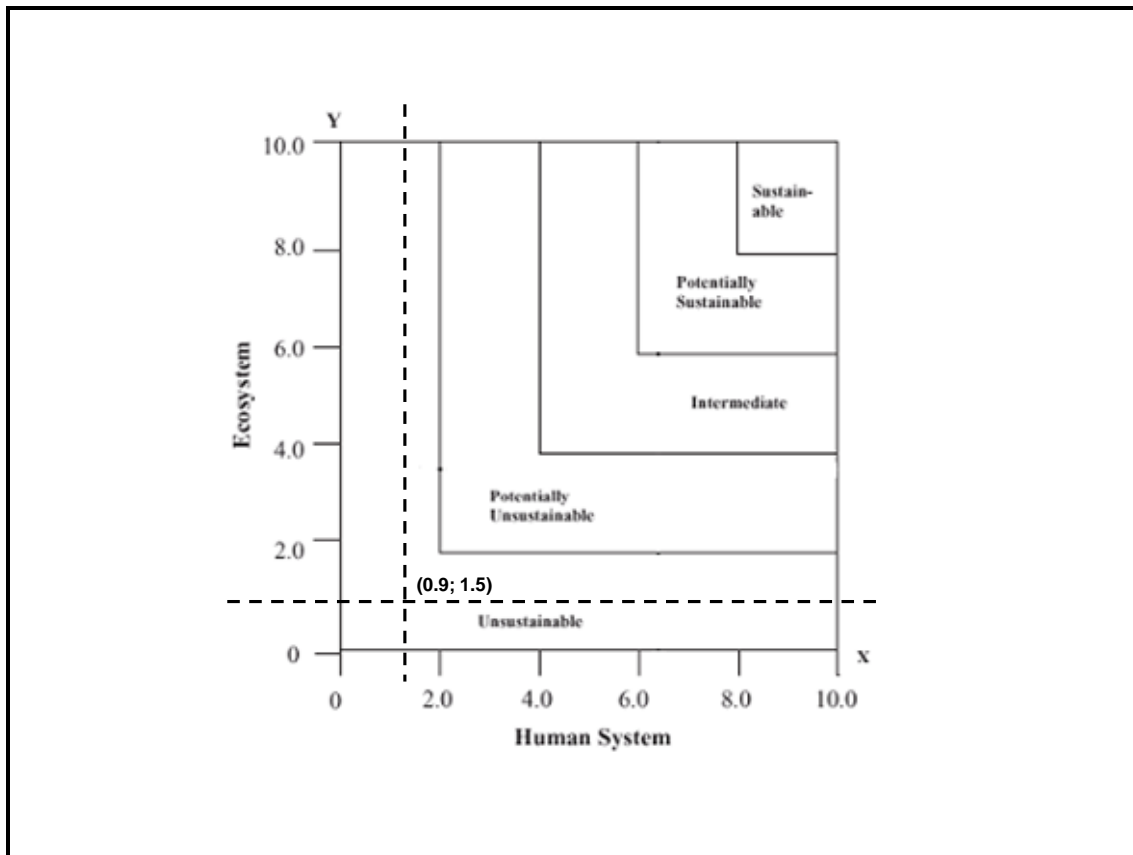


Figure 4.6 Barometer of sustainability – Barotse Trails Route

The establishment of the BTR and the CWP route was done in partnership with local communities, NGOs and the private sector and made use of a participatory approach. The CWP had 22 participants in total. Fifty nine percent of the participants on the route were

community projects, 27% are privately owned businesses and the remainder of the participants are local NGOs involved in rural development and nature conservation. The BTR consists of 53 participants of which 13% are community projects, 77% are privately owned businesses, 2% are NGOs, 6% are government entities, and 2% are religious organizations.

4.3.3 Social issues

The BTR scored low and the CWP route intermediately on the BTS on the social issues, with scores of 2.2 and 4.1 respectively. Figure 4.7 depicts the responses for each of the social issues being measured. The CWP has got a community or multi-stakeholder tourism plan developed through a collaborative effort between the Caprivi Promotional Project (CPP) and the community. The CPP is driven by a group of private and community-based tourism operators in the region. Their vision is to “introduce and promote all tourist destinations in Caprivi...” and to “publicise the many activities and facilities in the region” (Caprivi Promotional Project 2006). CPP published a 40-page booklet on the Caprivi in order to do this and aims to make this an annual publication. The project lacked sufficient representation from the community and thus scored lower on the BTS although the establishment of the route prompted them to include representatives of the community. The BTR did not have any type of multi-stakeholder plan in place before the establishment of the route.

The RF of the CWP meets on a regular basis to discuss issues relating to the route and thus scored above average on the BTS. The BTRs forum does not meet as often as CWP's forum due to lack of transport. The RF was divided into three sub-forums to decrease the travel distance for forum members, but it remains to be seen if this will address the problem.

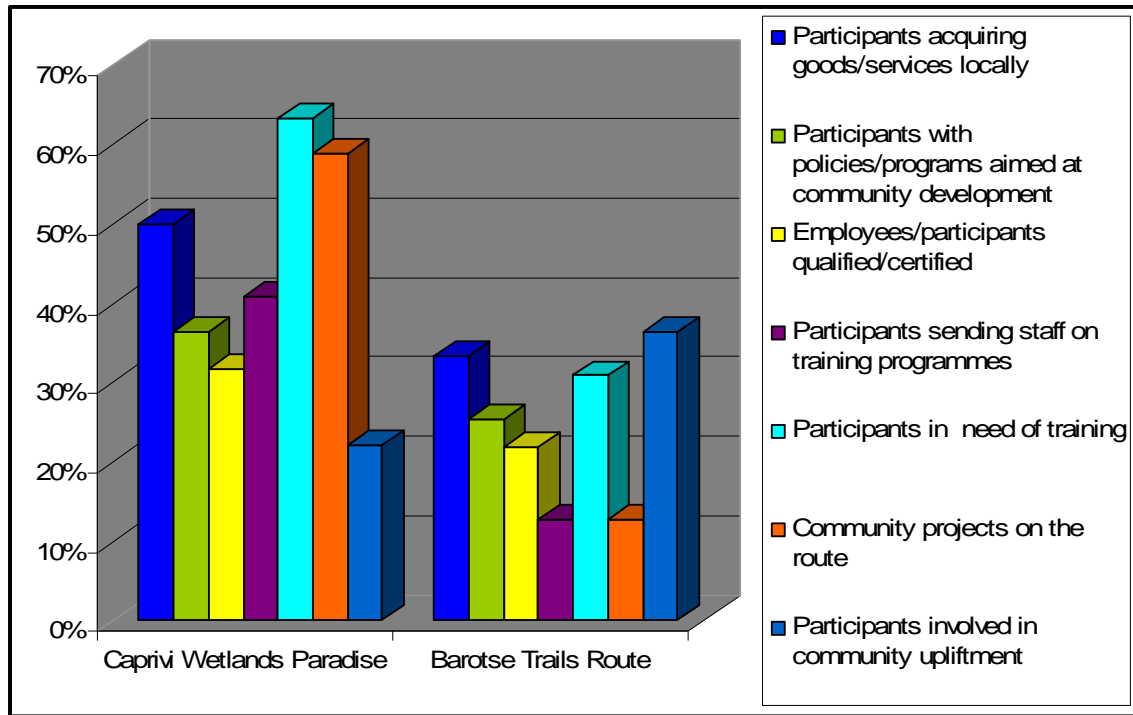


Figure 4.7 Participant responses on the social sustainability indicators

Both the BTR and the CWP scored intermediately on local community participation. When asked if participants acquired goods or services locally, one half of respondents on the CWP indicated that they did and one third of the participants on the BTR acquired their goods locally.

With regard to social responsibility, neither of the two routes had any policies aimed at community development at the time of the survey, although 36% of participants on the CWP, and about one quarter on the BTR indicated they had policies aimed at community development. The type of help provided for community development ranged from initiating self-help projects, building schools and clinics, and promoting and supporting craft development projects.

In terms of professional and personal development, only a few (13%) of the participants on the BTR send their staff on training programmes. The main reason for this is that Zambia has few tourism training institutions and the quality of the training providers is not always up to standard (Bezuidenhout 2005, pers com; Mutinta 2006, pers com;

Johnson 2005, pers com). This necessitates in-service training by the managers/owners of the establishments. More respondents on the CWP (41%) indicated that they send their staff on training programmes. Most of the respondents that did send their staff on training programmes, did it as a one-off occasion rather than on a regular basis. As mentioned above, tourism training programmes are not abundant in Zambia. The Caprivi, also remotely located in Namibia, seems to also have a need for tourism training. Sixty four percent of the respondents in the Caprivi indicated that they have identified a need for training in some aspect of their business, while 31% of the participants on the BTR voiced some need for training. The training requirements mentioned included training as tour or field guides, hospitality training, marketing, administration, business management and computer training.

The routes did not score well on community involvement in the BTS. The BTR has a large number of small, newly established businesses on the route. This ranges from local people acting as village, birding and fishing guides to crafters. Although they are not community projects these smaller businesses often do not have the capacity or monthly turnover to be able to invest in community projects. As mentioned above, the BTR consists of 13% community projects and 77% privately owned businesses, of which 37% are newly formed businesses that have either been initiated through the development of the route, or have been operational for less than a year. Eight of the 22 participants (36%) that have reasonably or well established businesses are involved in community upliftment in some way on the BTR. This takes the form of building schools or clinics to offering local birding courses, and supporting craft development. In the case of the CWP, 59% of the participants on the route are community projects and thus contribute directly to community upliftment, while 22% of the privately owned businesses are involved in community development in some way. One of the lodges helped set up a traditional village for tourists, the proceeds of which go directly into the community, and another has initiated a self-help project.

4.3.4 Economic issues

The survey results indicate that tourism in both of the routes is seasonal to some degree. Seasonality can be defined as “a cyclical pattern that more or less repeats itself each year. It usually refers to a temporal imbalance in the demand, and may be expressed in terms of the number of tourists, their expenditure, and bed nights” (Butler 1994 in Jang 2004: 819). Figure 4.8 shows about 60% of the respondents on the CWP indicated that their business is seasonal. The peak seasons for tourism in the Caprivi are winter and spring. Forty percent of the respondents on the BTR with businesses older than a year mentioned seasonality in their businesses. Currently the average number of tourists on the CWP is 112 per month, while the BTR receives 63 tourists on average per month.

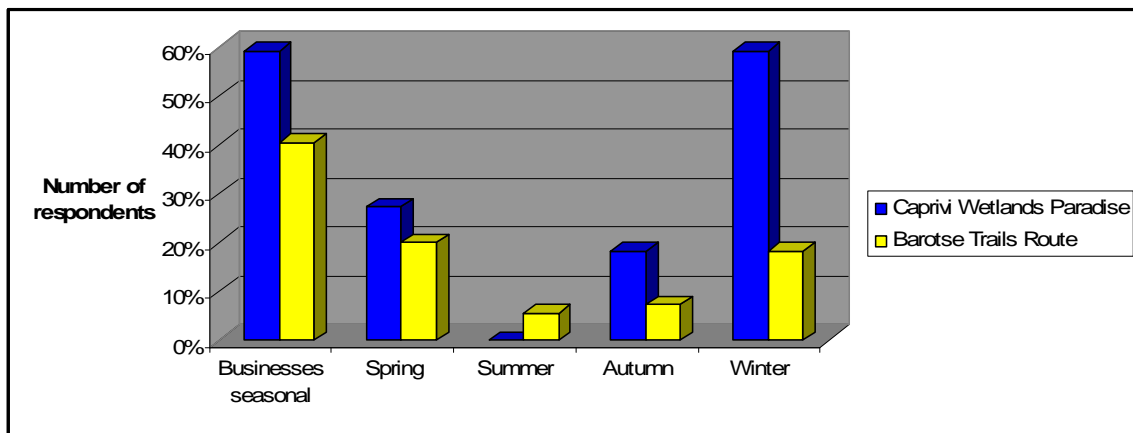


Figure 4.8 Seasonality of businesses on the routes

Both the CWP and BTR have diverse product ranges. The route scores of 7 and 8 respectively were determined by dividing products into ten product types and calculating the number of different product offerings each route has. The CWP thus has seven different product types whereas the BTR has eight. Table 4.2 shows the range of products that are on offer on the two routes. Where a specific establishment offers more than one type of product it is listed under both types of products, so the overall count of products may not reflect the actual number of participants.

Table 4.2 Product types offered on the routes

Product Type	Caprivi Wetlands Paradise	Barotse Trails Route
Accommodation	4	18
Arts & Crafts	4	11
Restaurant	0	1
Adventure / Activity	0	1
Museum/Aquarium / Heritage site	0	3
Protected Area / Park / Reserve	8	0
Tourguide	1	11
Information Centre / Travel Agent	1	0
Campsite	4	1
NGO / Community Project	16	5

A good mix of products exists on both routes with accommodation establishments featuring prominently on the BTR (Figure 4.9) with 34% of the participants offering accommodation, and community projects, mostly in the form of community campsites and conservancies featuring notably on the CWP (Figure 4.10).

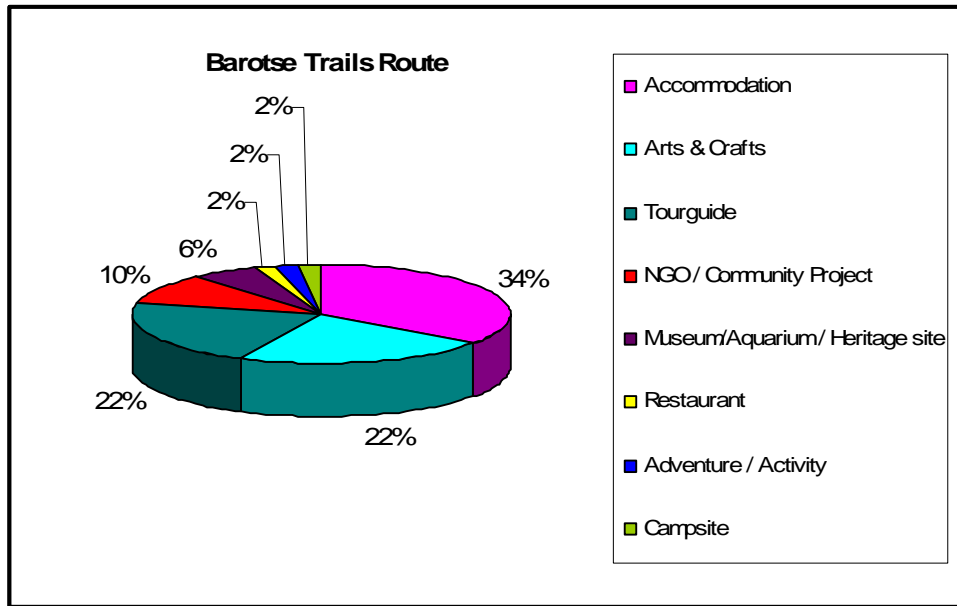


Figure 4.9 Product types – Barotse Trails Route

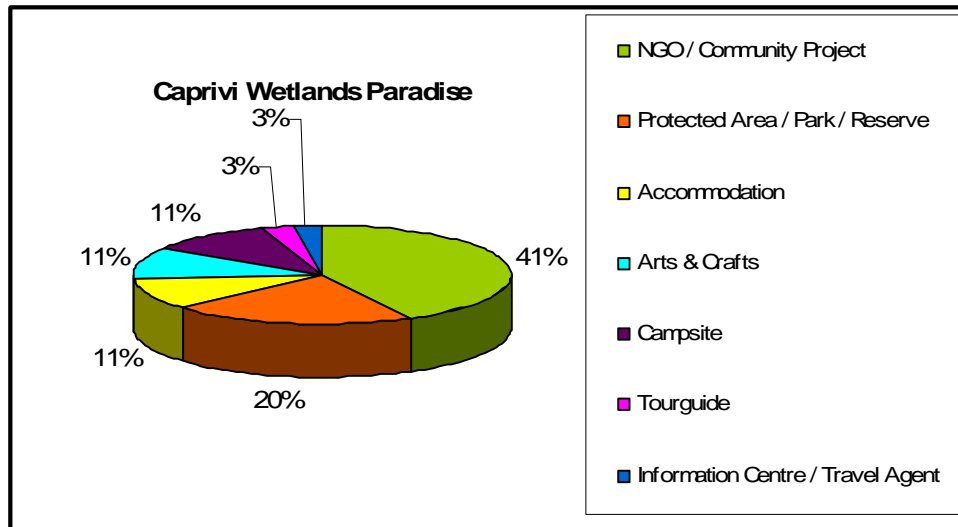


Figure 4.10 Product types – Caprivi Wetlands Paradise

Both the BTR and CWP lack restaurants and tourist activities as participants, although most accommodation establishments have restaurants and offer a range of activities as part of their product offering such as game drives, fishing, village tours etc. The lack of museums can be attributed to the areas the routes are established in, with both routes occurring in rural areas with only one major town each. The BTR is in discussion with the Czech Republic’s Consulate in Zambia to set up a site museum in Mwandia Village (Yeta 2006, pers com).

Very few of the participants on both the routes indicated that they make use of programmes or incentives for SMMEs. Only 2% of the respondents on the CWP and 0.2% on the BTR use incentives for SMMEs. The reason most quoted for not using incentives was that people were unaware of such incentives and one respondent on the CWP lamented that the conditions were too stringent. The question regarding incentives for SMMEs was confusing to many respondents and an explanation was required in many cases. If the data is collected in future assessments by only handing out questionnaires and not by means of a structured interview, this question may be left out of the survey to avoid confusion.

