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# THE ECONOMICS, INSTITUTIONS AND CONSERVATION BENEFITS OF COMMUNITY-BASED AVITOURISM IN SOUTH AFRICA

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## ABSTRACT

The size and value of the birding- or avi-tourism industry as a specialist component of the ecotourism market is immense and increasingly recognized. Community-based avitourism initiatives are an attempt to harness the potential birding tourism represents for conservation and development by training local guides from financially poor communities around sites of conservation interest. This research was aimed at understanding the biodiversity conservation and socio-economic impacts of community-based avitourism projects in South Africa and the institutional arrangements that can lead to their success. The study was conducted through the use of market and questionnaire surveys and key informant interviews at 11 community-based avitourism project sites in South Africa. Conservation success was measured with the Threat Reduction Assessment tool. The extent of a project's focus on threat reduction is positively related to the extent of conservation success which demonstrates community-based avitourism's effectiveness as a conservation tool where it is applied in this sense. Community-based avitourism projects achieved remarkable success in conservation and environmental awareness activities conducted by the local guide's in their communities in which over 36000 people participated. The average monthly income earned by local bird guides was R2240 which was R1642 per month more than what they were earning before their involvement in community-based avitourism projects. The degree of income benefits to local guides is found to be strongly affected by the extent of marketing as well as the extent and strength of project support. The extent of income benefits is found to be an insignificant determinant of conservation success. This research demonstrates substantial capacity building and empowerment benefits to local guides. The capacity building and development process of local guides is found to be challenged by cultural differences and a history of oppression as well as local guides' limited previous exposure to tourism and business. Institutional arrangements which allow for five years or more of intensive project support are recommended to successfully overcome these challenges. Results from a subset of projects suggest that the cost of this support is R56 818 per guide and that this results in a 66% success rate among local guides becoming self-sustaining. The development of innovative employment partnerships, in which tourism operators employ local guides in an early stage of the training process is proposed as a cost-saving alternative. The average cost per job created in community-based avitourism projects is calculated to be R34904 which is more than 13 times less than the average cost of job creation in the tourism sector in South Africa. Community-based avitourism is an important and cost-effective approach to conservation and development provided appropriate and sufficient long term support is provided to the local guides and the projects.

## TABLE OF CONTENTS

# CHAPTER 1: INTRODUCTION

*Bird and biodiversity conservation challenges in South Africa*

Africa faces a daunting biodiversity conservation challenge. Biodiversity is low on most national agendas, which is not surprising considering the low life expectancy, per capita gross domestic product and other human development indicators (Brooks and Thompson 2001). Although South Africa is characterised by different socio-economic and political features to many other countries on the continent it faces tremendous biodiversity conservation challenges in the face of pressing development needs. Serious constraints that are faced include insufficient skills, expertise and funding, legal fragmentation, the inadequate integration of biodiversity considerations into sectoral and land-use plans, and weak political commitment (Wynberg 2002). There is a critical need for ensuring benefits to, and the inclusive participation of, local communities in conservation and empowering a broad constituency for conservation (Adams *et al.* 2004, Fishpool and Evans 2001 and Brooks and Thompson 2001). Support and buy-in from government at different levels and other stakeholders such as the private sector and civil society, will ensure that biodiversity conservation impacts are strengthened (Thompson 2001). This support and understanding is most likely to emerge if the conservation activities are associated with economic and other benefits, and in so doing contribute to sustainable livelihoods and development (Fishpool and Evans 2001).

*Value of the birding market*

Over the past few decades bird-watching or birding has become an increasingly popular hobby and its importance and value in the ecotourism market is being increasingly recognised. The International Ecotourism Society defines Ecotourism as: "responsible travel to natural areas that conserves the environment and improves the well-being of local people and is an important and growing sector of the global economy" (Honey 1999). Birding or avitourism can be defined as a component of ecotourism that is focused specifically on birds and bird watching. The US Fish & Wildlife Service (2001) developed what they define as a conservative definition for a birder; this is someone who must have either taken a trip a mile or more from home for the primary purpose of observing birds and/or closely observed or tried to identify birds around the home. In this paper the terms birding tourism and avitourism are used synonymously.

Ceballos-Lascurain (1996) considered birders to form the single largest group of ecotourists. In the United States where extensive market surveys have been conducted it was found that there are 46 million birders and that birding is the fastest-growing outdoor recreational activity (Cordell and Herbert 2002, Sekerciouglu 2002 and US Fish & Wildlife Service 2001). There are a large number of birding tourists or avitourists who travel in pursuit of this hobby, and in the USA just over 18 million of the 46 million birders travel away from home to watch birds

(US Fish & Wildlife Service 2001). Annual expenditure on bird-watching in the United States in 2001 was estimated at US$32 Billion (R204.8 Billion) (US Fish & Wildlife Service 2001). This type of substantial economic impact from birding is not restricted to developed countries, and in 1999 Costa Rica received over US$400 million (R2560 million) in revenue from birders (Sekerciouglu 2002). The only national survey of the birding market in South Africa that has been conducted is by Turpie and Ryan (1998). This study estimated the total amount spent by birders in the South African economy in 1997 at between R80 and R170 million. Of this, expenditure by international birders visiting South Africa was estimated at between R10 and R25 million in 1997 from 750 to 1500 international birders. Turpie and Ryan (1998) estimated the total numbers of birders based in South Africa at between 11400 and 21200. The rapid increase since 1997 in the number of specialist bird tour operators and birding-focussed tourist establishments and the number of tours and products offered in South Africa, suggests that these numbers have increased substantially over the past 8 years. At a site level, a study at the Blue Swallow Natural Site (BSNHS) in Mpumalanga, South Africa showed that the potential demand for local birding and eco-guides at a site where the critically endangered Blue Swallow and other specials (i.e. bird species that are difficult to see and considered a special sighting, worth spending time and money to obtain) can amount to R113 327 per annum (Biggs 2005).

*Emergence of community-based avitourism*

The democratisation of South Africa which culminated in the first democratic elections in 1994 led to strong political and financial incentives being established in favour of initiatives with a strong emphasis on rural economic development, job creation and capacity building for previously disadvantaged sectors of society. This was accompanied by a large increase in the numbers of tourists, including international birders to South Africa from 1990 onwards (South African Tourism 2005, SouthAfrica.info 2005 and Turpie and Ryan 1998). The training and development of local birding and eco-guides was a clear response to the combination of the political imperative of job creation and skills development and the growing value and potential of the birding market. The central focus of community-based avitourism projects is to link biodiversity conservation with capacity building, job creation and small business development through the development of local birding and eco-guides from previously disadvantaged communities around sites of conservation interest. BirdLife South Africa (BLSA) has been the organisation primarily responsible for the drive to develop community-based avitourism projects and Table 3.1 contains details of the history of community-based avitourism and the individuals and organisations involved. The central objectives of a community-based avitourism project are to: 1) strengthen the conservation of birds and biodiversity; 2) empower individuals and communities through increased income generation and job creation, capacity building and community development and 3) create increased awareness of birds and broader biodiversity among local communities, land-owners and the broader public (BirdLife South Africa 2005).

Community-based avitourism projects typically focus on Important Bird Areas (IBAs) which are defined as sites of international significance for the conservation of birds and biodiversity that are selected using standardised criteria (Barnes 1998 and Stattersfield *et al.* 1998).

Community-based avitourism projects typically entail the following steps and processes (Fig 1.1):

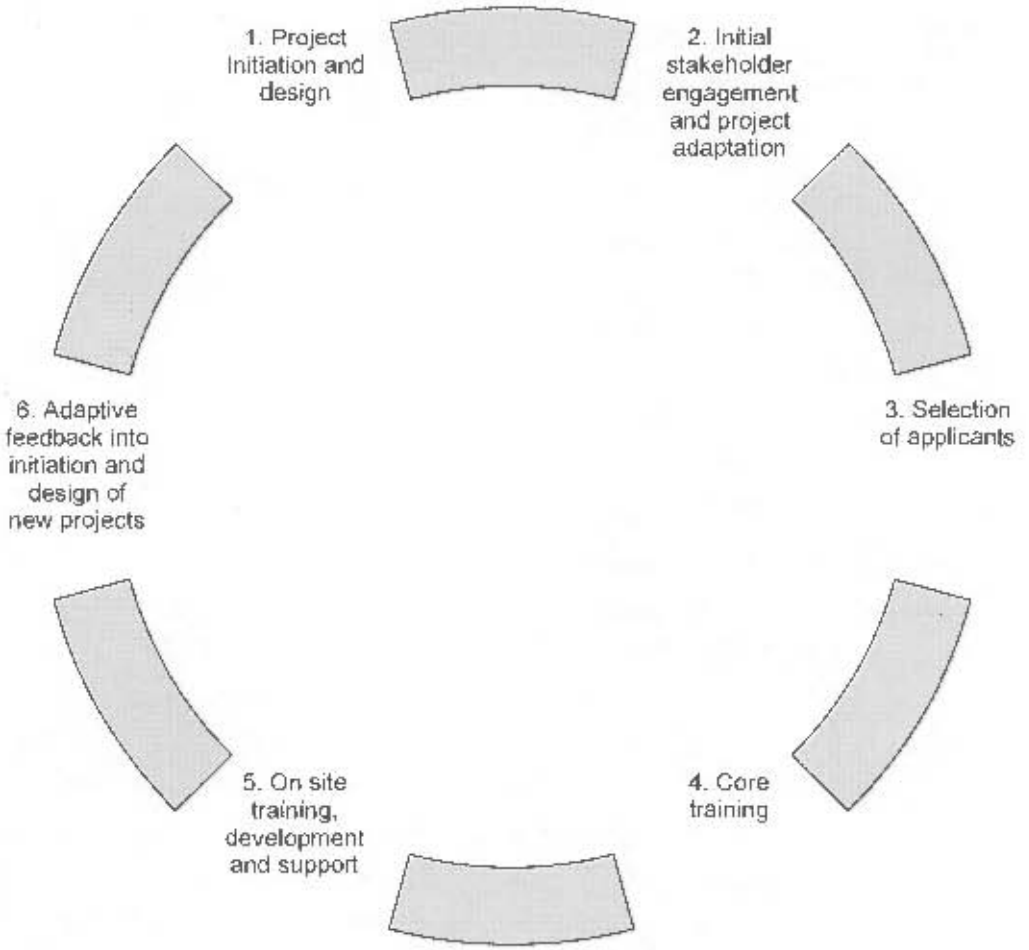



**Figure 1.1 Typical project process of community-based avitourism projects**

1. Typically, these projects commence with an initiating factor such as the availability of funding for a specific project or a recommendation as an outcome of an action plan. Sometimes a scoping and pre-feasibility exercise is conducted and this feeds into the project design.
2. A stakeholder engagement process is entered into and project plans are adapted according to stakeholder input. Initial partners for project implementation are identified and agreements are entered into. Stakeholders for project implementation are engaged. Sometimes this component entails a more detailed feasibility and/or a market assessment.

3. Candidates for training and development are selected. Over time these processes have become more rigorous.
4. The selected candidates undergo a period of approximately one month of intensive training. This core training typically takes place at or through the Sappi WWF BirdLife South Africa Training Centre. The training includes the provision of binoculars and bird identification field guides to local guides. The training includes aspects on the following:
    - An introduction to tourism
    - Ecology and conservation including conservation structures and legislation
    - Habitat types and concerns
    - The animal and plant kingdoms
    - Water and soil conservation
    - Bird biology
    - Bird identification
    - Guiding and client service
    - Business skills
    - Marketing skills
    - Community extension work
5. A key component of these initiatives is a well-structured and intensive after core-training support program. This component works towards building the capacity of the trained guides so that they are capable of operating successfully as local guides at their own site and running their own micro-enterprises in tourism. This training and capacity building builds on the basis that was established during the core training. The extent and duration of this training varies from site to site but typically includes additional training on birds and bird identification, local plants and animals, local history and geography as well as business development, management, marketing and networking skills. The development of support networks for the trained guides is established for their guiding activities as well as their involvement in conservation, monitoring and community extension work. On some projects this component includes facilitating and supporting the local guides in finding employment.
6. It is critical that lessons learnt and experiences gained from completed and current projects feed into the initiation and design of new projects. This ensures that the entire process of developing and managing a range of these projects is an adaptive one.

Community-based avitourism projects are an indirect conservation driver. Salafsky *et al.* (2001) hypothesize that indirect conservation drivers function through communities receiving sufficient benefit from a viable enterprise that depends on biodiversity, and therefore acting to counter internal threats caused by stakeholders living at the project site and external threats caused by outsiders (Figure 1.2). The main conditions of this hypothesis are that a) there

must be a linkage between the viable enterprise and *in situ* biodiversity and that the enterprise will suffer if this biodiversity is significantly degraded, b) there must be generation of short and long term benefits (environmental, financial or social) and c) stakeholder involvement (i.e. the enterprise must involve members of the local community who are stakeholders in the enterprises and the biodiversity of the area and they must have the capacity to take action to counter threats to biodiversity). The dotted lines in Figure 1.2 represent a revised version of this hypothesis after the results of the study concluded that non-cash stakeholder factors such as good relations with project staff, enhanced community confidence and higher levels of community awareness are more pertinent in influencing conservation success (Salafsky *et al.* 2001). Community-based avitourism is dependent on *in situ* biodiversity conservation to succeed.

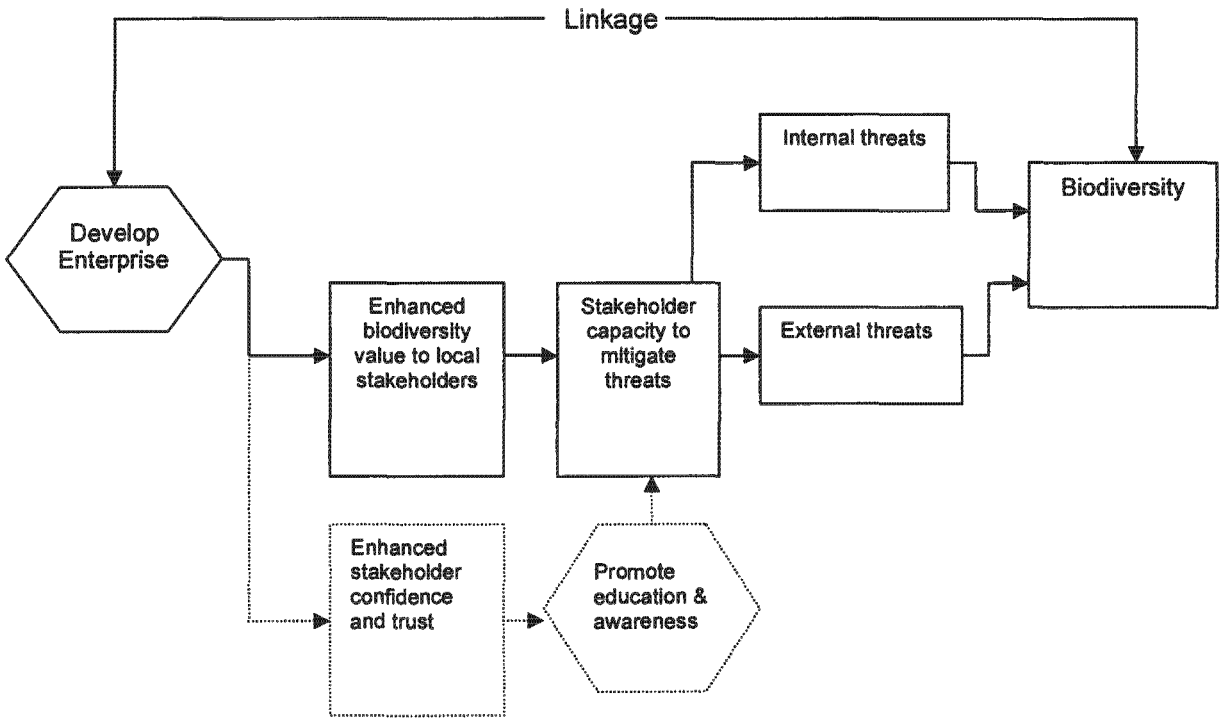



**Figure 1.2 The indirect linkage through which an enterprise-based strategy such as community-based avitourism impacts on biodiversity conservation (source: Salafsky *et al.* 2001). Details on this diagram are provided in the text above.**

*Need for research on community-based avitourism*

Numerous studies and publications have focused on the socio-economic and conservation impacts of community-based ecotourism and Community-based Natural Resource Management (CBNRM) (for example Goodwin and Swingland 1996, Abott and Thomas 2001, Spenceley and Seif 2003, Fabricius *et al.* 2004, Kiss 2004) or provide guidelines for the implementation of community-based ecotourism (for example Sproule and Suhandi 1998 and Drumm and Moore 2002). An extensive literature review and discussions with experienced

avitourism workers showed that very little work has been done on understanding the impacts of community-based avitourism initiatives or understanding the institutional context in which these initiatives function, or on their system characteristics and processes. Other than Biggs and Evans (2003), the work undertaken, either on or with reference to community-based avitourism is primarily limited to numerous grey literature reports such as Ngari (1998), Biggs and Bohensky (2002), and Biggs (2005). This research is an attempt to start addressing this gap in the scientific literature on community-based avitourism.

*Conceptual basis for research*

There has been a lot of debate on the merits of community-based conservation strategies in the light of mixed results and performance that is often well below expectations (Agrawal and Gibson 1999, Adams and Hulme 2001, Kellert *et al.* 2000, Barret *et al.* 2001 and Kiss 2004) . Community-based avitourism projects are a community-based ecotourism conservation strategy and are types of Integrated Conservation Development Projects (ICDPs). Kremen *et al.* (1994) define ICDPs as initiatives which aim to promote the conservation of biodiversity while improving human living standards. The proposed mechanism is to provide local people with environmentally sound, economically sustainable alternatives to destructive land use. One of the major challenges of community-based ecotourism and ICDPs is that they operate in complex realms with social, economic, institutional and political factors all playing a role in the final outcome of such initiatives.

Holling *et al.* (2002) discuss the complex, adaptive nature of linked socio-ecological systems characterised by historical dependency, inherent uncertainty and multiple equilibria and scales. These systems are driven by economic, ecological, social and evolutionary forces and both rapidly unfolding and slowly changing processes. A socio-ecological system is defined as a linked social and natural system or an integrated view of humans in nature (Walker *et al.* 2002 and Westley *et al.* 2002). Holling *et al.* (2002) mention further that we can ill afford to consider humans separately from nature and there is a clear need for a trans-disciplinary view of these complex systems. Natural resource problems are not isolated scientific or technical problems, and are exacerbated by human failure to predict the complex inter-relationships among the social, ecological and economic systems (Allison 2003). Berkes (2004) discusses a shift in perspective from reductionism to taking a complex systems view on the community-based conservation issue. Berkes (2004) further states that it is productive to view the community-based conservation issue from the perspective of institutions. Institutions can simply be defined as the way that people organise themselves around issues and are key drivers of environmental change (Deitz *et al.* 2003).

Ludwig (2001) defines the problems presented by community-based conservation problems as 'wicked problems'. These are problems with no definitive formulation, no test for a solution and problems that cannot be separated from issues of value, equity and social justice. There

is therefore widespread frustration with numerous failed attempts in translating theories of integration into practical achievements on the ground; and disillusion and disappointment associated with attempts to integrate complex sets of knowledge and actors with diverse sets of interests into a common framework (Sayer and Campbell 2004).

Community-based avitourism is a community-based conservation strategy and an ICDP approach to conservation. Thus, any attempt to understand community-based avitourism presents the 'wicked problem' that Ludwig (2001) discusses and it is within this context that this research was conducted. In attempting to research and understand community-based avitourism, the inherent multi-disciplinarity required to try and understand its dynamics and the myriad of complex factors that are likely to impact on its success has been carefully considered. In designing and implementing this research the researcher made special effort to understand the institutional dynamics that are key to community-based avitourism as well as the political, social, economic and ecological factors that may have bearing on its success in a socio-ecological systems framework.

*Research Objectives and Key Questions*

A fundamental premise of this dissertation is that the conservation and natural resource problems that community-based avitourism is trying to address are not isolated scientific or technical problems, but are part of socio-ecological systems which entail complex inter-relationships between social, ecological and economic components. In this light the research was not designed to evaluate a standard null hypothesis $H_0$ and alternative hypothesis $H_1$, but instead to formulate a set of key research objectives and questions with respect to community-based avitourism projects. These questions can be related back to Figure 1.2 as community-based avitourism represents an enterprise-based strategy directly dependent on *in situ* biodiversity to succeed.

The key research questions on community-based avitourism projects that this research attempted to answer were:

- What are the biodiversity conservation and development benefits?
- What the factors are that lead to conservation and development success?
- What is the institutional environment in which community-based avitourism projects operate and which institutional characteristics are key features in the success of these initiatives?
- Is there a link between the biodiversity conservation and economic benefits?
- How cost-effective is community-based avitourism as a job creation and development tool?

# CHAPTER 2 METHODS

## 2.1. Conceptual approach

Methods to study community-based ecotourism initiatives vary widely, depending on the time frame and nature of the study, the available budget, the disciplinary background and paradigm of the researcher or composition of the research team, and the objectives of the research (Berkes 2004). A common approach is to undertake a detailed and intensive study that focuses on one protected area or community (Bookbinder *et al.* 1998, Hvengaard and Dearden 1998, Walpole and Goodwin 2000, Abott and Thomas 2001 and Walpole and Goodwin 2001). Others have developed models or toolkits and tested them or applied a specific toolkit to different ecotourism operations to investigate specific issues such as pro-poor tourism or the sustainability of nature-based tourism in a comparative fashion (Ashley *et al.* 2001, Spenceley 2003 and Spenceley and Seif 2003). A number of studies and publications such as Yaman and Mohd (2004), Carrington (1996) and Spenceley (2005) discuss how community-based ecotourism can be developed and implemented as a conservation and development tool in a specific country or region. Salafsky *et al.* (2001) developed and implemented a learning portfolio approach to investigate the linkages between economic and conservation benefits and the relationships and factors that drive project success in a range of enterprise-based ICDPs which included ecotourism-based enterprises. Their research approach represented a learning portfolio which systematically tested a conservation strategy by supporting projects using the strategy and working with projects to collect the data necessary to test it Salafsky *et al.* (2001). Their approach allows for assessing impacts and trends across a range of different sites. Salafsky *et al.* (2001) recommend that the learning portfolio approach which they followed be used in the research and understanding of other conservation strategies.

