

# CHAPTER FIVE

## CONSTRUCTION OF EVALUATION FRAMEWORK

*“The earth has enough for everyone’s need  
but not everyone’s greed”  
(Mahatma Gandhi).*

### 5.1 Introduction

This chapter explains the construction of the evaluation framework for monitoring the sustainability of the six selected community-based ecotourism (CBE) case studies. The issues and indicators that form part of the evaluation framework as well as the methods that were used for the collection of the data relating to each issue and indicator are also discussed in this chapter. The results obtained in terms of the social, economic and environmental sustainability of the six CBE ventures follow in Chapter 6.

### 5.2 Defining social, economic and environmental sustainability

In order to contextualize the construction of an evaluation framework it is fundamental to define the three pillars or dimensions of sustainability, namely social, economic and environmental sustainability. United Nations Environmental Programme (UNEP) together with the World Tourism Organization (WTO) (WTO 2005, p. 9) defines these as follows:

- Social sustainability means respecting human rights and equal opportunities for all in society. It requires an equitable distribution of benefits, with a focus on alleviating poverty. There is an emphasis on local communities, maintaining and strengthening their life support systems, recognizing and respecting different cultures and avoiding any form of exploitation.
- Economic sustainability means generating prosperity at different levels of society and addressing the cost-effectiveness of all economic activity. Crucially, it is about the viability of enterprises and activities and their ability to be maintained in the long term.
- Environmental sustainability means conserving and managing resources, especially those that are not renewable or are precious in terms of life support. It requires action to minimize pollution of air, land and water, and to conserve biological diversity and natural heritage.

These three dimensions of sustainability are interdependent and have to be kept in a fine balance to ensure the long-term sustainability of tourism. The evaluation framework needs to address all three these dimensions.

### 5.3 Construction of the evaluation framework

The evaluation framework has to provide a time- and cost-effective means for monitoring the social, economic and environmental sustainability of CBE ventures. According to Bell and Morse (1999), the WTO (2004), and more recently Keyser (2009), indicators are seen as the core element in operationalizing sustainability. The use of sustainability indicators provides an objective way of measuring and monitoring sustainability. The value and benefits of utilizing sustainability indicators has been discussed in section 2.8. The discussion that follows here selects the issues and the associated indicators that formed the basis of the evaluation framework.

#### 5.3.1 Selecting the issues and indicators

The aim of the study, to develop a framework for monitoring the sustainability of CBE ventures in southern Africa and to test its applicability in a field setting, was addressed by constructing an evaluation framework that made use of a number of sustainability indicators. The sustainability indicators also serve as performance indicators. The field testing of the evaluation framework is discussed in Chapter 6, while the results of each case study investigated are compared by using a cross-case analysis in Chapter 7. In order to facilitate the cross-case analysis the same set of indicators needed to be used for the investigation of each individual case. It was therefore important to select a generic set of sustainability indicators.

Before selecting the indicators that were used for the investigation of the sustainability of CBE ventures, two important questions needed to be addressed:

- **How many indicators need to be selected?**

Clearly there was no ideal number of indicators to select. Any attempt to address all the aspects of sustainability using too few indicators would leave important gaps, while too many indicators in turn could overwhelm users and the collection of information for the numerous indicators could become too complex and time-consuming. According to the WTO (2004, p. 41) “[m]ost practitioners agree that it is essential to prioritize issues and the indicators that correspond to them, to help create a shorter list”. Furthermore, “practitioners agree 12-24 indicators are optimal” (WTO, 2004, p. 42). A central challenge in this investigation was to obtain a shorter list without creating gaps.

- **Which issues do the indicators need to address?**

Important issues that needed to be addressed in this sustainability investigation related specifically to the three core issues of CBE, namely community, tourism and conservation (discussed in Chapter 2). Each of these issues could be linked to the new triple bottom line of sustainability reporting as discussed above (also discussed previously in Chapter 2) namely social, economic and environmental sustainability, or otherwise stated as people, profit and planet. Community links to social sustainability, tourism links to the economic sustainability and conservation links to environmental sustainability.

The World Tourism Organization (2004) identified 12 baseline issues and their associated baseline indicators which served as an important point of departure for the identification of indicators (Table 5.1). The list of baseline indicators covers a range of social, economic and environmental issues likely to be found in most destinations. In Table 5.1 the social, economic and environmental sustainability dimension has been added in square brackets for each baseline issue.

**Table 5.1:** Baseline issues and baseline indicators for monitoring the sustainable development of tourism (adapted from WTO, 2004) [type of indicator]

<b>Baseline issues</b>	<b>Baseline indicator</b>
Local satisfaction with tourism [Social]	Local satisfaction level with tourism
	Local community complaints
Effects of tourism on communities [Social]	Percentage who believe that tourism has helped bring new services or infrastructure
	Other effects of tourism on the community
Sustaining tourist satisfaction [Economic]	Level of tourist satisfaction
	Perception of value for money
	Percentage of return visitors
	Perception of sustainability
Tourism seasonality [Economic]	Tourist arrivals by month (throughout the year, mean and peaks)
	Occupancy rates for accommodation by month
	Percentage of tourist industry jobs which are permanent or full-time (compared to temporary/seasonal jobs)
Economic benefits of tourism [Economic]	Number of local people (and ratio of men to women) employed in tourism
	Revenue generated
	Revenue spend in area
Energy management [Environmental]	Per capita consumption of energy (per person day)
	Energy-saving measures
	Percentage of energy consumption from renewable resources
Water availability and conservation [Environmental]	Water use (total water volume consumed and litres per tourist per day)
	Water conservation measures
Drinking water quality [Environmental]	Water treated to international potable standards
Sewage treatment [Environmental]	Sewage treatment systems
Solid waste management (garbage) [Environmental]	Waste volume produced
	Waste disposal (landfill, recycling, etc.)
Development controls [Crosscutting]	Existence of a development planning process including tourism
Controlling use intensity [Environmental]	Number of tourists per square metre of the site

As the baseline issues and indicators left some gaps with respect to the CBE nature of this investigation, it was deemed important to include additional issues and indicators which relate more specifically to the characteristics of ecotourism (as discussed in section 2.6.4) and CBE (as defined in section 2.7). Additional issues and indicators relating to education, community decision making, community benefits, culture, biodiversity and conservation as well as networking and collaboration were included (Table 5.2). Here again the sustainability dimension of each issue is added in square brackets.

**Table 5.2:** Community-based ecotourism specific issues and indicators [type of indicator]

<b>Issue</b>	<b>Indicator</b>
Education [Social]	Education of tourists
	Education of community
	Training and skills development of staff members
Community decision making [Social]	Community decision-making structures
Community benefits [Social]	Community benefits from tourism
Culture [Social]	Cultural appreciation and conservation
Biodiversity and conservation [Environmental]	Local community involvement in conservation projects in area
Networking and collaboration [Crosscutting]	Partnerships and collaborations

Eighteen issues with 34 associated indicators were selected for the evaluation framework for the investigation of the sustainability of the six identified CBE ventures. Each of these indicators required a specific data collection method in order to establish the performance of each CBE venture with respect to each specific indicator.