Figure 4.11 records the annual turnover per participant on the two routes. Fewer than 20% on the CWP had an annual turnover of less than R100,000 per annum, while about 15% of the participants of the BTR were in the same position. A small number of participants, 5% and 9% of the participants on CWP and BTR respectively, turn over between R500,001 and one million Rand per annum, while none of the respondents indicated that they have a turnover of more than one million Rand. Some respondents refused to give their annual turnover figures, or did not have these figures available.

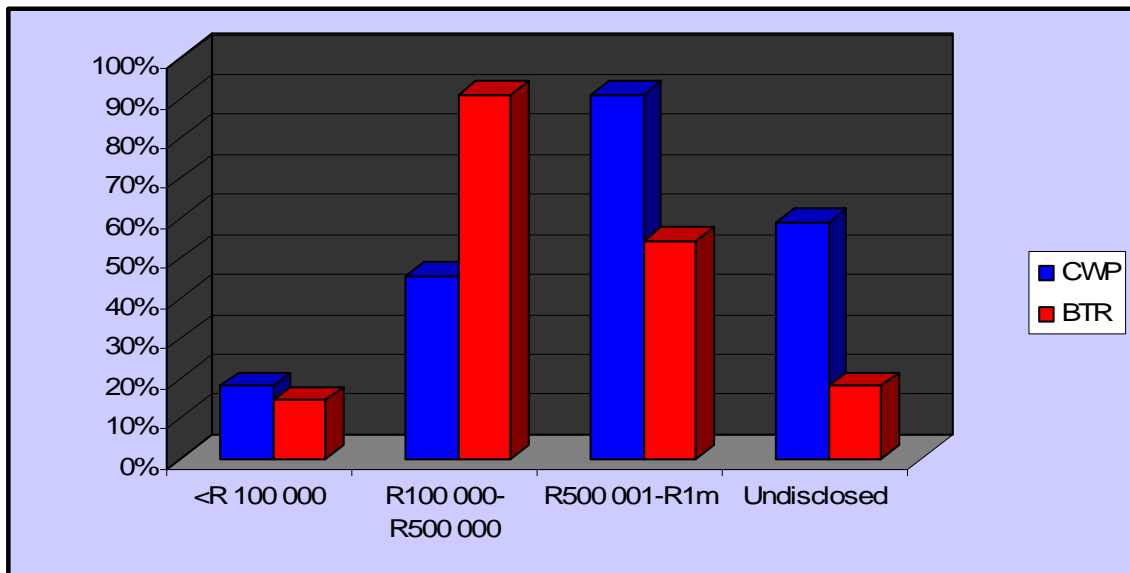


Figure 4.11 Annual turnover of businesses on the two tourism routes

Employment figures for the two routes (Figure 4.12) were used as an indicator of economic development, as both routes occur in remote rural areas where creating employment opportunities for local people offers distinct benefits to the local communities. The CWP had 209 full-time employees (in and out of season) and each business on the route employed an average of 12 people, while the BTR had 377 full-time employees in season and 358 out of season. Each business on the BTR employs an average of 13 employees on a full-time basis in season and 12 out of season. The CWP employs 1 186 people on a part-time basis throughout the year with an average of 69.8 per business, while the BTR employs 52 in-season and 42 out of season with an average of 2 and 1 people per business respectively.

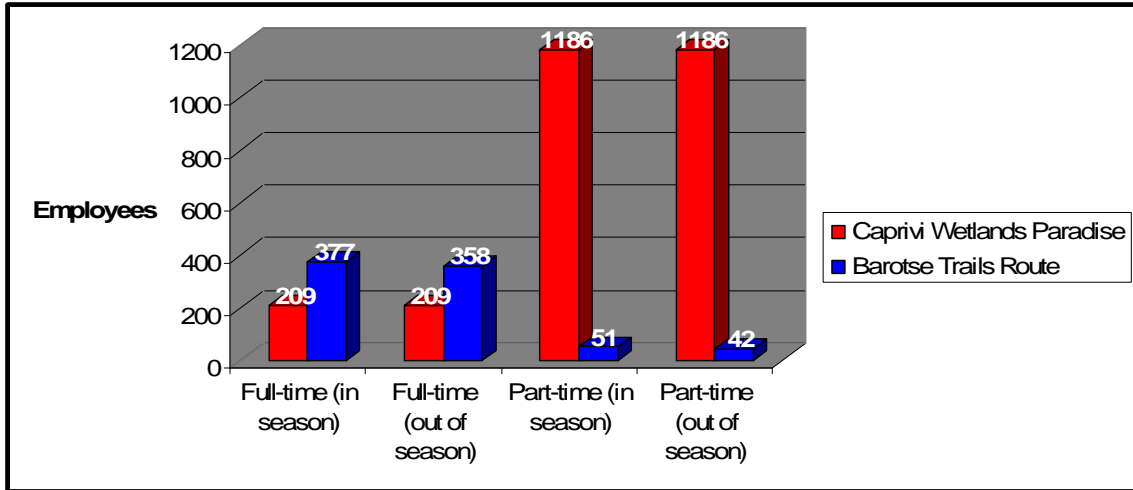


Figure 4.12 Full-time and part-time seasonal employment on the two routes

4.3.4 Environmental issues

A number of indicators measure the impact of the routes on the environment. Respondents on both the CWP and BTR generally scored poorly when asked if they had a policy on environmental or sustainability issues. About one third of the respondents on the CWP have a policy on sustainability issues while 16% of the respondents on the BTR indicated some kind of environmental or sustainability policy. As a result, the scores on the BTS were low for both routes with the CWP scoring only 0.5 and the BTR 1.6. Figure 4.13 indicates the combined usage of environmentally friendly technologies, techniques and practices by the survey respondents on the two case study routes. The CWP participants scored less on this aspect of environmental sustainability than the BTR, although the BTR were generally low. Only 5% of respondents on the CWP made use of water saving techniques, 14% save energy, usually by making use of generators that only run for a few hours of the day, and 5% look out for environmentally friendly products when purchasing goods. The BTR scored slightly higher with 15% of respondents making use of both energy- and water-saving techniques, while 9% purchase environmentally friendly products.

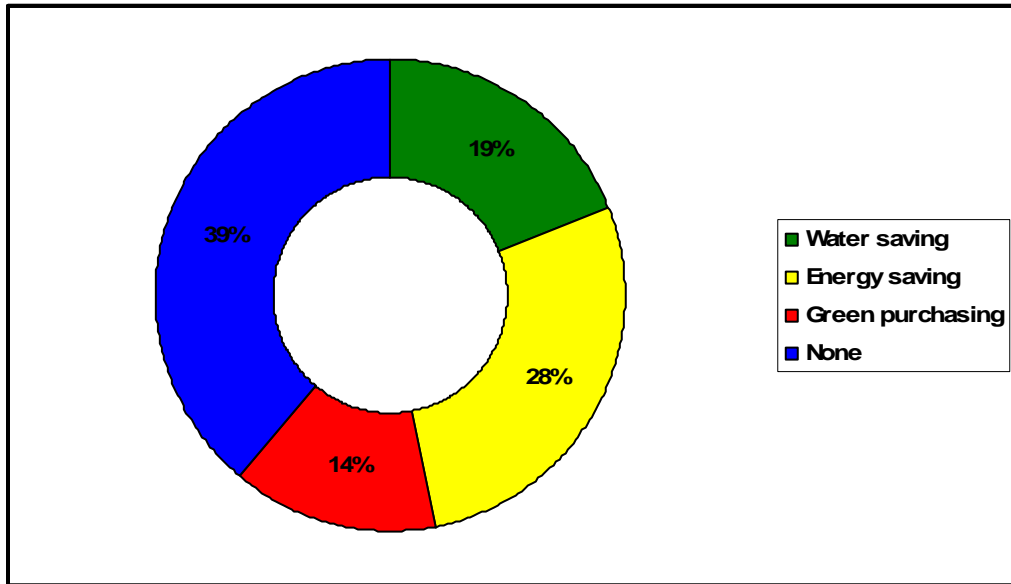


Figure 4.13 The use of environmentally friendly technologies, techniques and practices on the two routes

Recycling is difficult in these remote areas as recycling depots are usually located in towns and few respondents on either of the two routes mentioned that they recycle (Figure 4.14). Only 5% of the respondents on CWP recycle plastic and nothing else. Only 4% of respondents on the BTR recycle glass and paper while only 2% recycle plastic. Only 14% of the respondents indicated that they look for environmentally friendly products when they purchase goods. Some of the respondents did not know what was meant by the term, which indicates a general lack of knowledge about the concept, and could explain why so few of the respondents practice green purchasing.

Concerning the issue of environmental certification of tourism products, only 26% of the respondents on the BTR that required EIAs according to the environmental guidelines actually indicated some form of environmental certification. The BTR scored 2.6 on the BTS for environmental certification. Considerably more respondents on the CWP indicated that they had some form of environmental certification. 57% of the participants on the route who are liable for an EIA under the Environmental Management Bill had some form of certification. The CWP scored 5.7 on the BTS for environmental certification.

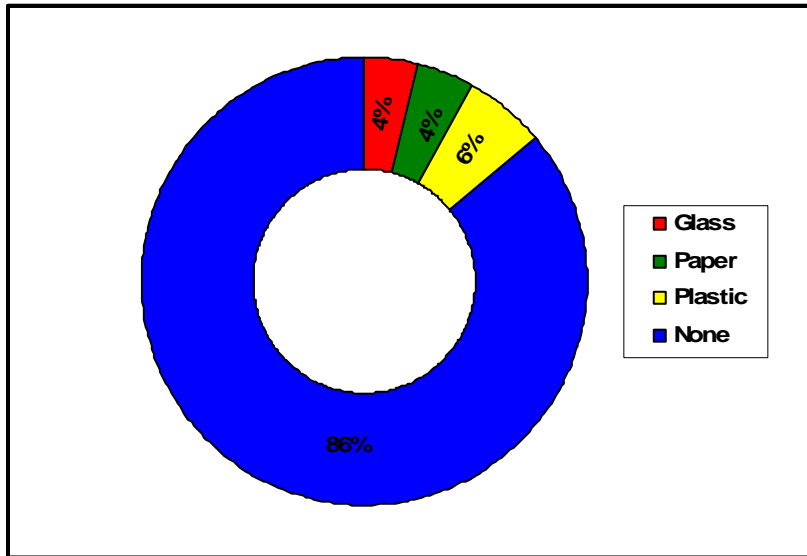


Figure 4.14 Recycling behaviour on the two routes

Of the eight conservation projects listed on the CWP, 75% indicated that tourism contributed to their budget for conservation. At the time of development, the BTR did not have any conservation projects listed as participants on the route.

The establishment of protected areas in most parts of the world is the most widely accepted means of achieving biodiversity conservation by national and international conservation agencies (Sekhar, 2003). Mbaiwa (2005) points out that resource conflicts between local people and the wildlife and tourism sectors reduce the potential of wildlife resources to be used sustainably. Studies by Wood (1993) and Darkoh & Mbaiwa (2001) have shown that conflicts over resource use by different stakeholders and resource users often result in the degradation of natural resources. This is particularly so when rural communities who happen to be the key resource users, live in poverty. Tourism operations often see the value in bringing the benefits of conservation to communities by including a community levy in their price structure.

About one third of the conservation projects in the form of communal conservancies on the CWP have a community levy built into their price structure. Although the BTR in Zambia has no listed conservation projects, two establishments indicated that they have a community levy built into their price structure. When asked what the main source of

funding is for biodiversity conservation, 63% of the conservation projects on the CWP indicated that hunting concessions were the main source, one respondent (12%) indicated that it was tourism and the remaining 25% did not say.

4.3.5 Network functionality

Due to the time constraints on this study, the network functionality indicators could not be measured. The BTR was in the process of being launched while the study was undertaken and the CWP has not yet been launched. Network functionality indicators are of such a nature that a baseline is difficult to determine. The network needs time to work together, and this can only happen once a route has been officially launched.

The dynamism of the RF is a critical factor in the success of a route. If forums do not meet regularly, routes will find it difficult to progress. For this reason the number of RF meetings per year were measured. Novelli, Schmitz & Spencer (2006) point to a similar problem in a tourism network in England, where at a certain point, only a handful of people who had always played a central role in the cluster, were actively involved in taking the project forward. Some of the justifications offered by less-committed members ranged from being a small business and not having enough time to spare, to staff shortages and lack of short-term benefits. Open Africa face similar challenges in keeping RF members motivated and committed. The reasons why RFs, in Open Africa's case, do not meet are:

- Long distances sometimes separate members;
- Not everyone has easy access to transport;
- The members are all volunteers and have their own business to which they must attend; and
- A lack of direction as to why they should be meeting, like no fixed agenda, plans or goals (De Villiers 2006).

Another important success factor for the route or network is that participants in the network must see the benefits of belonging to the network as value added to their

business. The perception participants have of these values is important if they are to continue being active members of the network. By measuring this perception an idea of the success of the network is gained. Network members can assess the results of networking in terms of benefits delivered by the network activities to them, as individuals, as well as to their business and to the community (Fadeeva 2004; Ranaboldo & Pinzas 2003). One of the first tasks of the network is to set out a number of goals that they want to achieve through the route or network. If goals are not reached, the likelihood of participants losing faith in the network is high and measures to mitigate the problem need to be taken.

The results of the baseline assessment indicate that the two routes can do much more to become sustainable. The RFs of the routes need to prioritize and address these issues if the routes are to become sustainable entities. A number of indicators could not be measured and subsequent assessments will also need to measure all the outstanding indicators. The identification of the route-specific indicators in the focus group meetings is discussed next.

4.4 FOCUS GROUP MEETINGS

In this study focus group meetings were held at three locations in Zambia – Mwandia, Lusu and Livingstone. Due to time constraints during the fieldwork phase, focus group meetings were not held with participants on the CWP route. The focus groups consisted of between eight and thirty participants and comprised a range of tourism role players, from lodge owners to government officials and local people. The focus groups first identified their key tourism features, before identifying relevant indicators through the PSR framework. The results are presented in the next two sections.

4.4.1 Tourism features

The first step was to guide participants through a process of identifying the main tourism features in the area. Figures 4.15-4.17 summarize the features of each of the three areas where focus group meetings were held.

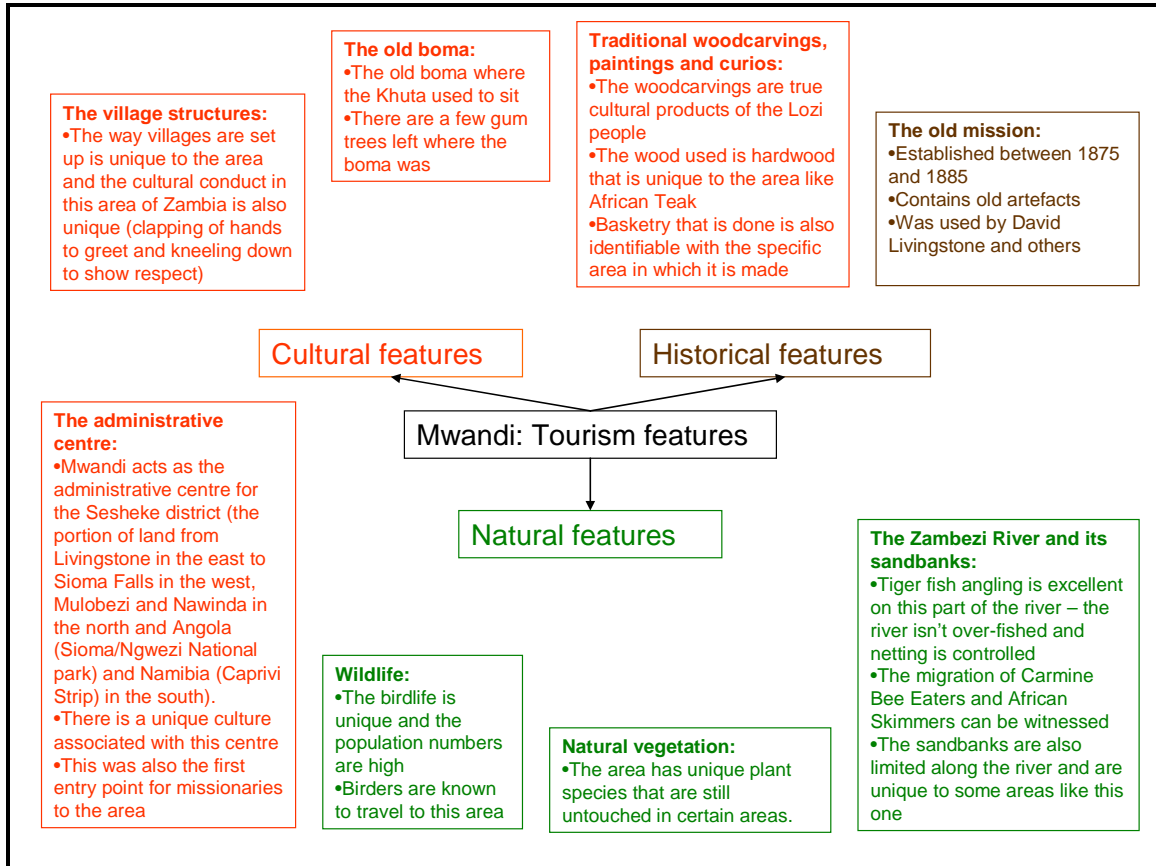


Figure 4.15 Tourism features - Mwandi

The focus group meeting held at the Barotse Royal Establishment in Mwandi had 24 participants ranging from local lodge owners to community leaders and community members involved in tourism. In Mwandi and the surrounding areas, eight features were identified by participants in the focus group meeting (see Figure 4.15). The features relate to cultural and natural assets, the most important feature, according to participants, being the boma where the traditional Khuta used to sit. The Mwandi Khuta is made up of elected representatives from the silalo (administrative area in the traditional system) and sits daily. “The Indunas (headmen of the administrative unit) here have clearly defined

sectoral responsibility, e.g. the fisheries induna, or the natural resources induna” (Pervis et al. 2005:12).