In the context of the conceptual approach taken by this study as described in the introduction, the methodologies used by Salafsky *et al.* (2001) were applied in this research. This approach to researching community-based avitourism enabled the assessment of benefits, trends and project dynamics across a range of sites. This study was conducted in a learning portfolio in that the researcher was involved with projects that were using the strategy as well as collecting data to research and test this strategy. This study aimed to go a step beyond Salafsky *et al.* (2001) and to elucidate the institutional characteristics which underpin the success of community-based avitourism and describe the institutional context in which community-based avitourism projects operate. Further details on the methods used by Salafsky *et al.* (2001) that were utilised in this study are provided in sections 2.3.4. and 2.3.6. The conceptual model of a socio-ecological system presented in Anderies *et al.* (2004) was used as a framework to describe the institutional dynamics and relationships of each CBAT project investigated, as well as to synthesise these into three general models. A stakeholder matrix analysis, using a participatory research technique, based on Long (2004) was used to

collect the data on the stakeholder and institutional environment at each study site. This information was supported by data collected through the use of historical transects and time trends as described in D'Hease and Kirsten (2003). Further information on these research techniques can be found in sections 2.3.2 and 2.3.5.

## 2.2. Projects selected for study

### 2.2.1. Site selection criteria

The following selection criteria were used in selecting case study sites to include in this study:

- The availability of high quality information based on in-depth knowledge and experience of each of the key case studies so that the institutional context could be clearly understood.
- The projects under investigation needed to contain a strong community-based ecotourism and conservation development component.
- Feasibility in terms of collecting the necessary information, access, cost and available funding to conduct research at the site.

### 2.2.2. Study sites

The selection of projects included in the study represented all current community-based avitourism initiatives in South Africa that have been operating for over 2 years. All the projects that were included in this study are listed in Table 2.1. Figure 2.1 indicates where these sites are located in South Africa and Figure 2.2 shows the location of sites in Kwazulu Natal. The projects in Kwazulu Natal are all part of the Zululand Birding Route (ZBR), a central marketing and coordination unit, but they are sufficiently unique to be treated as independent sites. The development of local bird guides at Wakkerstroom consists of two different projects, the BLSA local guides and the Bell's local bird guide development. BLSA employs local guides from its Wakkerstroom office and is in charge of marketing them and coordinating a reservations system. BLSA appointed David Nkosi as their first guide in 2000 and subsequently employed other guides. The Bell's local guide development project started in 1997 and was focussed on developing self-employed local guides.

Table 2.1: **Projects included in this study**

| Project | Project affiliation/broader program | Province |
|---|---|---|
| Dlinza Boardwalk, Eshowe | Zululand Birding Route | Kwazulu Natal |
| Muzi Pan | | |
| Richards Bay | | |
| Ngoye Forest Reserve | | |
| Amatikulu Nature Reserve | | |
| Green Futures | Independent | Western Cape |
| Kimberley local bird and eco-guide development | The BirdLife South Africa and the Northern Cape Department of Environmental Affairs, Tourism and Conservation | Northern Cape |
| Development of local birding and eco-guides at the Blue Swallow Natural Heritage Site, Kaapsehoop | BirdLife South Africa and the Endangered Wildlife Trust – Blue Swallow Working Group | Mpumalanga |
| Development of local birding and eco-guides in the Magoebaskloof | | Limpopo Province |
| BLSA local bird guide development in Wakkerstoom | BirdLife South Africa | Mpumalanga |
| Bell's local bird guide development in Wakkerstoom | Wakkerstroom Natural Heritage Association and United Distillers | |

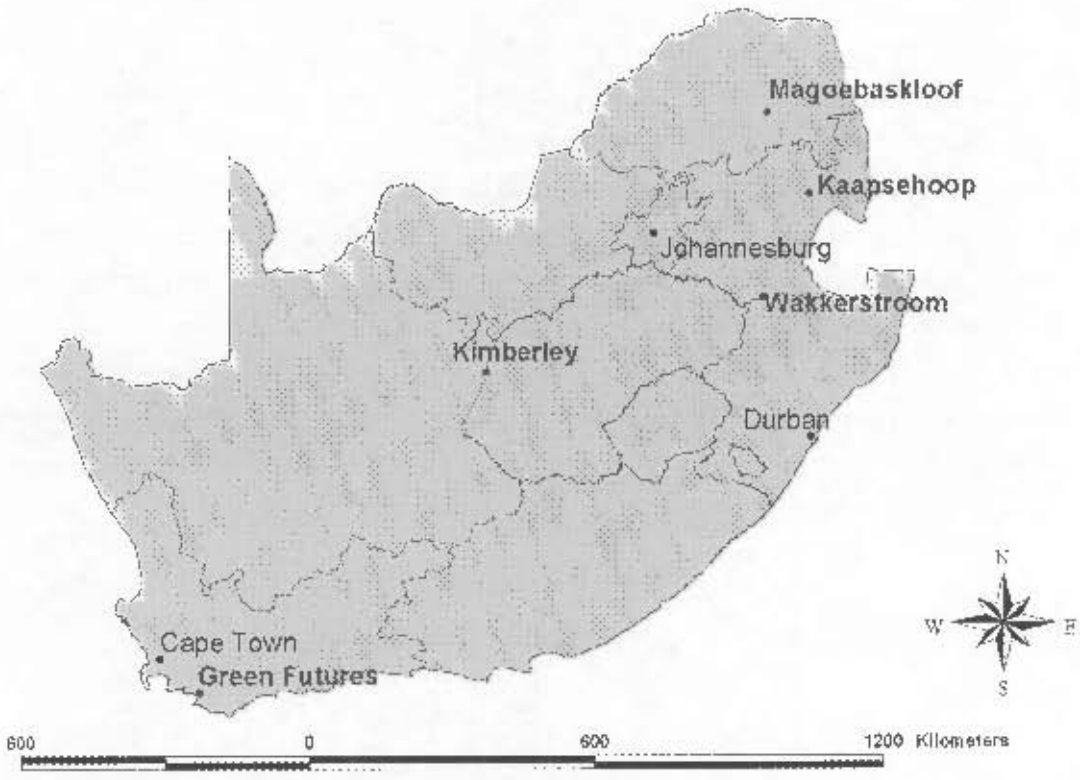



Figure 2.1: **A map of South Africa showing the location of the study sites (excluding those in Kwazulu Natal)**

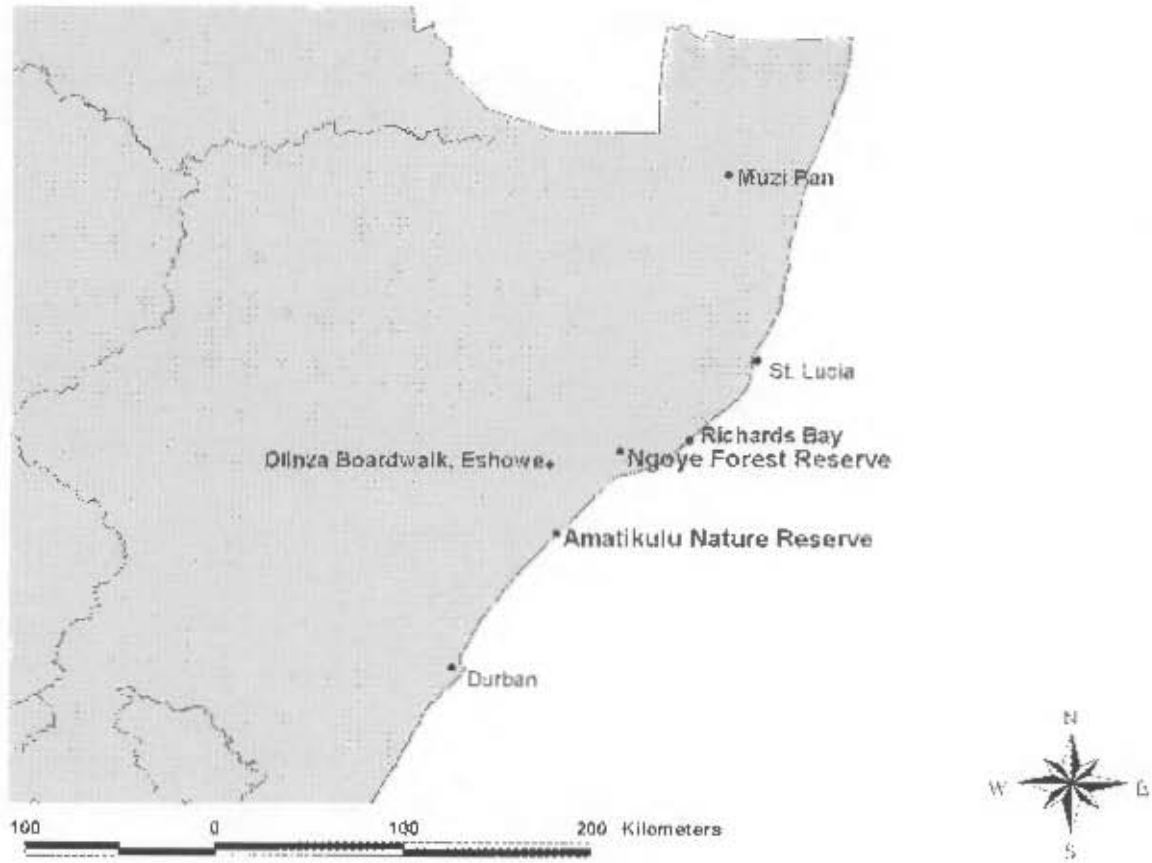



**Figure 2.2. A map of Kwazulu Natal showing the location of the study sites**

### 2.2.3. Study site descriptions

The site descriptions below are intended to provide a basic background on each site and the special and threatened bird species found there. Detailed information on the site and project history as well as the institutional environment and stakeholder relationships at each site are provided in section 2.2.3. The results of the Threat Reduction Assessment evaluations, which contain details of the threats to the conservation of each site, are detailed in section 3.5.1.

*Dlinza Boardwalk, Eshowe*

The Dlinza Boardwalk is situated in the 202 hectare Dlinza Forest Nature Reserve which is an IBA (IBA SA067), in the town of Eshowe, The reserve is situated on the R66 a main road running through northern-central Kwazulu Natal, it is 25 kilometres from the N2, the national road that runs along the Kwazulu Natal north coast. The nature reserve is managed by KZN Wildlife, the provincial conservation authority. The forest is located at an altitude of 530 metres above sea level and the reserve consists almost entirely of forest. The forest has characteristics of both coastal lowland forest and of mist-belt forest and is sometimes called coastal scarp forest (Johnson *et al.* 1998). The forest is a regular breeding site of the globally threatened Spotted Thrush *Zoothera guttata* and also holds the nationally threatened Delegorgue's Pigeon *Columba delgorguei*, as well as one globally near-threatened and two

nationally near-threatened species (Johnson *et al.* 1998). The threatened Blue Duiker *Philantomba monticola* is common and numerous threatened cycads occur (Johnson *et al.* 1998). Through funding provided by WWF-SA and Sappi, South Africa's first aerial boardwalk was constructed in this forest. There is a boardwalk management authority which employs a varying number of full time guides (currently 3). In addition to the employed guides there are currently 4 freelance local guides operating at the boardwalk.

*Muzi Pan*

Muzi Pan lies in the Greater St Lucia Wetland Park managed by KZN Wildlife near the south-eastern boundary of the Mkuzi Game Reserve. The site used to be very isolated but with the upgrading of a tarred road as part of the Lubombo Spatial Development Initiative it has now become more accessible, although it still remains one of the most isolated sites on the ZBR. The closest medium sized town is Hluhluwe and is about 50 kilometres by road. The unemployment rate in the local community is very high (pers comm. Pritchard 2005). The pan forms part of the Lake St Lucia and Mkuze Swmaps IBA (IBA SA058) (Johnson *et al.* 1998). Muzi Pan is a long, narrow cut off lake with a predominantly bare shoreline and *Phragmites* reeds mainly at the northern end (Johnson *et al.* 1998). Tall woodland and thicket surrounds the pan. The main attraction at the site is a resident Pel's Fishing Owl *Scotopelia peli* and a range of waterfowl, waders species occur on and around the pan. These include African Pygmy Goose *Nettapus auritus* and White-backed Duck *Thalassornis leuconotus* . Pink-throated Longclaw *Macronyx ameliae* also occurs. Numerous specials also occur in the surrounding thickets and woodland including the range-restricted Lemon-breasted Canary *Serinus citrinipectus* and Pink-throated Twinspot *Hypargus margaritus*. Two local bird guides currently operate at Muzi, the third passed away recently.

*Richards Bay*

Richards Bay is located 190km north of Durban and is home to one of South Africa's major harbours and industrial development around the harbour are the backbone of the local economy. The industrial development in Richards Bay presents a major conservation threat in the form of regular industrial spills and continued pressure for further industrial development (pers. comm. Duncan Pritchard). The Richards Bay Sanctuary or Game Reserve has been designated an IBA (SA 079) was formed in 1976 when a berm was erected across Richards Bay estuary (Johnson *et al.* 1998). The harbour development resulted in the division of the Richards Bay estuary into two sections. To the north-east of the berm, unrestricted harbour and industrial development proceeded and to the south-west of the berm, the bay was left as a nature reserve. Three rivers flow into a shallow mudflat and estuarine area in this reserve. The once extensive papyrus swamps on the Mhlatuze River floodplain have largely been drained and converted to sugar cane (Johnson *et al.* 1998). The natural remnants in the Richards Bay area are fragmented and disturbed and surrounded by industrial sites, roads and dumps (Johnson *et al.* 1998). Vegetation consists mainly of Papyrus, *Phragmites* and

*Typha* reedbeds. A site of substantial ornithological interest is Thulasishleka Pan which is situated in the industrial zone of Richards Bay and owes its origin to the disposal of spoil dredged during harbour construction in 1976. There are 8 nationally threatened bird species present at the site and these include the rare Bittern *Botaurus stellaris*, Grass Owl *Tyto capensis* as well as the globally threatened migrant the Corncrake *Crex crex*. The presence of regular vagrant species is another important draw-card for birders (Johnson *et al.* 1998). There are currently 7 local guides operating in Richards Bay one of which has a full time position with Richards Bay Minerals and another has a full time position with the University of Pretoria's local research unit. Richards Bay is the home town of the coordinating office of the Zululand Birding Route, which plays an important role in marketing, managing and coordinating all the sites included in this study that are in Kwazulu Natal.

*Ngoye Forest Reserve*

Ngoye forest is situated 20 kilometres to the east of Eshowe town and 11 kilometres inland of the small town of Mtunzini but is accessible only on a fairly poor dirt track. The reserve is 3906 hectares in size and is a designated IBA (SA065) (Johnson *et al.* 1998). This forest patch is currently managed by KZN Wildlife and before 1994 it was managed by the Kwazulu Bureau of Natural Resources. The open, wind-exposed ridges hold extensive patches of grassland dominated by *Andropogon shirensis*, *Aristida junciformis* and *Eragrostis capensis* among others (Johnson *et al.* 1998). The grassland has an extremely diverse forb component. Rocky outcrops in the grassland have bush clumps which hold *Canthium inerme*, *Ficus glumosa* and *Ficus ingens* (Johnson *et al.* 1998). Some of the open valleys hold open *Syzigium cordatum* woodland. The climax forest is characterised by its continuous canopy of large trees (25 to 30 metres in height) and poorly developed shrub layers (Johnson *et al.* 1998). The dominant tree species are *Chrysophyllum viridiflorum*, *Milletia sutherlandii* and *Margaritaria discoidea*. This is the only forest patch in southern Africa holding the Woodward's (Green) Barbet *Stactolema (olivacea) woodwardi.* The globally threatened Spotted Thrush *Zoothera guttata* and the nationally threatened Delegorgue's Pigeon *Columba delegorguei* occur in the forest (Johnson *et al.* 1998). Ngoye forest has its own endemic mammal, the Ngoye Red Squirrel *Paraxerus palliates ornatus* (Johnson *et al.* 1998). The Ngoye Dwarf Cycad *Encephalartus ngoyanus* and the localised Kwazulu Natal endemic the Zululand Dwarf Chameleon *Bradypodion nemorale* also occur (Johnson *et al.* 1998). There are currently no local guides based permanently at Ngoye, as the local guide that was selected and trained from the village neighbouring the forest reserve is currently completing additional studies at the University of Zululand in Richards Bay. Local guides based at Amatikulu Nature Reserve and at Dlinza Forest take clients to Ngoye because of its many birding attractions and its position as a key node of the ZBR. New developments are underway at the forest in the form of a birding and ecotourism lodge being built in partnership with the local community and that will initially be run under the auspices of the ZBR. A new tar road that will vastly improve access to the forest is also being built to accompany the lodge.

*Amatikulu Nature Reserve*

Amatikulu Nature Reserve is situated at the confluence of the Nyoni and Amatikulu rivers along the Indian Ocean. The reserve habitats consist of the river estuaries, coastal lowland and dune forest and coastal grassland (Gibbon 2003). It is accessed just off the N2 national highway by means of a gravel track. *Mimusops caffra* and *Brachyleana discolor* are dominant tree species of the dune forest and *Dalbergia armata* and *Dalbergia obovata* are dominant species of the coastal lowland forest (Grant and Thomas 1998). The reserve is 2100 hectares in size (Zululand Birding Route 2005). The closest major town is Stanger about 30 kilometres away. The nature reserve is managed by KZN Wildlife. The birding attractions at Amatikulu include breeding Swamp Nightjar *Caprimulgus natalensis*, Green Twinspot *Mandingoa nitidula* and Grey Waxbill *Estrilda perreini* among numerous other coastal forest, savanna and wetland species. Numerous large mammal species have been re-introduced into the reserve. Initially, 15 local guides were trained in 2000 and 2001 as part of a broader community development project. Of these 3 remain active in local bird guiding on the ZBR. Two of the local guides trained at Amatikulu are now working for the ZBR coordination office.

*Green Futures Horticultural & Ecotourism Development Project*

The Green Futures project is closely linked with the 1700 hectare Grootbos Private Nature reserve and two associated five star lodges. The nature reserve is situated in a popular tourist area near the town of Hermanus. The private nature reserve conserves a wide array of Fynbos plant species including *Erica magnisylva* which is endemic to the reserve (Africa Geographic 2006). Bird species include Orange-breasted Sunbird *Anthobaphes violecea*, Cape Siskin *Pseudochloroptila totta* and Cape Sugarbird *Promerops caffer*. The tourism operations commenced in 1995 and the Grootbos Private Nature Reserve was declared in 1996. The Green Futures project was in operation by 2003. This project is somewhat different from the others included in the study in that the focus of the project is on building capacity in individuals from previously disadvantaged communities to operate in indigenous horticulture and gardening. Although the focus of this project is slightly different, the objectives of strengthening local conservation through job creation and capacity building are the same and hence the inclusion of this project in this study. There is also a strong ecotourism link in that of the 11 people that had completed training at the time of the field visit, 4 of them that have since become local guides at the Grootbos Private Nature Reserve. The use of the word guide in this thesis is interchangeable with project beneficiary to include learners from Green Futures that are not ecotourism or birding guides.

*The Blue Swallow Natural Heritage Site at Kaapsehoop*

This 1500 hectare site is an IBA (SA014) and lies 30 kilometres south-west of Nelspruit, the capital of Mpumalanga province. It accessible by taking a short detour between Ngodwana and Nelspruit on a good, tarred road off the national N4 highway, one of the main tourist routes between Johannesburg and the Kruger National Park. The site consists of gently

undulating sour grasslands lying between 1695 and 1720 metres above sea level and is bisected by narrow drainage lines. The grasslands are dominated by *Themeda triandra*, *Leudetia simplex* and *Eragrostis racemosa* among a host of other species (Barnes and Tarboton 1998a). The Tree Fern *Cyathei dregei* lines the streams within the grasslands. The forests which are restricted to mesic valleys are dominated by *Rapanea melanophloes*, *Xymalos monospora*, *Podocarpus latifolius*, *Pterocelastrus echinatus* and *Syzygium gerrardii*. The site is a globally important IBA because of the presence of 8 to 12 breeding pairs of the globally threatened Blue Swallow *Hirundo atrocaerulea* (Barnes and Tarboton 1998a). The globally near-threatened Buff-streaked Chat *Oenanthe bifasciata* also occurs as does Gurney's Sugarbird *Promerops gurneyi* and Bush Blackcap *Liotilius nigicapillus*. The grassland in the reserve is known to hold Oribi *Ourebia ourebi*. The Natural Heritage site was until recently owned by the national Department of Water Affairs and Forestry and managed by the forestry company Komatiland Forests (previously SAFCOL) but it is in the process of being handed over to Mpumalanga Parks Board (pers. comm. Rudi du Plessis, local business owner). There is one local guide at the site, he was trained in 2001 and is supported by the Endangered Wildlife Trust - Blue Swallow Working Group (EWT – BSWG). The site is threatened by alluvial and open-cast mining, alien trees, uncontrolled tourist use and a lack of suitable nest-holes for the Blue Swallow (Barnes and Tarboton 1998a).

*Magoebaskloof*

The forests and grasslands in the Magoebaskloof area form part of the Wolkberg Forest Belt IBA (SA005). The region is heavily impacted by forestry and is dominated by *Eucalyptus* and *Pinus* plantations but large patches of good quality high altitude Afro-montane forest and small grassland patches are found (Barnes and Tarboton 1998b). Forest trees are up to 50 metres tall and species of general occurrence include *Rapanea melanphloes, Xymalos monospora, Podocarpus latifolius, Podocarpus falcatus* and *Rhus chirendensis.* The globally threatened Blue Swallow *Hirundo atrocaerulea* has been found breeding in the grasslands in this area. The forests here are a stronghold for the globally threatened South African endemic, the Cape Parrot *Poicephalus robustus*. Numerous other nationally near-threatened species and afro-montane forest species occur. These include Bat Hawk *Macheiramphus alcinusm*, Orange Thrush *Zoothera gurneyi*, African Finfoot *Podica senegalensis* and Whitebacked Night Heron *Gorsachius leuconotus* The Magoebaskloof forests provides for some of the best forest birding in the Limpopo Province and it is one of the few areas in South Africa where the Black-fronted Bush Shrike *Telophorus nigrifrons* can be seen. The local guide that was trained here is supported by BLSA and the EWT-BSWG. He operates mainly in the Woodbush forest and is actively involved in the activities of the Cape Parrot Working Group as well as the EWT-BSWG.