The identified issues and associated indicators were rearranged into social, economic, environmental and crosscutting types in order to create better structure and order.

**Table 5.3:** Evaluation framework listing the selected evaluation issues and indicators

<b>Issue</b>	<b>Indicator</b>
<b>Social issues</b>	<b>Social indicators</b>
1. Local satisfaction with tourism	1.1 Local satisfaction level with tourism
	1.2 Local community complaints
2. Effects of tourism on communities	2.1 Percentage who believe that tourism has helped bring new services or infrastructure
	2.2 Other effects of tourism on the community
3. Education	3.1 Education of tourists
	3.2 Education of community
	3.3 Training and skills development of staff members
4. Community decision making	4.1 Community decision-making structures
5. Community benefits	5.1 Community benefits from tourism
6. Culture	6.1 Cultural appreciation and conservation
<b>Economic issues</b>	<b>Economic indicators</b>
7. Sustaining tourist satisfaction	7.1 Level of tourist satisfaction
	7.2 Perception of value for money
	7.3 Percentage of return visitors
	7.4 Perception of sustainability
	7.5 Tourist complaints
8. Tourism seasonality	8.1 Tourist arrivals by month
	8.2 Occupancy rates for accommodation by month
	8.3 Percentage of tourist industry jobs which are permanent or full time (compared to temporary/seasonal jobs)
9. Economic benefits of tourism	9.1 Number of local people (and ratio of men to women) employed in tourism
	9.2 Revenue generated
	9.3 Revenue spent in area
<b>Environmental issues</b>	<b>Environmental indicators</b>
10. Energy management	10.1 Per capita consumption of energy (per person day)
	10.2 Energy-saving measures

	10.3	Percentage of energy consumption from renewable resources
11. Water availability and conservation	11.1	Water use (total water volume consumed and litres per tourist per day)
	11.2	Water conservation measures
12. Drinking water quality	12.1	Water treated to international potable standards
13. Sewage treatment	13.1	Sewage treatment systems
14. Solid waste management	14.1	Waste volume produced
	14.2	Waste disposal (landfill, recycling, etc.)
15. Controlling use intensity	15.1	Number of tourists per square metre of the site
16. Biodiversity and conservation	16.1	Local community involvement in conservation projects in area
<b>Crosscutting issues</b>	<b>Crosscutting indicators</b>	
17. Development controls	17.1	Existence of a development planning process including tourism
18. Networking and collaboration	18.1	Partnerships and collaborations

Before the data collection instruments that were used to collect data relating to the selected issues and associated indicators are discussed, each issue and its associated indicator/s are discussed in more detail.

### 5.3.2 Discussion of selected issues and indicators

In this section the selected issues and the associated indicators will briefly be discussed. In each section the reason for the indicators and the source of data will be mentioned. Each issue is discussed separately.

#### 5.3.2.1 Social issues

Social issues and indicators pertain to the socio-cultural effects of tourism on the community members. Six main issues and their associated indicators are discussed in this section: (1) local satisfaction with tourism, (2) effects of tourism on communities, (3) education, (4) community decision making, (5) community benefits and (6) culture.

##### 5.3.2.1 (a) Issue 1: Local satisfaction with tourism

In all CBE ventures the local communities play host to all the tourist facilities and activities taking place at that particular venture. The satisfaction of the local community with tourism is critical for sustainability. The local satisfaction with tourism was measured using two indicators, namely local satisfaction with tourism (indicator 1.1) and local community complaints (indicator 1.2).

##### Indicator 1.1 Local satisfaction level with tourism

**Reason for the use of the indicator:** The level of local satisfaction with tourism is an important measure indicating potential problems. The level of local satisfaction may serve as an early warning system for emerging problems and irritants before they become serious (WTO, 2004).

**Source of data:** Staff and community interviews, questions asked:

- Is tourism good for the community? Provide reasons for your answer.
- Do you want more or less tourism in your area? Why?

### **Indicator 1.2 Local community complaints**

**Reason for the use of the indicator:** The perceptions of the local community members may serve as an early warning system for emerging discontent between community members.

**Source of data:** Staff and community interviews, questions asked:

- Is there anything that bothers you about tourism in your community? Please specify.
- What can be done to make tourism better in your community?
- Do you know of any complaints received from local residents regarding tourism? If 'yes', what do they complain about?

### **5.3.2.1 (b) Issue 2: Effects of tourism on communities**

Tourism is usually associated with both positive and negative effects on communities. The major benefits associated with tourism relate to economic benefits which will be discussed later (issue 9: Economic benefits of tourism). In this instance however the socio-cultural benefits were measured using indicator 2.1, while the socio-cultural costs of tourism were measured using indicator 2.2.

### **Indicator 2.1 Percentage who believe that tourism has helped bring new services or infrastructure**

**Reason for the use of the indicator:** Besides economic benefits (which are discussed later as issue 9) communities may benefit from improved infrastructure (such as roads, sanitation, water, energy) and social services (such as health and schooling) as a result of tourism (Keyser, 2009). This indicator was used to identify the degree to which locals believed that tourism had helped bring new services and infrastructure to the community.

**Source of data:** Data was collected through staff and community interview questions:

- Does tourism help the community obtain infrastructure and services (e.g. roads, schools and clinics)? Provide reasons for your answer.

### **Indicator 2.2 Other effects of tourism on the community**

**Reason for the use of the indicator:** This indicator is used to monitor some of the possible negative impacts that tourism may have on the community, such as changes in employability, commodity prices, crime, behaviour of community, state of natural environment, access to specific sites and areas, and competition related to resources as a result of tourism activities in the areas. The access of local community members to the tourism facility is also established.

**Source of data:** Staff and community interviews, questions asked:

- Does tourism employ local youth?
- Does tourism increase or decrease the prices of local goods?
- Does tourism increase or decrease crime in the area? Why?
- Does tourism change the behaviour of the community (e.g. eat, drink, dress, buy, language)? Provide reasons for your answer.

- Does tourism damage or destroy nature? Why?
- Does tourism use the resources people need, like firewood and water?
- Are there areas that people cannot access because of tourism? Why?
- Can the local community visit/use the tourism facility? Explain.

### **5.3.2.1 (c) Issue 3: Education**

The education of visitors, staff and community is an important benefit that may be achieved through CBE ventures. The education of the visitors leads to an enhanced travel experience. Of equal importance is the education of both staff members and community members.

#### **Indicator 3.1 Education of tourists**

**Reason for the use of the indicator:** The ways in which tourists are educated during their visit to the tourism ventures ensures that visitors leave the CBE ventures more informed and enlightened (Fennell, 2003). This indicator will illustrate the ways in which visitors to the CBE venture are educated.

**Source of data:** Through participant observation the researcher was able to make a number of observations relating to the education of visitors. During the manager interview the manager was also asked:

- How are tourists educated (in terms of the environment and culture) during their visit?