Seven features were identified in the Lusu area (see Figure 4.16). The Lusu area is defined as the territory between Sesheke and Sioma, a rural area along the banks of the Zambezi River. The focus group meeting in this area was held at the Lusu Mission Station and had 30 participants including local lodge owners, tour guides, local crafters, the village headman and community members. The features identified here were mainly related to the natural assets of the area.

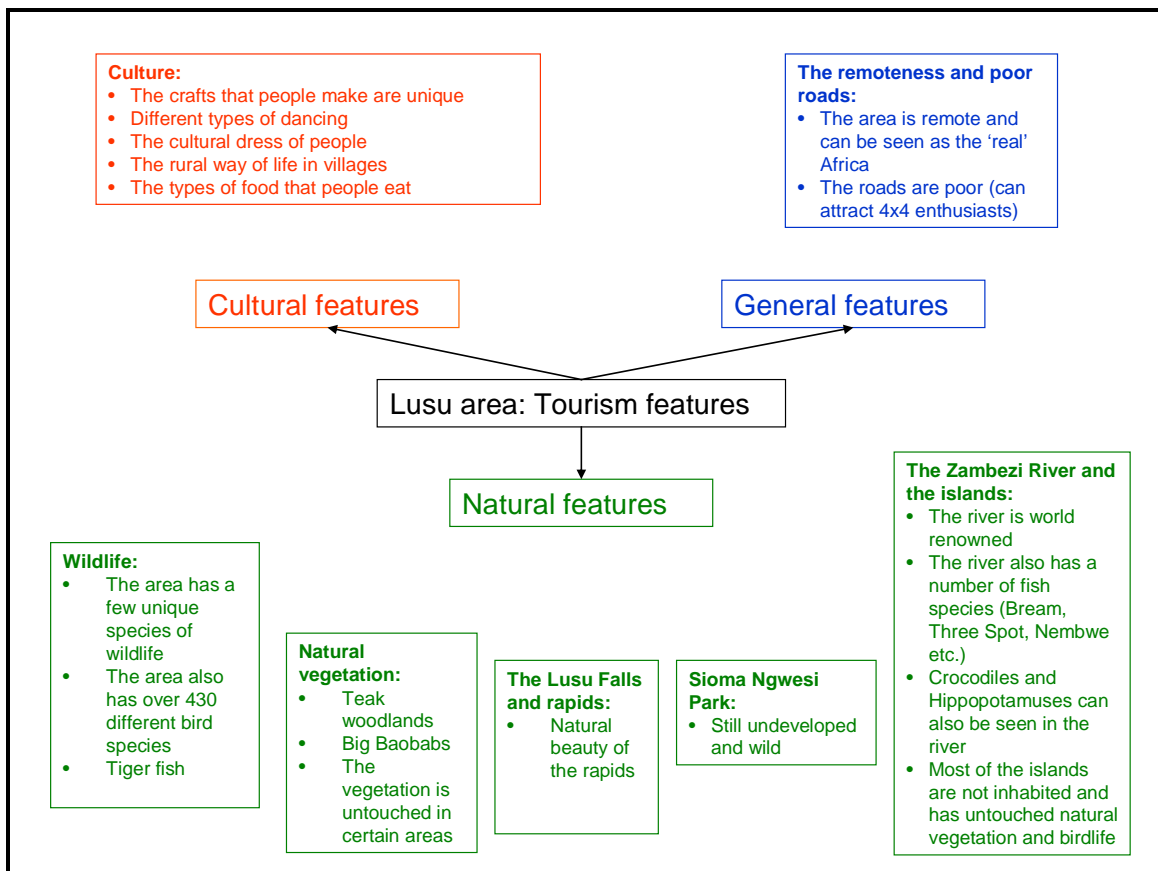


Figure 4.16 Tourism features – Lusu Area

The focus group meeting in Livingstone was held at ZigZag, a coffee house and bed and breakfast in town and was attended by eight participants. Not surprisingly, the Victoria Falls was identified as the main tourism feature of the area, although mention was made

of the friendliness of the local people and interesting historical sites. The participants identified seven features in total (see Figure 4.17).

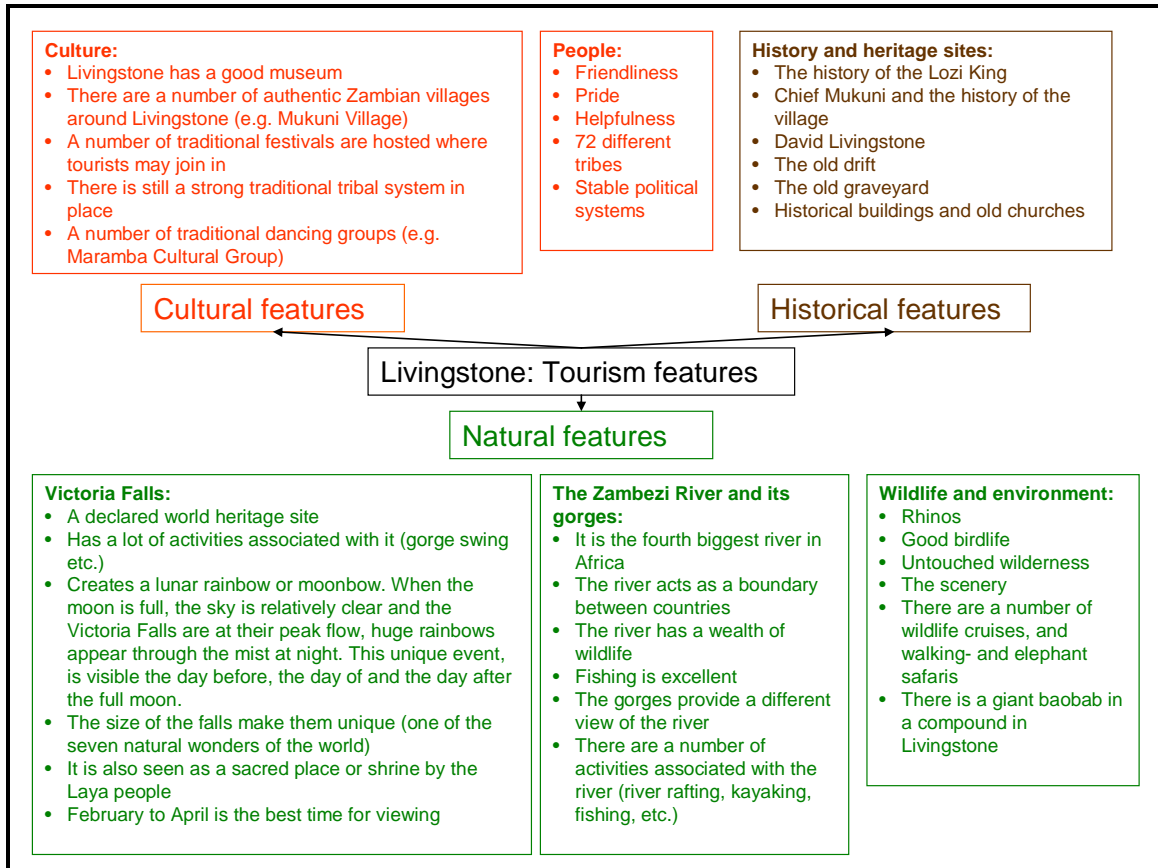


Figure 4.17 Tourism features - Livingstone

Once all the tourism featured have been identified for each area, the focus group participants are led through the PSR exercise. The PSR exercise for the BTR is discussed in the following section.

4.4.2 The PSR exercise

The second part of the focus group meetings was aimed at determining relevant indicators for these features as selected by the participants. Figures 4.18-4.20 exhibit the results of the PSR exercise for each of the three areas. The indicators are based on the tourism features that were identified in the first part of the focus group meetings. The

idea is to provide more of a qualitative approach to monitoring resources than producing indicators that are quantitative measures.

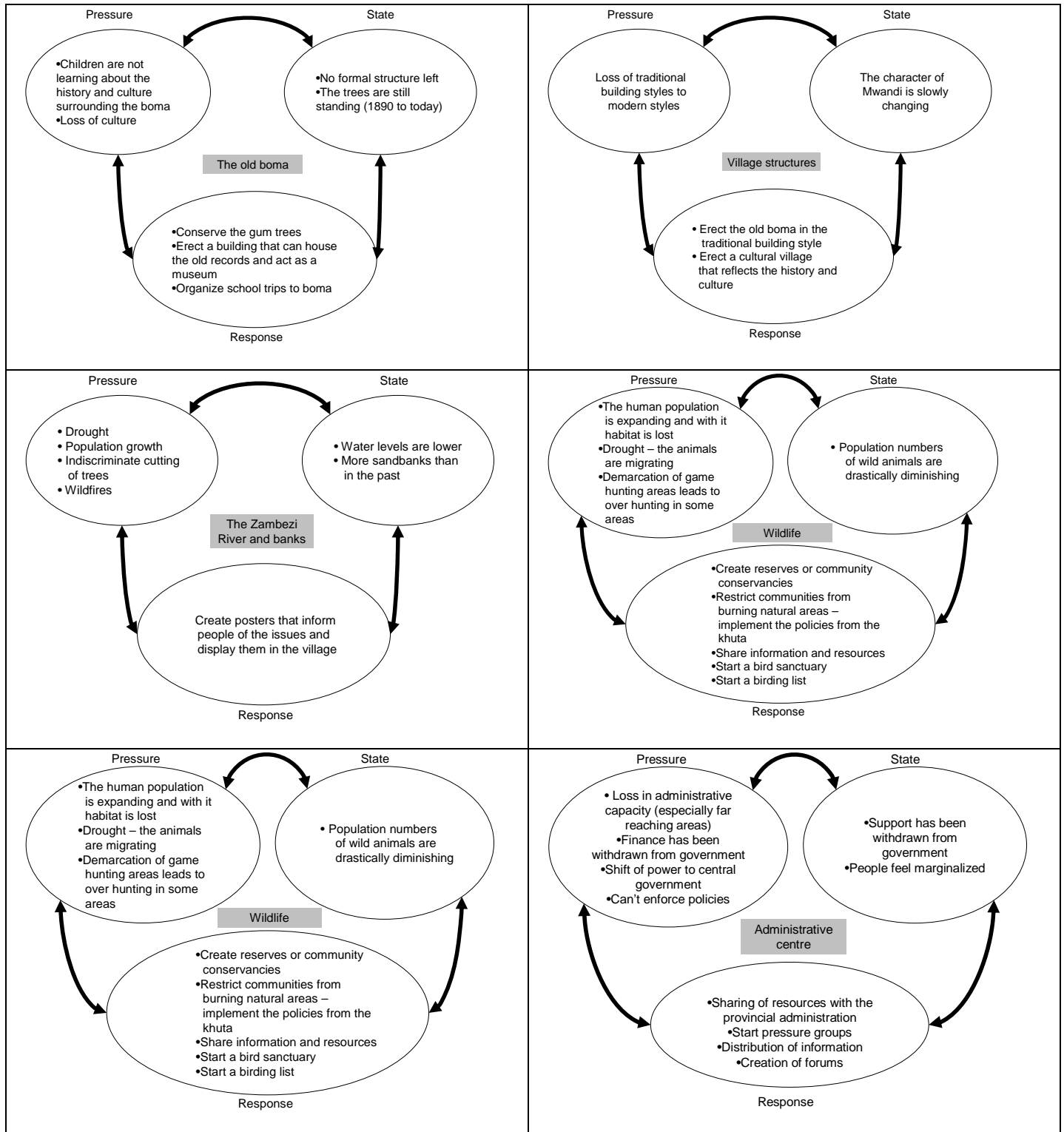


Figure 4.18 PSR framework – Mwandi

The indicators that were selected in the Mwandu focus group range from cultural to environmental (see Figure 4.18). In each instance the participants were asked to determine the current state of the feature, what pressures are exerted on it, and what they as a route or network community could collaboratively do to minimize or mitigate these pressures. The old boma where the Khuta used to meet has a cultural significance to the local people and the current situation is that there is no formal structure left. The participants felt that their cultural heritage is being lost for the younger generations and they have identified steps that can be taken to help preserve this cultural site.

The indicators that were selected in the Lusu area (Figure 4.19) mainly relate to natural assets like wildlife, the Sioma Ngwezi National Park and the Zambezi River. In the national park for example, pressures that were identified were poaching, high fees and the fact that the park is relatively unknown. The current state of the park is that it is underdeveloped and that wildlife is still scarce although numbers are improving slightly. The responses they identified include establishing more scout camps, marketing the park to visitors in the area by making use of the route, erecting signage to the park (presently there are no signs), sharing information on access points with visitors, establishing a ticket office and fixed point where scouts can be picked up, and placing pressure on government to establish a pricing structure for the park.

In the focus group meeting in Livingstone it was decided that not all features that were identified could be monitored or influenced by community action: the Victoria Falls being a prime example. The features that could be monitored were identified as the Zambezi River and its gorges, the local culture, wildlife and the environment (Figure 4.20).

The aim of the PSR exercise was to obtain qualitative data and to create a shift in the mindset of local communities and the private sector to take ownership of their resources and the responsibility for conserving them. Subsequent measurements will have to be made in the same focus group environment to determine which of the proposed responses have had positive affects on the resources.