*The Development of Local Bird and Eco-guides in the Kimberley area*

The city of Kimberley, capital of the Northern Cape Province is situated in central South Africa. The city is situated close to four IBAs. The Dronfield (IBA SA031) and Benfontein Game Farms (IBA SA033) lie within a few kilometres of the city and are both privately owned by the De Beers company. The dominant vegetation on Dronfield Farm is open *Acacia erioloba* savanna in tall grass. Dronfield holds 50 to 60 pairs of nationally threatened African Whitebacked Vultures *Gyps africanus* as well as numerous Kalahari thornveld species such as Kalahari Robin *Erythropygia paena* and Crimson-breasted Shrike *Laniarius atrococcineus* (Barnes and Anderson 1998). The dominant vegetation on Benfontein Game Farm is semi-open savanna, although the farm lies at the junction of 3 major biomes, the Kalahari to the north-west, Grassveld to the east and Nama-Karoo to the south. The globally threatened Blue Crane *Anthropoides paradiseus* breeds on Benfontein Game Farm and the globally threatened Lesser Kestrel *Falco naumanni* and globally near-threatened Blue Korhaan *Eupodotis caerulescens* also occur (Barnes and Anderson 1998). The newly described Long-tailed Pipit *Anthus longicaudatus* and Kimberley Pipit *Anthus pseudosimillis* have both been recorded on Benfontein. Kamfer's Dam (IBA SA032) is actually a non-perennial pan, although it has become a permanent water body in recent years as it is fed by treated sewage effluent from the city of Kimberley and half of the town's storm water. The quality and quantity of the sewage effluent discharged into the pan, and the pollutant levels of storm-water from Kimberley are threats to the integrity of the pan system (Barnes and Anderson 1998). The eutrophic water source that feeds the dam has resulted in the establishment of extensive *Phragmites australis, Typha capensis, Scirpus dioecus* and *Cyperus spp.* marsh, sedge and reedbeds (Barnes and Anderson 1998). Kamfers Dam holds significant congregations of waterbirds including Black-necked Grebe *Podiceps nigricollis* and South African Shelduck *Tadorna cana* (Barnes and Anderson 1998). The dam also holds up to 20000 Lesser Flamingos *Phoeniconaias minor* and 18000 Greater Flamingos *Phoenicopturus ruber* (Barnes and Anderson 1998). Sewage effluent that is pumped into the dam is a conservation concern (pers. comm. Mark Anderson, Northern Cape Department of Tourism, Environment & Conservation). Spitskop Dam (IBA SA028) lies approximately 100 kilometres to the north-west of Kimberley and is one of the largest wetlands in the semi-arid Northern Cape region (Barnes and Anderson 1998). The dam is managed by the Department of Water Affairs and Forestry for water consumption and recreation. Excessive livestock grazing, hunting and poaching of birds and pollution from agricultural pesticides and fertilizers are a threat to the system (Barnes and Anderson 1998). The dam holds significant congregations of waterbirds, particularly Great Crested Grebe *Podiceps cristatus*, South African Shelduck *Tadorna cana* and Red-knobbed Coot *Fulica cristata*. In 2003, 6 local bird and eco-guides were trained from Galeshewe township in Kimberley as a part of a project implemented by BirdLife South Africa and the Northern Cape Department of Tourism, Environment & Conservation (previously the Department of Agriculture, Land Reform, Environment and Conservation. These guides focus

their activities on the IBAs as well as numerous other good birding sites in the Kimberley area.

*Wakkerstroom*

Wakkerstroom is situated approximately 250 kilometres to the south-east of Johannesburg and is accessible on good quality tarmac roads. The area forms part of the Grassland Biosphere Reserve IBA (IBA SA020) which is considered to be one of the most important biodiversity areas in Africa (Barnes and Tarboton 1998a). The area consists of primarily private and state-owned land and a few small protected areas. Key conservation concerns in this area are grassland afforestation, wetland degradation, accidental and targeted poisoning of cranes and increased acid rain from local power station sulphur emissions (Barnes and Tarboton 1998a) The dominant grassland type in the area is moist, sandy highveld grassland which holds *Eragrostis plana, Eragrostis curvula, Heteropogon contortus, Trachypogon spicatus* and *Themeda triandra*. The Wakkerstroom Vlei situated on the outskirts of the town is an internationally important wetland and is predominantly a mosaic of *Carex acutiformis* and *Leersia hexandra*. The Wakkerstroom vlei is home of the globally threatened White-winged Flufftail *Sarothrura ayersi*. The high altitude grasslands around Wakkerstroom are strongholds of three globally threatened South African endemics: Rudd's Lark *Heteromirafra ruddi*, Yellow-breasted Pipit *Hemimacronyx chloris* and Botha's Lark *Spizocorys fringallis* (Barnes and Tarboton 1998a). A further four globally threatened species occur in the area and these are: Bald Ibis *Geronticus calvus*, Lesser Kestrel *Falco naumanni*, Corncrake *Crex crex* and Blue Crane *Anthropoides paradiseus*. Most of the 78 north-eastern mountain grassland endemic and near endemic plant species are found within this IBA.

*Bell's guides:* Wakkerstroom was the site of the first local bird guide training course and project in South Africa in 1997 funded by United Distillers and run by the Wakkerstroom Natural Heritage Association. (WNHA). This initiative was known as the Bell's local guide development initiative.

*BirdLife guides*: In 2000 the first BLSA bird guide training course was run at the Sappi WWF BLSA training centre in Wakkerstroom. David Nkosi attended this first course and was employed as BLSA's first local guide in 2000. David has since resigned and BLSA has employed Lucky Ngwenya. At the time of field research BLSA were looking to employ another local guide. BLSA runs all the marketing and coordination of the guiding operation and the local guides receive a monthly salary.

## 2.3. Interview approaches and tools

### 2.3.1. General approach

Project coordinators, local guides and key stakeholders were interviewed at each site, to obtain a range of views and perspectives from the different key role players. The interviews were conducted between the 26th of April and the 13th of July 2005. A combination of

interview techniques was used. These included scheduled structured interviews and non-scheduled structured interviews. A scheduled structured interview is based on an established questionnaire and entails a set of questions with fixed wording and sequence of questions that is presented in the same way to each respondent to ensure consistency and objectivity (Bless and Higson Smith 1995). A non-scheduled structured interview entails a list of issues to be investigated that is made prior to the interview that may include some precise questions, but the interview is non-scheduled in the sense that the interviewer is free to formulate other questions as judged appropriate in the situation (Bless and Higson Smith 1995). According to the interview methods described in Patton (1980), the standardised open-ended interview and the general interview guide approach were combined. This enabled standardised information to be collected from all the interviewees as well as allowing for the collection of additional information and insights on the projects under investigation. Combinations of open and closed-ended questions were used. Where necessary, the interview style was adapted to improve participants' understanding of the issues under investigation. In some instances, groups of local guides participated in focus group discussions. During this process, participants share their thoughts with each other and the interviewer's role was to stimulate debate (Bless and Higson Smith 1995).

*Reliability and validity*

The researcher conducted all the interviews personally using the same structure to ensure consistency of measures, reliability and comparability (Bless and Higson Smith 1995 and Neuman 1997). The interviews were conducted and structured in a manner that was non-threatening by taking steps to ensure that the interviewees were at ease and comfortable (Manheim 1977 and Neuman 1997). Communication was made with interviewees in advance, and care was taken to conduct interviews as accurately and thoroughly as possible to ensure that the appropriate level of detail was obtained and confidentiality was assured. These procedures adhered to the guidelines for good interviews (Fowler 1993). Because of the amount of time and effort that were put into each interview many of the standard problems associated with questionnaire and interview surveys such as lack of clarity and potential for misunderstanding and misinterpretation were reduced. As all interviewees had a good understanding of the English language and could speak English fluently, no interpreters or translators were needed.

*Pilot Study*

The Pilot Study for these questionnaires was conducted and this entailed obtaining the input of researchers with extensive experience in using similar questionnaires as well as the interviewing of 9 project beneficiaries, 1 project coordinator and 1 key stakeholder.

### 2.3.2. Assessment of Historical Trends

Extensive use was made of historical transects and time trends during the interviews. D'Hease and Kirsten (2003) define a historical transect as a technique which is used to get an indication and understanding of the major events and changes in the past. Time trends show quantitative changes over time in different aspects of life. Where it seemed as though an interviewee did not understand the question, this was re-explained and discussed. The approach involves the following steps:

1. Explain the purpose of the activity to the interviewee/s.
2. Facilitate a short open discussion to establish a starting point for the time-line.
3. Explain how the exercise is done, e.g. start with an appropriate date and then get an indication of:
    - the quantitative variables under investigation (time trend)
    - The key events, developments changes and developments that have taken place (historical transect)
4. Facilitate discussion around key points, identify the key driving factors that led to the changes in the quantitative measures (time trend) and project and development changes (historical transect).

Historical transects and time trends were used to collect data on conservation action and conservation awareness benefits, direct economic impact as well as the history of community-based avitourism development in South Africa.

*Conservation Action*

Conservation Action is defined as conservation-oriented activities undertaken as part of or a result of avitourism projects under investigation. This includes activities such as monitoring of bird species and numbers, patrolling of a key site, clearing invasive alien species and clearing litter. This was investigated through the use of historical transects and time trends and in this way quantitative data on the extent of conservation action (in terms of numbers of hours and days and number of people involved) as a result of the development of the avitourism projects under investigation was established. This data is represented as the number of labour days which is defined as the equivalent of 8 hours of conservation-directed labour activity by 1 adult.

*Conservation Awareness*

Conservation awareness activities are those activities which are specifically targeting an increase in awareness of the importance of the conservation of a certain species/ site / area or conservation in general. This includes presentations at community meetings, schools, churches and school and community outings. This was investigated through the use of historical transects and time trends and in this way quantitative data on the amount and extent of conservation awareness (in terms of numbers and frequency of awareness activities

and the numbers of people involved) as a result of the development of the avitourism projects under investigation was established.

*Direct economic impact*

The direct economic impact was measured through increased income generation due to the projects under investigation. At each project a) the local guides and b) project coordinators were questioned as to the levels of income earned by the local guides and the number of local guides that gained part time or full time employment due to the avitourism projects. In some cases only the local guides provided income data as the project coordinators did not have this information and for certain learners at Green Futures and on the Zululand Birding Route sites income information was only available from the project coordinator. This information was provided in the form of detailed quantitative time trends. Where there were discrepancies between the figures provided by a) and b) averages were used. In many projects, some of the local guides gain other employment and are involved in guiding in only a part time basis or not at all. A local guide's income was included as part of the project benefit if: a) their job or work is in the tourism and conservation fields and therefore related to the training that the community-based avitourism project provided them, or b) or the position they have obtained is a result of the training and development process that they have been through on a community-based avitourism project. Local guides were also asked to provide information on how many dependants were being supported by their income and what their income was before they were selected and trained as local guides. Additionally, the number of project beneficiaries that have gained full time or part time employment due to their involvement in the project was ascertained as well as the numbers of beneficiaries who dropped out of the training program.

*Understanding the history of avitourism development*

The study attempted to understand the broader institutional and political environment which provided the basis for the rapid growth in community-based-avitourism from the late 1990s onwards. In-depth, non-scheduled structured interviews in the form of historical transects were used. The main interviewee for this segment of the work was Aldo Berruti, the Director of BirdLife South Africa from 1996 to 2004. This information was augmented by an interview with Andre Botha (the Guide Training Manager for BirdLife South Africa until 2004) and interviews with project coordinators and key individuals involved in avitourism development during this period. A total of 7 individuals were interviewed for this component. The methodologies draw to a large extent on Olsson *et al.* (2004) who describe the presence of a "window of opportunity" that led to the successful emergence of institutions for the sustainable ecological management of a wetland landscape in Sweden.

### 2.3.3 General open-ended questions

Interviewees were asked a few general, open-ended questions which gave them the opportunity to provide information on additional aspects of these projects. The structure and wording of these general open-ended questions is indicated in the table 2.2.

**Table 2.2: General open-ended questions**

| Question Number | Question |
|---|---|
| 1 | What would you change if you could change anything about the project and your personal experience and development as part thereof? |
| 2 | What have been the biggest highlights and strong features of this project and your involvement in it? |
| 3 | How would you say this project and your experience has made a difference to your life and to the life of other project participants? |
| 4 | How would you say your involvement in this project has made a difference to the community which you come from? |
| 5 | What would you say the impact would be if the support from Duncan Pritchard and the ZBR support and marketing structure changed. (Question only relevant to ZBR projects)? |
| 6 | Any other comments? |

### 2.3.4. Expert Scale Ranking Exercises

Extensive use was made of Expert Scale Ranking Exercises following the work of Salafsky *et al.* (2001). This provided an effective way to collect data on numerous variables related to the institutional environment of the projects. Seven-point scale rankings (Likert scale) designed through the use of strictly defined criteria and applied in a standardised fashion across all sites were used for this purpose. Tourangeau *et al.* (2000) argue that 7 rating scale categories seem to present the best compromise in conducting research. Preston and Collman (2000) mention that rating scales with 7 response categories have a high test-retest stability as well as high internal consistency reliability. Preston and Collman (2000) suggest that rating scales with 7, 9 or 10 response categories are preferred and that the use of 5 point rating scales is less justified. Expert scale ranking scores and supporting evidence for scores were obtained from the project coordinators local guides and stakeholders at each site. These scores were averaged and the researcher used these to develop standardised scores for each site to ensure consistency across all sites. The institutional variables that data were collected on are indicated in Table 2.3. Appendix 3 contains details of the scales used for each measure.

**Table 2.3: Definition and relevance of each institutional measure as measured through the Expert Scale Ranking technique**

| Code | Measure | Definition & Relevance |
|---|---|---|
| T1 | Extent of threat reduction targeted | The extent to which a project has targeted the reduction of threats to the conservation of a site or group of sites of interest. |
| A1 | Extent & strength of the marketing arm of a project | The extent & strength of the marketing arm of a project. Marketing was mentioned by community-based avitourism workers as a critical success factor during the research design phase. |
| A2 | Extent & strength of long term support for capacity building by a project | This reflects the extent to which a project has budgeted resources/ made provision for providing capacity building support during the project implementation period. |
| A3 | Extent of long term support for coordination by a project | Coordination support refers to general coordination of activities which support the process of local guides taking out clients on a bird or nature tour. These would include, making contact with guides to make sure they are there on time, following up if there are any complaints or problems etc. |
| A4 | Extent of embedment of project in institution with continuity | The extent to which a project is embedded in an institution with continuity, e.g. if a local government department or local business (which should continue to exist in an area in which there is a project) are partnered in the implementation of a project, it can be said that the project is embedded in an institution with continuity. |
| A7 | Extent of project focus on building a support network for local guides. | Support networks for local guides are seen as critical in their successful business development. These support networks would consist of local businesses, Bed & Breakfasts and other tourism establishments, conservation officials and other skilled individuals who assist the guides in developing. This support group would play a critical role in providing the guides with networks to for e.g. tourist accommodation establishments which would forward clients to the guides. The support group should also provide network links to key individuals and organisation which would put the guides in a position to access further opportunities for capacity building, marketing, exposure etc. This support structure should also play an active role in promoting the conservation capacity of the guides and assist them in developing and undertaking conservation and conservation awareness activities. Such a support network may include a formal body or committee or may be an informal grouping. |
| A8 | Extent of emergence of non-direct project support structure for the project | This measures the extent to which a non-direct (external) support structure emerged and was active in supporting the project. |
| A10 | Extent of project link to direct employment opportunities | This measures the extent to which a project focuses on ensuring employment opportunities for learners (trained guides) in terms of project design and budgeted activities. |
| A11 | Extent of linkage to established and relevant tour operators | Established Bird Tour Operators (e.g. Lawson's Birding & Photographic Tours, Birding Africa, Tropical Birding and Rockjumper Birding Tours) can play an important role in making use of the services of local guides on their own tours, as well as reserving local guides directly. Established operators may also play a role in building the capacity of local guides. A11 measures the extent to which local guides have a link to established bird tour operators. This linkage could either have been facilitated by the project coordinators or may have emerged directly between the local guides and the established tour operators. This measure includes linkages with the full range of operators. |
| A12 | Extent of focus on the candidate selection process | Because of the severe challenges and barriers and the high costs that are involved in building capacity in individuals from previously disadvantaged communities, project experience to date has shown that substantial resource investment in candidate selection is of importance. A12 measures the extent to which projects have committed time and other resources into the candidate selection process to ensure that high quality candidates are selected. |

| | | |
|---|---|---|
| A13 | Extent of local site accessibility to potential market | The accessibility of a site to potential tourists is an important aspect and arguably, the more accessible a site, the lower the required marketing expenditure and drive (A1) to ensure a steady flow of clients. This measure assesses, based on the best judgement of project coordinators and other key tourism stakeholders, to what extent a site at which local guides operate is readily accessible to the potential clients. This measure includes distance to large potential market, proximity to existing major tourist routes and local scale accessibility (tarred road, easy to find, well-marked etc). |
| A14 | Extent of birding and eco-touring attraction | The presence of range-restricted bird species or so-called birding specials or other attractive species play an important role in birding tourists or general eco-tourists with an interest in birds visiting a site. |
| A15a | Ease of site accessibility without a local guide (this measures the extent to which there is a legal or logistical requirement to take a local guide) | Ease of access to a site without a guide is an important issue, as at some sites there is a legal requirement that the site can only be accessed through hiring a local guide. Often in these cases only a guide has a key to an entrance gate which allows access to a site. At other sites, access is freely open to the public and the use of a local guide is optional and would be done to enhance the birding experience such that more birding specials can be seen. |
| A15b | Extent of perceived need for use of a local guide for security reasons. | At some sites having a local guide along is perceived as an important for enhancing security of the birding visit – whereas other sites are safe and easy to go into on your own. |
| A15c | Extent of perceived need to use a local guide to find your way around | At some sites, one needs a local guide to find your way around, as entering the area on your own you will most likely get lost and/or not get to the right place for the birding specials; whereas other sites are well marked and it is easy to get to, and there is good information on where the exact sites are to see the birding specials. |
| A15 | Overall perceived need for a local guide. | An overall score considering the above three and other possibly relevant factors in the extent to which a local guide needs to be used. |
| A16 | Extent of complaints by clients about the services of the local guides. | A score measuring the extent to which there are complaints by clients about the services of local guides |

### 2.3.5 Description of stakeholder environment and institutional relationships of individual projects

A stakeholder matrix analysis technique based on Long (2004) was used to gain an understanding of the stakeholder environment and institutional relationships at each project site. The steps in this process are as follows:

1. Explain the purpose of the activity to the individual/group, the importance of institutions and organisations to a projects success.
2. Provide examples.
3. Make a list of all the important organisations and people involved in the project (including community-based organisations, non-governmental organisations, government departments, private sector organisations and key individuals).
4. Create a table which encompasses the following measures as indicated below.
5. Through discussions with the individual/group decide how important various organisations and people are for the project. Through this process each organisation

will be rated on a 7 point expert scale ranking exercise (Likert scale) where 7 is the most important and 1 is the least important and 4 is of a medium or average level of importance.

6. Through discussion determine how strong and close each relationship is, where 7 is a strong, close relationship and 1 is a weak, distant relationship.
7. Conflict in each relationship is expert scale ranked, where 1 is a very high level of conflict and 7 is a very low level of conflict.
8. The strengths and weaknesses of each relationship with every organisation mentioned are elicited.
9. Ask for further comments.

The results of the stakeholder matrices in combination with discussions with the interviewees were used to construct an institutional representation of each project shown in section 3.2. The construction of these institutional models grouped the Likert scale scores. With respect to closeness of an organisation with the project, scores of 1 – 3 were grouped together as weak or distant, 4 – 5 as a moderate level of closeness and 6 or 7 as a close relationship. Similarly a score of 1 -3 was grouped as a high level of conflict, 4 – 5 a moderate level of conflict and 6 or 7 as a low or minimal conflict. This representation was based on the model presented in Anderies *et al.* (2004).

### 2.3.6. Threat Reduction Assessment

An important part of assessing the conservation benefits of each project was through the application of the Threat Reduction Assessment (TRA) tool (Salafsky and Margoluis 1999 and Margoluis and Salafsky 2001) to each project under investigation. TRA has a theoretical disadvantage in being a proxy measure for biodiversity conservation, it measures the reduction in threats to biodiversity and not biodiversity itself. The use of this index was appropriate for this study as it is practical and cost effective, is directly related to project interventions and is based on data collected through simple techniques and can be done in retrospect. TRA measures the extent to which a project has been successful by reducing the threats to a particular site. As far as possible TRA scores were calculated with the inputs from project coordinators and other key stakeholders, typically conservation officials. These inputs were averaged to obtain the score used in the analysis. In one instance, for Ngoye forest, where a new community-based birding-tourism development is currently under construction, a TRA score was calculated for the current situation as well as a projected TRA score for once the birding tourism development is in operation. The TRA Evaluation form is shown in Appendix 4. The steps in conducting a TRA assessment are as follows (adapted from Margoluis and Salafsky (2001):

1. Define the exact area where the conservation project is being implemented and establish specific start and end dates for the assessment period. Specify the biodiversity that the project is targeting in terms of area, species or both.
2. Identify all the direct threats (i.e. threats that immediately affect the biodiversity of the site of interest) to biodiversity at the start of the assessment period.
3. Write a clear and precise definition of each threat and explain what 100% reduction (elimination) of that threat means.
4. Rank the threats based on the portion of area in the site that the threat will affect. The largest number is assigned to the threat that will affect the largest area and the smallest number to the threat that will affect the smallest area. Do not assign the same ranking number to more than one threat.
5. Rank the threats based on intensity (i.e. the impact or severity of the destruction caused by the threat), assigning the largest number to the most intense threat.
6. Rank each threat for urgency (i.e. is it a current threat or will it only occur 25 years from now), assigning the largest number to the most urgent threat.
7. Add the three rankings (area, intensity and urgency) across the columns to arrive at a total ranking for each of the threats you identified. Add up these total rankings to determine the combined total ranking.
8. As of the end date of the assessment period, determine the degree to which each threat has been reduced, based on the definition of 100% threat reduction from Step 3. The most accurate, reliable and cost-effective method should be used to ensure that the information entered into the analysis is as measurable, precise, consistent and sensitive as possible.
9. Multiply the total ranking for each threat by the percentage threat reduced determined in Step 8 and add the numbers to determine the total raw score.
10. Divide the total raw score (from Step 9) by the total ranking (from Step 7) to determine the TRA Score or Index.

### 2.3.7. Measuring capacity building benefits

Capacity building is defined as the enabling of people not only to perform specific tasks which can increase their income but also to make decisions and follow a development path which will actively enhance the quality of their lives according to their own criteria (De Beer and Swannepoel 1998). It is considered a key component of a development initiative. The levels of capacity building in each project was assessed through obtaining a measure of the capacity of project beneficiaries (local guides) to perform successfully as local bird and nature guides through the use of a capacity building expert scale ranking exercise. Local guides were asked to score themselves and project coordinators were asked to score the local guides as well. These scores were averaged for the purposes of the analysis. The rates of successful National Qualifications Framework assessment of local bird and nature guides against national standards defined by the Tourism and Hospitality Education Training

Authority of South Africa was used as a baseline for determining the scale. The ranking scale that was used is indicated below.