#### **Indicator 3.2 Education of community**

**Reason for the use of the indicator:** The improvement of education in the community is an important benefit for communities involved in tourism, be it through the education of individual community members or the community as a whole. This indicator will evaluate whether community members have received some form of education through the tourism ventures.

**Source of data:** During community interviews the following questions were posed to community members:

- Do community members receive any skills training through the tourism venture?
- Does the community receive any training about nature and culture through the tourism venture?

#### **Indicator 3.3 Training and skills development of staff members**

**Reason for the use of the indicator:** The training and upliftment of the skills of the staff employed by the tourism ventures provide a significant benefit for those community members receiving the training (WTO, 2004). The training does not only improve the quality of the level of service at the CBE venture but it also gives the staff members receiving the training valuable skills and experience which they could use to seek alternative employment later. This indicator tests the perceptions of staff members at CBE ventures with regard to training and skills development.

**Source of data:** Staff members were asked to reply to the following questions during the staff interviews:

- Did you receive any training/skills development to do this work? Provide details.
- Do staff members receive any skills training through the tourism venture?
- Does the staff receive any training about nature and culture through the tourism venture?

#### **5.3.2.1 (d) Issue 4: Community decision making**

All CBE ventures should have a significant degree of community decision making to ensure that the venture is truly community-based. Mowforth and Munt (1998) indicate that communities need to have a certain amount of control over tourism activities in the destination to ensure that tourism does not destroy the very nature of the community.

##### **Indicator 4.1 Community decision-making structures**

**Reason for the use of the indicator:** “A community’s sense of ownership, feeling of responsibility and practical involvement in tourism has been heralded...as central to the sustainability of tourism” (Simpson, 2008a, p. 1). This indicator measures the perceptions of the staff and community members as to whether the community has control over tourism.

**Source of data:** During staff and community interviews they were asked:

- Does the community have control over tourism?

After participants answered the question they were requested to elaborate on their answer.

#### **5.3.2.1 (e) Issue 5: Community benefits**

In order for tourism ventures to remain sustainable over the long term the community in close proximity to the ventures needs to benefit.

##### **Indicator 5.1 Community benefits from tourism**

**Reason for the use of the indicator:** This indicator measures the attitude and perceptions of staff and community members regarding the benefits associated with tourism. It also measures their perceptions of personal, household and community benefits associated with tourism. Questions eliciting responses pertaining to the employment opportunities created through tourism and whether the money spent by tourists actually remains in the area were also posed.

**Source of data:** During both staff and community interviews, the following questions were asked:

- Do you personally benefit from tourism? Provide reasons for your answer.
- Does anyone else in your household benefit from tourism? If ‘yes’, how?
- Does the broader community benefit from tourism? Provide reasons for your answer.
- Does tourism create jobs for local people?
- Does the money spent by tourists remain in the community?



### **5.3.2.1 (f) Issue 6: Culture**

Culture forms an important part of ecotourism activities and attractions. Encouraging tourism could lead to either negative or positive changes in the culture of the host community (Keyser, 2009). Although tourism provides the means and motivation to conserve culture as a tourist attraction, it is also important that culture and cultural activities be conserved and actively practised.

#### **Indicator 6.1 Cultural appreciation and conservation**

**Reason for the use of the indicator:** This indicator measured the appreciation level of visitors to the tourism ventures and the associated cultural sites. This indicator also determines whether tourism provides a stimulus for additional craft making and cultural activities.

**Source of data:** In visitor questionnaires, visitors were requested to reply, using a Likert scale (strongly disagree =1, disagree = 2, neutral =3, agree = 4, strongly agree =5) to the statements that follow. The average score of the Likert-scale responses are used in the discussion of results in Chapter 6.

- I had a good experience involving the local culture.
- Cultural sites were well maintained.
- Cultural sites were accessible.
- Good souvenirs and crafts were available.

Staff and community members were also requested to respond to the question:

- Are there more crafts and more cultural activities because of tourism? Please specify.

### **5.3.2.2 Economic issues**

The economic issues that were investigated relate to three factors: (1) tourist satisfaction, (2) the seasonality of tourism and the (3) economic benefits which may be associated with tourism.

#### **5.3.2.2 (a) Issue 7: Sustaining tourist satisfaction**

“Tourist satisfaction is central to whether tourists return, recommend the destination to others or conversely advise others to stay away. It is therefore a leading indicator of the longer-term sustainability of a destination” (WTO, 2004, p. 86). Tourist satisfaction is based on a number of different aspects, including the state of the environment, the attractiveness of the destination, the accessibility, the quality of the service, the perception of value for money and the experiences the tourists have during their visit.

#### **Indicator 7.1 Level of tourist satisfaction**

**Reason for the use of the indicator:** This indicator is used to test the level of satisfaction tourists derive from their experience, the accessibility of the destination, the state of the environment and the level of service as well as the visitors’ perceptions of safety. These

perceptions serve as important indications of aspects that should be addressed by the management of CBE ventures.

**Source of data:** Visitors were requested to reply to the statements listed below, using a Likert scale (strongly disagree =1, disagree = 2, neutral =3, agree = 4, strongly agree =5).

Relating to their experience:

- I enjoyed my experience in [destination].
- [Destination] provided a good variety of experiences.
- I would recommend [destination] to my friends.

Relating to access:

- The state of the roads made travel easy.
- The state of the signage made travel easy.
- It was easy to get to [destination] for my visit.

Relating to the environment

- I found [destination] to be clean.
- I was bothered by noise.
- I was bothered by solid waste.
- The state of the natural environment was good. If 'disagree' or 'strongly disagree', why?
- [Destination] has an interesting and varied landscape.

Relating to service

- The quality of the local cuisine was good.
- The quality of accommodation was good.
- The level of service provided was high.
- Service staff were competent and helpful.

Relating to safety

- I felt safe and secure during my visit.

The resultant average Likert-scale scores were utilized in the discussion of the results presented in Chapter 6.

### **Indicator 7.2 Perception of value for money**

**Reason for the use of the indicator:** The perception of value for money is important to gauge whether visitors feel that they have received value for money in terms of the experiences they had. If they did not receive value for money, the experience they had was not worth the financial costs, while value for money would indicate that the experience was well worth the financial cost.

**Source of data:** Visitors were asked to respond to the following statement:

- I feel I received good value for money.

### **Indicator 7.3 Percentage of return visitors**

**Reason for the use of the indicator:** The percentage of visitors who return is a strong indicator that they were happy with the experience they had in previous visits. This indicator

provides an indication of the percentage of visitors that returned to the destination. Besides establishing the percentage of return visitors it is also important to establish if the visitors will return after their present visit. The visitors that indicated that they intended returning to the tourism venture were also requested to indicate the length of their stay next time.

**Source of data:** Visitors were asked to respond to the following questions / statement:

- Is this your first visit?
- I would visit [destination] again.
- How long would you stay next time?

#### **Indicator 7.4 Perception of sustainability**

**Reason for the use of the indicator:** A question was also asked on the visitors' perception of the tourism venture in order to establish whether they perceived the venture to be sustainable. This provided an important feedback mechanism for the CBE venture as to whether they were in fact on the right track towards sustainability.