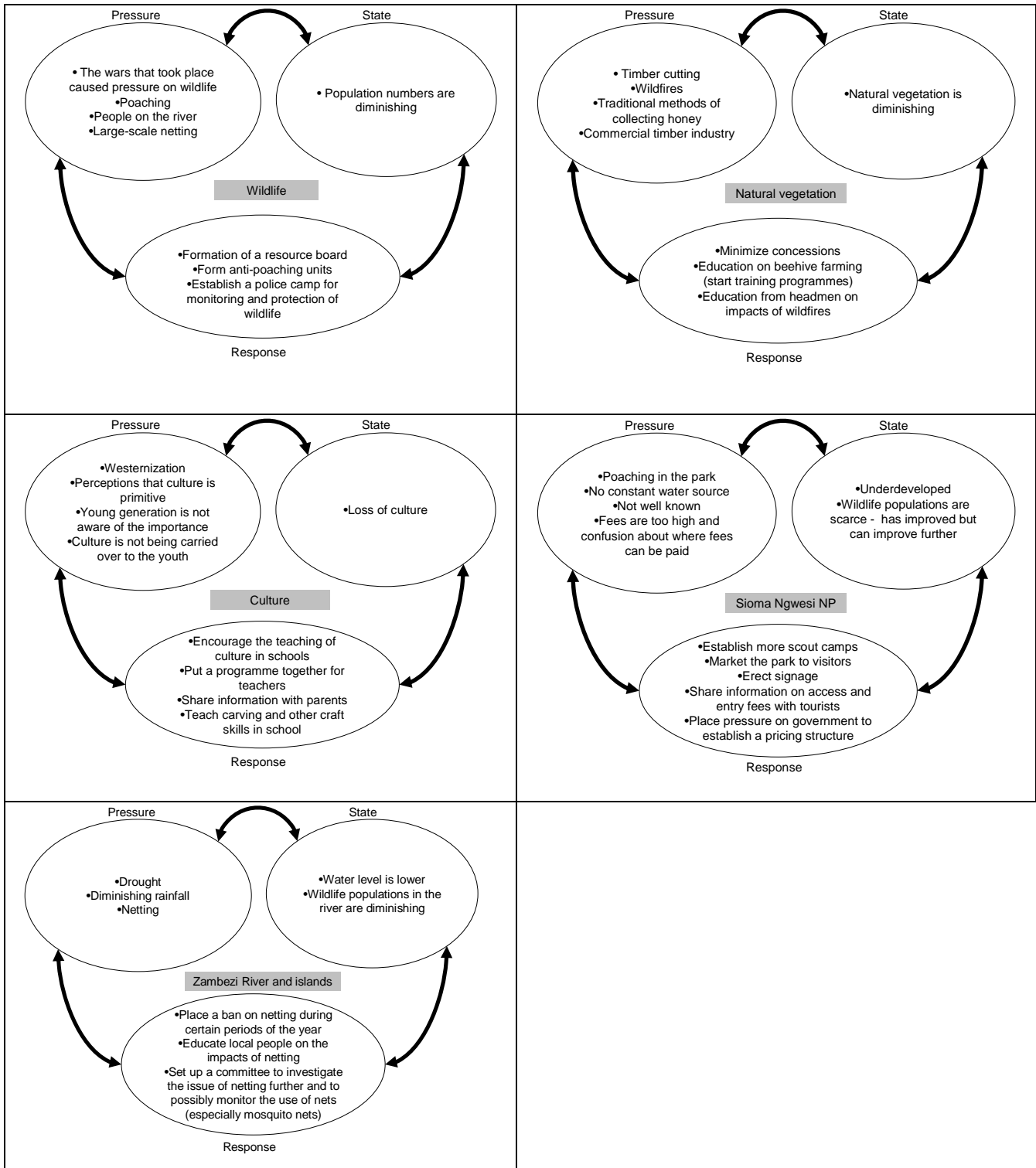


Figure 4.19 PSR framework – Lusu area

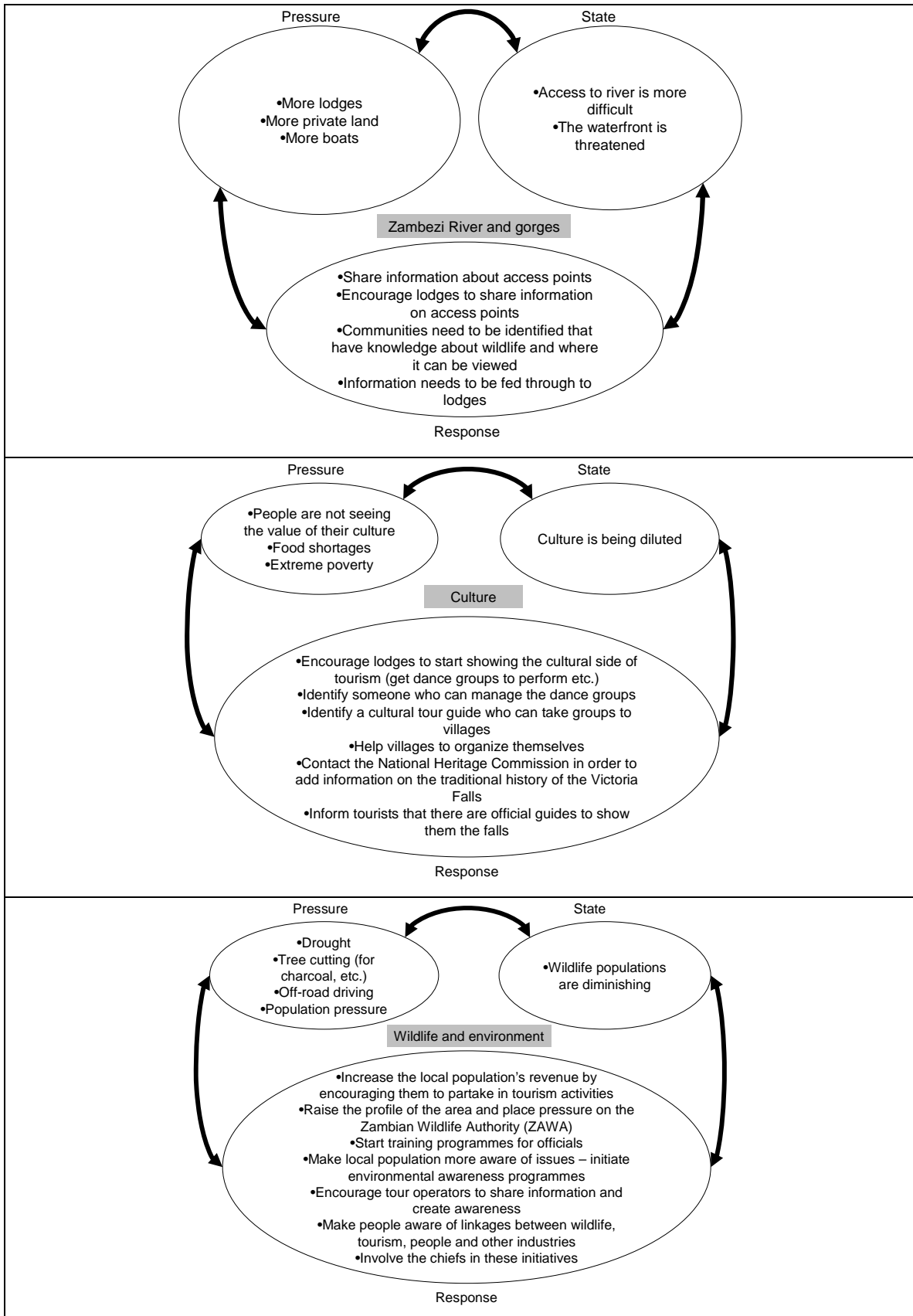


Figure 4.20 PSR framework – Livingstone

The results show that the two routes studied can still improve on their sustainability. Specific areas of concern are the lack of route policies aimed at community development, the provision of training for staff on the routes, route policies on environmental and sustainability issues, and the application of environmentally friendly technologies, techniques and practices.

The PSR exercise showed that communities can contribute significantly in identifying local indicators and that their responses to sustainability issues are often creative and useful. There are some recommendations that can be made for improving the sustainability of the two routes and this will be discussed next.

CHAPTER 5: RECOMMENDATIONS AND CONCLUSION

5.1 GENERIC SUSTAINABILITY INDICATORS

The generic indicators selected from the literature, although not always meant to be applied to routes or networks, but rather to destinations, were summarized for application to routes by using the framework proposed by Ko (2005). The last step in Ko's framework is evaluation. It is not the purpose here to pass judgement on the overall sustainability of the two case study routes, but rather to determine a baseline and to find out whether the method used is applicable to route development in the African context. The baseline assessment will be discussed first, followed by an appraisal of the suitability of the proposed method for monitoring tourism route development.

5.1.1 Social development

Attitudes in the Caprivi community towards tourism have changed dramatically in recent years. The region, known more as a war zone (it was occupied by the South African Defence Force from the 1960s to 1990) than as a tourism destination (Caprivi Promotional Project 2006), has done much to change its image in the recent past. It is especially encouraging to witness the local communities develop and start to benefit from tourism initiatives (Ashley 1995). There are still dividing lines between the upmarket lodge owners and the local communities, but this is slowly changing owing to initiatives like the Caprivi Promotional Project and the Caprivi Wetlands Paradise route. The development of a multi-stakeholder tourism plan for the area, although not yet fully developed or implemented, can contribute greatly to collaboration between these two groups for their mutual benefit. On the opposite side of the Zambezi, however, there is a very different scenario. Zambia is experiencing a significant rise in the number of tourists they receive, especially in view of the political and economic situation in Zimbabwe. The tourism industry and governing bodies are not very well developed and few tourism

associations exist (CHL Consulting 2006). The Livingstone Tourism Association is one example of a private sector initiative that aims to promote and regulate tourism in south-western Zambia. As a result, tourism operators in Livingstone are far better organized than those in the surrounding rural areas. In the Lusu area for example, many of the operators, although there are only seven well established lodges on an 80km stretch of road with no towns between them, have never or seldom met to discuss issues that affect them. The development of a multi-stakeholder tourism plan for the area could be of benefit to the operators and the surrounding communities by organizing them into a structure that can deal with the issues that affect them all. The route should help to bring together people from different backgrounds and a development plan could formalize these relationships. The route's operators could even go further by adopting a constitution and eventually registering as a cooperative or association to formalize its structure.

The importance of community participation has been pointed out by many researchers and discussed above. Participation refers not only to involvement in tourism initiatives as such, but also involvement in the economy. This is especially the case in rural areas in Africa, where economic opportunities are scarce. In the Caprivi, half of the respondents indicated that they acquire their goods and services locally, with a few of the more expensive and specialised items being sourced from Windhoek. On the Barotse Trails Route however, and especially in the Lusu area, operators cross the border to Katima Mulilo in Namibia to purchase their goods, thus creating a leakage from the local economy. This is understandable as the closest town in Zambia (Livingstone), is more than 120km away. Both routes can do much more in terms of supporting local communities by acquiring goods locally. Only one lodge on the BTR made a significant effort to purchase and display the work of a local carpenter who is also listed on the route. This is a good example of how local businesses can be supported by established operators. The benefits of routes on local economic development have been shown by authors such as Rogerson (2002b). One of the key benefits lies in supporting small businesses. By supporting these businesses, communities that are often marginalized become involved in the tourism economy which holds indirect social benefits for them. Involving local communities also contributes to changing their perceptions of tourism and can lead to greater social integration. Services in these remote areas can also be

obtained locally by making use of local tour guides, especially for village tours. There are still significant opportunities on both routes to make greater use of tour guides sourced from the local communities.

The researcher observed when doing the survey that none of the routes had developed a policy on community development, mainly due to the fact that they were still in different stages of development at the time. By developing a formal policy on community development and supporting community projects collectively, definite benefits will accrue to routes and communities in the area. One example of such an initiative is in the Caprivi where a group of lodges supported the development of a traditional village that is run autonomously by the local community. The lodges benefit as they have something authentic and unique to offer their visitors and the community benefits directly from additional income. This also helped to establish a good relationship between the lodge owners and the adjacent communities. A route could, for example, aim to support a different community craft project each year by providing business and marketing expertise and making a commitment to refer clients to the project. A route could also decide to implement a community levy on the price structures of their participants and the funds generated in this way can be channelled to support community projects in the area.

A number of participants on both of the case study routes indicated that they have a policy on community development. This ranges from building clinics or schools to providing training or implementing a community levy. It is recommended that more of the businesses consider doing this, especially in rural areas where the relationship between the community and the tourism operator is of crucial importance. In areas like western Zambia for instance, lodges are built on traditional land, and the fostering of a relationship and showing the benefits of tourism to the local communities become crucial to the ongoing tenancy and operation of these businesses. The Route Forums (RFs) of these routes can investigate best-practice examples of such policies from the participants and share them with others in the network.

Not many of the respondents have qualified or certified staff, mainly due to a lack of effective training programmes in these remote areas. Staff are usually trained in-house by

the managers or owners of the business. A suggestion put forward by one of the respondents is to ask trainers to come and provide training in these areas for a number of establishments simultaneously. The board and lodging of the trainers could be sponsored by the route participants, making it more cost-effective. Alternatively, the RF can approach authorities and plead their case as a collective for the necessary training to be provided. Routes can also apply for funding from donors or support programmes to have training courses conducted for route participants.

Training occurs more frequently on the CWP than on the BTR mainly due to the availability of courses in Namibia. Zambia lacks training courses, especially in rural areas. There is one main training provider, the Hotel and Tourism Training Institute Trust in Lusaka (HTTI Trust 2005). Having well-trained staff can contribute greatly to the sustainability of a business not only in terms of service excellence, but also in terms of investing in staff's professional and personal development. Many participants felt that if they invest in such training, staff members will leave to find better or higher paying jobs. A mindset should be created that by investing in staff, one is also investing in building a stronger tourism industry that will benefit all.

Few of the respondents on the BTR indicated that they have training requirements for their staff. Most of the businesses indicated that they provide in-house training for their staff and thus have no need for other training. The CWP had greater training requirements, indicating that the route needs to approach a training institution or the tourism authorities to see where they can obtain support for training.

The CWP has a good variety of community projects listed on the route. These range from craft projects to communal conservancies and community-based camp sites that were developed with support from Integrated Nature Conservation and Rural Development (IRDNC), a local NGO that has been instrumental in establishing communal conservancies in the Caprivi. The Namibia Community Based Tourism Association (NACOBTA) has also undertaken marketing activities for these projects. Communities in the Caprivi are thus actively involved in tourism mainly through communal conservancy structures. This has brought about a definite mindset change, as many of the community

representatives interviewed stated that tourism has brought benefits to their communities in terms of social development. A number of schools and clinics have been built in the region with money obtained from community-based tourism projects (IRDNC 2005). There are fewer community projects listed on the BTR, mainly due to the fact that structures like NACOBTA and the IRDNC are still absent in south-western Zambia. The possibility of approaching the IRDNC to help with such projects has been considered although nothing has materialized to date. One such programme in Zambia is the Okavango Upper Zambezi International Tourism (OUZIT) spatial development initiative. An objective of this project is the upliftment of rural poor through community-based tourism development linked to expanding inward investment in tourism and related infrastructure. It remains to be seen if this will bring benefits to community-based tourism projects. The advantage of organizations like the IRDNC is their on-the-ground support for communities in all aspects of development. The Zambian government could look at this model for establishing and managing communal conservancies as used by the Namibian government for conservation and tourism development.

Participants on both routes could be encouraged to become more involved in community upliftment. Many respondents felt that they would like to get involved but did not know how or where to start. The RFs of these routes could look at a few best-practice examples from participants on the route and distribute the information to other members in the network. Upliftment can range from large inputs like building schools or clinics to much smaller efforts, like providing training to local people or sharing business experience.

5.1.2 Economic development

The research found that the majority of the participants on the CWP experience seasonality in their businesses. A few suggestions have been put forward in this regard. Events like festivals could attract significant numbers of people in the off-season if marketed correctly. These festivals can include the selling of local produce and crafts, and they can be combined with music concerts or sporting events. Operators can benefit from additional visitors, but they can also use the opportunity to showcase their products

at the festivals. Alternatively, groups of product owners can get together and develop special-rate packages that would attract additional visitors to the area. Routes provide a good platform for collaboration in developing itineraries or package deals.

The development of a tourism route is primarily an economic activity aimed at increasing visitor numbers to host areas. The product variety on the routes plays an important part in attracting visitors. By increasing the variety of products the needs of different market segments can be addressed and thus increase the potential market size. Both routes investigated have a good variety of products. It is up to the RFs to further strengthen the number and variety of products on offer. Gaps can be identified and the information passed to the tourism authorities who are responsible for attracting tourism investments. The number of participants on a route is also a good indication of the success of a route, as people would want to become members if they see the benefits of participating.

The main reason for developing tourism routes is to attract more visitors and thus increase the turnover of individual businesses on the routes. As this was a baseline assessment it did not receive a score on the BTS, but subsequent assessments can measure the percentage growth in the turnover of individual participants. Tourist arrivals and employment figures can be handled in the same way.

5.1.3 Environmental protection

Although not a main function of a route, protection of the resource base for tourism is important, as both the routes studied occur mainly in rural areas where the tourism product is directly reliant on the natural environment. Protecting the environment thus means indirectly protecting your product.

Not many of the participants on either of the routes have policies regarding environmental and sustainability issues. Organizations like Fair Trade in Tourism South Africa (FTTSA) are presently conducting workshops on sustainable tourism for product owners in South Africa. The organization currently only operates in South Africa but

similar programmes could be introduced in neighbouring countries. Alternatively routes can start identifying best-practice examples in their routes and distribute the information to network members. In doing so, they will increase awareness of sustainability issues and encourage other participants to adopt sustainable practices and policies.

Few participants on the two routes make use of environmentally friendly technologies. This is mainly due to difficulties with recycling in remote areas. There are examples of participants that do recycle and their methods or procedures should be disseminated within the networks. RFs can arrange awareness campaigns with environmental organizations and could even negotiate with recycling or waste-removal companies to pick up recycled goods from all participants once a fortnight or month. Most participants interviewed were interested in learning more about how to recycle in their areas.

Not many of the participants listed on the BTR have been evaluated in terms of environmental impacts. This could be attributed to the fact that the capacity of government to conduct such assessments is limited. Many of the larger operators in Zambia and Namibia indicated that EIAs had to be conducted before they could develop. Although not all businesses require such assessments, it is suggested that independent assessments are made of all businesses or projects and suggestions given as to how they can minimize their impacts on the environment. Organizations like FTTSA do such assessments and businesses can become fair trade-accredited. Similar organizations should be sought in other countries, or FTTSA could be approached to explore the possibility of expanding their work into other parts of Africa.

To date there are no protected areas or conservation projects listed on the BTR so this could not be assessed in this category. This is likely to change with the development of the Kavango-Zambezi (KAZA) Transfrontier Conservation Area, which will facilitate further development of the Sioma Ngwezi National Park. Presently there is no office or contact person for the park. The CWP has eight protected areas listed as participants. These are communal conservancies managed by the communities living in or around the conservancy. The majority of these conservancies indicated that tourism contributes to the conservation of biodiversity in the form of community-based campsites or craft

projects. Funds from these projects are invested in the conservation of fauna and flora in the conservancy through appointing resource monitors, anti-poaching units and committee members. Only one of the conservancies listed on CWP indicated that tourism was their main source of income for biodiversity conservation. Many of the tourism projects in the other conservancies started in the last five years and need more time to contribute significantly towards conservation. Most of the conservancies indicated that their main source of income was hunting concessions. Protected areas or conservation projects can add a tourism levy to their fee structure to contribute towards conservation.

5.1.4 Network effectiveness

In order for a route or network to function effectively the members need to be coordinated. This is achieved by having regular RF meetings. As the two routes were in different stages of development at the time of the survey only a limited number of RF meetings had taken place. The CWP route met more frequently with the Caprivi Promotional Project being the driving force behind scheduling meetings. The BTR found it more difficult to meet as long distances between RF members make it difficult to have regular meetings. In such remote areas, some suggestions like breaking routes into sub-routes with sub-forums have been put forward which would help overcome some of these difficulties. It is up to the RF to motivate route members to stay actively involved in the route. RF meetings can be rotated to take place at different establishments each time to make them more interesting and to allow participants to better get to know one another's products.

The number of joint networking activities per year gives an indication of the functioning of the network. Indicators in this regard are the organizing of annual events, applications submitted for joint funding, or the number of travel shows attended. It is through these activities that benefits which will contribute to better coordination and participation are shown to members. The network or route should provide benefits for its participants if they are to remain active in the network. This is done by adding value to their businesses

in some way which can include economic value, such as marketing exposure or sharing of business ideas among network members.