**Table 2.4: Expert scale for determining extent of capacity building benefits**

| Rating | Description |
|---|---|
| 1 | The beneficiary attended the local bird guide training course offered by BirdLife South Africa (or other training agency) but did not advance beyond this level. (very weak) |
| 2 | The beneficiary attended and successfully completed the BirdLife South Africa course (or other training course) but was not assessed as competent against national standards. (weak) |
| 3 | (moderately weak) |
| 4 | The beneficiary was assessed as competent against national standards as a local bird and nature guide (or other relevant standard), but has not furthered his or her development beyond this stage. (moderate) |
| 5 | The beneficiary was assessed as competent against national standards as a local bird and nature guide (or other relevant standard), and has made progress in furthering his/her birding, guiding, business development and conservation skills since assessment. (moderately strong) |
| 6 | (strong) |
| 7 | The beneficiary was assessed as competent against national standards as a local bird and nature guide (or other relevant standard), and has excellent made progress in furthering his/her birding, guiding, business development and conservation skills since assessment. (very strong) |

**Table 2.5 Total number of interviews conducted with each tool at each project site.**

**Key:**

**A = Institutional Variables (Expert Scale Ranking Exercises)**

**B = Capacity Building**

**C = Conservation Action & Awareness**

**E = Income**

**H = Historical timeline**

**G = General open-ended questions**

**S = Stakeholder analysis**

**T = Threat Reduction Assessment**

**X = Total Number of interviews**

| Project | Local Guides | | | | | | | | | Project Coordinator | | | | | | | | | Key Individuals and Stakeholders | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | E | G | H | S | T | X | A | B | C | E | G | H | S | T | X | A | B | C | E | G | H | S | T | X |
| Dlinza Boardwalk, Eshowe | 2 | 1 | 3 | 2 | 1 | 3 | 0 | 0 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 4 |
| Muzi Pan, | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| Richards Bay | 4 | 4 | 4 | 4 | 2 | 4 | 2 | 0 | 4 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 3 | 4 | 0 | 0 | 4 |
| Ngoye | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 1 | 5 |
| Amatikulu | 3 | 3 | 1 | 3 | 3 | 3 | 1 | 0 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| Green Futures | 7 | 8 | 7 | 7 | 8 | 8 | 7 | 0 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Kimberley* area | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 0 | 5 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 3 |
| BSNHS* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| Magoebas - kloof* | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 2 | 1 | 2 | 2 |
| Wakker-stroom | 4 | 4 | 3 | 3 | 5 | 5 | 4 | 0 | 4 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 2 |

*The author responded to the questions himself as he was project coordinator on these projects.

A total of 30 interviews were conducted with local guides, 16 with project coordinators and 25 with key individuals and stakeholders. The total number of interviews conducted with each research tool is shown in Table 2.6.

**Table 2.6 Total number of interviews conducted with each tool**

| Interview tool | Number of interviews |
|---|---|
| A Institutional variables | 52 |
| B Capacity Building | 46 |
| C Conservation Action & Awareness | 55 |
| E Income | 40 |
| H Historical timeline | 57 |
| G General open-ended questions | 70 |
| S Stakeholder analysis | 36 |
| T Threat Reduction Assessment | 20 |

## 2.4. Analysis and synthesis

### 2.4.1. Analytical outline

*Bivariate Correlation Analyses*

The methods used for analysis were based on Salafsky *et al.* (2001) whose research also made extensive of expert scale rankings. Salafsky *et al.* (2001) mentioned that ideally they would like to have run a quantitative, multivariate analysis to systematically examine the interactions between variables. Due to data constraints however and the small sample size relative to the number of variables a series of bivariate analyses were conducted which qualitatively examined the interactions between factors (Salafsky *et al.* 2001 and pers comm. Nick Salafsky). This study's sample size of 11, which was restricted by the number of community-based avitourism projects in South Africa meant that the scope for analysis was limited and after consultations with statistical experts and the authors of Salafsky *et al.* (2001) it was decided that multivariate analyses could not be conducted (pers comm. Greg Distiller, Tim Dunne, Department of Statistical Sciences, University of Cape Town; Nick Salafsky and Isak Smit, South African National Parks). The analysis entailed a series of bivariate analyses and due to the small sample sizes and the many categorical variables non-parametric statistical techniques were used. The factors that contribute to a higher conservation benefit measured with the TRA score and economic benefits measured through total income were evaluated through correlation analyses. The relationship between economic and conservation benefits was also investigated. In most cases the Gamma statistic was used as it is the preferred statistic to use in the case of many tied observations (Siegel and Castellan 1988). In cases where there were not tied observations the Spearman's Rank Correlation Coefficient was used. It was decided a priori which the most pertinent relationships were in terms of a projects conservation and economic benefit and these were tested and the p-values were corrected with the Bonferroni correction for multiple testing (Quinn and Keough 2002). Further tests were done to illustrate the nature and strengths of the relationships between other project factors and these were not corrected for using the Bonferroni correction as this would have resulted in unrealistic p-values. These relationships are indicated in Tables 3.16 and 3.17 and the increased potential for a Type 1 error through multiple testing using this technique is acknowledged and should be taken account of when interpreting the data.

*Project Efficiency and Institutional Synthesis*

An analysis was conducted of total income to local guides after 4 years since project onset in comparison to project expenditure to obtain a measure of efficiency. A further analysis was conducted of the income to local guides in comparison to project expenditure in the fourth year of project operation. For those projects that have been running for less than 4 years, the total income to local guides after 4 years or in the fourth year was projected based on the levels of monthly income at the time of field research. An analysis was also conducted of the cost per job created in the community-based avitourism projects under investigation in comparison to the average cost of job creation in the tourism sector as provided by Naude and Harmse (2001). Urban-Econ (2000) define job creation as the process of creating employment opportunities that can be for a certain period (contract based) or no specific and unknown time period. In their study, a new job was defined as a job which would be sustainable for one year or longer depending on government's continued policy to invest (Urban-Econ 2000). The cost of job creation in the community-based avitourism projects was calculated by dividing the project expenditure at each project site with the number of project beneficiaries (local guides) making a living from: a) guiding, b) a job related to their training and development or c) a job they obtained as a result of their training development. At the time of field research all the projects in this study had been in operation for over two years and only one local guide had been in working for less than one year. Through the synthesis of the individual project institutional models that are presented in the chapter 3, three general institutional project models were constructed. This synthesis was based on the model presented in Anderies *et al.* (2004) and in consideration of the discussions in Ostrom *et al.* (2002).

# CHAPTER 3 - RESULTS

## 3.1. Timeline of avitourism development

The timeline for avitourism development was based primarily on an interview with Aldo Berruti, the previous Director of BLSA who was managing BLSA during the period of rapid growth in avitourism. An interview with Glen Ramke from the WNHA provided information on the development of the first local bird guide training course held in Wakkerstroom in 1997. Relevant information from interviews from other sites was also included.

**Table 3.1 Timeline of the development of Avitourism in BLSA and South Africa.**

| Date/Year | Key Events |
|---|---|
| 1994 | Warwick Tarboton, an influential conservationist in Wakkerstroom started discussing his idea of training local bird guides. A group of people in Wakkerstroom involved and interested in local conservation worked together on developing this concept. |
| 1996 | Aldo Berruti was appointed as Director of BLSA. BLSA was a new member of the BirdLife International partnership at that stage and Aldo was immediately drawn into the African forum of BirdLife International. In this forum there was a lot of emphasis on building the capacity of black Africans. |
| 1997 | The first local bird guide course was held in Wakkerstroom. Patrick Cardwell from United Distillers also an enthusiastic birdwatcher agreed to fund this program and the trained guides were called the Bell's bird guides. After the first course the oil company SASOL was interested in funding local bird guide training. There was international support for this, an enabling political environment in South Africa and the model of the first United Distillers-funded course to build on. In 1997 Aldo Berruti visited the group responsible for running the Eshowe conservancy birding weekends and suggested the idea of a bigger ZBR. This then started with some simple brochures in some areas. |
| 1999 | The ZBR continued to grow but the focus was still primarily on providing information. It was realized that for the ZBR to continue to grow and develop it needed funding to appoint a full time person, as at that stage everyone was working as a volunteer. |
| 2000 | With funding from Sappi WWF and support from SASOL, the first course at the newly constructed Sappi WWF BirdLife South Africa training centre was run in September 2000.<br>The ZBR came close to closing down, as there was limited progress.<br>Commencement of feasibility study for the development of local bird and eco-guides at the BSNHS as a partnership between BLSA and the EWT-BSWG. |
| 2001 | Courses at the Sappi WWF BirdLife South Africa training centre continued but a number of issues emerged:<br>• Local guides faced a substantial growth curve in learning and there emerged a clear need for long term mentorship.<br>• Resistance to the program from established birding tourism operators as local guides were perceived as competition.<br>The ZBR developed its first website and a link between BLSA, the ZBR and the BirdLife International Rio Tinto Partnership was formed. Marketing of the ZBR was strengthened and the development of infrastructure commenced.<br>A local guide was trained and developed at the BSNHS supported by BLSA and the EWT-BSWG |
| 2002 | Funding was secured through a BirdLife International Rio Tinto partnership to develop the ZBR. The ZBRs first full time employee, Duncan Pritchard started on the 1st of November 2002.<br>Expansion of the BLSA and EWT-BSWG supported guide development project to Magoebaskloof in the Limpopo Province. |

| | |
|---|---|
| **2003** | BirdLife Travel, a division within BLSA which *inter alia* markets local guides, coordinates reservations of local guides was launched.<br>Launch of the BLSA Oppenheimer De Beers program which is focused on developing birding tourism on De Beers-owned properties throughout South Africa.<br>Launch of a local bird guide development project centred in Kimberley in the Northern Cape Province. |
| **2004** | BLSA's avitourism projects were presented as flagships at the BirdLife International World Conference held in Durban, South Africa.<br>Aldo Berruti resigned as BLSA director. |
| **2005** | Avitourism continues to grow and play a key role in BLSA with the ZBR as a flagship project. |

## 3.2. Results of individual projects

The results on individual projects are presented in this section. These are presented as a timeline, a diagram of the stakeholder and institutional environment and a table of strengths and weaknesses of the different organisations and players involved. Additionally there is a brief discussion of the key drivers and strengths, the key challenges and the key issues for conservation and development for each project. Detailed information on the conservation benefits and economic benefits across all sites are included in sections 3.3 and 3.4 respectively.

### 3.2.1 Dlinza Boardwalk, Eshowe

*Timeline*

A timeline indicating key events in the development of the Dlinza boardwalk project is indicated in Figure 3.1.

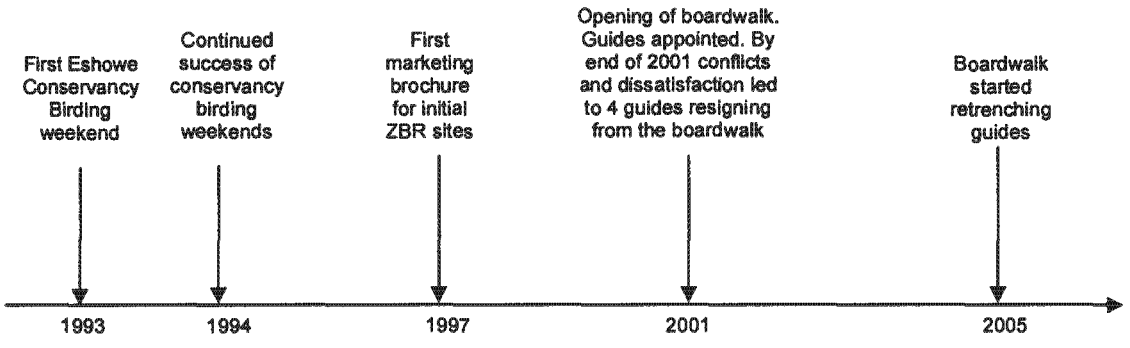



**Figure 3.1 Timeline for the Dlinza Boardwalk, Eshowe**

The four of the six guides that were working at the boardwalk in 2001 that resigned, left because they wanted fixed contracts, wanted to be paid more and felt that they were

receiving limited support and mentorship. These four guides that left subsequently started operating as freelance guides.

*Institutional Environment*

The institutional environment and the organisational and institutional strengths and weaknesses at the Dlinza boardwalk project site are indicated in Figure 3.2 and table 3.2.

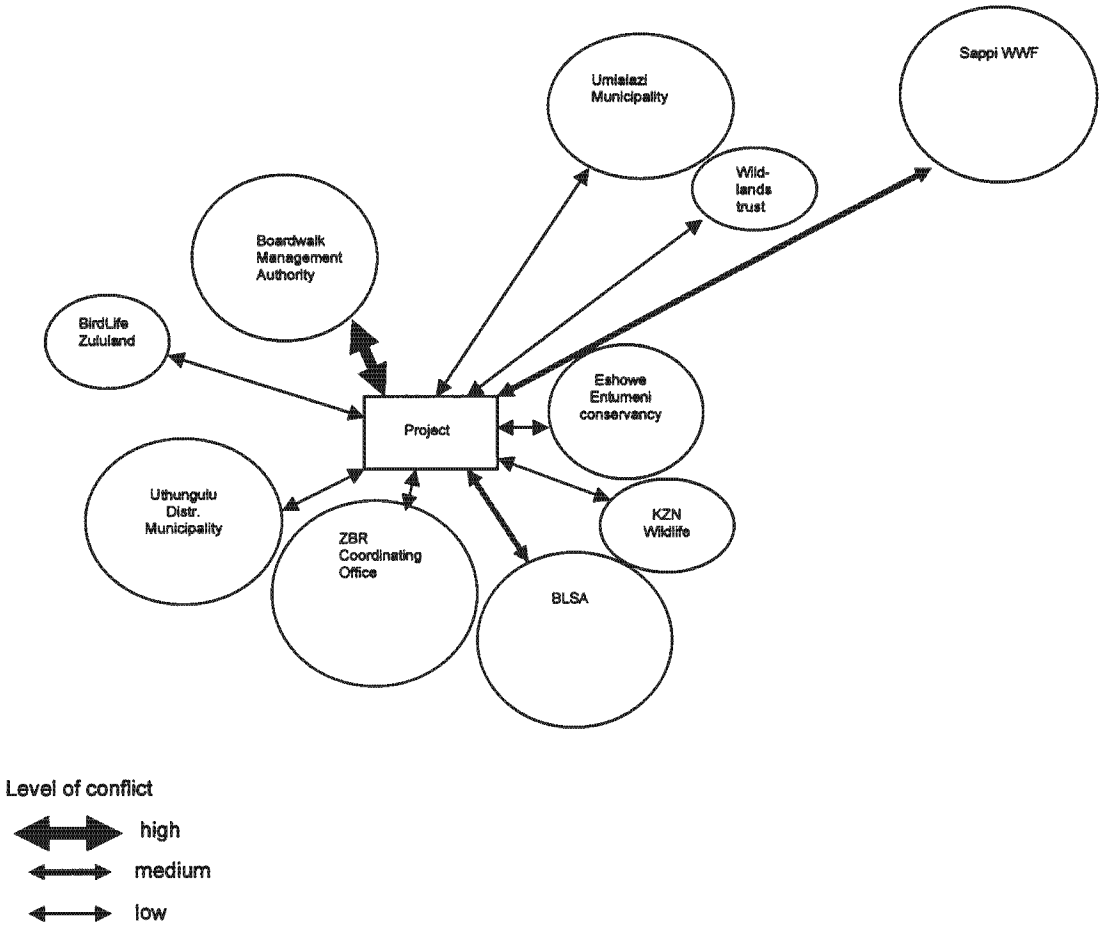



**Figure 3.2 Stakeholder and organisational environment for the Dlinza boardwalk, Eshowe. In all the stakeholder and organisational environment diagrams in this figure, the distance from the project represents how close the relationship is between the organisation and the project. The size of the circle represents how important the organisation is. The larger the circle is, the more important the organisation is to the project. The thickness of the connecting line represents the level of conflict in the relationship with each organisation.**

**Table 3.2 Strengths and weaknesses between organisational arrangements at Dlinza Boardwalk**

| Organisation | Strengths | Weaknesses/ notable points of conflict |
|---|---|---|
| Boardwalk Management Authority | Developed the project and raised the necessary funding | There have been conflicts between the authority and the local guides which led to a number of guides resigning. |
| Sappi WWF | Provided funding for the boardwalk | Limited involvement beyond providing the funding. |
| Umlalazi Municipality | Provided security at the boardwalk after a crime incident. | No significant points of conflict |
| Eshowe Entumeni Conservancy | The initial birding weekends of the conservancy provided an important impetus to the broader development of avitourism in the region. | No significant points of conflict |
| Zululand Birding Route coordinating office | Provides support to the boardwalk.<br>Provides training and mentorship support to the local guides at the boardwalk.<br>Provided support and opportunities to the local guides who resigned from the boardwalk. | No significant points of conflict |

*Project drivers, strengths and challenges*

*Key drivers and strengths:* Financial support from Sappi WWF to cover the cost of getting this innovative project up and running was important. The boardwalk is situated close to a major tourist route and there are large numbers of tourists that visit the site.

*Key challenges:* At the time of the field research, the boardwalk was considering laying off all the employed local guides and only using freelance guides. The issue of the relationship between the boardwalk management authority and the local guides that work on the boardwalk has been a major challenge.

*Key issues for conservation:* Over 15000 people have been reached through the conservation awareness activities at the Dlinza forest and the boardwalk (Table 3.14). These are primarily school children that visit the site on school outings. The boardwalk has a strong focus on conservation and environmental awareness. The forest reserve is managed by KZN Wildlife and there is strong local support in Eshowe for its continued conservation.

### 3.2.2. Muzi Pan

*Timeline*

A timeline indicating key events in the history and development of the Muzi Pan project is indicated in Figure 3.3.

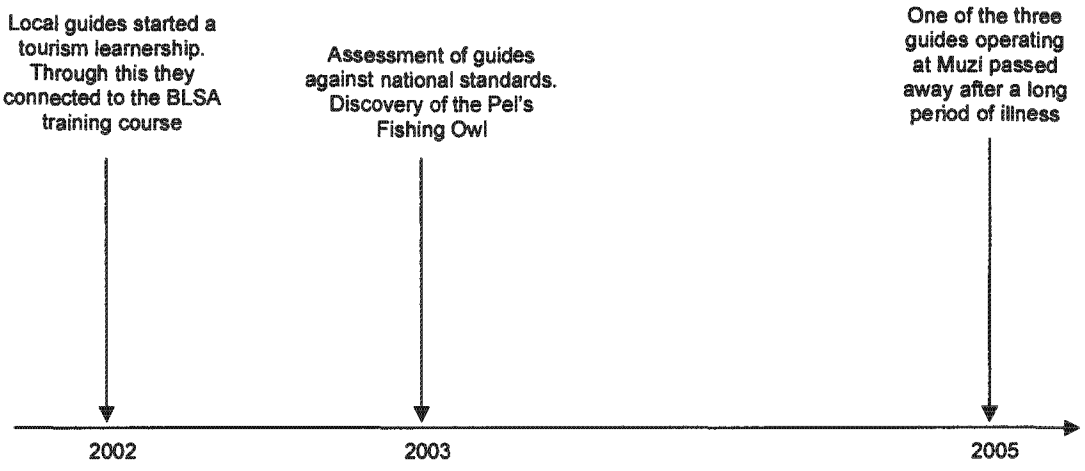



**Figure 3.3 Muzi Pan timeline**

The three guides selected to be trained as local bird guides were on a tourism learnership which was administered through the KZN Wildlands Trust when they first were first identified for training as local guides.

*Institutional Environment*

The institutional environment and the organisational and institutional strengths and weaknesses at the Muzi Pan project site are indicated in figure 3.4 and table 3.3.

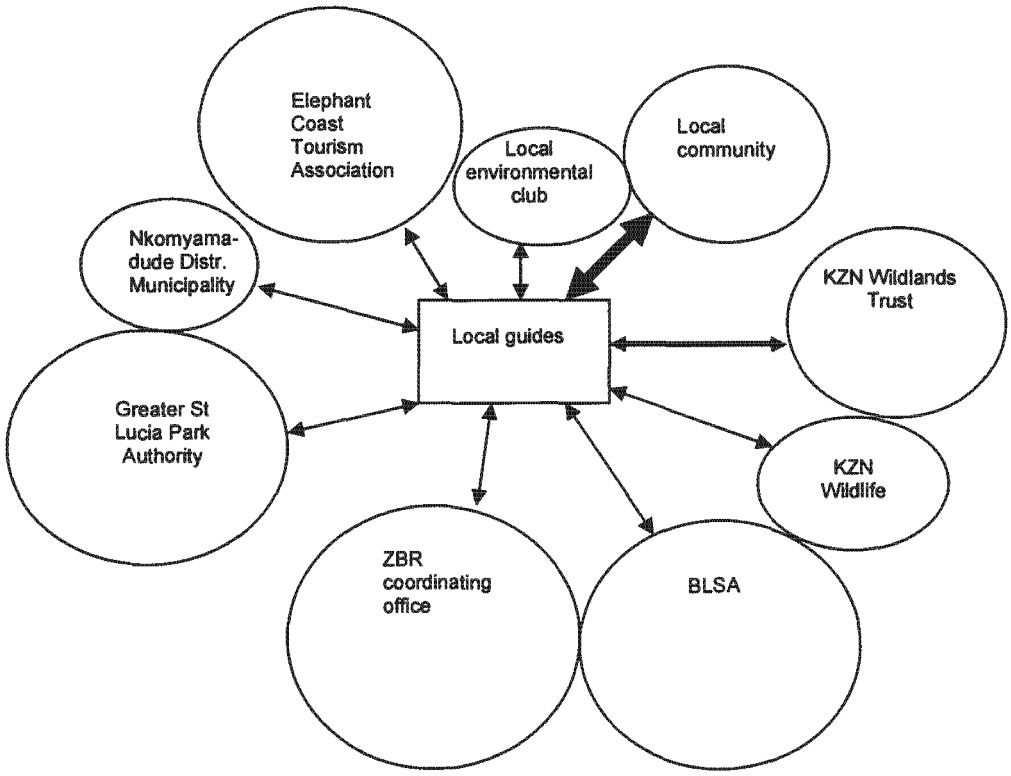



**Figure 3.4 Stakeholder and organisational relationships at Muzi Pan**

**Table 3.3 Strengths and weaknesses between organisational arrangements at Muzi Pan**

| Organisation | Strengths | Weaknesses/ notable points of conflict |
|---|---|---|
| Local Community | No significant strong points were mentioned by the interviewees | There is a very high level of unemployment in this community, and there is jealousy and conflict between the local bird guides and elements in the community, particularly a group involved in trying to promote canoe trips. There is a limited understanding of what the local bird guides are doing. |
| Local environmental club | This provides a basis for the spread of the conservation message and conservation action | Lack of participation in this club has been a problem. |
| KZN Wildlife | No significant strong points were mentioned by the interviewees | Bureaucratic delays in developing ecotourism ventures that involves the local guides working in the neighbouring Mkuzi Game Reserve. Conflict between the local community and KZN Wildlife. |
| KZN Wildlands Trust | They provided the learnership and associated initial tourism and conservation training to the local guides. | Learners complain of limited feedback. |

*Project drivers, strengths and challenges*

*Key drivers and strengths:* The new tarred road that passes through the area has made a big difference in improving accessibility. The discovery of the Pel's Fishing Owl is a major attraction that draws birders to the area.