**Source of data:** In the visitor questionnaire, visitors were asked:

- Do you perceive [destination] to be sustainable? Please motivate your answer.

#### **Indicator 7.5 Tourist complaints**

**Reason for the use of the indicator:** While the other indicators in this section measured tourism satisfaction, this indicator measures tourism dissatisfaction. This indicator serves as an important early warning system of aspects that need to be remedied to ensure long-term sustainability.

**Source of data:** Visitors were asked:

- What could be done to improve your visit?
- What would you change?
- Do you have any other comments or complaints you would like to bring to the researcher's attention?

During staff interviews, staff members were asked:

- Do you know of any complaints received from tourists? If 'yes' what do they complain about?

### **5.3.2.2 (b) Issue 8: Tourism seasonality**

Very few destinations have consistent levels of tourism throughout the year. Most destinations experience some form of seasonality. Seasonality may be the result of various factors, from climatic and weather patterns to school vacation periods and public holidays. The indicators here provide an indication of the seasonality of the CBE ventures (indicators 8.1 - 8.3).

#### **Indicator 8.1 Tourist arrivals by month**

**Reason for the use of the indicator:** This indicator provides a direct measure of the seasonality of the tourism destination; the numbers of visitors provide an indication of the

intensity of the demand tourism on the destination area. The monthly distribution of tourist arrivals throughout the year helps identify peaks, low and high periods. These are illustrated in the graphs in Chapter 6.

**Source of data:** Secondary data collected by the tourism venture relating to tourist arrivals was used to provide an indication of tourist arrivals.

#### **Indicator 8.2 Occupancy rates for accommodation by month**

**Reason for the use of the indicator:** Besides indicating tourism seasonality, occupancy rates also provide an indication of the level of utilization of the available accommodation.

**Source of data:** Secondary data collected by the tourism venture was used to provide the necessary information.

#### **Indicator 8.3 Percentage of tourist industry jobs which are permanent or full-time (compared to temporary/seasonal jobs)**

**Reason for the use of the indicator:** Tourism seasonality can play an important role in the seasonality of employment opportunities offered by CBE ventures. A high degree of tourism seasonality may make it necessary for tourism employees to change their means of livelihood through the year in order to generate alternative means of income. This may result in associated economic and social impacts.

**Source of data:** The manager of the CBE ventures was interviewed to request information pertaining to the number of staff and whether they were permanent or seasonal employees.

### **5.3.2.2 (c) Issue 9: Economic benefits of tourism**

Tourism has the potential to bring investment and employment opportunities to destination communities. Besides the investment that tourism may make in infrastructure and services, one of the most important benefits communities receive through tourism relates to the employment of community members either directly or indirectly. Communities should ensure that the whole community receives some form of economic benefit. These indicators provide an indication of the number of community members employed, the revenue generated and the way in which the revenues are spend (indicators 9.1 – 9.3).

#### **Indicator 9.1 Number of local people (and ratio of men to women) employed in tourism**

**Reason for the use of the indicator:** Employment is a key factor in the decision to invest in tourism. It is also the most important economic benefit that communities receive through tourism. The number and percentage of local and outsider employment was given as well as the male-female ratio of employment.

**Source of data:** The information for this indicator was derived from the manager interviews.

### **Indicator 9.2 Revenue generated**

**Reason for the use of the indicator:** This indicator provides an indication of the revenues generated through the tourism operation. The actual monetary revenues generated were not made available by the tourism operations. As a result, an estimation was made of the revenues generated. The average number of visitors, together with the tariffs obtained, was used to estimate the revenues generated.

**Source of data:** The researcher sourced the data for this indicator from the occupancy levels calculated in indicator 8.2 and also obtained the tariffs for accommodation from the manager during the manager interview.

### **Indicator 9.3 Revenue spent in area**

**Reason for the use of the indicator:** This indicator provides a direct measure of the economic benefits that a community is expected to receive from tourism. Once again it was foreseeable that the actual monetary values would not be made available to the researcher and only a qualitative account of the revenues spent in the area was obtained.

**Source of data:** The manager of the venture was asked to provide an indication of the ways in which revenues earned from tourism were spent in the area.

## **5.3.2.3 Environmental issues**

Environmental issues relate to the various aspects of the environment which may be affected through the establishment and operation of tourism ventures. These include aspects such as energy and water use, the management of sewage and solid waste, as well as visitor control and the involvement of visitors and community members in biodiversity conservation projects.

### **5.3.2.3 (a) Issue 10: Energy management**

Significant levels of energy are consumed by the tourism sector, both through fixed assets (such as buildings) and movable assets (such as motor vehicles). Reductions in the energy use by tourism ventures could have a positive impact on the operational costs of the ventures as well as better environmental performance through reduced consumption of natural resources. The indicators here provide an indication of the per capita consumption of energy (indicator 10.1), the implementation of energy-saving measures (indicator 10.2) and the percentage of energy consumption from renewable resources (indicator 10.3).

#### **Indicator 10.1 Per capita consumption of energy (per person per day)**

**Reason for the use of the indicator:** This indicator provides an indication of the per capita consumption of energy (in kWh) per tourist per day. The total consumption of energy needed to be obtained, thereafter all the different sources of energy had to be converted into Kilowatt

hours (kWh)<sup>1</sup> as this is the general measure for energy used in southern Africa. In order to convert all energy sources that are not measured in kWh into kWh, the following table was used for the conversion:

**Table 5.4:** Energy conversion table (into kWh) (adapted from EPA, 2008, p. 2)

Energy source	Conversion factor
Electricity (in kWh)	1
Diesel (in litres)	10.67
Petrol (in litres)	9.5
Liquid Petroleum Gas (LPG) (in kg)	13.69
Solar power (W) x 8.5 hours	.001

The average total energy consumed per month was then divided by the average number of tourists staying overnight per month in order to determine the total amount of energy used per day.

**Source of data:** The manager interview provided the total consumption of different energy sources.

#### **Indicator 10.2 Energy-saving measures**

**Reason for the use of the indicator:** These are all the measures that were taken at the tourism ventures to reduce the energy consumption levels.

**Source of data:** The manager interviews and participant observations made by the researcher during visits provided the data for this indicator.

#### **Indicator 10.3 Percentage of energy consumption from renewable resources**

**Reason for the use of the indicator:** The percentage of energy consumption from renewable resources provides a valuable indication of the move towards sustainability in terms of energy use.

**Source of data:** The manager interviews and participant observations made by the researcher during visits provided the data for this indicator.

### **5.3.2.3 (b) Issue 11: Water availability and conservation**

The provision of water is critical for the development of tourism and many of the services tourists demand are water-dependent. The use of water by tourism ventures should be closely monitored, especially in southern Africa where water is a scarce commodity. Besides monitoring water use it is equally important to introduce water conservation measures in an attempt to reduce demand on this precious resource.

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<sup>1</sup> Some organizations such as the Global Reporting Initiative (GRI) prefer energy use to be converted into Gigajoules (GJ). In order to convert Kilowatt hour (kWh) into Gigajoules multiply by 0.0036 (GRI, 2006, p. 8).