Most importantly, the network must achieve the goals that they set for themselves. The goals should be achievable and activities monitored regularly. Defining time frames for goals helps to prevent activities being put off until the point is reached where they never get tackled. A project plan is a good tool to define goals and set time frames and indicators to achieve and measure their results.

The research indicates that the two routes can do much more to become more sustainable and some suggestions have been put forward. The next section looks more closely at the PSR framework and its suitability for identifying route-specific indicators.

5.2 ROUTE-SPECIFIC INDICATORS

The research has shown that the PSR framework can be suitably applied to developing route-specific indicators in a participative environment. The communities that were involved in the focus group meetings on both the CWP route and the BTR were well aware of the impacts of tourism on social systems and the environment. The responses they gave in terms of actions they can take were innovative and mostly practical. This is not to say that all these activities will be undertaken and it is the RFs that will have to coordinate members and develop project plans to see that these things actually happen.

The PSR method, although mainly used for environmental indicators, provides a means to collect qualitative data on real issues communities face and the impacts they perceive to be the most urgent. It also serves as a way to get communities and the private sector to start thinking about sustainability issues and solutions to their problems. It makes use of indigenous knowledge that can be useful if regarded as valid. The benefits of developments are aimed at communities and it is therefore important that they be involved in making decisions and solving problems. This, in turn, can contribute to positive attitudes towards tourism, as they are informed about things happening in their

areas and they have some measure of control over the outcomes. Participants in the focus group meetings of the BTR had the opportunity to raise issues that are not discussed often. They gave local people a chance to interact with lodge owners to try and find solutions to common problems that affect everyone in the community, as well as influencing the experiences of tourists to the area.

The PSR method has been criticized for not being able to capture the complex and dynamic nature of processes, but its uncomplicated nature makes it suitable for dealing with communities. It can be used as a guiding framework while leaving enough room to capture the qualitative nature of impacts and responses when dealing at the grass-roots level.

5.3 SUITABILITY OF THE MONITORING SYSTEM

The framework proposed by Ko (2005) provides a good base on which to do sustainability assessments on tourism routes or networks. The framework serves as a step-by-step procedure that can be followed, but also adapted to local circumstances. Although Ko proposed eight dimensions of sustainable tourism development, this study only made use of four – the social, economic and environmental dimensions with the added dimension of network functionality specific to tourism routes.

Sustainability indicators (SIs) can be selected from the vast literature on the subject, or identified through practical experience or by making use of the Delphi technique. The SIs that are selected will depend on the type of industry or activities that are being measured. This study made use of existing literature and the researcher's practical experience to identify SIs that are applicable to tourism route development. Although the literature that was surveyed focused more on destination-specific SIs, the practical experience of the researcher made it possible to select or adapt SIs for measuring the impacts of tourism routes. Where such experience is lacking, the list identified in this study and existing literature on the subject should provide sufficient examples of potential SIs.

The survey instrument that was developed can be used by the RFs to conduct subsequent assessments. The assessment is time-consuming and will have to be well coordinated among RF members. Although the community questionnaire was not administered as part of the baseline assessment, it forms an important part of the overall assessment and is a valuable tool to determine local community perceptions of tourism. The customer-exit questionnaire is another valuable tool for measuring tourist perceptions of a route. All the participants on a route should conduct this survey with their customers and the completed questionnaires collected by the RF for analysis. Where RFs do not have the necessary skills to analyse the data, Open Africa should provide support. A spreadsheet can be set up to automatically analyse data which will simplify this process significantly. The participant questionnaire will be administered by Open Africa on an annual basis in future and feedback provided to the RFs.

The study made use of a ten-point interval scale to score individual SIs. The indicators measured the perceptions of the tourism stakeholders on the route. For studies of this nature - especially in remote rural areas where technical and scientific data are not always available - perception studies are a good way to assess sustainability. One of the distinct advantages of perception studies is that they involve local stakeholders in the measurement. This was crucial to this study as one of the key elements of responsible tourism is to involve communities in the decision-making process. Thus the measurement of impacts had to include all the stakeholders in the assessment procedure. The scoring of individual indicators can become quite technical and this may be a problem for RFs with no technical expertise.

For the purpose of this study a five-class scale was used to evaluate the sustainability of tourism routes. The scale was chosen as it provides detailed information on the sustainability of the routes. This information is fed back to the stakeholders on the routes and enables them to make informed decisions.

The sustainability assessment maps (SAMs) are valuable for communicating information about the assessment to stakeholders. By presenting results of the assessment visually, all stakeholders are able to get a snapshot of the sustainability of the route and this also

makes it easier to communicate and understand. The SAMs are extended over time to enable comparisons to be made between assessments. Comparison of subsequent assessments makes it possible to determine if progress has been made on sustainability issues on a route.

For the purpose of identifying route-specific indicators, the pressure-state-response (PSR) framework was used. The method provided the researcher with a framework to identify suitable local SIs in a participative manner. The method is simple and easy to understand. The results can be communicated visually through images as done in this study. Such images are easily understandable and especially suitable to rural communities.

5.4 RECOMMENDATIONS FOR FURTHER RESEARCH

The time constraints on this study prohibited assessments being extended over time. Subsequent research can be conducted to determine whether the methods identified in this study produce the desired results when extended over time.

The methods should also be introduced to RFs and their feedback should be obtained about the usefulness of the data and information acquired by the surveys. Aspects that could not be covered by this study, like the community and customer-exit surveys, can be presented to RFs in order to determine if they add value to the existing assessment procedure.

The assessment method for generic SIs can be quite technical and may pose difficulties for some RFs. The procedure can be simplified by making use of fewer indicators. The RFs can use the list identified in this study as a compendium from which to select indicators that they feel are the key elements to monitor on their route. By making use of a two- or three-class interval scale, analyses of the data can also be simplified.

Further research can be conducted on making use of focus groups in sustainability assessment. Government departments and other organizations involved in development and conservation could be invited to focus group meetings so that they can contribute and understand more clearly what impacts are perceived by communities to be positive and negative, and to help find practical solutions and initiate mitigation measures where necessary. Focus groups are a handy vehicle for government and the private sector to debate issues around development. These meetings can be facilitated by neutral organizations like NGOs.

A discussion forum like focus group meetings can also be expanded to include other sectors of the economy. Tourism has links to many other sectors and discussions could be facilitated between tourism and sectors like transport, trade and industry, conservation and labour to name a few. Discussions can also be divided into smaller groups with feedback and general discussion at a later stage.

Furthermore, research can be conducted in employing geographic information systems (GIS) to display results spatially. Because the location of all the participants in this study was surveyed with a global positioning system (GPS) instrument, the data can be spatially orientated. By using raster models, the results can be displayed visually by means of GIS.

5.5 CONCLUSION

Tourism route development is a development tool that is increasingly employed for developing tourism and local economies in Africa. These routes can also play an important part in fostering community participation in the tourism industry and contribute towards conservation of the natural environment. It is crucial, however, that the activities of individual tourism operators and these routes be evaluated for sustainability. This research developed a set of indicators that can be used to monitor tourism route development in any area, with special consideration given to the African context. It also investigated a method of developing route-specific indicators in a participative approach

by making use of the PSR framework. These methods were tested on two case study routes in Zambia and Namibia and the results show that they are useful in obtaining the necessary data to evaluate the sustainability of the routes. The results are scored on the barometer of tourism sustainability and presented graphically by making use of sustainability assessment maps.

The research serves as a baseline assessment for sustainability in the two case studies and subsequent assessments can provide useful information on progress made in terms of the sustainability issues in these areas. The results of the baseline assessment indicate that both routes still have much to do in terms of becoming sustainable.

The route concept has the potential to contribute significantly to community development, local economic development and conservation, especially if done by making use of a bottom-up approach. Communities are involved in the actual development of a route and its management once developed. This encourages true participation and could contribute to positive relationships between industry players and host communities.

REFERENCES

- Agarwal S, Ball R, Shaw G & Williams A M 2000. The geography of tourism production: Uneven disciplinary development? *Tourism Geographies* 2, 3: 241-263.
- Ahn B, Lee B & Shafer CS 2002. Operationalizing sustainability in regional tourism planning: an application of the limits of acceptable change framework. *Tourism Management* 23, 1: 1-15.
- Allie F 2006 (ed) South African tourism glitters more than gold. *Tourist Guide Newsletter* 2nd Quarter 2006 [online] Available from http://www.capecapegateway.gov.za/Text/2006/7/tg_second_quarter_newsletter_2006.pdf [Accessed 9 June 2007].
- Andereck KL, Valentine KM, Knopf RC & Vogt CA 2005. Residents' perceptions of community tourism impacts. *Annals of Tourism Research* 32, 4: 1056-1076.
- Ashley C 1995. *Tourism, Communities and the Potential Impacts on Local Incomes and Conservation*. Discussion Paper 10. Windhoek: Ministry of Environment and Tourism.
- APEIS (Asia-Pacific Environmental Innovation Strategies) 2003. Community-based tourism in Corbett National Park and Binsar Wildlife Sanctuary (India): A case study of multi-stakeholder tourism planning for the CBN (Corbett National Park, Binsar Wildlife Sanctuary, Nainital) landscape. Workshop on community-based tourism, India.
- Appleton AF 2005. Sustainability: A practitioner's reflection. *Technology in Society* 28, 12:3-18.
- Bakkes JA, Van der Born GJ, Helder JC, Swart RJ, Hope CW & Parker JDE 1994. *An overview of environmental indicators: State of the art and perspectives*. Environmental assessment technical reports. New York: United Nations Environmental Programme.
- Barnard WS 2001. *Conceptions of Geography*. Centre for Geographical Analysis. Stellenbosch: University of Stellenbosch.
- Barotseland.com 2007. History of Barotseland [online] Available from <http://wwwbarotseland.com> [Accessed 12 May 2007].

- Berensford C 2007. Open Africa route maps [online] Available from <http://www.clipclip.co.za> [Accessed 22 August 2007].
- Berry S & Ladkin A 1997. Sustainable tourism: A regional perspective. *Tourism Management* 18, 7:443-440.
- Besculides A, Lee ME & McCormick PJ 2002. Residents' perceptions of the cultural benefits of tourism. *Annals of Tourism Research* 29, 2:303-319.
- Binns T & Nel E 2002. Tourism as a local economic development strategy in South Africa. *The Geographical Journal* 168, 3: 235-247.
- Brandon K 1993. Basic steps toward encouraging local participation in nature tourism projects. In Lindberg K & Hawkins D (eds). *Ecotourism: A Guide for Planners and Managers*, pp. 134-151. North Bennington: The Ecotourism Society.
- Briedenhann J & Wickens E 2004. Tourism routes as a tool for the economic development of rural areas—vibrant hope or impossible dream? *Tourism Management* 25, 1: 71-79.
- Brown F 1995. A new geographical approach. *Tourism Management* 16,4: 325.
- Brunt P & Courtney P 1999. Host perceptions of sociocultural impacts. *Annals of Tourism Research* 26, 3: 493-515.
- Bruwer J 2003. South African wine routes: Some perspectives on the wine tourism industry's structural dimensions and wine tourism product. *Tourism Management* 24, 4: 423-435.
- Buckley R 1999. Tools and indicators for managing tourism in parks. *Annals of Tourism Research* 26, 1: 207-210.
- Budowski G 1996. Ecotourism and conservation: Avoiding conflicts and building a mutually profitable relationship. Paper presented to the International Meeting on Ecotourism, Manaus.
- Burns PM & Sancho MM 2003. Local perceptions of tourism planning: The case of Cuéllar, Spain. *Tourism Management* 24, 3: 331-339.
- Butler R 1994. Seasonality in tourism: Issues and problems. In Seaton A, Jenkins CL, Wood RC, Dieke PUC, Bennet MM, Maclellan LR & Smith R *Tourism: The State of the Art*, pp. 332-339. Chichester: Wiley.
- Butler RW 1991. Tourism, environment, and sustainable development. *Environmental Conservation* 18, 3: 201-209.

- Butler R 1998. Sustainable tourism: Looking backwards in order to progress. In Hall MC & Lew AA (eds) *Sustainable Tourism: A Geographical Perspective*, pp. 25-34. Harlow: Longman.
- Butler RW 1999. Sustainable tourism: The state of the art. *Tourism Geographies* 1, 1:214.
- Butler R 2004. Geographical research on tourism, recreation and leisure: Origins, eras and directions. *Tourism Geographies* 6, 2: 143-163.
- Cape Town Declaration 2002. The International Centre for Responsible Tourism. [online] Available from <http://www.icrtourism.org/capetown.html> [Accessed 21 January 2006].
- Caprivi Promotional Project 2006. *The Caprivi: Namibia's Wetland Paradise*. Windhoek: Projects and Promotions.
- Carruthers G & Tinning G 2003. Where, and how, do monitoring and sustainability indicators fit into environmental management systems? *Australian Journal of Experimental Agriculture* 43: 307–323.
- Cater CI 2006. Playing with risk? Participant perceptions of risk and management implications in adventure tourism. *Tourism Management* 27, 2: 317-325.
- Cater EA & Lowman G 1994. *Ecotourism: A Sustainable Option?* Chichester: Wiley.
- CETRA (Centre for Tourism Research in Africa) 2005. Bringing together Africa-focused tourism researchers. Cape Town: Cape Peninsula University of Technology, Faculty of Management Studies.
- Chapman K & Walmsley B 2003. *Country Reports: Zambia. Environmental Impact Assessment in Southern Africa*. Windhoek: Southern African Institute for Environmental Assessment.
- CHL Consulting 2006. Zambia: Tourism sector profile [online]. Available from <http://www.tourism2006.com> [Accessed 17 July 2007].
- Choi HC & Sirakaya E 2006. Sustainability indicators for managing community tourism. *Tourism Management* 27, 6: 1274-1289.
- Christie IT & Crompton DE 2001. *Tourism in Africa*. Africa Region Working Paper Series 12. Washington DC: The World Bank.
- City of Cape Town 2000. *Summary: State of the Environment Report for the City of Cape Town*. Cape Town: City of Cape Town Environmental Management Department.

- Clayton AMH & Redcliffe NJ 1996. *Sustainability: A Systems Approach*. London: Earthscan.
- Correia L, Passos Ascensão MJ & Charters S 2004. Wine routes in Portugal: A case study of the Bairrada Wine Route. *Journal of Wine Research* 15, 1: 15-25.
- Darkoh MBK & Mbaiwa JE 2001. Sustainable development and resource conflicts in Botswana. In Salih MAM, Ditez T & Ahmed AGM (eds). *African Pastoralism: Conflicts, Institutions and Government*, pp. 39-55. London: Pluto Press.
- Denman R 2006. Objectives, policies and tools for sustainable tourism. Paper delivered at the Seminar on Tourism Sustainability and Local Agenda 21 in Tourism Destinations, Jeddah.
- De Villiers NN 2006. The crucial importance for route forums to meet regularly. Cape Town: Open Africa.
- Dharmaratne GS, Sang FY & Walling LJ 2000. Tourism potentials for financing protected areas. *Annals of Tourism Research* 27, 3: 590-610.
- Driver B 1996. Benefits Driven Management in Natural Areas. *Natural Areas Journal* 16: 94-99.
- Elhard KC & Jin Q 2004. Shifting focus. Assessing cataloguing service through focus groups. *Library Acquisitions and Technical Services* 28, 2: 198-206.
- Elliot SM & Mann S 2005. *Development, Poverty and Tourism: Perspectives and Influences in Sub-Saharan Africa*. The George Washington Center for the Study of Globalization (GWCSG) Occasional Paper Series. [online] Available from <http://gstudynet.com/gwscg/publications/OPS/papers/CSGOP-05-34.pdf> [Accessed 18 January 2006].
- Endicott M 1997. Towards definition [online] Available from www.green-travel.com/gtdef.htm#Responsible [Accessed 19 January 2006].
- Europäische Weinstrassen 1999. *La Route des Vins*. Blaye: Europäische Weinstrassen.
- Fadeeva Z 2004. Development of the assessment framework for sustainability networking. *Journal of Cleaner Production* 13, 2: 191-205.
- Farsari Y & Prastacos P 2007. Sustainable development indicators: An overview [online]. Available from <http://www.iacm.forth.gr/regional/papers/Asteras-English.pdf> [Accessed 23 May 2007].
- Fennell DA 2000. *Ecotourism*. London: Routledge.