*Key challenges:* The long distance from Richards Bay has meant that the site has received less support from the ZBR coordinating office than other sites closer to Richards Bay and this has led to a perception of isolation among the local guides. There is a lack of cooperation between the local guides and KZN Wildlife who manage the adjacent areas and there is conflict between the local bird guides and members of the local community, particularly a group of canoe guides.

*Key issues for conservation:* The presence of an environmental club that has been operational in the local community for over 10 years paved the way for this conservation and tourism development project.

### 3.2.3. Richards Bay

**Timeline**

A timeline indicating key events in the history and development of the Richards Bay project is indicated in Figure 3.5.

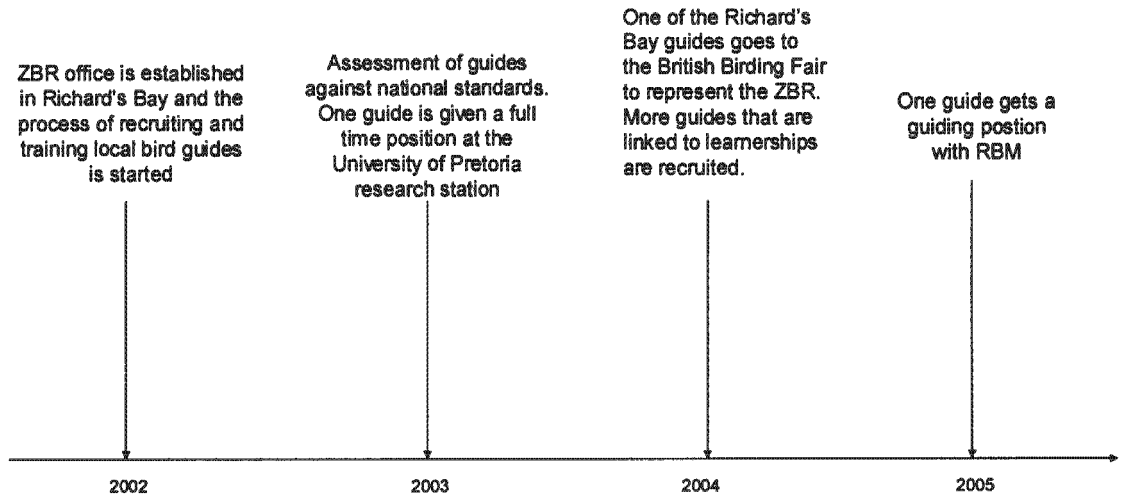



**Figure 3.5 Timeline Richards Bay**

**Institutional Environment**

The institutional environment and the organisational and institutional strengths and weaknesses at the Richards Bay project site are indicated in figure 3.6 and table 3.4.

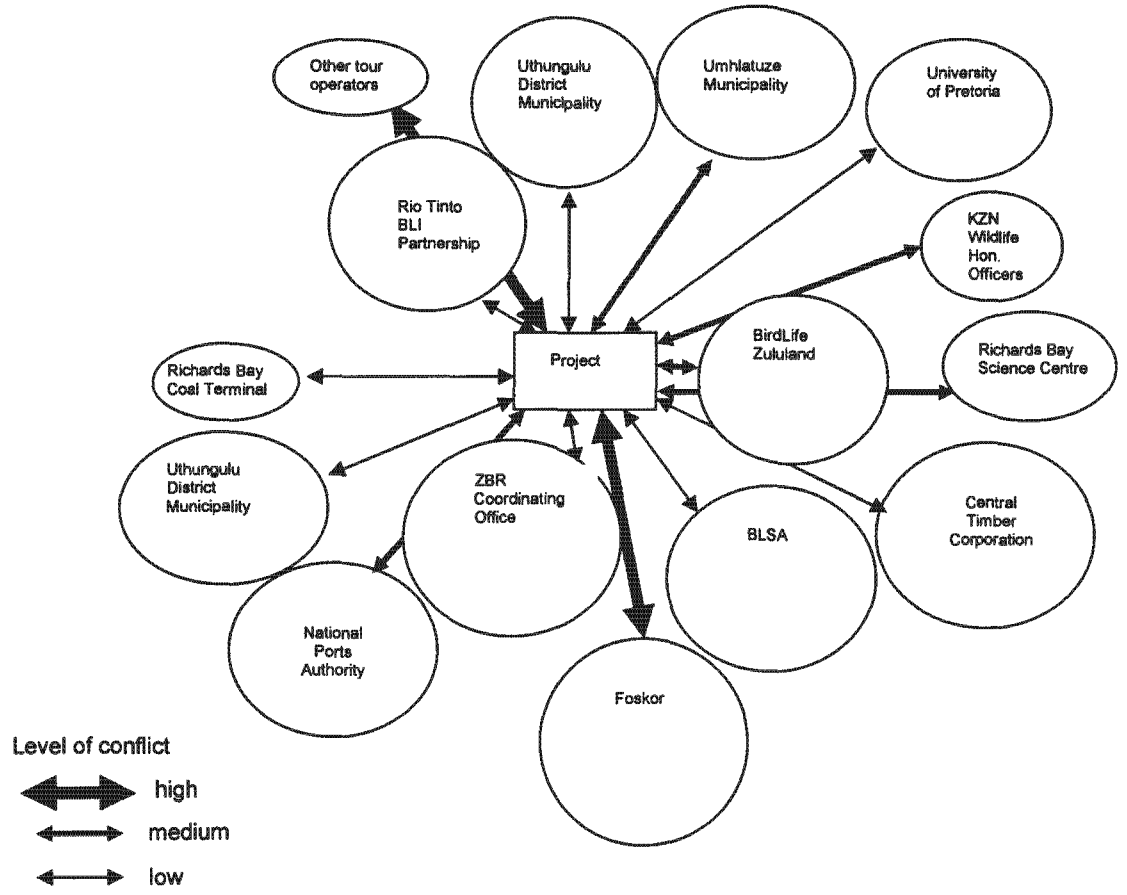



**Figure 3.6 Stakeholder arrangements and organisational relationships at Richards Bay**

**Table 3.4 Organisational strengths and weaknesses at Richards Bay**

| Organisation | Strengths | Weaknesses/ notable points of conflict |
|---|---|---|
| Other Tour Operators | No significant strong points were mentioned by the interviewees | The local guides feel that the tour operators in Richards Bay who hire them want an unfairly high share of the income they receive from guiding. |
| Foskor | No significant strong points were mentioned by the interviewees | Responsible for frequent industrial spills which threaten the integrity of the wetland habitats in Richards Bay. |
| Umhlatuze Municipality | Have given the ZBR a 49 year lease on Thulasishleka Pan, a key habitat for birds in Richards Bay, to manage it for ecotourism. Have provided financial support for the development of infrastructure. | Development-oriented members of the municipality are opposed to the strong conservation drive of the ZBR. |
| Richards Bay Coal Terminal | Provides learnerships to some of the guides. | No significant points of conflict |
| Richards Bay Science Centre | The ZBR provides input into their birding section. They provide good mentorship to some of the local guides. | No significant points of conflict |

*Project drivers, strengths and challenges*

*Key drivers and strengths:* The ZBR coordinating office is based in Richards Bay. There are a number of key relationships between the ZBR coordinating office and partners that are centred on the project at Richards Bay. The benefits of these relationships extend more broadly to a range of other sites that are part of the ZBR. Of these sites Muzi Pan, Dlinza boardwalk, Ngoye and Amatikulu formed part of this research study. One of the most important of these partnerships is the funding provided through the Rio Tinto BirdLife International Partnership and RBM. The Wildlife and Environment Society of South Africa (WESSA) plays an important role in providing mentorship to the ZBR's education program. BirdLife Zululand, the local branch of BLSA is based in Richards Bay and plays a role in sustaining the efforts and activities of the local guide development, conservation and environmental awareness activities in Richards Bay. This role extends to a lesser extent beyond Richards Bay. The provincial tourism authority, Tourism Kwazulu-Natal has supported the ZBR by providing office equipment. The Kwazulu Natal Wildlands Trust has been an important partner in providing support and advice to the ZBR. BirdLife Travel, a branch of BLSA now does the bulk of the reservations for the ZBR and they are able to book itineraries for clients to include a number of sites to be visited. Key supporting individuals have played an important role in promoting birding tourism, a good example is Errard Sullivan from the Protea Hotel in Richards Bay who regularly promotes avitourism among his staff and guests.

*Key challenges:* The fact that industrial and harbour development is the primary driver of the Richards Bay economy, it has been difficult to market avitourism and conservation as a viable alternative, as conservation is seen by many locals to be in conflict with development.

*Key issues for conservation:* The density and extent of industrial plants and the risk of industrial spills are a major threat to the local ecosystems. The potential of further development extends these threats. A major achievement of the Richards Bay project is that the ZBR was given a 49 year lease on Thulasishleka Pan for conservation and tourism development. Thulasishleka Pan is a key site for birds in Richards Bay and is a prime site for industrial development and has often been under threat. Based on the successes of the Richards Bay project as well as the broader success of the ZBR, the ZBR is now seen as a key conservation and tourism stakeholder and is often asked to comment on Environmental Impact Assessment reports which is a sign of its strengthened local and regional conservation impact.

### 3.2.4. Ngoye Forest Reserve

*Timeline*

A timeline indicating key events in the history and development of the Ngoye Forest project is indicated in Figure 3.7.

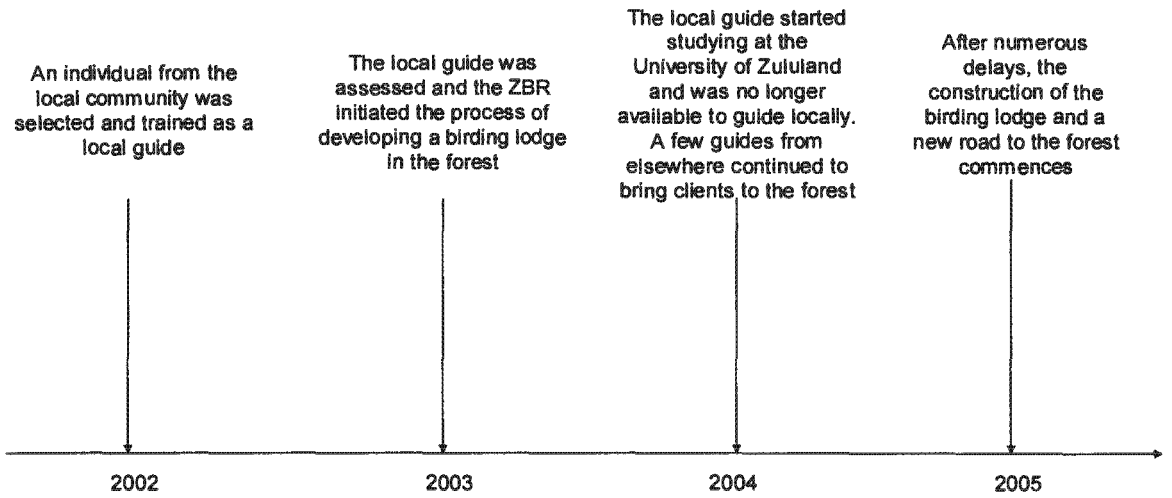



**Figure 3.7 Timeline Ngoye Forest Reserve**

*Institutional Environment*

The institutional environment and the organisational and institutional strengths and weaknesses at the Ngoye Forest project site are indicated in figure 3.8 and table 3.5.

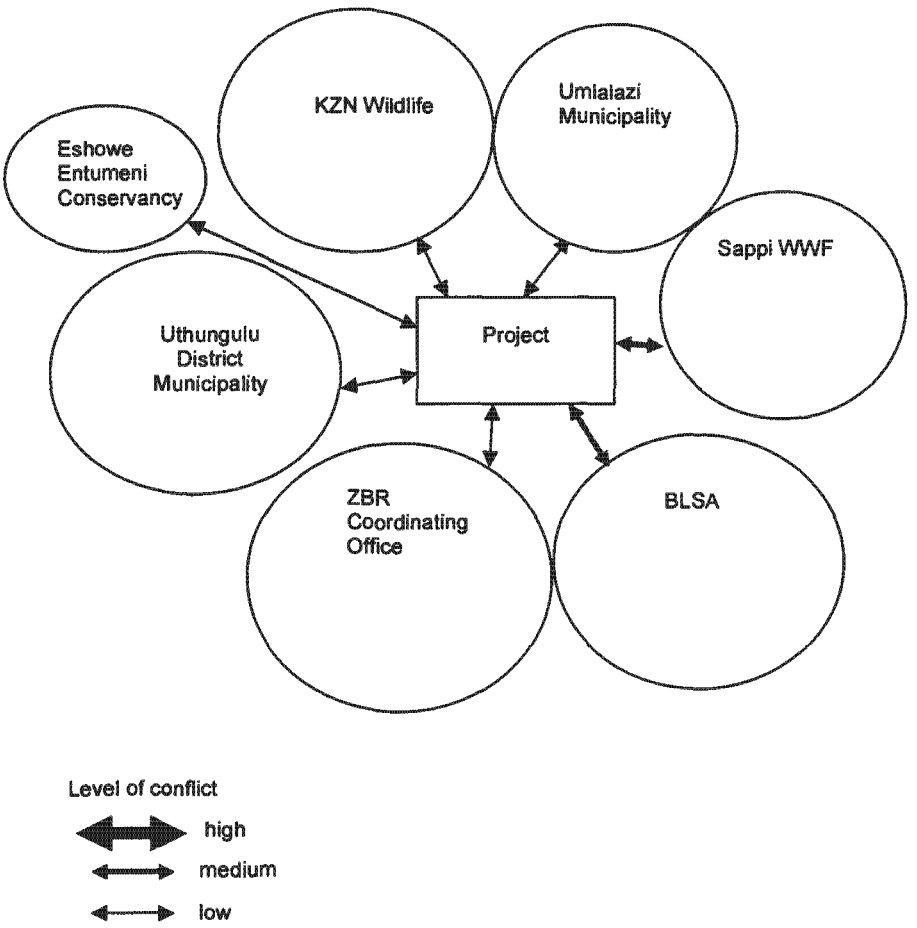



**Figure 3.8 Stakeholder and Organisational relationships at Ngoye Forest Reserve**

**Table 3.5: Organisational strengths and weaknesses at Ngoye Forest Reserve**

| Organisation | Strengths | Weaknesses/ notable points of conflict |
|---|---|---|
| Uthungulu District Municipality | Provided important legal support and advice to the development of a birding lodge in Ngoye forest | There is a risk that if the executive committee at the municipality changes there could be a drastic reduction in the extent of support provided. |
| Umlalazi Municipality | Played an important role in supporting and promoting the Ngoye Birding Lodge development | No significant points of conflict |
| Sappi WWF | Provided funding to the Ngoye birding lodge development | No significant points of conflict |
| KZN Wildlife | Important conservation stakeholders in that they manage the forest. | No significant points of conflict |

*Project drivers, strengths and challenges*

*Key drivers and strengths:* The presence of the highly restricted Woodward's (Green) Barbet amongst a range of other species makes this site one of South Africa's top birding attractions with substantial birding and conservation interest. The success of the ZBR in negotiating for the development of a birding lodge and the related construction of a new road will be a major boost to tourism as the site is currently difficult to access.

*Key challenges:* There is a long history of use of the Ngoye Forest by the local community and there has been conflict between the local community and KZN Wildlife due to restriction of access and harvesting in the forest (pers comm. Graham Keet, KZN Wildlife and Duncan Pritchard).

*Key issues for conservation:* Continued illegal and harvesting and poaching by the local community is seen as a conservation threat. The new birding lodge that is currently being built is seen as an important opportunity by the local community and by KZN Wildlife and the Uthungulu District Municipality to integrate conservation and economic development through ecotourism (pers. comm. Counsellor Powell, Uthungulu District Municipality and Counsellor Mbonkazi, Uthungulu District Municipality). It is hoped that the new lodge will reduce the threats posed by poaching and illegal harvesting (pers. comm. Duncan Pritchard)

### 3.2.5. Amatikulu Nature Reserve

*Timeline*

A timeline indicating key events in the history and development of the Amatikulu Nature Reserve project is indicated in Figure 3.9.

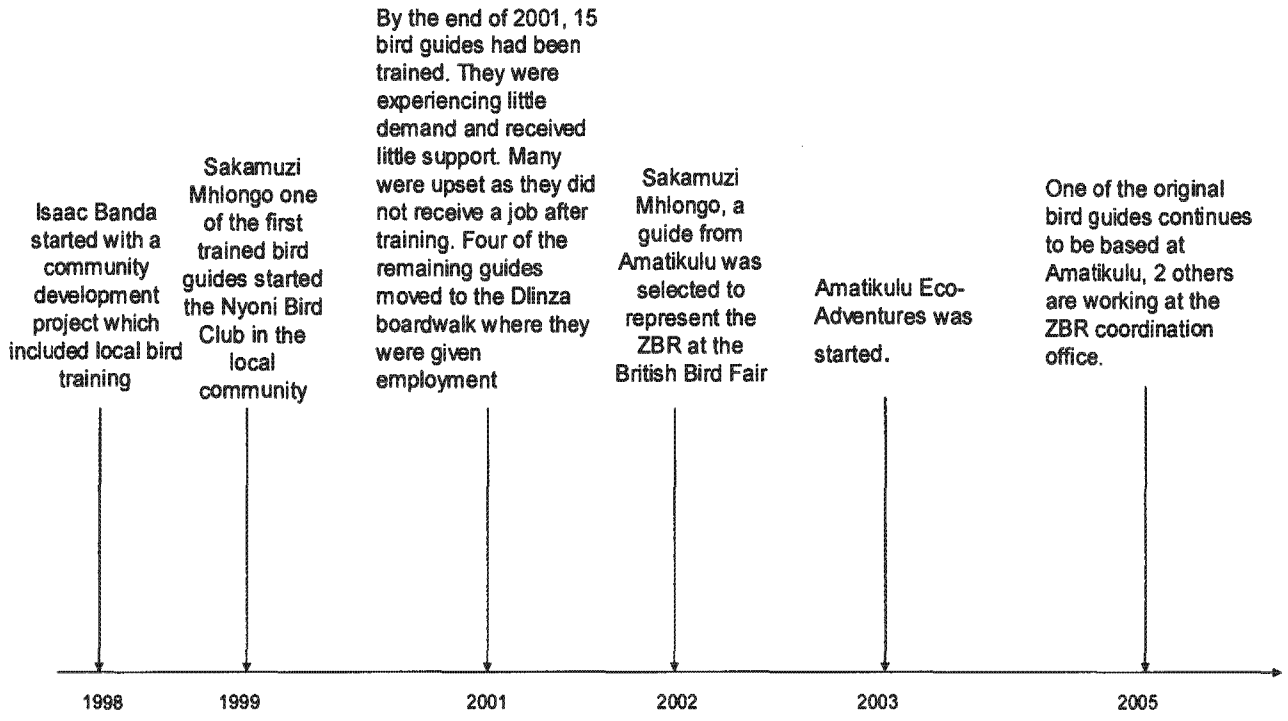



**Figure 3.9 Amatikulu Nature Reserve Timeline**

By 2003, only one of the four guides that left Amatikulu to work at the Dlinza Forest boardwalk in 2001 were still there, the other three had left due to conflicts with the boardwalk management. The Amatikulu Eco-Adventures project involved training guides in guiding, business management, birds, hiking, fly-fishing and canoeing. Twenty-two were initially trained in 2003. There was limited after-training support and marketing and at the time of the field research in July 2005, only 4 or 5 of these guides remained and demand was low.

*Institutional Environment*

The institutional environment and the organisational and institutional strengths and weaknesses at the Amatikulu Nature Reserve project site are indicated in figure 3.10 and table 3.6.

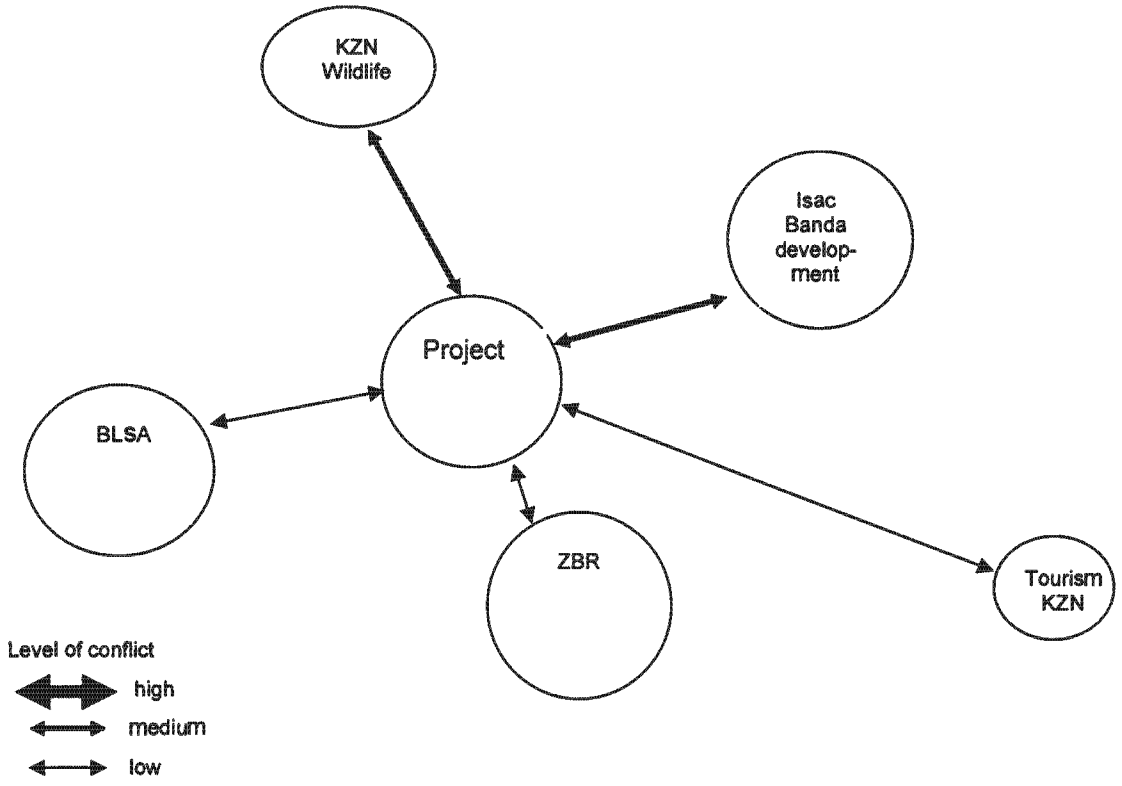



**Figure 3.10 Stakeholder and organisational relationships at Amatikulu Nature Reserve**

**Table 3.6 Organisational strengths and weaknesses at Amatikulu Nature Reserve**

| Organisation | Strengths | Weaknesses/ notable points of conflict |
|---|---|---|
| Isac Banda Community Development | Provided initial project in which community members and guides were trained. | Limited follow up |
| KZN Wildlife | Management authority for Amatikulu Nature Reserve | Disagreements about local guides having to pay for access into Amatikulu Nature Reserve. Feeling that Amatikulu is a small reserve which does not get much attention. |
| ZBR | Provide reservations, marketing and support system | Feeling that at Amatikulu, there is limited support from the ZBR office as they are too far out of Richards Bay. |

*Project drivers, strengths and challenges*

*Key drivers and strengths:* The location of Amatikulu Nature Reserve just off the N2 highway means that it is easily accessible to tourists. The large number of trained guides and the length of time over which guides from local villages have been trained means that knowledge of birding tourism and conservation is fairly widespread.