#### **Indicator 11.1 Water use (total water volume consumed and litres per tourist per day)**

**Reason for the use of the indicator:** This indicator measures the water use of the tourism facility and is expressed as litres of water consumed per tourist per day. In some cases water may be a key measure limiting the physical carrying capacity of water-poor destinations.

**Source of data:** The manager interview provided the basic data relating to the consumption of water (in most cases the manager could only give an estimate of the water consumption) while secondary data collected by the CBE ventures provided precise details of tourist arrivals which were used to calculate the number of litres consumed per tourist per day.

#### **Indicator 11.2 Water conservation measures**

**Reason for the use of the indicator:** The conservation of water is an important measure to relieve pressure on the water supply and water system. This indicator does not measure the amount of water saved but provides an indication of the measures that have been taken by the specific tourism venture to reduce water use.

**Source of data:** During the manager interview the manager was asked which water conservation measures had been implemented. The researcher also made observations during site visits to the CBE ventures.

#### **5.3.2.3 (c) Issue 12: Quality of drinking water**

The quality of drinking water is a very important factor in tourist wellbeing. Poor drinking water quality often leads to intestinal diseases which may affect users. Therefore a destination that is perceived to have drinking water of a poor quality will often deter many visitors from visiting that area.

#### **Indicator 12.1 Water treated to international potable standards**

**Reason for the use of the indicator:** Since most water for tourism comes from groundwater sources that are usually not treated before use, it is important to establish the quality of the water at the tourism ventures. The results of the water quality analysis were compared to the South African national standard for drinking water (SANS 241:2006 Edition 6.1) (Standards South Africa, 2006). This indicator provides an idea of the level to which the water quality adheres to a number of selected criteria.

**Source of data:** The data was obtained from water quality tests on the physical, chemical and bacteriological characteristics of water samples.

#### **5.3.2.3 (d) Issue 13: Sewage treatment**

The management of liquid waste (sewage) is a major concern for tourism. Sewage may often be a major source of contamination of lakes, rivers and water supplies. This is of particular importance as one of the main sources of water for tourism in rural areas is groundwater, which may be polluted through sewage contamination. The indicator used in this instance relates to the type of sewage treatment system used at each CBE venture (indicator 13.1).

### **Indicator 13.1 Sewage treatment systems**

**Reason for the use of the indicator:** This indicator provides an idea of the sewage treatment systems that were in place in the various tourism ventures that were visited.

**Source of data:** The data for this indicator was collected during the interview with the manager of the tourism venture.

### **5.3.2.3 (e) Issue 14: Solid waste management**

Solid waste is a major polluter of our planet and most human activities result in some form of solid waste. In the past most solid waste was merely buried underground in a landfill site. These waste materials represent a significant loss of resources as well as an increase in greenhouse gases during their replacement and manufacture as well as during the related transportation. Due to the problems associated with the contamination and the related negative impact on the image of the destination, waste production needs to be measured (indicator 14.1) and its disposal managed (indicator 14.2).

#### **Indicator 14.1 Waste volume produced**

**Reason for the use of the indicator:** In order to effectively address the problems associated with solid waste management the first step that needs to be taken is to measure the quantity of waste actually produced by the tourism venture.

**Source of data:** The managers of the ventures provided this information.

#### **Indicator 14.2 Waste disposal (landfill, recycling, etc.)**

**Reason for the use of the indicator:** This indicator provides an important indication of the method in which solid waste is disposed of. It also provides possible methods by which the amount of waste being disposed of in landfill may be reduced.

**Source of data:** Data was collected through the interview with the manager and participant observations made by the researcher.

### **5.3.2.3 (f) Issue 15: Controlling use intensity**

The issue here relates to the number of tourists and the intensity of use of a specific site. All tourism sites are usually aware of the number of tourists visiting the sites but at some stage the density of visitors exceeds the desired standards or thresholds which may lead to degradation of the site.

#### **Indicator 15.1 Number of tourists per square metre of the site**

**Reason for the use of the indicator:** In order to control use intensity it is important to calculate the density of the utilization of a site. The density of use helps predict stresses on ecological and cultural assets, infrastructure, and also levels of management and mitigation which may be needed to ensure long-term sustainability of sites.



**Source of data:** Global positioning data was collected during site visits, and this data was then used with a geographical information system to calculate the area of the site utilized by the tourism facility. The number of tourists was obtained from secondary data to calculate the use intensity.

#### **5.3.2.3 (g) Issue 16: Biodiversity and conservation**

The biodiversity and the conservation of the biodiversity in close proximity to tourism facilities provide an important draw-card for tourists. It is important that both staff and communities make a concerted effort to protect and help conserve this valuable resource.

##### **Indicator 16.1 Local community involvement in conservation projects in area (conservation area)**

**Reason for the use of the indicator:** This indicator measures the involvement of staff and community members in the conservation of the biological diversity of the areas surrounding the tourism facilities.

**Source of data:** Staff and community members were interviewed to find out how and whether staff and community members were involved in conservation projects.

#### **5.3.2.4 Cross-cutting issues**

These issues play an important part in guiding and facilitating the long-term success and sustainability of CBE ventures. The cross-cutting issues affect all three dimensions of sustainability.

#### **5.3.2.4 (a) Issue 17: Development controls**

Where planning systems and development controls are in place there is a capability to guide the development of tourism in a specific area towards a desired outcome, in terms of the location, type and density of tourism development.

##### **Indicator 17.1 Existence of a land use or development planning process including tourism**

**Reason for the use of the indicator:** This indicator merely provides an answer as to whether any land-use or development planning processes have been put in place to control and coordinate future tourism developments.

**Source of data:** The information was obtained from the manager interviews.

#### **5.3.2.4 (b) Issue 18: Networking and collaboration**

Networking and collaboration is an important factor that assists tourism ventures in becoming successful and sustainable in the long-term. This is particularly important for CBE ventures which often need as much support and assistance as possible to establish and operate successful CBE ventures.

### **Indicator 18.1 Partnerships and collaborations**

**Reason for the use of the indicator:** This indicator will list the important partnerships and collaborations that many CBE ventures have established in order to support their establishment and operation.

**Source of data:** The managers were interviewed to establish which partnerships and collaboration the CBE ventures had been able to establish.

These issues and indicators were investigated using a series of data collection instruments which are discussed in the next section.

## **5.4 Compilation of data collection instruments**

A variety of data collection instruments were brought together for the collection of the data needed to investigate the sustainability issues and indicators listed above. As a result of the wide variety of issues and indicators that were investigated, a variety of data collection instruments were designed. These ranged from questionnaires and interviews, direct observations and photographic records, field notes, secondary data, water sampling and analysis to data collected by a global positioning system (GPS). This was in line with current trends of data collection as mentioned by Guba and Lincoln (1994, p. 105): “[Researchers] are increasingly encouraged these days to make use of quantitative and qualitative methods in tandem.” After each data collection instrument is discussed in the next section, the specific issues and indicators that each data collection instrument addressed are listed. Although these methods are discussed separately here, the results obtained from different methods were often utilized in combination to arrive at results. The data collection was completed in an orderly manner, as prescribed by the case study protocol.