- Font X & Harris C 2004. Rethinking standards from green to sustainable. *Annals of Tourism Research* 31, 4: 986-1007.
- Getz D 2000. *Explore wine tourism: Management, development and destinations*. New York: Cognizant.
- Gossling S, Hansson CB, Horstmeier O & Saggel S 2002. Ecological footprint analysis as a tool to assess tourism sustainability. *Ecological Economics* 43: 199-211.
- Gray B 1989. *Collaborating: finding common ground for multiparty problems*. San Francisco: Jossey-Bass Publishers.
- Green H & Hunter C 1992. The environmental impact assessment of tourism development. In Johnson P & Thomas B (eds). *Perspectives on Tourism Policy*, pp. 29-48. London: Mansell.
- Green H, Hunter C & Moore B 1990. Assessing the environmental impact of tourism development. *Tourism Management* 11, 2: 111-120.
- Gündling L, Korn H & Specht R 2000. Report of the International Expert Workshop "Case Studies on Sustainable Tourism and Biological Diversity". International Academy for Nature Conservation Isle of Vilm, Germany, November 11 - 14, 1999. [online] Available from <http://www.bfn.de/09/tourism2.pdf>. [Accessed 14 January 2006].
- Gunn CA 1988. *Tourism planning*. New York: Taylor & Francis.
- Günther W & Winkler K 2006. Sustainable tourism development in the Baltic Sea Region: Comparative assessment of existing tools and methods for strategic cooperation in tourism [online]. Available from <http://www.yepat.uni-greifswald.de> [Accessed 14 July 2007].
- Hall CM 2005. Rural wine and food tourism cluster network development. In Hall D, Kirkpatrick I & Mitchell M (eds). *Rural tourism and sustainable business*, pp. 149-164. Clevedon: Channel View.
- Hall CM & Lew A 1998. *Sustainable tourism: A geographical perspective*. Harlow: Longman.
- Hall DR 1998. Tourism development and sustainability issues in Central and South Eastern Europe. *Tourism Management* 19, 5:423-431.
- Halme M 2001. Learning for sustainable development in tourism networks. *Business Strategy and the Environment* 10: 100-114. [online] Available from

- <http://www.oikos-stiftung.unisg.ch/campus2001/halme.pdf> [Accessed 19 January 2006].
- Halme M & Fadeeva Z 2000. Small and medium-sized tourism enterprises in sustainable development networks—Value-added? *Greener Management International* 30: 97–113.
- Hammond A, Adriaanse A, Rodenburg E, Bryant D & Woodward R 1995. *Environmental Indicators: A Systematic Approach to Measuring and Reporting on Environmental Policy Performance in the Context of Sustainable Development*. Washington: World Resources Institute.
- Haralambopoulos N & A Pizam 1996. Perceived impacts of tourism: The case of Samos. *Annals of Tourism Research* 23, 3: 503-526.
- Hardi P & Pinter L 1995. *Models and Methods of Measuring Sustainable Development Performance*. Winnipeg: International Institute for Sustainable Development.
- Hart S 1997. Strategies for a sustainable world. *Harvard Business Review* Jan–Feb: 67-76
- Hillery M, Nancarrow B, Griffin G & Syne G 2001. Tourist perception of environmental impact. *Annals of Tourism Research* 28, 4: 853-867.
- Hodge RA 1996. A systemic approach to assessing progress toward sustainability. In Dale A, & Robinson JB (eds) *Achieving sustainable development*, pp. 267-292. Vancouver: UBC Press.
- Holden A 1999. High impact tourism: A suitable component of sustainable policy. *Journal of Sustainable Tourism* 7, 2: 97-107.
- Holden A 2000. *Environment and Tourism*. London: Routledge.
- Horn C 1998. Trails, tourism and regional development. Report on Trails, Tourism and Regional Development Conference. Cromwell, New Zealand 2-5 December 1997 [online]. Available from <http://www.sciencedirect.com> [Accessed 15 March 2006].
- HTTI Trust 2005. The Hotel & Tourism Training Institute, Zambia. *Fairview Hotel* [online]. Available from <http://www.fairview.co.zm/traininginstitute.htm> [Accessed 17 July 2007].
- Hughes G 2002. Environmental indicators. *Annals of Tourism Research* 29, 2: 457-477.
- Hunter C 1996. Sustainable tourism as an adaptive paradigm. *Annals of Tourism Research* 24, 4: 850-67.

- Hunter C & Green H 1995. *Tourism and the environment: A sustainable relationship*. London: Routledge.
- Hunter C & Shaw J 2007. The ecological footprint as key indicator of sustainable tourism. *Tourism Management* 28, 1: 46-57.
- Huxham C 1996. *Creating collaborative advantage*. London: Sage.
- Innes JE & Booher DE 1999. *Indicators for sustainable communities: A strategy building on complexity theory and distributed intelligence*. Working Paper 99-04. Institute of Urban and Regional Development. Berkeley: University of California.
- Inskip E 1994. Training for tourism in developing countries. In Seaton AV (ed.). *Tourism: The state of the art*, pp. 563-570. Chichester, England: Wiley.
- IRDNC (Integrated Rural Development and Nature Conservation) 2005. *Annual technical report: Caprivi CBNRM programme* [online]. Available from <http://www.irdnc.org.na/download/caparjun05.pdf> [Accessed 4 April 2007].
- International Centre for Responsible Tourism 2004. *Tourism and local economic development* [online]. Available from <http://www.propoortourism.org.uk> [Accessed 7 July 2007].
- Jackson J & Murphy P 2002. Tourism destinations as clusters: Analytical experiences from the New World. *Tourism and Hospitality Research* 4, 1: 36-52.
- Jackson J 2006. Developing regional tourism in China: The potential for activating business clusters in a socialist market economy. *Tourism Management* 27, 4: 695-706.
- Jang S 2004. Mitigating tourism seasonality: A quantitative approach. *Annals of Tourism Research* 31, 4: 819-836.
- Jurowski C, Uysal M & Williams D 1997. A theoretical analysis of host community resident reactions to tourism. *Journal of Travel Research* 36, 2: 3-11.
- Kaplan L 2004. Skills development in tourism: South Africa's tourism-led development strategy. *Geojournal* 60, 3: 217-227.
- Kaynak E & Macauley JA 1984. The Delphi technique in the measurement of tourism market potential: The case of Nova Scotia. *Tourism Management* 5, 2: 87-101.
- Kernel P 2005. Creating and implementing a model for sustainable development in tourism. *Journal of Cleaner Production* 13: 151-164.
- Keyser H 2002. *Tourism development*. Cape Town: Oxford University Press.

- Khanya 2001. Stimulating sustainable tourism policy workshop. Pretoria: International Institute for Environment and Development.
- Kirsten M & Rogerson CM 2002. Tourism, business linkages and small enterprise development in South Africa. *Development Southern Africa* 19, 1: 29-59.
- Kiss A 2004. Is community-based ecotourism a good use of biodiversity conservation funds? *Trends in Ecology & Evolution* 19, 5: 232-237.
- Ko TG 2001. Assessing progress of tourism sustainability. *Annals of Tourism Research* 28, 3: 817-820.
- Ko TG 2005. Development of a tourism sustainability assessment procedure: A conceptual approach. *Tourism Management* 26, 3: 431-445.
- Kotze DJ 2002. *Guidelines for Responsible Tourism Development* [online]. Available from <http://www.deat.gov.za> [Accessed 15 March 2006].
- Kreisel WE 1984. Representation of the environmental quality profile of a metropolitan area. *Environmental Monitoring and Assessment* 4: 15-33.
- Krippendorf J 1987. *The holiday makers: Understanding the Impact of Leisure and Travel*. London: Heinemann.
- Kuo N, Hsiao T & Yu Y 2005. A Delphi-matrix approach to SEA and its application within the tourism sector in Taiwan. *Environmental Impact Assessment Review* 25, 3: 259-280.
- Lankford S & Howard D 1994. Developing a tourism impact attitude scale. *Annals of Tourism Research* 21, 1: 121-139.
- Lee-Smith D 1997. Community-based indicators: A guide for field-workers carrying out monitoring and assessment at the community level. In *An approach to assessing progress towards sustainability: Tools and training series for institutions, field teams and collaborating agencies*. Gland: IUCN
- Lepp A 2007. Residents' attitudes towards tourism in Bigodi village, Uganda. *Tourism Management* 28, 3: 876-885.
- Li W 2004. Environmental management indicators for ecotourism in China's nature reserves: A case study in Tianmushan Nature Reserve. *Tourism Management* 25, 5: 559-564.
- Linstone HA & Turoff M 1975. *The Delphi Method: Techniques and applications*. Massachusetts: Addison-Wesley.

- Livermann DM, Hanson ME, Brown BJ & Meredith RW 1988. Global sustainability: Toward measurement. *Environmental Management* 12: 133-143.
- Lowe P, Murdoch J & Ward N 1995. Networks in rural development: beyond endogenous and exogenous approaches. In Van der Ploeg JD & van Dijk G (eds) *Beyond modernisation: The impact of endogenous rural development*, pp. 87-105. The Netherlands: Van Gorrum Assen.
- Maldonado T, Hurtado De Mendoza I & Sobario O 1992. *Análisis de Capricidadde Carga Para Visitación en las Áreas Silvestres de Costa Rica*. San José : Fundacion Neotropica.
- Mannion AM & Bowlby SR 1992. In Mannion AM & Bowlby SR (eds) *Environmental issues in the 1990's*, pp. 3-20. Chichester: Wiley.
- Mayaka M & Akama S 2007. Systems approach to tourism training and education: The Kenyan case study. *Tourism Management* 28, 1: 298-306.
- Mbaiwa JE 2005. Wildlife resource utilisation at Moremi Game Reserve and Khwai community area in the Okavango Delta, Botswana. *Journal of Environmental Management* 77, 2: 144-156.
- McCool SF & Moisy RN 2001. *Tourism recreation and sustainability: Linking culture and the environment*. New York: CABI Publishing.
- McCool SF & Stankey GH 1999. *Searching for meaning and purpose in the quest for sustainability*. Montana: School of Forestry, University of Montana.
- McGehee N & Andereck K 2004. Factors predicting rural residents' support of tourism. *Journal of Travel Research* 43, 2: 131-140.
- Mendelsohn J & Roberts C 1997. *An environmental profile and atlas of the Caprivi*. Windhoek: Ministry of Environmental Affairs and Tourism, Namibia.
- MET (Ministry of Environment and Tourism, Namibia) 1995. *Namibia's Environmental Assessment Policy* [online]. Available from <http://www.met.gov.na/programmes/eia/eiapolicy/NAMIBIAEIApolicy.pdf> [Accessed 20 august 2007].
- MET (Ministry of Environment and Tourism, Namibia) 2006. *Indicators of State of Environement Pertaining to Tourism, Parks and Biodiversity*. [online] Available from www.met.gov.na/programmes/soers/biodiversity/soebiov2.pdf [Accessed 15 March 2006].
- Meyer D 2004. Tourism routes and gateways: Key issues for the development

- of tourism routes and gateways and their potential for pro-poor tourism [online]. Available from www.pptpilot.org.za/Routes%20report.pdf [Accessed 15 May 2005].
- Middleton VTC & Hawkins R 1998. *Sustainable tourism*. Oxford: Butterworth-Heinemann.
- Miller G 2001. The development of indicators for sustainable tourism: Results of a Delphi survey of tourism researchers. *Tourism Management* 22, 4: 351-362.
- Morrison G, Fatoki OS, Zinn E & Jacobson D 2001. Sustainable development indicators for urban water systems: A case study evaluation of King William's Town, South Africa, and the applied indicators. *Water SA* 27, 2: 219-232.
- Moulin C & Boniface P 2001. Routeing heritage for tourism: Making heritage and cultural tourism networks for socio-economic development. *International Journal of Heritage Studies* 7, 3: 237- 248.
- Mowforth M & Munt I 2003. *Tourism and sustainability: Development and new tourism in the Third World*. London: Routledge.
- Murphy E 1985. *Tourism: A community approach*. New York: Routledge.
- Nyaupane GP, Morais DB & Dowler L 2006. The role of community involvement and number/type of visitors on tourism impacts: A controlled comparison of Annapurna, Nepal and Northwest Yunnan, China. *Tourism Management* 27, 6: 1373-1385.
- Nel E 2001. Local Economic Development: A review and assessment of its current status in South Africa. *Urban Studies* 38, 7: 1003– 1024.
- Novelli M, Schmitz B & Spencer T 2006. Networks, clusters and innovation in tourism: A UK experience. *Tourism Management* 27, 6: 1141-1152.
- OECD 1993. *Core Set of Indicators for Environmental Performance Reviews: A Synthesis Report by the Group on the State of the Environment*. Environment Monographs 83. Paris: Organization for Economic Co-operation and Development [online]. Available from <http://enrin.grida.no/htmls/armenia/soe2000/eng/oecdind.pdf> [Accessed 11 July 2007].
- Olsen M 2003. Tourism themed routes: A Queensland perspective. *Journal of Vacation Marketing* 9, 4: 331-341.
- Open Africa 2002. *Information relating to the African Dream Project*. Cape Town: Open Africa.
- Open Africa 2005. *Open Africa project handbook*. Cape Town: Open Africa.

- Open Africa 2006a. The story so far. Cape Town: Open Africa.
- Open Africa 2006b. The crucial importance for Route Forums to meet regularly. Cape Town: Open Africa.
- Open Africa 2007. The Open Africa implementation manual. Cape Town: Open Africa.
- Pauw C 2006. Caprivi Wetlands Paradise Route. *Travel News Namibia* [online]. Available from <http://www.travelnews.com.na/index.php?fArticleId=1207> [Accessed 3 February 2007].
- Pavlovich K 2003. The evolution and transformation of a tourism destination network: The Waitomo caves, New Zealand. *Tourism Management* 24, 2: 203–216.
- Pervis J, Abbott J, Naesje T & Hay C 2005. *Shared Resource Management on the Zambezi/Chobe Systems in Northeast Namibia: Current Practices and Future Opportunities* [online]. Available from <http://idrinfo.idrc.ca/archive/corpdocs/118525/ManagementOptions.pdf> [Accessed 23 May 2007].
- Pigeon R 1994. Municipal partnerships enhance tourism economic development. *Economic Development Review* 12, 1: 74-76.
- Pigram JJ 1990. Sustainable tourism policy considerations. *The Journal of Tourism Studies* 1, 2: 3-9.
- Pinter L, Cressman DR & Zahedi K 1999. *Capacity Building for Integrated Environmental Assessment and Reporting: Training Manual*. United Nations Environment Programme (UNEP), International Institute for Sustainable Development (IISD) & Ecologistics International Ltd [online]. Available from <http://www.virtualcentre.org/en/dec/toolbox/Refer/geoman.pdf> [Accessed 10 July 2007]
- Porter ME 1998. *On competition*. Boston: Harvard Business Review Press.
- Potts T & Harrill R 1998. Enhancing communities for sustainability: A travel ecology approach. *Tourism Analysis* 3: 133–142.
- Prescott-Allen R 1997. Barometer of sustainability: Measuring and communicating wellbeing and sustainable development. In IUCN *An Approach to Assessing Progress Toward Sustainability: Tools and Training Series for Institutions, Field Teams and Collaborating Agencies*. Gland: International Union for Conservation of Nature and Natural Resources.

- Prescott-Allen R 2001. *The wellbeing of nations: A country-by-country index of quality of life and the environment*. Washington: Island Press.
- Priskin J 2001. The assessment of natural resources for nature-based tourism: The case of the Central Coast Region of Western Australia. *Tourism Management* 22, 6: 637-648.
- Purdon 2003. The nature of ecosystem management: Postmodernism and plurality in the sustainable management of the boreal forest. *Environmental Science and Policy* 6, 4: 377-388.
- Ranaboldo C & Pinzas T 2003. *United We Stand...? A Study About Networks Involved in Sustainable Development*. ETC Andes and ICCO. [online] Available from <http://www.mande.co.uk/networks.htm> [Accessed 30 July 2006].
- Ravichandran S & Gilmore S 2006. *To Empower or Not to Empower: The Case of Students Employed in One Midwestern University's Dining Services*. [online] Available from http://www.fsme.org/pdf/06/UDS_%20Empowerment_rev.pdf [Accessed 20 April 2007].
- Rauschmayer F & Risse N 2004. A framework for the selection of participatory approaches for SEA. *Environmental Impact Assessment Review* (Article in press) [online]. Available from <http://www.sciencedirect.com> [Accessed 15 March 2005].
- Reed MS, Fraser EDG & Dougill AJ 2006. An adaptive learning process for developing and applying sustainability indicators with local communities. *Ecological Economics* 59, 4: 406-418.
- Reid DG, Mair H & George W 2004. Community tourism planning: A self-assessment instrument. *Annals of Tourism Research* 31, 3: 623-639.
- Republic of Zambia 1997a. Preliminary first draft national report on the implementation of the Convention on Biological Diversity. [online] Available from <http://www.biodiv.org/doc/world/zm/zm-nr-01-en.pdf> [Accessed 7 May 2007].
- Republic of Zambia 1997b. Environmental impact assessment regulations. *Supplement to the Republic of Zambia Government Gazette*. [online] Available from <http://faolex.fao.org/docs/pdf/zam10326.pdf> [Accessed 7 May 2007].
- Riley J 2001. Multidisciplinary indicators for impact and change: Key issues for identification and summary. *Agriculture, Ecosystems and Environment* 87, 2: 245-259.

- Robinson M & Picard D 2006. *Tourism, Culture and Sustainable Development* [online]. Available from <http://unesdoc.unesco.org/images/0014/001475/147578E.pdf> [Accessed 2 July 2007].
- Rogers M & Ryan R 2001. The triple bottom line for sustainable community development. *Local Environment* 6, 3: 279-289.
- Rogerson CM 2002a. Tourism-led local economic development: The South African experience. *Urban Forum* 13, 1: 95-119.
- Rogerson CM 2002b. Tourism and local economic development: The case of the Highlands Meander. *Development Southern Africa* 19, 1: 143-167.
- Rogerson 2006. *LED and Route Tourism*. (Briefing No. 3) European Union South African Partnership Programme [online]. Available from http://www.khanya-aiicdd.org/photo_root/newsletters/led/led%20policy%203.pdf [Accessed 10 July 2007].
- Saxena G 2005. Relationships, networks and the learning regions: Case evidence from the Peak District National Park. *Tourism Management* 26: 277-289.
- Schneider AE & Donaghy WC 1975. *Organizational communication*. London: McGraw-Hill.
- Sekhar NG 2003. Local people's attitudes towards conservation and wildlife tourism around sariska tiger reserve, India. *Journal of Environmental Management* 69, 4: 339-347.
- Simmons DG 1994. Community participation in tourism planning. *Tourism Management* 15, 2: 98-108.
- Simon S 2003. Sustainability and water management. The Open University, Environmental Web Course. [online] Available from <http://www.frances.plus.com/u316block4.html> [Accessed 3 April 2006].
- Singh S 1997. Developing human resources for the tourism industry with reference to India. *Tourism Management* 18, 5: 299-306.
- Sirakaya E, Teye V & Sönmez S 2002. Understanding residents' support for tourism development in the Central Region of Ghana. *Journal of Travel Research* 41, 1: 57-67.
- South Africa (Republic of) 1989. Environment Conservation Act, 1989, Act 73 of 1989. *Government Gazette* 288 (11927), 09.06.1989:1188.