*Key challenges:* Amatikulu Nature Reserve is quite far from Richards Bay where the ZBR coordinating office is based and the local guides based there feel isolated from the rest of the ZBR. This associated with the lack of follow up support from the other and earlier community development projects some of which contained a tourism development component has been

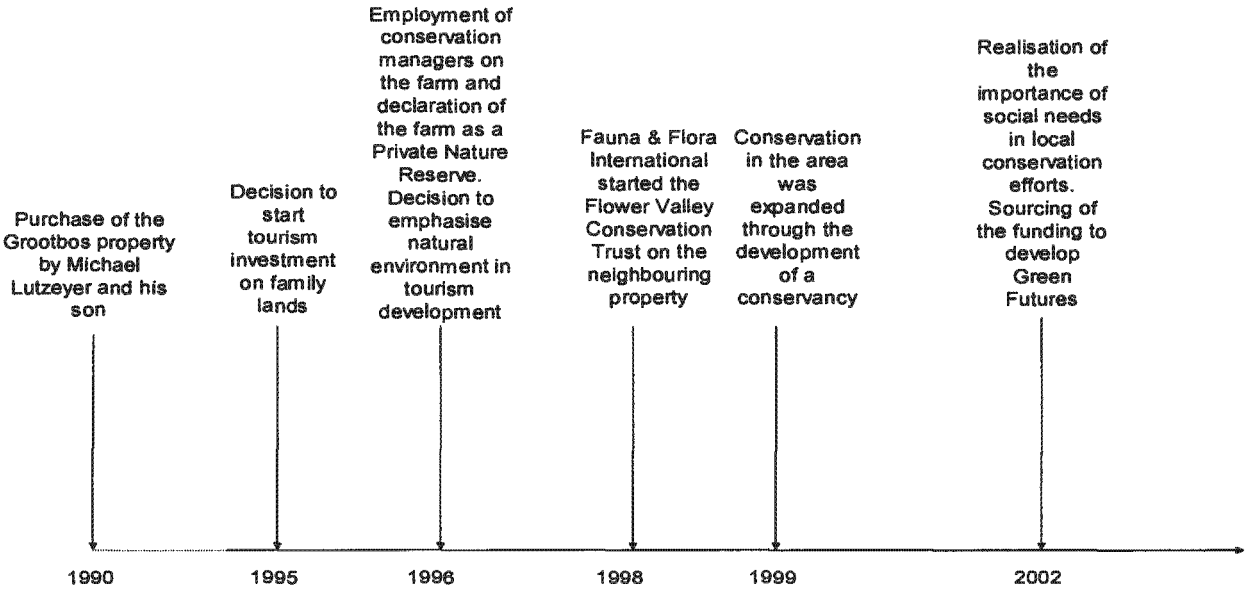
a major limitation to the success of these projects. Of the 15 local guides that were trained at Amatikulu, only one is still based at the reserve, but he also guides at a number of other sites. A further 2 local guides that were initially selected from Amatikulu are now working for the ZBR coordinating office. Local guides and conservationists also feel that KZN Wildlife see Amatikulu as a small and unimportant reserve and do not give it adequate attention.

*Key issues for conservation:* The combined effects of a low level of KZN Wildlife expenditure at Amatikulu with the distance from the ZBR coordinating office and limited other support has made successful birding tourism development and the strengthening of local conservation a challenging task.

### 3.2.6. Green Futures

*Timeline*

A timeline indicating key events in the history and development of the Green Futures project is indicated in Figure 3.11.



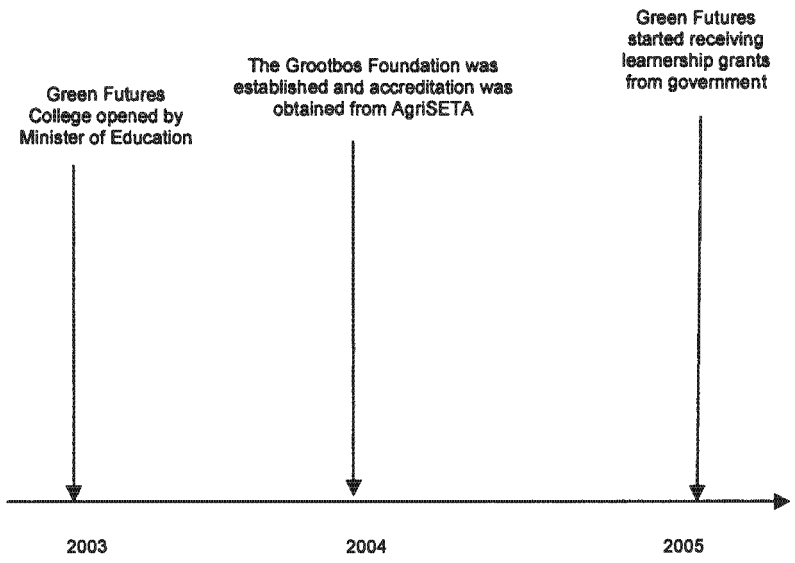
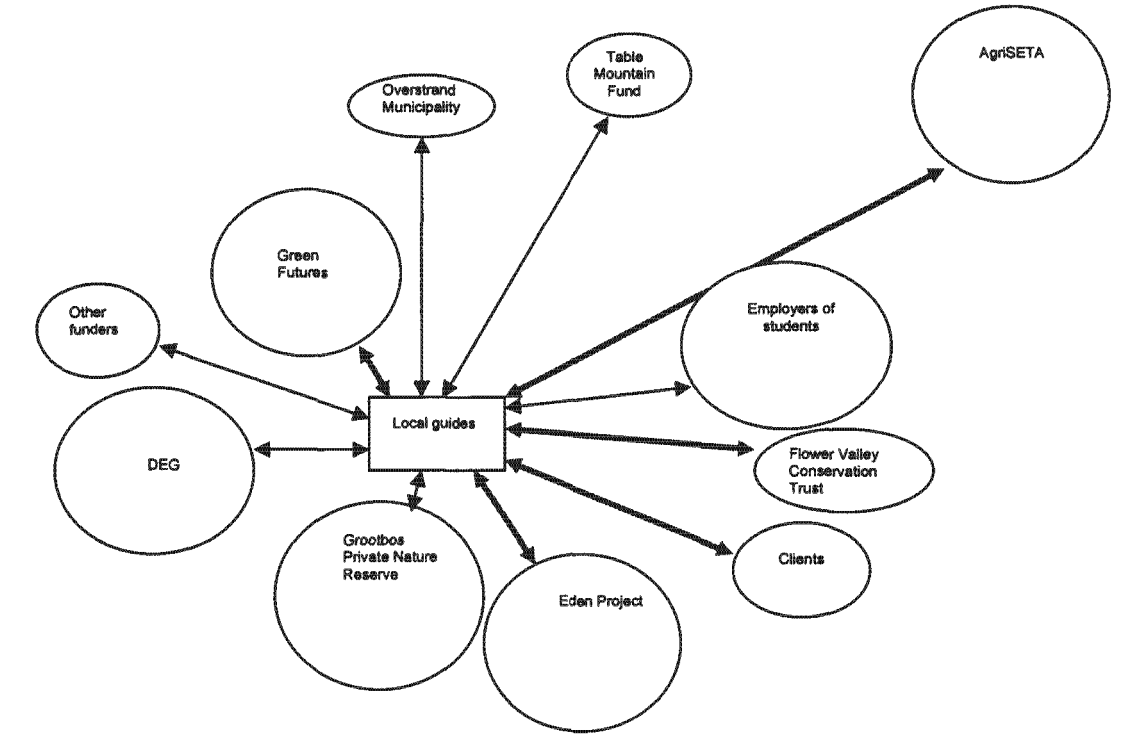



**Figure 3.11 Timeline for Green Futures**

Funding was provided for Green Futures on a 50/50 basis by the Grootbos Private Nature Reserve and German Investment and Development Company (DEG). The 12 month course offered by Green Futures is multifaceted and covers a range of technical and life skills. Mid-way through the course, half year reviews are conducted with each student where they indicate the direction their desired future direction. The founding of the Grootbos Foundation, a non-profit side of the Grootbos Private Nature Reserve, in 2004 has made it much easier to raise funding. Accreditation from the Agricultural Sector Education and Training Authority AgriSETA (previously PAETA) meant that Green Futures could easily access funding through government.

*Institutional Environment*

The institutional environment and the organisational and institutional strengths and weaknesses at the Green Futures project site are indicated in figure 3.12 and table 3.7.




Level of conflict

high

medium

low

**Figure 3.12 Stakeholder and Organisational Environment at Green Futures**

**Table 3.7 Organisational strengths and weaknesses at Green Futures**

| Organisation | Strengths | Weaknesses/ notable points of conflict |
|---|---|---|
| AgriSETA | Provides accreditation to the Green Futures College.<br>A channel through which funding and learnerships (learner grants) can be accessed. | Bureaucratic delays and inefficiencies. |
| Overstrand District Municipality | Local political powerhouse has played an important role in supporting the community-based organisation Siyakula. | Although there is a low level of conflict, bureaucracy and unfulfilled expectations was raised as an issue. |
| Employers of students | The project cannot work and succeed without them. | Unfulfilled expectations and promises. |
| Eden Project | Important funding source, a high profile organisation that has provided important exposure and marketing to Green Futures. | No significant points of conflict |
| Grootbos Private Nature Reserve | The founding organisation that provides the main source of financial backing. It provides marketing and high profile clients and networks which gives Green Futures better standing. | Although there is a low level of conflict, the issue was raised that Grootbos is too powerful and domineering. |

*Project drivers, strengths and challenges*

*Key drivers and strengths:* The Green Futures project follows a different model from the others in the study. This difference includes a long term presence in the area of operation and a guarantee of employment for the learners that are trained through its program. Additionally the Green Futures learners are paid whilst they attend the year long training course. This is something that increases enthusiasm and is likely to keep learners in the project for a longer period of time. The fact that the Green Futures project is based in the Grootbos Private Nature Reserve and that Grootbos is a key funder plays an important role in strengthening the sustainability of the Green Futures initiative.

*Key challenges:* The Green Futures project has set itself the goal of longer term financial self-sufficiency and the initiative still needs to make progress in achieving this objective. Until this point is reached, the initiative is likely to be largely dependent on the Grootbos Private Nature Reserve to keep operating.

*Key issues for conservation:* The Green Futures project has tied into the conservation efforts that were already taking place in and around the Grootbos Private Nature Reserve and the Walker Bay conservancy. The Green Futures project has made an important contribution in creating jobs and involving the previously disadvantaged communities in the area in these conservation efforts.

### 3.2.7. The development of local bird & eco-guides in the Kimberley area

*Timeline*

A timeline indicating key events in the history and development of the Kimberley project is indicated in Figure 3.13.

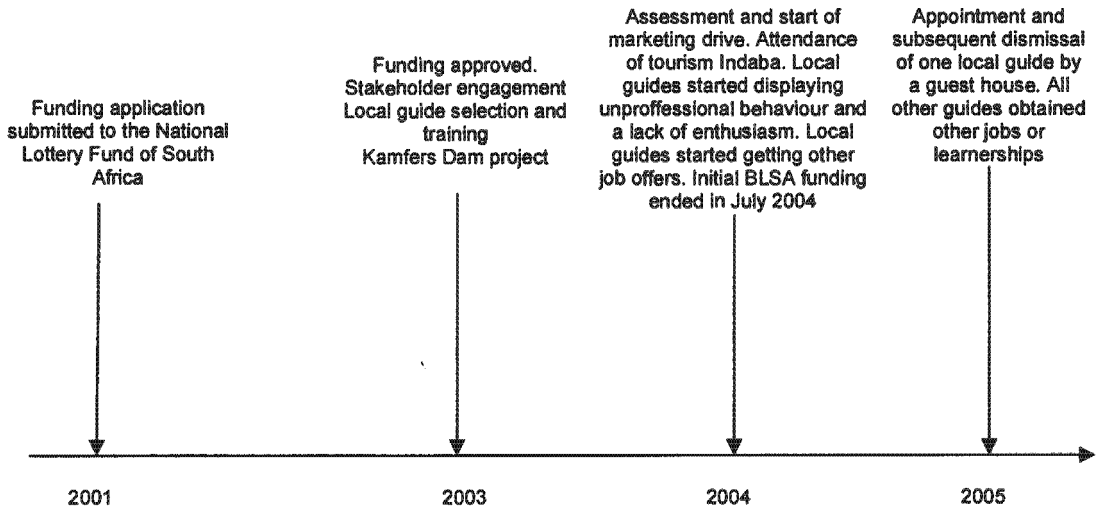


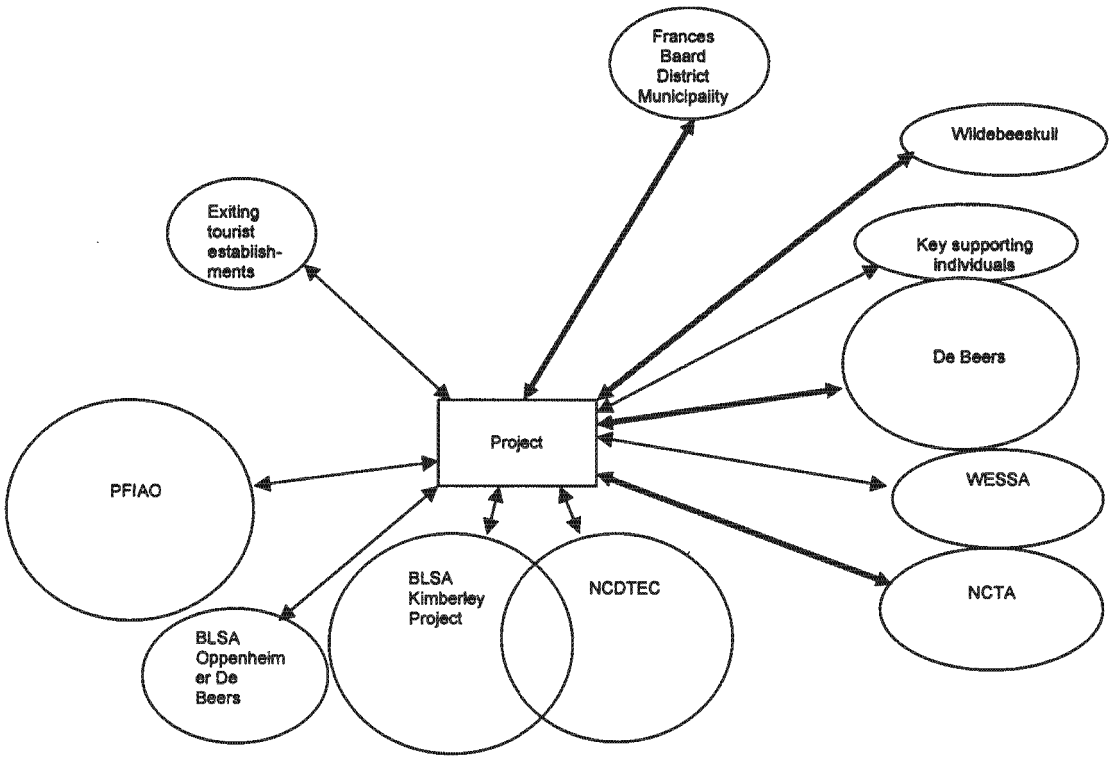

**Figure 3.13 Timeline for the Kimberley project**

An extensive stakeholder engagement process was followed and a stringent selection process for guides was held at this project. Upon return from the local guide training course in September 2003, an intensive on-site multi-faceted capacity building and development

program was initiated and led by BLSA. In December 2003, a successful Christmas Holiday initiative at the Kamfers Dam focussed on the local guides attracted much attention and the local guides were very enthusiastic about the prospects of the project. Local birders supported the guides in their preparation for assessment against national standards. Guides felt that after assessment they did not get into the field as much as they would have liked because of transport problems. By May 2004, the enthusiasm of the guides had waned as they were not getting out into the field that much, other opportunities started emerging and reports of unprofessional behaviour by the local guides started. Due to improvements in their levels of skills and experience, the local guides were getting other job offers by the second half of 2004 and the low levels of demand for their guiding services meant that their enthusiasm for guiding continued to decrease. At the time of field research only two of the six local guides that were trained were guiding on a full time basis, a further three were in other positions and their guiding was a part time endeavour. One of the local guides dropped out of the project entirely.

*Institutional Environment*

The institutional environment and the organisational and institutional strengths and weaknesses at the Kimberley project site are indicated in figure 3.14 and table 3.8.




Level of conflict

high

medium

low

**Figure 3.14 Stakeholder and Organisational environment at Kimberley**

**Table 3.8 Organisational strengths and weaknesses at Kimberley**

| Organisation | Strengths | Weaknesses/ notable points of conflict |
|---|---|---|
| BLSA Kimberley Project | Sourced funding for the implementation of this initiative. Worked in partnership with NCDTEC (shown by overlapping circles in Figure 3.14) in implementing this project. After July 2004, the initial pool of funding had ended and the project was continued as part of the BLSA Oppenheimer De Beers Program | Although overall conflict was low, BLSA was not on site and provided limited support beyond the initial funding which ended in July 2004 which meant that sustainability of the project was weakened. Some of the guides felt that the approach to training was too paternalistic. |
| NCDTEC | Played an important on site coordination and support role to the project which continued beyond July 2004 when the initial pool of BLSA funding had ended. | NCDETC's support of the project was primarily driven by one individual. Although the overall level of conflict was low, there was frustration on the side of the individual and within the Department with respect to the unprofessional behaviour of the local guides. Some of the guides felt that the approach to training was too paternalistic. |

| | | |
|---|---|---|
| PFIAO | The PFIAO employee in Kimberley, Eric Hermann played a key on site role in mentoring the local guides and furthering their bird identification ability. | Unprofessional behaviour by the guides led to a reduction in support by Eric. |
| Wildebeeskuil | The Rock Art Centre based at Wildebeeskuil served as an important base for the guides to start getting experience and dealing with tourists and as a site to take clients to | There was a conflict over payment that the guides felt they never received from the centre. |
| Existing tourist establishments | The Milner Guest House offered two of the guides an opportunity to be employed, one was selected and employed. | The guide who was appointed did not show up for work at the guest house and the employment of this guide was called off. |
| BLSA Oppenheimer Project | Provides a longer term, larger project for the Kimberley project to form part of and continue. | Poor communication which resulted in misunderstandings over project developments. |
| De Beers | Have provided important support to this project and has also allowed access to their properties in the Kimberley area. | Although overall conflict was low, local guides and project stakeholders felt that De Beers could have done more to support this project to strengthen job creation and tourism on their properties. |

*Project drivers, strengths and challenges*

*Key drivers and strengths:* The birding and ecotourism attractions that exist in the Kimberley area together with the funding and support towards the project from BLSA, the Northern Cape Department of Tourism, Environment & Conservation (NCDTEC), De Beers and other individuals and organisations placed the project in a strong position.

*Key challenges:* The limited funding period of the BLSA Kimberley project weakened the sustainability of this initiative as resources and effort was still required at the time this funding came to an end. Although this project continued to be part of the broader BLSA Oppenheimer De Beers Project, this is a broader initiative and the project has received less direct and focused support. Continued support by Mark Anderson from NCDTEC, Eric Herrmann from the PFIAO, Eddie Macfarlane (a private individual) has played an important role in sustaining the project. NCDTEC's support to the project was largely catalyzed by one individual, Mark Anderson. However unprofessional behaviour by the guides has resulted in reduction of support to them and reduced motivation for making this project work. Three of the five guides obtained positions in a field that was not directly related to guiding, this has also hampered the success of this initiative. It should be noted that the local guides saw the training and development process that they had been through as critical in putting them in a competitive position to apply for other jobs and opportunities. The benefits from this local bird guide training and development was stated to have been the tourism skills and knowledge that they obtained as well as the life skills, confidence and communication skills which they developed.

*Key issues for conservation:* This project was more focused on raising general awareness of birds and the environment and was not a targeted conservation intervention at a site.

### 3.2.8. Blue Swallow Natural Heritage Site, Kaapsehoop

*Timeline*

A timeline indicating key events in the history and development of the Blue Swallow Natural Heritage Site project is indicated in Figure 3.15.

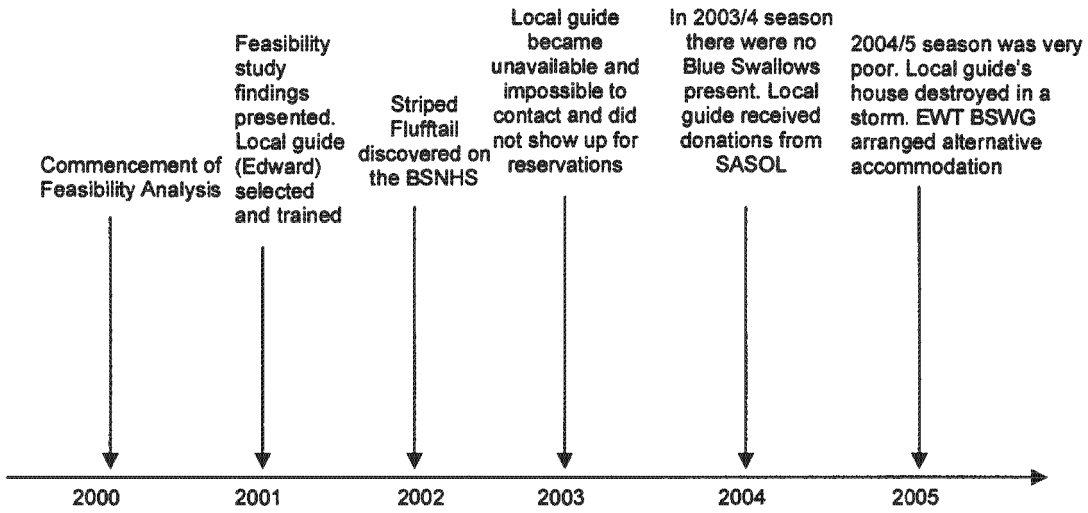



**Figure 3.15 Timeline of the BSNHS project**

Upon return from the local bird guide training course in May 2001, an intensive on-site, multi-faceted training and development program led by BLSA was undertaken. Once the local guide became unavailable and impossible to contact from time to time in 2003, this had a negative impact on the local people who were supporting him. The absence of Blue Swallows from the site in the summer of 2003/4 and the presence of only one pair in the summer of 2004/5 had a further negative impact on the success of the local guide. The discovery and marketing of Striped Flufftails as an alternative attraction led to a small increase in demand for the local guide's services.