### **5.4.1 Questionnaires and interviews**

One questionnaire and three different interview schedules were compiled for the primary data collection of this study. It is important to differentiate between questionnaires and interviews. Questionnaires required respondents to complete the questionnaires independently, while during the structured interviews, the interviewer asked the respondents the questions sequentially and followed a predetermined schedule (Finn *et al.*, 2000). For this study, a visitor questionnaire was compiled and three interview schedules: one each for staff members, community members and the manager of the CBE ventures. All the interviews were of a structured nature to ensure consistency. The interviews simultaneously collected both quantitative and qualitative data.

#### **5.4.1.1 Visitor questionnaires (Appendix C)**

The design of the visitor questionnaire was done using an adapted version of the Exit Questionnaire as proposed by the WTO (2004). The stated questions asked in the

questionnaire varied from open- and closed-ended questions to Likert scale-type questions. Since Likert scales are often used to measure attitudes or opinions of tourists, such as visitor satisfaction (Finn *et al.*, 2000), a significant portion of the questionnaire requested Likert scale-type replies. The nature of the questions asked covered eight categories. Questions about the following were asked:

- The tourist's visit and previous visits (questions 1-8)
- Visitor satisfaction (questions 9-32)
- Expected activities and recommended improvements(questions 33-35)
- Next visit (questions 36-39)
- Whether the visitor perceived the venture to be sustainable (questions 40-41)
- Spending patterns (stated in the local currency) (questions 42-43)
- Personal information (questions 44-50)
- Any other comments and complaints (question 51)

At each CBE venture, 10 visitors were requested to complete questionnaires. If a visitor did not wish to participate, another visitor was requested to complete a questionnaire. The questionnaire was adapted after it was piloted; the final questionnaire is included in Appendix C. The biographical information of the visitors who completed questionnaires is given in Table 5.5.

**Table 5.5:** Biographical information of visitors who completed questionnaires at the six selected CBE ventures

Biographical information of visitors who completed questionnaires	Individually operated Aba-Huab Campsite	Community-operated Kaziikini & Shandreka	Informal joint venture Malealea Lodge	Formal joint venture Damaraland Camp	Triple joint venture Tembe Lodge	Organ. operated !Khwa ttu
<b>No. of questionnaires completed</b>	10	11	10	10	10	12
<b>Gender</b>						
Male	5	8	4	4	7	7
Female	5	3	6	6	3	5
<b>Ages</b>						
< 20			1		1	
20 - 29	3	2	6	2	1	
30 - 39	3	1	3	6	2	2
40 - 49	2	3			2	2
50 - 59	2	4		1	3	3
60 +		1		1	1	5
<b>Education level*</b>						
Primary						1
Secondary		1	1		1	1
Tertiary	4	3	6	4	3	3
Postgraduate	6	6	2	6	5	7
<b>Income level*</b> (in SA Rand. Other currencies were converted to SA Rand)						
< R 10 000	1		4			2
R10 000 - R15 000			2			2
R15 000 - R20 000						1
R20 000 - R25 000	1	2				3
R25 000 - R30 000	1			3		
R30 000 +	5	9	3	5	9	3

\* In some instances all the visitors did not provide answers to all the questions asked, therefore the number of replies does not always equal the total number of questionnaires completed.

The information obtained through the visitor questionnaires will be used to address issue 6 (indicator 6.1) and issue 7 (indicators 7.1 to 7.5).

**Table 5.6:** Issues and the associated indicators with visitor questionnaires as data source

Issue	Indicator
6. Cultural	6.1 Cultural appreciation and conservation
7. Sustaining tourist satisfaction	7.1 Level of tourist satisfaction
	7.2 Perception of value for money
	7.3 Percentage of return visitors
	7.4 Perception of sustainability
	7.5 Tourist complaints

#### 5.4.1.2 Staff and community members interviews (Appendix D & E)

The design of the staff and community interview schedules was done using an adapted version of the Local Questionnaire as proposed by the WTO (2004). It was decided to use interviews so that the responses could be standardized. If staff and community members were not able to read and write they would still be able to contribute verbally to the study in a meaningful way. Only open- and closed-ended questions were asked in the interviews. Since the level of literacy of the staff and community members was not known it was decided not to use Likert scale-type questions in the staff and community interviews as they would not be filled in by the interviewees themselves.

The **staff interview** (Appendix D) assessed nine categories of questions. Questions were asked about the following:

- Staff's job functions and training received (questions 1-5)
- Whether tourism is good for the community and benefit related questions (questions 6-13)
- General opinion questions relating to tourism venture (questions 14-35)
- Whether they want more or less tourism in their area (questions 36-37)
- Personal complaints or concerns regarding tourism and possible improvements (questions 38-40)
- Personal information (questions 41-52)
- Local residents' complaints (questions 53-54)
- Tourists' complaints (questions 55-56)
- Any other comments and complaints (question 57)

Ten staff members who were conversant in either English or Afrikaans were interviewed. The biographical information of the staff members who were interviewed is indicated in Table 5.7.

**Table 5.7:** Biographical information of staff members interviewed at the six selected CBE ventures

Biographical information of staff members interviewed	Individually operated Aba-Huab Campsite	Community-operated Kaziikini & Shandreka	Informal joint venture Malealea Lodge	Formal joint venture Damaraland Camp	Triple joint venture Tembe Lodge	Organ. operated !Khwatlu
<b>No. of interviews</b>	10	6	10	10	10	10
<b>Gender</b>						
Male	2	2	5	4	5	6
Female	8	4	5	6	5	4
<b>Ages</b>						
< 20						1
20 - 29	4	5	1	3	5	3
30 - 39	5	1	5	5	5	5
40 - 49	1		1	2		1
50 - 59			2			
60 +			1			
Average age of staff members interviewed	32.6	28.7	41.5	33.1	30.8	30.1
<b>Income level</b> (in SA Rand. Other currencies were converted to SA Rand)						
<b>R100 – R300</b>						
<b>R301-R600</b>	4		1			1
<b>R601-R1 000</b>	4	4	1	6	2	1
<b>R1 001-R1 500</b>	1		2	1		1
<b>R1 501-R2 000</b>	1		2		2	
<b>R2 001-R2 500</b>			1	1	2	1
<b>R2 501-R3 000</b>		2	1		3	4
<b>R3 001-R3 500</b>				1		1
<b>R3 501-R4 000</b>						
<b>R4 001 - R4 500</b>			2			
<b>R4 501 - R5 000</b>						
<b>R5 000 +</b>					1	1
Average income (In SA Rand)	814.50	1573.17	2270.50	1300.89*	2316.00	2543.70
Average no. of dependants	2.9	8.83	3.6	10	5.1	5.9
Average distance of home from tourism venture (in kilometres)	104.5	22	13.67	28.7	60.7	1100

\* Only nine members of staff were prepared to give their income level (Damaraland Camp). All other replies equal to total number of interviews completed.