- South Africa (Republic of) 1996. *White Paper on the Development and Promotion of Tourism in South Africa*. Pretoria: Department of Environmental Affairs and Tourism [online] Available from <http://www.info.gov.za/whitepapers/1996/tourism.htm#3.4> [Accessed 19 January 2006].
- South Africa (Republic of) 1998. National Environmental Management Act, Act 107 of 1998. *Government Gazette* 401, 27.11.1998:19519.
- South Africa (Republic of) 2005. Fund for research into industrial development, growth and equity (FRIDGE). *The Department of Trade and Industry's Tourism Proposal for 2005*. Pretoria: Department of Trade and Industry.
- Spenceley A 2001. *Literature review: Principles, codes, guidelines, indicators and accreditation for responsible and sustainable tourism*. Report to the Department of Environmental Affairs and Tourism, and the Department for International Development (UK).
- Suich H, Busch J & Barbancho N 2005. *Economic Impacts of Transfrontier Conservation Areas: Baseline of Tourism in the Kavango-Zambezi TFCA*. Cape Town: Conservation International.
- Swanson M, Weissman A, Davis G, Leet Socolof M and Davis K 2005. Developing priorities for greener state government purchasing: a California case study. *Journal of Cleaner Production* 13, 7: 669-677.
- Tarr P & Tarr J 2003. Country Reports: Namibia. In Southern African Institute for Environmental Assessment. *Environmental Impact Assessment in Southern Africa*. Windhoek: Southern African Institute for Environmental Assessment.
- Telfer D J 2000. Strategic alliances along the Niagara wine route. *Tourism Management* 22, 1: 21-30.
- The African Dream Project 2000. *Unleashing the spirit of Africa*. Cape Town: Open Africa.
- The Cluster Consortium 1999. *South African Tourism Collaborative Action Process: Strategy in Action Report* [online]. Available from <http://www.nedlac.org.za/research/fridge/satourrep/chapt2.pdf> [Accessed 23 June 2005].

- The Deloitte & Touche Consortium 2002. Final draft summary report of the KwaZulu-Natal tourism development strategy [online]. Available from <http://www.kzn.org.za/invest/devstratweb/devstrat.htm> [Accessed 9 June 2007].
- Tosun C 2000. Limits to community participation in the tourism development process in developing countries. *Tourism Management* 21, 6: 613-633.
- Tosun C 2006. Expected nature of community participation in tourism development. *Tourism Management* 27, 3: 493-504.
- Tsaur S, Lin Y & Lin J 2006. Evaluating ecotourism sustainability from the integrated perspective of resource, community and tourism. *Tourism Management* 27, 4: 640-653.
- UNESCO (United Nations Educational, Scientific and Cultural Organization) s.d. *Towards a Strategy for the Sustainable Development of Tourism in the Sahara in the Context of Combating poverty – The Ksour Route* [online]. Available from http://portal.unesco.org/culture/en/file_download.php/f3952669c58a62b47d90577f70ed8ff3KsourRoute_en.pdf [Accessed 9 June 2007].
- UNESCO (United Nations Educational, Scientific and Cultural Organization) 2006a. *Cultural tourism – Tourism of memory* [online]. Available from http://portal.unesco.org/culture/en/ev.php-URL_ID=27534&URL_DO=DO_TOPIC&URL_SECTION=201.html [Accessed 9 June 2007].
- UNESCO (United Nations Educational, Scientific and Cultural Organization) 2006b. *The Slave Route Project* [online]. Available from <http://unesdoc.unesco.org/images/0014/001465/146546e.pdf> [Accessed 9 June 2007].
- Visser G 2005 *Responsible tourism and tourism-resort development in South Africa: A contradiction in terms?* Bloemfontein: University of the Free State.
- Wahab S & Pigrim JJ 1997. *Tourism development and growth: The challenge of sustainability*. London: Routledge.
- Wainwright C & Wehrmeyer W 1998. Success integrating conservation and development. A study from Zambia. *World Development* 26, 6: 933-944.
- Walker BH & Dickson R 1988. Tourism and conservation: facilitation or competition. In Faulkner B & Fagance M (eds) *Frontiers of Australian tourism: The search for new*

- perspective's in policy development research*, pp.341-347. Canberra: Bureau of Tourism Research.
- Walmsley RD & Pretorius JR 1996. *State of the Environment Series: Environmental Indicators*. Pretoria: Department of Environmental Affairs and Tourism.
- Warburton C 2006. Wildlife tourism - Training for success. *The Tourism and Environment Forum*. [online] Available from <http://www.greentourism.org.uk/wildlife-tourism-report.pdf> [Accessed 19 April 2007].
- Weaver DB 1998. *Ecotourism in the less developed world*. Wallingford: CAB International.
- Weaver DB (ed.) 2000. *Encyclopaedia of Ecotourism*. Wallingford: CAB International.
- Weaver DB & Lawton L 1999. *Sustainable tourism: A critical analysis*. CRC for sustainable tourism research report series, Research report 1, Gold Coast, Australia: CRC Sustainable Tourism.
- Wefering FM, Danielson LE & White NM 2000. Using the AMOEBA approach to measure progress toward ecosystem sustainability within a shellfish restoration project in North Carolina. *Ecological Modelling* 130: 157-166.
- Wellman B, Carrington PJ & Hall A 1988. Networks as personal communities. In Wellman B and Berkowitz SD (eds.), *Social structures: A network approach*, pp. 130-184. Cambridge: Cambridge University Press.
- Wellman B & Berkowitz SD 1988 (eds.), *Social structures: A network approach*. Cambridge: Cambridge University Press.
- Wheeller B 1993. Sustaining the ego. *Journal of Sustainable Tourism* 1, 2: 121-129.
- Wolfe RI 1964. Perspective on outdoor recreation. *Geographical Review*, 54: 203–238.
- Wood A 1993. Natural resource conflicts in South West Ethiopia. In Hurskanien A & Salih M (eds.), *Social science and conflict analysis*, pp. 83-102. Uppsala: Nordiska Afrikaistitutet.
- World Bank 2006. *Local Economic Development*. [online] Available from <http://web.worldbank.org/> [Accessed 21 January 2006].
- WCED (World Commission on Environment and Development) 1987. *Our Common Future*. Oxford: Oxford University Press.

- WTO (World Tourism Organization) 1995. *What Tourism Managers Need to Know: A Practical Guide to the Development and Use of Indicators of Sustainable Tourism*. Madrid: World Tourism Organisation.
- WTO (World Tourism Organization) 2004. *Indicators of Sustainable Development for Tourism Destinations: A Guidebook*. Madrid: World Tourism Organization.
- WTO (World Tourism Organization) 2005a. *WTO World Tourism Barometer 2*, 1: 1-22 [online] Available from <http://www.tursab.org.tr/content/turkish/istatistikler/akrobat/GENEL/WTOBaro04.pdf> [Accessed 20 March 2005].
- WTO (World Tourism Organization) 2005b. *WTO World Tourism Barometer 3*, 1: 1-4 [online]. Available from www.world-tourism.org/facts/barometer/WTOBarom05_1_en_excp.pdf [Accessed 15 June 2005].
- WTO (World Tourism Organization) 2006. Specific programme to promote tourism in Sub-Saharan Africa. Regional conference on “Tourism and handicrafts: Opportunities for development”, Ouagadougou, Burkino Faso.
- WTO (World Tourism Organization) 2007a. *Africa- The Fastest Growing Region* [online]. Available from <http://www.world-tourism.org/facts/wtb.html> [Accessed 12 May 2007].
- WTO (World Tourism Organization) 2007b. *Another Record Year for World Tourism* [online]. Available from <http://www.unwto.org/newsroom/Releases/2007/january/recordyear.htm> [Accessed 4 May 2007].
- WTTC (World Travel and Tourism Council) 2002. *South Africa: The Impact of Travel & Tourism on Jobs and the Economy*. [online] Available from <http://www.wttc.org/publications/pdf/06South%20Africa.pdf> [Accessed 12 March 2005].
- Yaw F 2005. Cleaner technologies for sustainable tourism: Caribbean case studies. *Journal of Cleaner Production* 13, 2: 117-134.
- Yoon Y, Gursoy D & Chen JS 2001. Validating a tourism development theory with structural equation modeling. *Tourism Management* 22, 4: 363-372.

ZAWA (Zambia Wildlife Authority) s.d. *Procedure and Guidelines for Allocating Lodge Sites in Zambia's Protected Areas* [online]. Available from http://www.zawa.org.zm/investment_opportunities.htm [Accessed 18 August 2007].

Zeithaml VA, Berry LL & Parasuraman A 1988. Communication and control processes in the delivery of service quality. *Journal of Marketing*, 52, 2: 35-48.

Personal Communication

Bezuidenhout H 2005. Manager, Sakazima Island Lodge and Golden Moon Adventures. Silolo, Zambia. Interview on 11 October 2005 about tourism route development in Zambia.

Johnson G 2005. Owner, Mutemwa Lodge. Ilwendo, Zambia. Interview on 18 October 2005 about tourism route development in Zambia.

Mutinta J 2006. Tourism Services Manager, Zambia National Tourist Board. Livingstone, Zambia. Interview on 2 May 2006 about training programmes in Zambia.

Yeta S 2006. Owner, Sibeso's Lodge and Fishing Camp. Mwandi Village, Zambia. Interview on 3 May 2006 about the establishment of a museum in Mwandi Village.

APPENDICES

APPENDIX A: Refined list of sustainability indicators

Sustainability Indicators for Tourism Routes	
Issues	Indicators
Social Indicators	
Effects of tourism on communities	Local satisfaction with level of tourism
	% who believe that tourism has helped bring new infrastructure or services
Local community participation	% of goods and services acquired for tourism operation of the site from: * Participants on the route * The broader community
	Employment of local residents in tourism operations (numbers, income levels)
Indicators of authenticity	Number (%) tourists who are satisfied with the environmental and cultural experiences
Social responsibility	Existence of (route) policies aiming at support for community development % of participants with policies/programmes aimed at community development
Social benefits associated with tourism	Number of social services available to the community (% attributed to tourism)
	% who believe that tourism has helped bring new services or infrastructure
Retaining access to important sites for local people	Access by locals to key sites (% of sites freely accessible to public or with local rates)
	Number of complaints by local residents regarding access
Achieving equitable distribution of tourism funds/benefits across the community	The amount of funding acquired by the route for: *General *Signage *Marketing *Infrastructure *Brand development
	Number and type of development programmes in place on the route (education, training, health, natural resource management, conservation etc.)
Professional and personal development	Number (%) of employees/participant qualified/certified
	Frequency of training programmes and level of participation

Economic Indicators	
Tourism seasonality	Tourist arrivals by month or quarter (distribution throughout the year)
	If seasonal - peak months
Image in marketplace (resourcing, strategies, response to market)	% of operators and visitors (inbound, outbound) who perceive the route as safe, attractive, interesting, good value etc
	% of participants whose marketing carries the brand features (logo, slogan, etc.) or uses complementary images: *Open Africa (footprint) *Route specific
Indicators of brand effectiveness	% of visitors who believe the brand values, attributes and benefits communicated were met during their trips
	% of visitors (and participants) who recall the brand name. (% recall on same day, % recall in longer term)
Measuring level of marketing effort	Volume of marketing products divided by type: *Brochures *Advertisements *Posters *Websites
	Level of representation/contact (number of fairs, exhibits, journalists trips, familiarization trips for tour operators and open days)
	Cost of marketing (by type, where possible by cost per contact).
Operation and support of micro, small, and medium sized enterprises, or community-based enterprises	Number of participants on the route (subdivided by types, e.g. accommodation and catering, tour guiding, transportation, tour operation, etc.)
	Number of participants making use of incentives or programmes for SMMEs: *Aware of *Making use of *Not making use of (why not)
	Number of participants involved in capacity building on the route (established with emerging)

Environmental Indicators	
Environmental management systems and environmental initiatives	% of establishments on the route with formal certification in each or all of the following: EMS; ISO 14000; or any other environmental certification
	Existence of a (route) policy on environmental and sustainability issues (including revision and reporting mechanisms); % establishments with policies
	Existence of designated personnel for environmental and sustainability management issues on the route
	Training of participants on environmental issues (% trained)
	Application of environmentally friendly technologies and techniques (% of participants) *Water saving techniques or devices *Energy *Recycling: Glass, Paper, Plastic *Green purchasing
Identifying the market for sustainable (Environmentally friendly or culturally sensitive products)	% of visitors who seek environmentally friendly or culturally sensitive experiences
	% of visitors willing to pay extra for these experiences of enhanced value
	Number of requests to environmentally or culturally sensitive products (restaurants, tours, ecotourism and cultural tourism sites), phone and mail inquiries, hits in websites
Measuring potential impact of tourism on the natural environment	% of projects where tourism impact is evaluated
	% of conservation projects where tourism financial contribution is component
Source of financing for biodiversity conservation and maintenance of protected areas	Main source of funding for biodiversity conservation
	Value of contribution from operators (concession fees, donations, services provided)
	Value of donations received from tourists
	% of businesses on the route contributing to conservation
	% of tourism products (tours, etc) with specific contributions built into the price or surcharges
	Number and involvement in environmental support clubs (e.g. “friends of the park”)

Network Functionality Indicators	
Coordination among members of the network	Number of route forum meetings per year
	Number of joint network activities
Network benefits	Value added to business through network
	Achievement of network's goals

APPENDIX B: The participant questionnaire

QUESTIONNAIRE SURVEY

FOR THE _____ ROUTE

*Queries → Francois Viljoen
Tel/Fax +27 21 683 9639
Email: francois@openafrica.org*

SECTION A: PERSONAL INFORMATION

<i>Participant Contact Details</i>	
Name of tourism business / attraction:	
Contact Person(s):	
Tel:	
Fax:	
Cell:	
Email:	
Website address:	
Postal Address:	Physical address:
Code:	Code:
GPS Readings (in decimal degrees)	
S: ___ ___, ___ ___, ___ ___, ___ ___, ___ ___, ___ ___, ___ ___, ___ ___ °	
E: ___ ___, ___ ___, ___ ___, ___ ___, ___ ___, ___ ___, ___ ___, ___ ___ °	

SECTION B: CONFIDENTIAL INFORMATION FOR STATISTICAL BASELINE

Employment: How many people does the business / attraction employ (including yourself)?			
Full-time in season:	Full-time out of season:		
Part-time in season:	Part-time out of season:		
c) Volunteers:			
Clientele & Market Share: Of all the business's clients, estimate what percentage are:			
a) Local / domestic tourists:	% +	International tourists:	% =100%
b) Holiday-makers:	% +	Business travellers:	% =100%
c) Part of organized tour group:	% +	Self-drive travellers:	% =100%
Business Information			
What is the annual turnover of the tourism business?	R 10 000 or less <input type="checkbox"/>	R 10 000 – R50 000 <input type="checkbox"/>	
	R50 000 – R100 000 <input type="checkbox"/>	R 100 000 – R 500 000 <input type="checkbox"/>	
	R 500 000 – R 1 m <input type="checkbox"/>	R1 m or more <input type="checkbox"/>	
Is the tourism business seasonal?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
If yes , when is the busiest season?	Summer <input type="checkbox"/>	Autumn <input type="checkbox"/>	
	Winter <input type="checkbox"/>	Spring <input type="checkbox"/>	
Indicate the average number of tourists you receive per month:			
How many of the business's staff are qualified/certified?			
Does the business offer or send staff on training programmes?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
If yes , please give details:			
Does the business acquire goods locally?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
From participants on the route?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
How do most clients find out about the tourism business?	Internet <input type="checkbox"/>	Word-of-mouth <input type="checkbox"/>	Brochures <input type="checkbox"/>
	Adverts <input type="checkbox"/>	Media editorials <input type="checkbox"/>	Other <input type="checkbox"/>
If other , please describe:			
Does the business provide accommodation facilities?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
If yes, how many people can be accommodated per night (bed-nights)? _____ (exclude camping)			

Capacity & Training Needs		
What is the business's key need?	Financial management <input type="checkbox"/>	Business planning <input type="checkbox"/>
	Infrastructure <input type="checkbox"/>	Marketing <input type="checkbox"/>
	Technical / creative skills <input type="checkbox"/>	Other <input type="checkbox"/>
If other , please describe:		
Does the business's staff require any form of training?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If yes , what kind of training is needed?		
Environmental and Community Issues		
Are you involved in any capacity building within the route?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Does the business have any type of environmental certification?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If yes , please indicate:		
Does the business have a policy regarding environmental or sustainability issues?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Does the business apply any of the following environmentally friendly technologies?		
Water-saving <input type="checkbox"/>	Energy-saving <input type="checkbox"/>	Green purchasing <input type="checkbox"/>
Recycling: Glass <input type="checkbox"/>	Paper <input type="checkbox"/>	Plastic <input type="checkbox"/>
Other <input type="checkbox"/> If other, please specify:		
Community Involvement		
Is the business a community owned and managed project?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If yes , do not complete the rest of this section. If no , is the business involved in any community upliftment or development?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Please explain:		

The next section is only applicable to conservation projects, parks and reserves.