*Institutional Environment*

The institutional environment and the organisational and institutional strengths and weaknesses at the BSNHS project site are indicated in figure 3.16 and table 3.9.

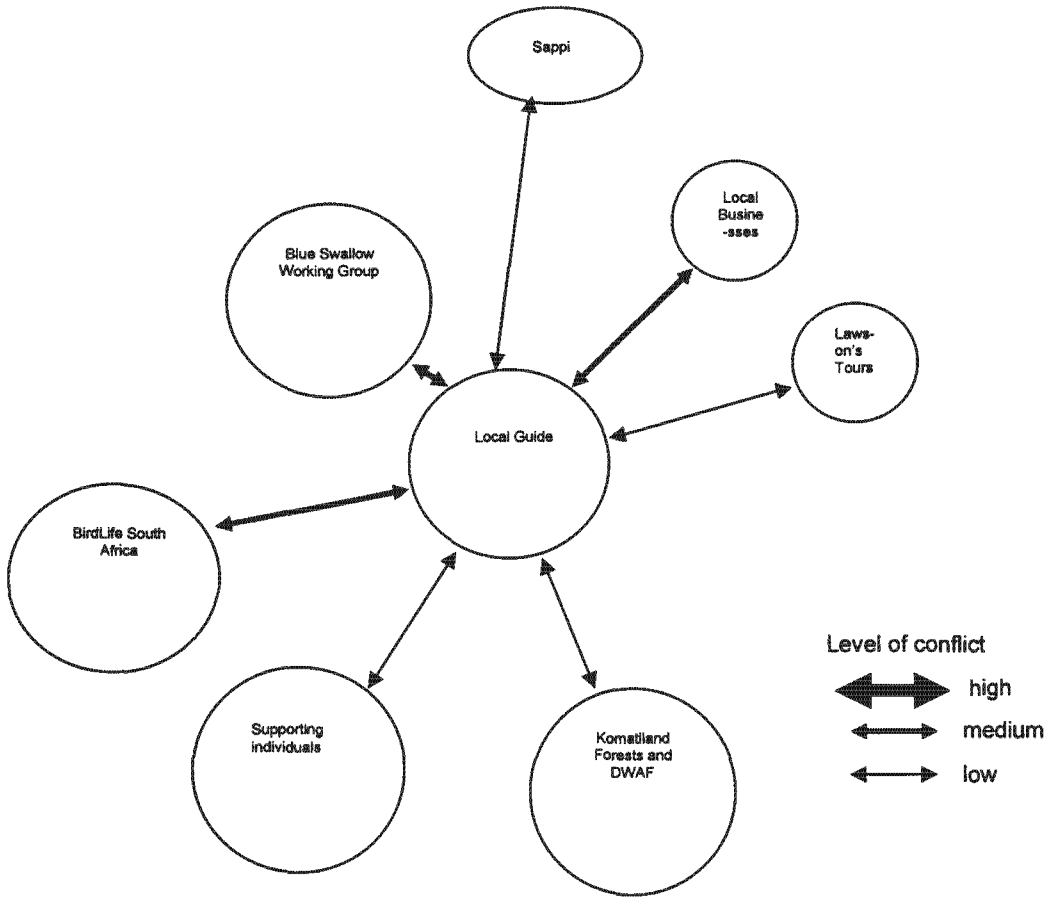



**Figure 3.16 The stakeholder and organisational environment at the BSNHS**

**Table 3.9 Organisational strengths and weaknesses at the BSNHS**

| Organisation | Strengths | Weaknesses/ notable points of conflict |
|---|---|---|
| BSWG | Marketing | Limited resources for guide development. Unprofessional behaviour by the local guide poses a big challenge. |
| BLSA | Marketing | Limited resources for guide development. Unprofessional behaviour by the local guide poses a big challenge. |
| Lawson's Tours | Send clients, marketing and some training and mentorship. | No significant points of conflict |
| Komatiland Forests and DWAF | Control access to the Natural Heritage Site where the Blue Swallows breeds and other birding properties.<br>Has assisted the local guide in learning grasses. | Bureaucratic delays |
| Local businesses | Provided the local guide with a lot of local support and sent him clients. | The continual unprofessional behaviour by the local guide meant that the local businesses stopped supporting him in frustration. |

*Project drivers, strengths and challenges*

*Key drivers and strengths:* This project site has the advantage of the presence of a critically endangered species, the Blue Swallow together with other birding, wildlife and scenic attractions. The local guide was granted exclusive guiding access to the property on which the Blue Swallow is seen and this together with the presence of a supporting local community and supporting organisations placed this project in a good position.

*Key challenges:* A key issue at the BSNHS was that the presence of only one guide was seen as a problem. The lack of competition meant that when the guide was behaving unprofessionally there was no alternative. The project also lacked the resources to follow up on site on a continuous basis or to train another alternative guide or to develop the capacity of the existing guide to behave more professionally. The absence of the Blue Swallow during the 2003/4 and 2004/5 summer season further hampered project progress and success.

*Key issues for conservation:* The presence of the local guide on the site when the project was operating successfully was seen to have a strong conservation impact (Steven Evans, Endangered Wildlife Trust). The development of the local guide increased awareness in the local community of the plight of the Blue Swallow and its habitat.

### 3.2.9. Magoebaskloof

*Timeline*

A timeline indicating key events in the history and development of the Magoebaskloof project is indicated in Figure 3.13

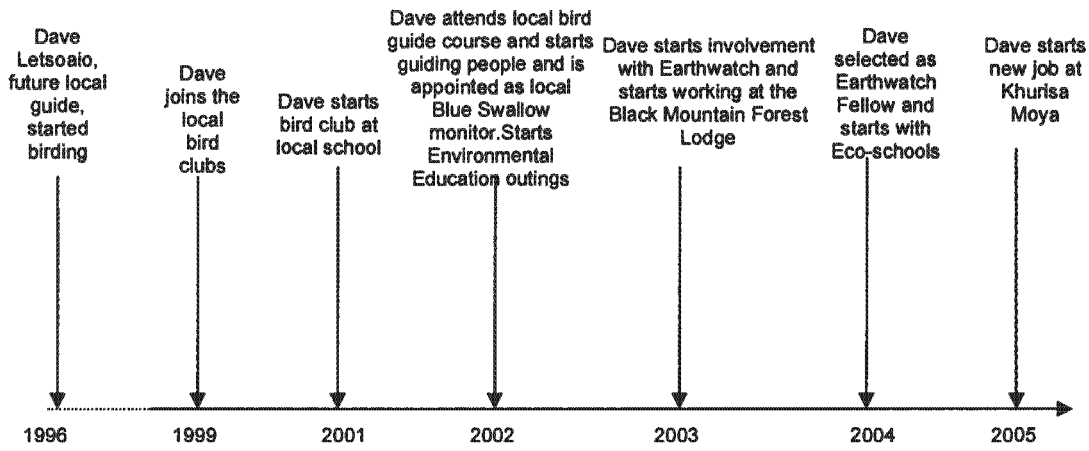



**Figure 3.17 Timeline Magoebaskloof**

Upon return from the local bird guide training course in 2002, an intensive on-site, multi-faceted training and development program led by BLSA was undertaken. The EWT BSWG also played an important role in this and this enabled Dave Letsoalo to strengthen his local networks. At the time of conducting the field research Dave Letsoalo had just started at Khurisa Moya Lodge where he said his prospects looked good.

*Institutional Environment*

The institutional environment and the organisational and institutional strengths and weaknesses at the Magoebaskloof project site are indicated in figure 3.18 and table 3.10.

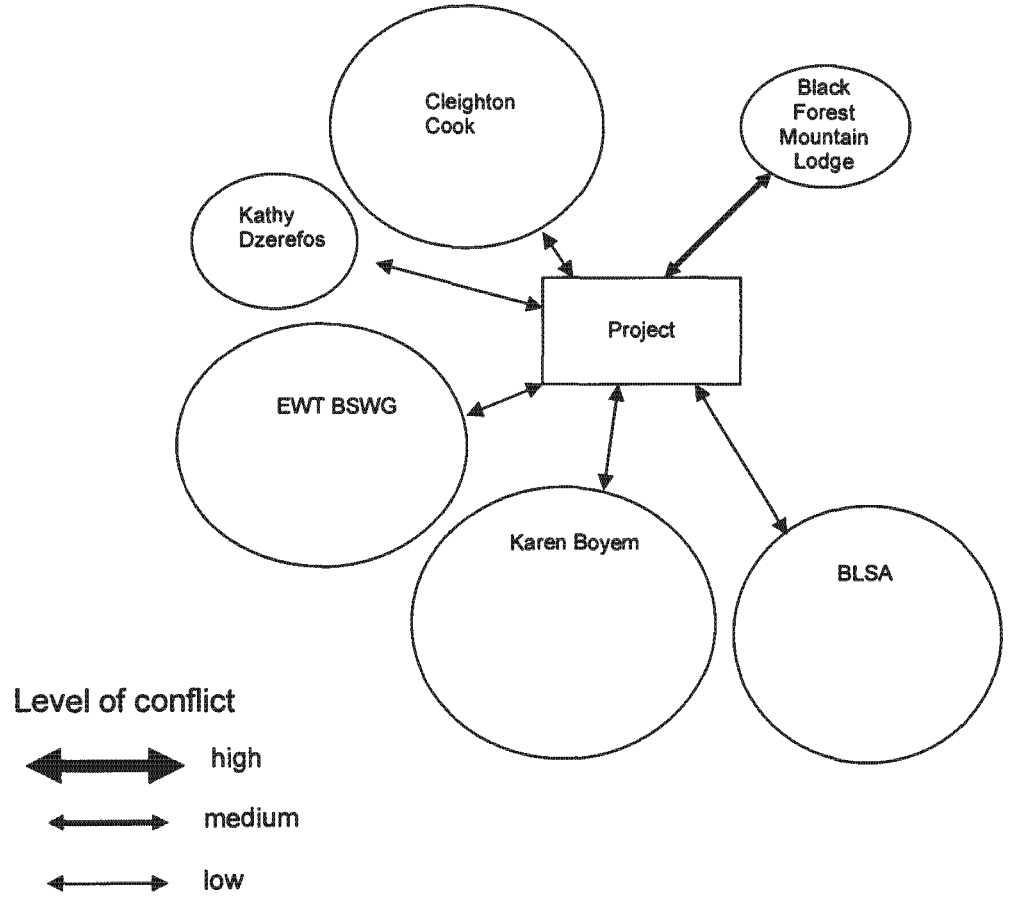



**Figure 3.18 Institutional and Organisational Environment at Magoebaskloof**

**Table 3.10 Organisational strengths and weaknesses at Magoebaskloof**

| Organisation | Strengths | Weaknesses/ notable points of conflict |
|---|---|---|
| Initial employer | Dave Letsoalo's initial employer who stimulated his initial interest in birding. | Karen was unhappy that David's guiding activities were taking him away from his other work. |
| EWT BSWG | Phillip Le Feuvre, the EWT BSWG coordinator who was based locally provided Dave with important support. The BSWG provided Dave with further support in the form of opportunities and equipment | No significant points of conflict |
| WESSA | Through Kathy Dzerefos, Dave has linked up to the WESSA Eco-schools project which provides him with an important opportunity to earn additional income and perform important conservation awareness work. | No significant points of conflict |
| Supporting individual A | A local inhabitant who has provided Dave with important opportunities to further his environmental awareness work. | No significant points of conflict |
| Supporting Individual B | Provided important capacity building and mentoring support to Dave. | No significant points of conflict |
| Black Forest Mountain Lodge | Employment | Dave grew increasingly dissatisfied with his job and the way he was treated. Complaints about bad communication with staff. |
| BLSA | The training, mentorship and support provided were critical to Dave's successful development. | The fact that BLSA did not have someone on site limited these benefits. Complaints about a lack of follow up regarding the legally required assessment process. |

*Project drivers, strengths and challenges*

*Key drivers and strengths:* The Magoebaskloof project represents the positive outcomes that are possible when a highly competent local guide with a strong entrepreneurial ability is trained in a favourable environment with a in which he was provided with opportunities and given support by the local community.

*Key challenges:* There are few challenges at this project site but there is room for increasing the conservation benefits from the local guide's activities. A further issue is to secure the resources and support necessary to build the capacity of the local guide to progress to the next level of being a provincial guide.

*Key issues for conservation:* The local guide has played a very active role in developing conservation awareness activities in his area.

### 3.2.10 Wakkerstroom

*Timeline*

A timeline indicating key events in the history of local guide training and development in Wakkerstroom is indicated in Figure 3.19.

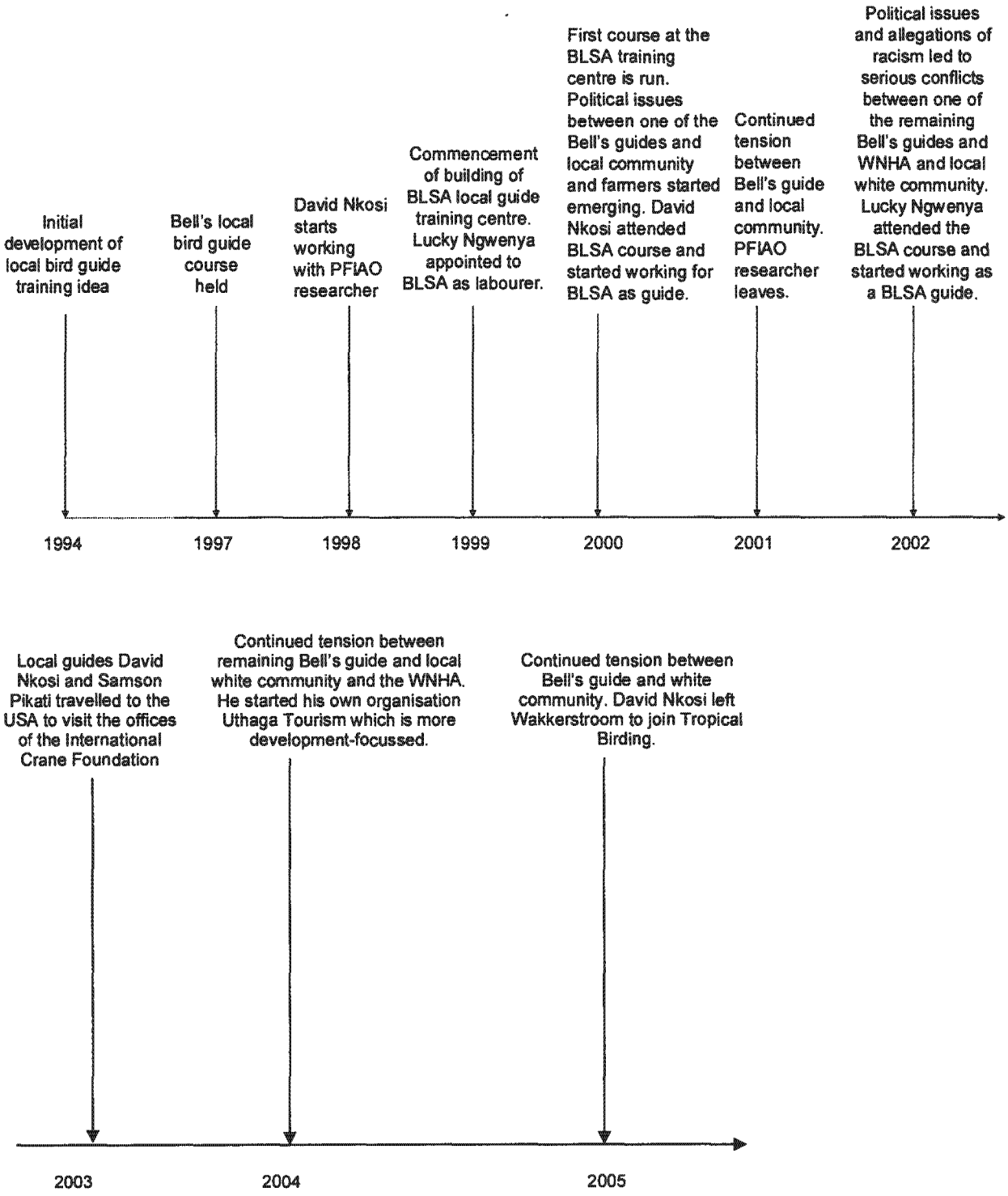



**Figure 3.19 Wakkerstroom timeline**

One of the trained local guides Samson Pikati started working for the EWT as an extension officer after attending the local bird guide training course where he has been very successful. The presence of research students from the Percy FitzPatrick Institute of African Ornithology (PFIAO in the Wakkerstroom area played an important role in building the capacity of and

stimulating an interest in birding among members of the local community. David Nkosi, a local guide employed by BLSA joined Tropical Birding, a South African-based international bird tour operator in the beginning of 2005. David felt the learning and growth opportunities at Tropical Birding were better than at BLSA and he has now developing himself to lead tours throughout South Africa as well as to other African countries. It should be noted that whilst David Nkosi was still in Wakkerstroom he played a key role in stimulating other subsequent guides and in acting as a role model.

*Institutional Environment*

The institutional environment and the organisational and institutional strengths and weaknesses at the Wakkerstroom for the BLSA guides are indicated in Figure 3.20 and Table 3.11. The institutional environment and the organisational and institutional strengths and weaknesses at the Wakkerstroom Bell's guides are indicated in Figure 3.21 and Table 3.12.

a) The BLSA guides

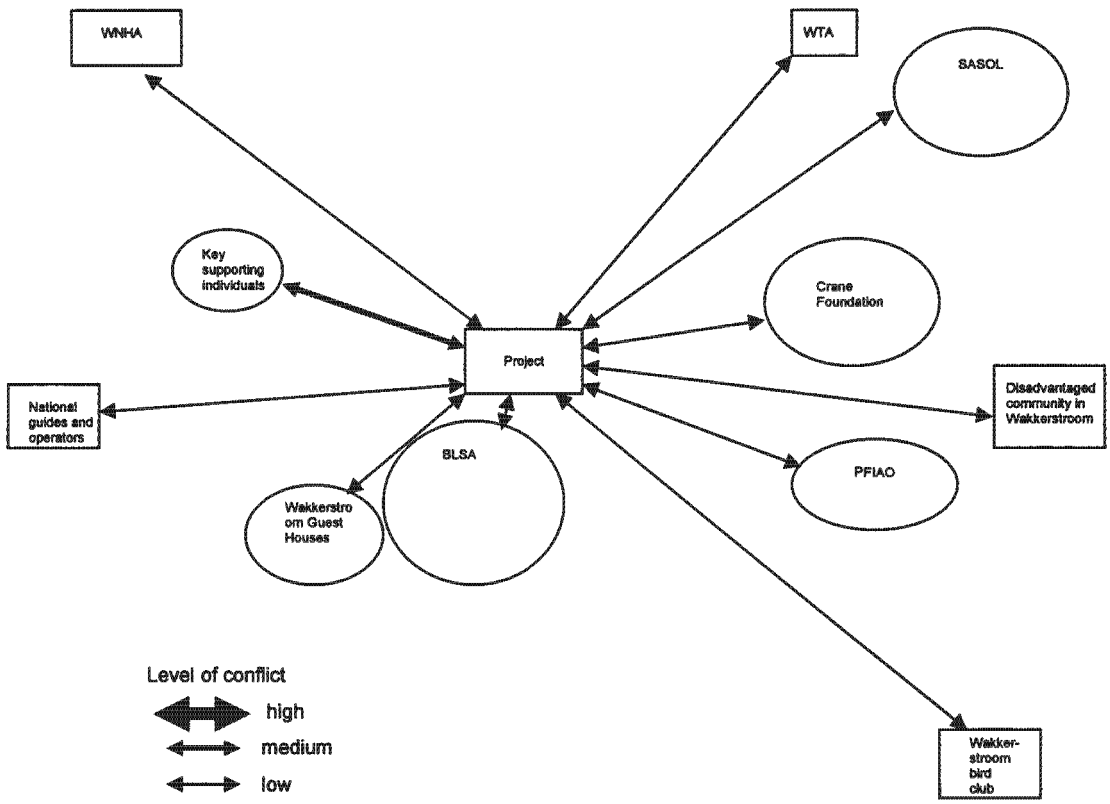



**Figure 3.20 Stakeholder and organisational environment of the BLSA Wakkerstroom guides**

**Table 3.11 Strengths, weaknesses and points of conflict for the BLSA guides**

| Organisation | Strengths | Weaknesses/ notable points of conflict |
|---|---|---|
| BLSA | Provides BLSA guides with full time employment, reservation support and coordination.<br>Provided employees with training and capacity building support. | Some expectations of local guides not met. |
| PFIAO | The presence of post-graduate field researchers played an important role in stimulating the interest of some of the local guides in birds and the environment | Although overall conflict was low, the local guides expressed dissatisfaction with poor communication and expectations not met. |

*Project drivers, strengths and challenges*

*Key drivers and strengths:* The fact that BLSA pays the local guides a fixed monthly salary and take primary responsibility for the marketing and reservation systems means has been important.

*Key challenges:* Ensuring the continued capacity building and stimulation of the local guides and keeping them busy with constructive work during the quiet months has been a challenge.