The staff interviews were designed to yield results that would address the following: issues 1, 2, 3, 4, 5, 6, 7 and 16 and the associated indicators listed in Table 5.8.

**Table 5.8:** Issues and the associated indicators with staff interviews as data source

Issue	Indicator
1. Local satisfaction with tourism	1.1 Local satisfaction level with tourism
	1.2 Local community complaints
2. Effects of tourism on communities	2.1 Percentage who believe that tourism has helped bring new services or infrastructure
3. Education	3.2 Education of community
	3.3 Training and skills development of staff members
4. Community decision making	4.1 Community decision-making structures
5. Community benefits	5.1 Community benefits from tourism
6. Culture	6.1 Cultural appreciation and conservation
7. Sustaining tourist satisfaction	7.5 Tourist complaints
16. Biodiversity and conservation	16.1 Local community involvement in conservation projects in area

The **community interview** (Appendix E) was structured along the same lines as the staff interview. The questions that were asked related to the following:

- Whether tourism is good for the community and benefit-related questions (questions 1-8)
- General opinion questions relating to the tourism venture (questions 9-30)
- Whether they want more or less tourism in area (questions 31-32)
- Personal complaints or concerns regarding tourism and possible improvements (questions 33-35)
- Personal information (questions 36-41)
- Local residents' complaints (questions 42-43)
- Any other comments and complaints (question 44)

Five community members who were conversant in either English or Afrikaans were interviewed in each case study. The community members were sampled through non-probability accidental sampling. Some authors refer to accidental sampling as convenient, availability or haphazard sampling (Strydom & Venter, 2005, p. 207). Once permission was granted to interview community members, a member of the tribal authority or the community that could speak English or Afrikaans was asked to identify other members of the community that could speak English or Afrikaans. After each community interview was completed the interviewee was asked to identify other community members who were also proficient in English or Afrikaans. Biographical information of the community members who were interviewed is indicated in Table 5.9.

**Table 5.9:** Biographical information of community members interviewed at the six selected CBE ventures

Biographical information of community members interviewed	Individually operated Aba-Huab Campsite	Community-operated Kaziikini & Shandreka	Informal joint venture Malealea Lodge	Formal joint venture Damaraland Camp	Triple joint venture Tembe Lodge	Organ. operated !Khwa ttu
<b>No. of interviews*</b>	6	5	5	5	5	5
<b>Gender</b>						
Male	3	5	4	3	5	4
Female	3		1	2		1
<b>Ages</b>						
< 20	2		1			
20 - 29	2	1	2		1	2
30 - 39	1	4	1	1	2	2
40 - 49	1			1	1	1
50 - 59				1	1	
60 +			1	2		
Average age of community members interviewed	27.7	30.8	33.4	54.2	37.6	32.4
Average no. of dependants	4.8	6	6.2	11.2	4.6	4.6
Average distance of home from tourism venture (in kilometres)	1	20.8	1.31	16.8	5.2	1000

\* All other replies equal to total number of interviews completed.

The issues and associated indicators addressed by community interviews are indicated in Table 5.10.

**Table 5.10:** Issues and the associated indicators with community interviews as data source

Issue	Indicator
1. Local satisfaction with tourism	1.1 Local satisfaction level with tourism
	1.2 Local community complaints
2. Effects of tourism on communities	2.1 Percentage who believe that tourism has helped bring new services or infrastructure
3. Education and awareness	3.2 Education of community
	3.3 Training and skills development of staff members
4. Community decision making	4.1 Community decision-making structures
5. Community benefits	5.1 Community benefits from tourism
6. Culture	6.1 Cultural appreciation and conservation
16. Biodiversity and conservation	16.1 Local community involvement in conservation projects in area

#### 5.4.1.3 Manager interview (Appendix F)

All questions posed to the manager were open-ended. Questions relating to all of the following aspects were posed to the manager of each case study under investigation:

- Accommodation and activities
- Employment
- Tourist arrivals
- Local impact
- Energy
- Water
- Waste
- Site
- Education and training
- Conservation
- Decision-making structures
- Community benefits
- Cultural activities
- Support organizations
- Tourism organization and development

The documents or data the manager promised to provide to the researcher in the form of secondary data was also noted at the top of the interview for follow up later. During the interview the manager also received feedback on the progress made with the questionnaires and interviews.

The results of manager interviews and the associated secondary data were used to address all the issues and indicators.

All interviews were conducted by the researcher himself, as he is proficient in both English and Afrikaans. The interviews were conducted in either English or Afrikaans. It was decided not to use translators as the researcher was interviewing tourism managers, staff and community members, who should have a working knowledge of English. Smith (1996) and Sturge (1997) cited by Jobbins (2004, p. 316) explain that

the essential problem of translation can be understood as one of transferring concepts and meaning from one language to another. This is problematic, owing to interconnection of culture, language and meaning, and requires the mapping of ideas in one culture and language on to the categories of meaning from another.

If the interviewee was not conversant in either English or Afrikaans they were not interviewed.

During all interviews the researcher made written notes on the interview schedules that had been drawn up. All the interviews conducted were recorded. The audiotapes provided an accurate record of the interviews and the interviewees' actual words used. Recording the interviews only took place with the permission of the interviewee in all cases. If the interviewee declined to be recorded, more extensive written notes were taken.

#### **5.4.2 Direct observations and photographic records**

Direct observations were made throughout the field visits, including those occasions during which other evidence, such as interviews or GPS data was collected. Yin (1994) contends that evidence garnered through observation is often beneficial because it could provide extra information about the topic under investigation. The direct observations were supplemented by photographic records of observations. In this regard Yin (2009, p. 110) states that "[t]he observations can be so valuable that an investigator may even consider taking photographs at the case study site. At a minimum, these photographs will help to convey important case characteristics to outside observers." The direct observations and photographs were presented throughout the case study records (Chapter 6) where appropriate in various issues and indicators.

#### **5.4.3 Secondary data collection**

'Secondary data' is data that is collected by an individual or organization other than the researcher. Various forms of secondary data needed to be collected in this study to provide an indication of the performance of the case studies in terms of various issues and indicators. The most important information that needed to be collected related to tourist arrivals and occupancy levels, energy and water consumption. The secondary data was used to address issues 8, 10 and 11 as well as their associated indicators (8.1, 8.2, 10.1 & 11.1).



**Table 5.11:** Issues and the associated indicators with secondary data as data source

Issue	Indicator
8. Tourism seasonality	8.1 Tourist arrivals by month
	8.2 Occupancy rates for accommodation by month
10. Energy management	10.1 Per capita consumption of energy (per person per day)
11. Water availability and conservation	11.1 Water use (total water volume consumed and litres per tourist per day)

#### 5.4.4 Water sampling and analysis

Water samples were collected at each of the case study sites. The water samples were used to establish the quality of drinking water in terms of three requirements: physical, chemical and bacteriological characteristics. At each case study the samples were taken directly from the taps in the accommodation units or from the stand pipes in the campsite areas, whichever were applicable.