Conservation		
Does tourism contribute to the overall budget for conservation?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
What is your main source of funding for biodiversity conservation?		
Do you have a community levy/surcharge built into your price structure?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If yes, to what is it allocated?		

APPENDIX C: The community questionnaire

COMMUNITY QUESTIONNAIRE
Queries – Francois Viljoen
Tel/Fax: +27 21 683 9639
E-mail: francois@openafrica.org

Community: _____

<i>Scale your opinion on the aspects below according to the scale: 1=Strongly disagree; 2= Disagree; 3=Neutral; 4=Agree; 5=Strongly agree</i>	1	2	3	4	5
A) Tourism is good for my community					
B) I personally benefit from the tourism industry					
C) Tourism in my community has the following effects (bulleted below):					
• Creates jobs for local residents					
• Employs local youth					
• Raises prices for goods					
• Helps the community obtain services					
• Causes rise in crime rates					
• Harms moral standards					
• Disrupts local activities					
• Harms the environment					
• Stops locals from beach (or park or similar) access					
• Helps stimulate local culture and crafts					
• Uses natural resources needed by local residents (e.g. fish, game, water, etc.)					
• The community has control over tourism					
• The money spent by tourists remains in my community					
• Local residents have easy access to areas that tourists use					

Scale your opinion on the aspects below according to the scale:	1	2	3	4	5
<i>1=Very unsatisfactory; 2= Poor; 3= Satisfactory; 4= Good; 5=Very optimistic</i>					
Overall, what is your opinion of tourism in your community?					

What is your main concern regarding tourism in your community?

What could be done to improve tourism in your community?

Comments:

Thank you for your valuable input.

APPENDIX D: The customer questionnaire

Customer Questionnaire

Queries – Francois Viljoen

Tel/Fax: +27 21 683 9639

E-mail: francois@openafrica.org

Route: _____

Why did you visit this route?

Is this your first visit to the route?

Yes	No
-----	----

If yes, when were you last here?

How did you find out about the route? (Mark applicable box with an X)

Africandream website	<input type="checkbox"/>
Route website	<input type="checkbox"/>
Brochures	<input type="checkbox"/>
Adverts	<input type="checkbox"/>
Media editorial	<input type="checkbox"/>
Word-of-mouth	<input type="checkbox"/>
Other website	<input type="checkbox"/>

If other website, please indicate: _____

On the route, did you:

Visit a nature reserve	Yes	No
Visit cultural sites	Yes	No
Visit arts and crafts projects	Yes	No
Go on an organized tour	Yes	No
Visit development projects	Yes	No
Visit a township	Yes	No
Visit historical/heritage sites	Yes	No

What aspects of the route attracted you most?

Please respond to the following questions with the appropriate answer:

1 = Strongly disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly agree

- I enjoyed my experience on the route
- The state of roads and signage made travel easy
- I found the area to be clean
- The route provided a good variety of experiences
- The towns were crowded
- I had a good experience involving the local culture
- Cultural sites were well maintained
- Cultural sites were accessible
- The beaches were clean
- Good arts and crafts were available
- I had good opportunities to enjoy local cuisine
- The quality of the accommodation was good
- The level of service provided was high
- Service staff was competent and helpful
- The towns on the route were messy
- I was bothered by noise
- The state of the natural environment was good
- I felt safe and secure during my visit
- I feel I received good value for money
- I would recommend the route to my friends
- I would visit the route again

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

Please provide us with the following personal information:

Age:

Nationality: _____

Home city/region: _____

Length of stay: Days

Please indicate the mode of transport you used to travel on the route

Car	4x4	Bus	Other
-----	-----	-----	-------

If other, please indicate _____

Thank you for your valuable input.

APPENDIX E: Participant list - Caprivi Wetlands Paradise

Business Name	Contact Person	Telephone	Fax	Cellphone	Postal Address	Physical Address	E-mail
Bird Guide - Katy Sharpe	Katy Sharpe	+264 66 253 453	+264 66 253 453	+264 81 124 6696	PO Box 980, Ngweze, Namibia	Zambezi Fish Farm, Wenela Rd, Katima Mulilo	sharpe@iafrica.com.na
Bum Hill Community Campsite	Kangumu Fabian/ Nacobta Booking Office	+264 61 255 977	+264 61 222 647		PO Box 8075, Ngweze, Namibia	50m from Kongola Checkpoint	office.nacobta@iway.na
Caprivi River Lodge	Keith or Mary	+264 66 252 288	+264 66 253 158	+264 81 241 8182	PO Box 2029, Ngweze, Namibia	Ngoma Rd, Katima Mulilo, Namibia	
Impalila Conservancy	Charles Matengu/Godfrey Chupo			+267 71 626 497/379 780	PO Box 2435, Ngweze, Namibia	Impalila Island, Eastern Caprivi Floodplain, Namibia	
IRDNC	Markfaren Mushabiti OR Reuben Mafati	+264 66 252 108	+264 66 252 518	+264 81 238 9737/299 9348	PO Box 1050, Ngweze, Namibia		m.mushabati@iway.na OR irdncc@iway.na
Kalizo Lodge	Valerie Sparg	+264 66 686 802/3	+264 66 686 802/4		PO Box 1854, Ngweze, Namibia		kalizo@mighty.co.za
Katima Craft Centre	Godfrey Musialela	+264 66 252 965	+264 66 252 965	+264 81 235 4690	PO Box 2565, Ngweze, Namibia	In centre of Katima, next to the open market	
Kasika Conservancy	Alfred Sibongo Matengu			+267 71 202 419	PO Box 749, Ngweze, Namibia	Kasika area, Eastern Caprivi Floodplain	
Kabunyana Community Campsite	Richard Samatumbo	+264 66 252 108	+264 66 252 518	+264 81 238 9737/299 9348	PO Box 8011, Ngweze, Namibia	Kongola, Namibia	m.mushabati@iway.na OR irdncc@iway.na
Lianshulu Lodge	Reservation Office	+264 61 254 317	+264 61 254 980			Mudumu National Park, Namibia	lianshul@mweb.com.na
Lizauli Traditional Village	Ernest Mbengela	+264 61 254 317	+264 61 254 980		PO Box 904, Ngweze, Namibia	Kongola, Namibia	
Mashi Conservancy	Muchaka Joubert	+ 264 66 252 518			PO Box 8061, Ngweze,	30km south of Kongola, Namibia	

Mashi Craft Market	Peggy Tualife	+264 66 252 666		+264 81 223 9935	PO Box 8020, Mayuni, Kongola, Namibia	Next to the Kongola Filling Station	
Mayuni Conservancy	Naha Lusken Lukatezi/IRDNC	+264 66 252 108	+264 66 252 518	+264 81 295 4547	PO Box 8011, Ngweze, Namibia	Next to the Kongola Filling Station	
Nambwa Community Campsite	Kulobone Rector	+264 66 252 666	+264 66 252 518	+264 81 221 9352	PO Box 8011, Ngweze, Namibia	Follow sign, turn off 50m from Kongola checkpoint	
N/goabaca Community Campsite	Joel Boyongo / Reuben Mafati	+264 66 252 108	+264 66 252 518	+264 81 299 9348	PO Box 1050, Ngweze, Namibia	Divundu, Namibia	irdncc@iway.na
Ngoma Craft Centre	Othidia Sakacheli	+264 66 252 108	+264 66 252 518		PO Box 1050, Ngweze, Namibia	Ngoma rd, Aproximately 64km from Katima Mulilo, Namibia	candia@iway.na OR irdncc@iway.na
Salambala Conservancy	Albert Mautu	+264 66 252 108	+264 66 252 518		PO Box 1050, Ngweze, Namibia	Ngoma rd, Bukalo, Namibia	
Sheshe Craft	Priscilla Lilata	+264 66 696 011				Turn off at Kongola, Namibia	
Susuwe Island Lodge	Louise Townsend	+27 11 706 7207	+27 11 463 8251	+27 83 456 7424	PO Box 70378, Bryanston, South Africa		louise@islandsinafrica.com
Tutwa Tourism and Travel	Strijs or Elaine Coertzen	+264 66 253 048	+264 66 252 238	+264 81 127 7429 / 129 2992	PO Box 126, Katima Mulilo	328 Hace Geingob Ave, Katima Mulilo, Namibia	info@tutwa.com
Wuparo Conservancy	Obert Mafwila	+264 66 696 011	+264 66 252 518	+264 81 294 9152	PO Box 1707, Ngweze, Namibia	Sangulali Village, Linyanti Rd, Caprivi, Namibia	

APPENDIX F: Participant list – Barotse Trails Route

Business Name	Contact Person	Telephone	Fax	Cellphone	Postal Address	Physical Address	E-mail
African Visions	Ali Shenton	+260 3 323 668		+260 97 862 684	PO Box 60117, Livingstone	125 Mosi-o-Tunya Rd, Livingstone	alishenton@zamnet.zm
Birding with Bob	Bob Stjernstedt			+260 97 769 333	PO Box 61189, Livingstone	Livingstone Safari Lodge	bob@zamnet.zm
Elephant Pepper Farm	Michael Granna			+260 97 478 929	PO Box 60301, Livingstone	Maramba Farm, Linda Compound, Livingstone	mick@elephantpepper.org
Kubu Crafts	Lucy Renew	+260 3 324 093	+260 3 324 093	+260 97 458 576	PO Box 60478, Livingstone	133 Mosi-o-Tunya Rd, Livingstone	kubucrafts@zamnet.zm
Livingstone Museum	Mr. Katanekwa	+260 3 320 245			PO Box 60489, Livingstone	Mosi-o-Tunya Rd, Livingstone	livmus@zamnet.zm
Makuni Village	Edwin Mbulo			+260 97 488 088	PO Box 60214, Livingstone		edwinmbulo2000@yahoo.com
Railway Museum	Edwin Mbulo			+260 97 488 088	PO Box 60214, Livingstone	Chisimba Falls Rd, Livingstone	edwinmbulo2000@yahoo.com
Royal Makuni Lodge	Moki Makuni			+260 97 848 486	PO Box 61133, Livingstone		
Songwe Craft Association	Martin Malumo			+260 97 403 673	PO Box 60270, Kazangula		
Songwe Point Village	Dorothy Shinga			+260 97 43 2146	PO Box 60666, Livingstone		dpshinga@yahoo.com

Taita Falcon Lodge	Anmarie Fourie	+260 0 321 850	+260 0 321 850	+263 11 230 667 / 208 387	PO Box 60012, Livingstone	Batoka Gorge, Makuni Area, Livingstone	taita-falcon@zamnet.zm
Victoria Falls	Edwin Mbulo			+260 97 488 088	PO Box 60214, Livingstone		edwinmbulo2000@yahoo.com
Yataba African Hospitality	Yataba Nyausiska Mtomborwa			+260 97 793 349 / 761731	PO Box 61194, Livingstone	52 Kabompo Rd, Livingstone	yatainvestcoltd@yahoo.com
thezambezi.com	Andrew 'Sven' Bolton			+260 95 838 408	PO Box 60479, Livingstone	559 Mokambo Rd, Livingstone	kayak@thezambezi.com
Zig Zag Coffee House and B&B	Andy and Bev Welch	+260 322 814		+260 95 780 180	PO Box 61059, Livingstone	Plot 693, Industrial Rd, off Linda Rd, Livingstone	zigzag@zamnet.zm
Mwandi							
African Art Centre	William Kasaila				PO Box 57, Mwandi	Mwandi Village	
Alisunda Mutonga - Village Guide	Alisinda Mutonga						
Brenda's Best Baobab Tree	Emelda Nasilele/ Mr. Walibuta	+260 1 481 228		+260 97 143 566	PO Box 40, Sesheke	Near Sesheke Council Rest-House, Sesheke	
Mulatiwa Guest House	Martin Sianga Mashewani				PO Box 57, Sesheke	Mulatiwa Guest Hoouse, Katima Mulilo Compund	
Mwandi Basic School	Mr. Mubiana Milale				PO Box 99, Mwandi		
Mwandi Market	Induna Ambanwa				PO Box 32, Mwandi	Main Street, Mwandi	
Chuma Kweseka Guesthouse	Mr. B.M. Ngombo			+260 97 143 841	PO Box 78, K.M. Sesheke	Plot 38, Katima Mulilo	

New Look Arts and Crafts	Samuel Silume Situmbelo			+260 97 509 236	PO Box 57, Mwandi	Along the Sesheke Road, 5km from Mwandi	
Sibeso's Fishing Camp and Lodge	Sibeso Yeta			+260 97 879 204 OR +264 81 294 9638	PO Box 32, Mwandi	Barotse Royal Establishment, Mwandi	syfic@mail.davidson.alumlink.com
Sisheke Lodge	Matengu Mbita	+260 1 481 086	+260 1 481 165	+260 97 722 115	PO Box 175, Sesheke	Plot 430, Nakatindi Rd, Sesheke	
Zambezi Skimmers	Dan McDonald					Matoya Area, Mwandi District	
Zambezi Banks Chalets	Matomola Lubinda			+260 97 467 623	PO Box 6, Sesheke	House RHB 18, Sesheke	
Lusu							
Adons Mufalali - Village Guide	Adons Mufalali			+260 97 43 9624		Mutanda Village, Sesheke District	
Cultural Dancing	Mr. Chimbwi Chimbwi				PO Box 6, Sesheke	Ilweendo Village, 100m east of Mutemwa School	
Golden Moon Adventures	Hannes Bezuidenhout		866522035 (SA ony)	+27 82 893 2657	PO Box 526, Buhrmansdrif, 2867, South Africa		
Green Salumano – Village Guide	Green T. Salumano				PO Box 129, Sesheke	Salumano Village, near Lusu Mission	
Hand Craft	Mr. Kachaka				PO Box 129, Sesheke	Lusu Mission	

Ilwendo Cultural Dancing	Boyd Sitali Sitali				PO Box 6, Sesheke	Ilwendo Community School	
Kabula Tiger Lodge	Gerrie Schoeman	+27 15 297 7418	+27 15 297 5977	+27 83 471 6702			info@destination-africa.co.za
Kalvin Nyambe – Local Guide	Kalvin Nyambe					Tubone Village, near Sakazima	
Kingsley Nawa – Village Guide	Kingsley Mbangwa Nawa				PO Box 8, Sesheke	Lusu Muleneni, 200m north of the school	
Kavumbu River Safari Camp	Jorg OR Lize Werksman	+264 66 252 739	+264 66 252 238	+264 81 269 8790	PO Box 2413, Ngweze, Katima Mulilo, Namibia	Silumbu Area, Sesheke District, Zambia	tutwa@mweb.com.na
Kuzunza Mwinga – Village Guide	Kuzunza Mwinga						
Lubasi Songiso – Village Guide	Lubasi Songiso				PO Box 6, Sesheke	Llukusi in Ilweendo Village	
Leonard Matengu - Carpenter	Leonard Matengu			+260 91 278 9916	PO Box 8, Sesheke	Enquire at Sakazima	
Lusu Mission	Father Boris Dabo	00870763420768			PO Box 129, Sesheke	Lusu Area	bdabo@lusumission.org
Mat and Makoro Makers	Beatrice Masupa Mulonga				PO Box 6, Sesheke	Ilwendo Village	
Mudame Cultural Goup	Clement Nalisa				PO Box 57, Sesheke	Makai Village, Sesheke District	
Mutemwa Lodge	Gavin Johnson	+ 27 11 234 1747	+ 27 11 234 1748	+ 27 82 990 2405		Sesheke-Senanga Rd, Sesheke District	mutemwalodge@mweb.co.za

Mwanomei Mukolo/Island Visiting	Supani Libwenta				PO Box 8, Sesheke	Mwanomei Village (enquire at Lusu Mission)	
Nina Camp	Nicky Rossouw			+264 81 269 8767 OR +260 97 353 966	PO Box 15, Sesheke		
Oscar – Local Guide	Oscar Semu			+260 91 278 9916	PO Box 57, Sesheke	Tubone Village, near Sakazima	
Rapids View Community Campsite	Father Boris Dabo	00870763420768			PO Box 129, Sesheke	Lusu Area	bdabo@lusumission.org
Reed Mat Makers	Namasiku Mubita				PO Box 6, Sesheke	Ilwendo Village, 50m of Mutemwa School	
Thebe River Safaris	Annatjie van Wyk / Franci Otto	+267 6250 952	+267 6250 314		PO Box 5, Kasane, Botswana	Sesheke-Senanga Rd, Sesheke District	zambiatrs@botsnet.bw
Traditional Mat Makers	Loveness Chimba / Godfrey Siliaso				PO Box 8, Sesheke	Ilwendo Village, Sesheke District	
Sakazima Island Lodge	Hannes Bezuidenhout	+27 12 653 6545/3872	+27 12 653 2513	+27 82 873 2657	PO Box 7264, Centurion, 0046, South Africa		tourism@sakazima.com
Zabelozi Island Lodge	Bruce Johnson			+27 82 775 4888			zabelozi@yahoo.com