The **physical characteristics**, namely pH, conductivity and dissolved solids, were measured on site using a handheld meter capable of measuring these three characteristics. The handheld meter was calibrated before each visit. The physical characteristics were collected on site, as they may change over time, and depending on the cases that would be investigated, the time taken between collecting the sample and the delivery to an accredited water testing facility may have been several days. The **chemical characteristics** were determined using the samples taken from each case. These samples were analysed by the South African Bureau of Standards laboratories (a division of Standards South Africa) in Pretoria, one of the few fully accredited water analysis laboratories in southern Africa. Due to the high costs associated with laboratory analysis only the macro-determinants as prescribed by Standards South Africa (2006) were analysed. These include ammonia, calcium, chloride, fluoride, magnesium, nitrate and nitrite, potassium, sodium, sulphate and zinc. An indication of the **bacteriological characteristics** was also collected on site as these also change over time. A mobile test kit (SANICHECK®BF) that was obtained from BIOSAN Laboratories, Inc. was used to collect heterotrophic bacteria counts. The method used was as per the directions for use provided by BIOSAN Laboratories Inc. (no date). Heterotrophic bacteria counts were used to indicate the general microbial quality of water. This provided an indication of the efficiency of water treatment and disinfection processes (DWAF, 1996). Heterotrophic plate counts are usually reported as counts (number of colonies)/ml.

The results of these three types of characteristics were compared with the South African national standard for drinking water (Standards South Africa, 2006). This data was used to address issue 12: indicator 12.1.

**Table 5.12:** Issue and the associated indicator with water quality analysis as data source

Issue	Indicator
12. Drinking water quality	12.1 Water treated to international potable standards

#### 5.4.5 Global positioning system (GPS) data and GIS mapping

A Garmin GPS was used to collect data at each case study site. All facilities (e.g. accommodation units, kitchens, dining areas, staff quarters and workshops) as well as all roads and walkways within the tourism venture complex were logged. Waypoints were stored for all the point data, while tracks were used for all line data that was collected. The GPS data was downloaded to Mapsource software where it was cleaned and prepared for conversion to shapefile format. The data was then imported into a geographical information system (GIS), ArcGIS 9.2, where the area covered by the tourist facility was calculated. Only the facilities, roads and walkways that were directly related to the tourism facility were included in this part of the investigation. It should be remembered that the accuracy of handheld GPS usually varies between four and six metres; however this is the most accurate measure that can be collected to calculate the area covered by the tourism facility. All point data was given a 6-metre radius zone of influence area, while walkways and roads were given a 2- and a 5-metre wide zone of influence respectively. This resulting data together with data from other sources was combined to address issue 15: indicator 15.1.

**Table 5.13:** Issue and the associated indicator with GPS as data source

Issue	Indicator
15. Controlling use intensity	15.1 Number of tourists per square metre of the site

#### 5.5 Preparation before conducting fieldwork

Before the official fieldwork commenced a pilot case study was conducted and a case study protocol was compiled.

A **pilot case study** was undertaken to refine data collection plans with respect to both the content of the data and the procedures to be followed (cf. Yin, 2009). As pointed out by Yin (2009, p. 92), “[t]he pilot case is more formative, assisting you to develop relevant lines of questions possibly even providing some conceptual clarification for the research design as well”. The pilot case that was selected for investigation was the Shewula Mountain Camp in Swaziland. The main criterion, besides proximity, was the fact that access to this pilot case was assisted by prior personal contact on the part of the researcher who had visited this venture on various occasions in the past. The interviewees were also aware that the investigation was at an early stage of research. Both the questionnaires and the interviews were adapted after the pilot case study. The following changes were implemented after the pilot survey was conducted: Staff and community interviews

- The wording used in the staff and community interview schedules was changed to be more basic. An example of a question of which the wording was changed is: “Does tourism harm the environment?” The two concepts ‘harm’ and ‘environment’ were found to be problematic for both the community and the staff members to understand and as a result this question was reworded to: “Does tourism damage or destroy nature?” The

reworded question was more understandable than the original question, while it still achieved the goal of ascertaining whether the interviewees believed that tourism harms the environment.

- Most of the questions in the staff and community interview schedules were also changed from open-ended to closed-ended questions. The interviewees could answer the questions with either a 'yes' or a 'no' reply to indicate their agreement or disagreement with each question. After the positive or negative response was received the interviewees were asked to elaborate on or substantiate their answer.
- The interview schedule was amended so that the researcher only had to tick the appropriate box for the 'yes' or 'no' reply, thereby saving time and giving the researcher more opportunity to interact with the interviewee. The number of pages of the interview schedule was also reduced from 3 to 2, making the interview schedule more user-friendly during the interview process.
- The order of the questions in the interview schedules was changed to facilitate a smoother flow during the interviews.
- All the questions were numbered after completion of the pilot survey as this would facilitate the data-capturing process after the data collection had been completed.

#### Visitor questionnaires

- Two open-ended questions were converted to closed-ended questions and extra space was added for elaboration.
- The number of pages of the visitor questionnaire was reduced from 3 to 2 to make the questionnaire more user-friendly.
- The questions were numbered to facilitate data capturing.
- An additional question was included to find out what the visitors' length of stay was at each venture.
- One question that was incorrectly included under the Likert-scale type questions was removed from this section and placed in a separate section.

No changes were made to the manager interview schedule.

An important lesson that was learned from the pilot survey relates to the comprehension and language abilities of communities. It is necessary to understand the profile of the respondents of each community in order to adequately prepare for the interviews that needed to be conducted. English was assumed to be the only language that would be used to conduct the interviews. However, many community members in Northern Namibia were not proficient in English but were able to speak Afrikaans, another language in which the researcher is proficient.

The pilot survey also assisted in the compilation of a final case study protocol which facilitated and guided the smooth and consistent data-collection process. After the pilot case study was

investigated and the relevant adaptations made on each of the data collection instruments, a **case study protocol** was compiled (Appendix G). The case study protocol is an important method of increasing the reliability of case study research and is intended to guide the investigator in carrying out the data collection from each single case (Yin, 2009). The case study protocol contains the procedures and instruments that were followed during each case study. This is fundamental in a multiple case study investigation such as this study, to ensure that the same processes and procedures are followed in each successive case study. An additional advantage in this study was that all the data collection was conducted by the researcher himself using the case study protocol as a guide to ensure that each case study was investigated in the same way. The utilization of a case study protocol simplified the cross-case analysis, which is presented in Chapter 7.

## **5.6 Conducting data collection**

The data collection in the field was conducted in a manner consistent with the case study protocol discussed above. The results of the data collection are presented in Chapter 6.

## **5.7 Summary**

The construction of the evaluation framework for the investigation of the sustainability of the CBE ventures in southern Africa was discussed in this chapter. The issues and the indicators that make up the evaluation framework were also discussed, together with the various data collection instruments that were used to collect data relating to the abovementioned issues and indicators. The results of the field testing of the evaluation framework are provided in the next chapter.