*Key issues for conservation:* The local guides have played a role in conservation action and monitoring work although there is room to further support their activities in conservation awareness.

b) The Bell's guides

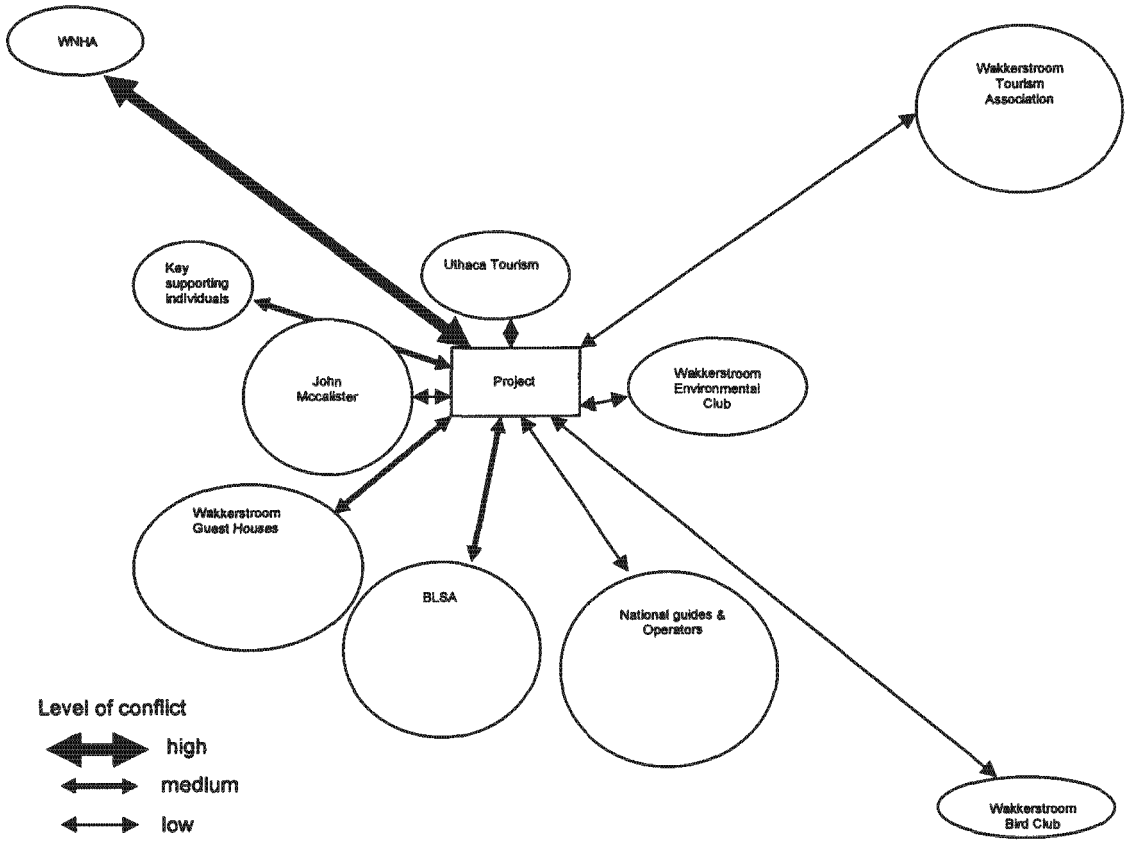



**Figure 3.21 Stakeholder and organisational environment for the Wakkerstroom Bell's guides.**

**Table 3.12 Strengths, weaknesses and points of conflict for the Bell's guides**

| Organisation | Strengths | Weaknesses/ notable points of conflict |
|---|---|---|
| BLSA | Provided core training course | The Bell's guides feel that BLSA provided them with limited opportunities presented by BLSA to get involved with BLSA's conservation and birding activities. BLSA is seen to perceive the Bell's guides as competition and is therefore not that interested in helping them. |
| Uthaka Tourism | A black empowerment and development focussed tourism association started by one of the Bell's guides in Wakkerstroom | The organisation is not supported by the white community.<br>Lack of resources. |
| John Mccalister | Established bird guide in the Wakkerstroom area. Provided capacity building support to the local guides. | No significant points of conflict |
| WNHA | Initial funding and guide training project was structured through the WNHA. | The Bell's guides did not agree with the strategies of the WNHA and felt that the WNHA was breaking them down rather than building them up. |
| National guides & operators | Use the local guides on some of their tours. | |

*Project drivers, strengths and challenges*

*Key drivers and strengths:* The Bell's guides were located in Wakkerstroom, one of South Africa's prime birding hotspots. This in addition to the high level of local enthusiasm around their initial training and development put them in a strong position. The Bell's guides were the first local bird guides to be trained in South Africa and have presented an important basis for further community-based avitourism initiatives to develop.

*Key challenges:* As the first community-based avitourism project to take place, there was a lot of learning that had to take place which benefited future projects. The expectations of the local guides were not well managed. The last remaining local guide of the seven that were trained is in conflict with the local Wakkerstroom community, the WNHA and the Wakkerstroom Tourism Association and sees himself in competition and conflict with the BLSA guides. The other six Bell's guides are no longer guiding because of the presence of more fruitful opportunities elsewhere.

*Key issues for conservation:* Although these have not been quantified by this thesis, the developments that were catalyzed by the training and development of the Bell's local guides have had substantial conservation benefits in the Wakkerstroom area as well as elsewhere in South Africa. There have also been substantial conservation awareness benefits as a result of the Bell's guides development.

## 3.3 Generalised institutional models

Generalised institutional models were constructed as a synthesis of the individual project models presented in section 3.2. This synthesis is based on the model presented in Anderies *et al.* (2004) and in consideration of the discussions in Ostrom *et al.* (2002).

### 3.3.1 The small, self-employed model

The projects that resemble the small, self-employed model (Figure 3.22) are the BSNHS, Magoebaskloof, Kimberley, and the Wakkerstroom Bell's guides.

*Entities in the model*

*A – The local guides*: These are the local guides that are selected, trained and developed. In these projects, they are selected through a selection process that varies in level of rigour from project to project. The basic premise in these type of projects is that the local guides will become successful micro-entrepreneurs in local bird and eco-guiding or that the training and development process will put them in a position to get employment as a local guide. The project implementers B, typically seek out and promote opportunities for the trained local guides to develop their businesses and to gain employment during the project implementation period as well as market their availability.

*B – The project implementers*: These are typically represented by an NGO such as the EWT-BSWG or BLSA which has raised the necessary funding to implement and drive the initiative. The project concept for these projects is that the project implementers will only be actively present in the area of operation for the funding period, typically 18 months to 3 years, where-after the assumption is that the local guides will be able to sustain themselves and the implementing agency to a large extent withdraws from the project.

*C – The project partners, stakeholders and supporters*: These are represented by local businesses, individuals, tourism organisations, municipalities and government departments who play a role in supporting the project in various ways. This support may come in the form of in kind donations and support, funding for marketing and other project activities, lobbying for the project, strengthening the project's and local guide's network and providing employment opportunities for the local guides. In these projects, support by this group is usually strong during the project implementation period when their involvement is motivated by B, the project implementers. Once the project implementers withdraw from the project, the continued support by this group is very dependent on their interaction with the local guides. In the case of the Magoebaskloof project where the local guide was perceived by stakeholders and supporters to be very enthusiastic, dedicated and competent there was a high level of support. In other projects where the local guides have been perceived less favourably and the local guides do not have the capacity to develop these relationships themselves these relationships have been weak.

*D – The Market*: This consists of the clients who pay the local guides for the services that they offer. In projects that follow small, self-employed model, the marketing budget tends be relatively small and the marketing tends to be limited to local media sources such as the BLSA newsletter, articles in the magazine Africa: Birds and Birding and travel marketing materials targeting residents or South African tourists or travellers. The clients that make use of guides are primarily local South African birders or tourists or foreign tourists that are passing through the area and find out about the local guides through the local advertising or word of mouth.

*E – The Funders*: This represents the primary agency responsible for funding the project. They have a direct relationship with B, the project implementers. In this model the funders are not directly involved with the project and their sole purpose tends to be the provision of funding.

*Linkages and relationships*

*Connectors 1 and 2*: Although there was a marketing effort by the project implementers, and the extent of this varied from site to site, the implicit assumption in this project design is that when the implementation phase of the project is complete, the local guides will be able to do their own marketing. This means that in all cases the marketing effort by the project implementers is not a sustained one. Although the level of marketing capacity of the local guides varies from project to project, their marketing capacity is typically weak and one of the most important types of marketing in these cases becomes so-called 'word of mouth' marketing. What this means is that where the local guides deliver a consistently good service and they develop a good reputation, the demand levels for their services are can be high. In cases where the local guide's are perceived to be perform poorly, the demand for their services becomes low. The absence of a project implementing agency or partner over the long term to assist the local guides in negotiating the ups and downs of establishing a market for their services is a limiting factor of this model. It is only the 'best of the best' that survive under these circumstances.

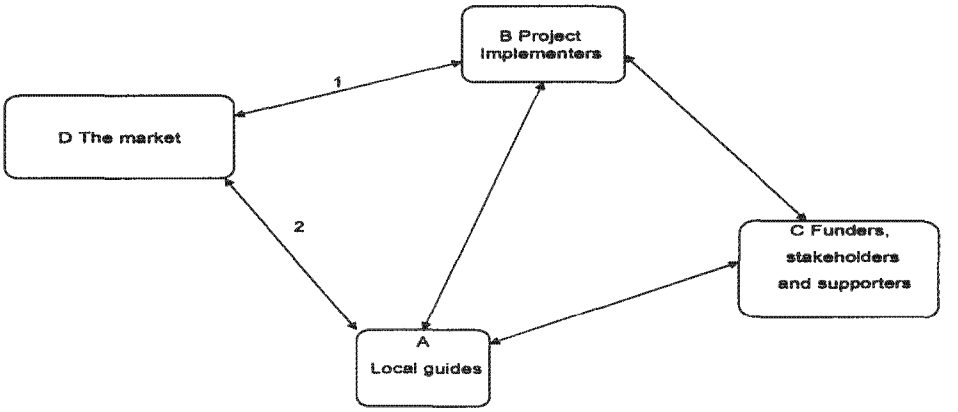



**Figure 3.22 The small, self-employed model. Details on the diagram are provided in the text above.**

### 3.3.2 The large-budget, self-employed model

The projects that follow the large budget, self-employed model (Figure 3.23) are those that form part of the ZBR, these are, Dlinza, Muzi Pan, Richards Bay, Ngoye Forest and Amatikulu Nature Reserve

*Entities in the model*

*A – The local guides*: These are the local guides that are selected, trained and developed. In the ZBR projects, they are selected through a selection process that has become more rigorous over time. The basic premise in these type of projects is that the local guides will become successful micro-entrepreneurs in local bird and eco-guiding or that the training and development process will put them in a position to get employment as a local guide or in a related field.

*B – The project implementers*: In these projects this is the ZBR coordinating office.

*C – The project partners, stakeholders and supporters*: These are represented by local businesses, individuals, tourism organisations, municipalities and government departments who play a role in supporting the project in various ways. This support may come in the form of in-kind donations and support, funding for marketing and other project activities, lobbying for the project, strengthening the project's and local guide's network and providing employment opportunities for the local guides. Due to the high level of continued and long

term involvement by the ZBR coordinating office, the levels of support from C has continued to grow as it is seen as a worthwhile and valuable project to be part of.

*D – The market*: This consists of the clients who pay the local guides for the services that they offer. In projects that follow this model, there is a large marketing budget and an intensive and professional marketing drive. The marketing drive includes the attendance and marketing of the projects at international bird-watching and travel fairs, an informative and professionally-managed website and the regular production of large numbers of full-colour marketing brochures and posters and regular promotions in magazines and to bird clubs in South Africa. The result of this is that the ZBR reaches many more potential clients across South Africa as well as internationally than projects with a smaller marketing budget. Clients to the ZBR are both local birders and tourists as well as birding tourists from more distant parts of South Africa or other countries, some of who may plan a visit specifically to the ZBR as a result of their exposure to the marketing materials. Word of mouth remains an important way in which more clients are sourced.

*E – The funders:* This represents the primary agency responsible for funding the project. They have a direct relationship with B, the project implementers in providing funding as well as providing coordination support and advice and are involved in the projects on a more hands-on basis.

*Linkages and relationships*

*Connectors 1 and 8*: The ZBR office selected guides for training, provided them with on site support once they returned from training which included assessment against national standards. The ZBR play a critical role in marketing the local guides at a high level and at the time of field research funding had been secured to continue doing this for the next two to three years and possibly longer. The ZBR also facilitates the process of supporting some of the local guides in finding employment. The extent of interaction of the ZBR coordinating office with each project is dependent on the distance of the project site and the local guides to Richards Bay where the ZBR coordinating office is based. In Richards Bay this is a very close relationship whereas at Muzi Pan and Amatikulu Nature Reserve this is a more distant relationship. As indicated by connector 8, one of the key advantages of the projects which form part of this model is that through the ZBR all local guides are linked to a broader network of sites. This strengthens the sustainability of the outcomes of individual projects as if one project does not succeed the local guides based there can move elsewhere.

*Connectors 2 and 3*: The implementing agency, the ZBR office has been able to build strong relationships with numerous project partners, supporters, funders and stakeholders. These relationships are strongest at the Richards Bay project site where the ZBR offices are based. The ZBR office also supports the development of these partnerships at other project sites. As

the implementing agency, the ZBR office has been operating in the area since 1998, and intensively since 2002. It is perceived to have been successful and the expectation is that it will continue to grow and expand. Although this was not quantified *per se* as part of this research, through its successes, the ZBR seems to have crossed a threshold where there is positive awareness of its different projects and there are many private and public and private organisations that want to support it and be part of its growing success. The relationships represented by connector 2 in Figure 3.23 are therefore strong and growing. The longer term presence and perceived success of the ZBR has also strengthened the relationships between the local guides and the project partners, supporters and stakeholders (indicated by connector 3 in Figure 3.23). If the ZBR were to start operating at a lower level or close down in the area the relationships indicated by arrow 3 would then become dependent on the interactions between the project partners, supporters and stakeholders and the local guides at each site.

*Connectors 4 and 5*: The professional, high level marketing drive of the ZBR coordinating office and hence its relationship with the market (Connector 5 in Figure 3.23) is regularly mentioned to be one of its key success factors. Although the local guides are encouraged to develop their own marketing strategies (Connector 4 in Figure 3.23) and supported in their efforts the majority of the marketing is managed by the ZBR coordination office. Another important feature is that the ZBR office through its partnership with BirdLife Travel manages a reservation system for the local guides, which assists in the running of a professional and consistently good quality operation. This marketing and reservation is also very important in the level of demand the local guides experience. Of the 8 local guides at sites on the ZBR that were questioned on this topic, an average of 80% of demand was sent to the local guides through the ZBR coordinating office's reservation system.

*Connectors 6 and 7*: The implementing agency the ZBR office has developed a very successful relationship with the primary funder of the ZBR projects, which is the BirdLife International Rio Tinto partnership. There is regular contact between the ZBR office and the funder, which takes an interest in what is happening at each project site and which also provides management advice to the various ZBR projects. This represents a direct relationship between the funder and the local guides indicated by connector 7.

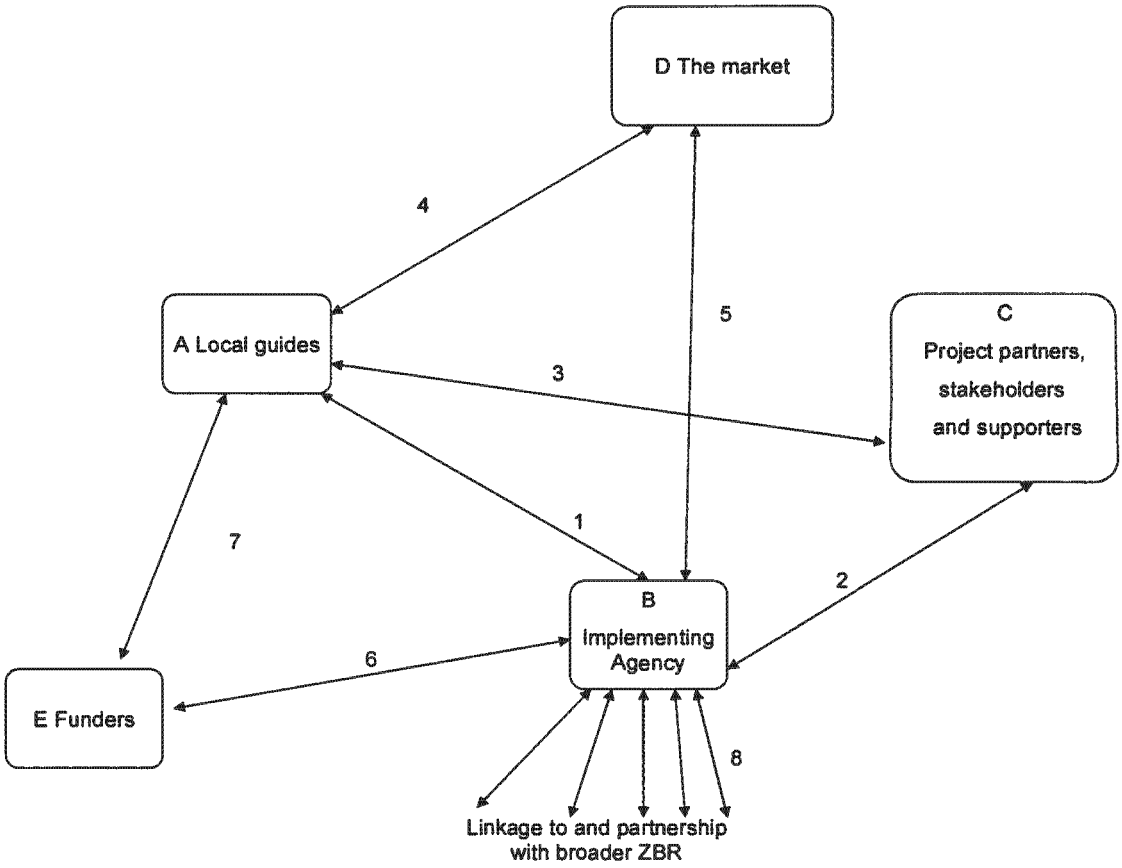



**Figure 3.23 The large-budget, self-employed model. Details on the diagram are provided in the text above.**

### 3.3.3. Innovative employment model

The projects that follow the innovative employment model (Figure 3.24) are Green Futures, the Wakkerstroom BLSA guides and projects where local guides have gained employment such as at Magoebaskloof and certain guides on the ZBR.

*Entities in the model*

*A – the Local Guides*: These are the local guides that are employed. They may have been working for an employer already and were then selected to undergo local bird and eco-guide training to become a local guide at the site (eg the BLSA guides in Wakkerstroom). At Green Futures, arrangements for employment are made with employers whilst the local guides are being trained such that once their training is complete, an opportunity for employment is available for them. Alternatively, they may have been provided employment as a local guide once they had already been trained and were working as a freelance guide (e.g. Magoebaskloof).

*B – Employers*: These are the organisations that employ the local guides and pay them a fixed salary or wage. The employers would employ the guides because they contribute to the

objectives of the organisation and they can fund it from the demand from the clients that utilise the services of the local guides or from other sources or because their employment is seen as profitable.

C – *The stakeholders and supporters*: They play a less important role in this model. To varying extents they may play a capacity building support role for the local guide or provide the employer with clients that utilise the services of the local guide.

D – *The Market*: This consists of the clients who pay the employer for the services of the local guides. In this model the type and extent of the marketing drive depends largely on the employer. If the local guide/s are working for a 5-star tourist lodge which caters primarily to the international tourist market, their clients will primarily be wealthy foreigners. If the local guide/s are working for a lower cost accommodation establishment that caters to South African birders and travelers as well as foreigners, their clients will be a mix of both. The employer may try to market the availability of local guides at their establishment as a major draw-card and bring tourists from distant parts of South Africa or other countries to make use of the local guides. Alternatively the employers marketing of the local guides may be more low-key and the local guide's clients will be travelers who find out about the guides once they are already at the establishment. Some lodges allow the local guides to market themselves independently of the marketing their employer is doing for them but this marketing would primarily be through local sources and targeting local residents or birders.

*Linkages and relationships*

*Connector 1*: The employers pay the local guides a salary/wage to perform guiding and other duties. These other duties include working at reception and meeting and greeting guests, as well as gardening and general maintenance. Some employers take an active interest in building the capacity of the local guide and provide the local guide with opportunities in this regard.

*Connectors 2 and 3*: The employer may establish and foster linkages between themselves and stakeholders and supporters (Connector 2 in Figure 3.24) or establish and foster linkages between the local guides and stakeholders and supporters (Connector 3 in Figure 3.24). In this model, the onus rests on the employer to ensure that the required partnerships are there for the success of the local guides they are employing. Different employers develop these linkages to different extents to promote the development of the local guides.

*Connectors 4 and 5*: The employer is responsible for marketing to the clients and taking and managing reservations. In some cases as with the BLSA Wakkerstroom guides, the local guides only take out clients that were reserved through the employer and they have no direct connection with marketing. At Magoebaskloof, the local guide is also permitted to market

himself independently and to take independent bookings and pay a commission to his employer. At Green Futures, candidates are trained in horticulture and once employed, they have typically very little role in marketing their own services as their employer would market their services or if they are employed at an organisation such as a golf estate, they provide their services directly to this organisation on a salaried basis.

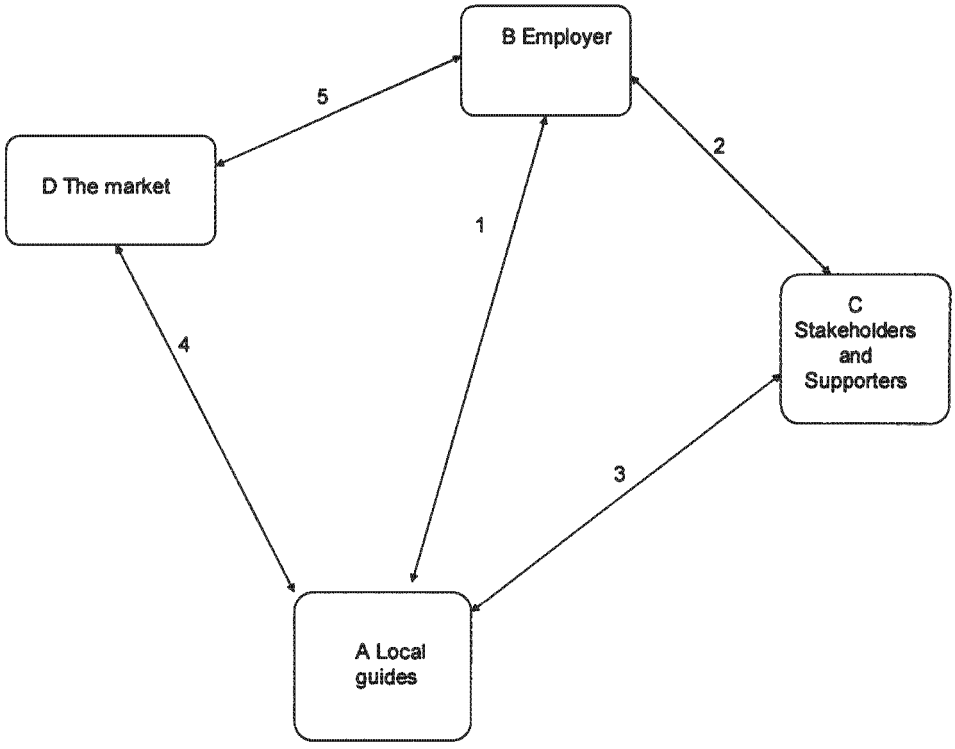



**Figure 3.24 The innovative employment model. Details on the diagram are provided in the text above.**

### 3.4. Capacity building benefits

A summary of the average capacity building benefits to each project is indicated in figure 3.25. Chapter 1 provides further details of the capacity building process and what the capacity building program entails. A score of four is considered to be a threshold score as a score of four or above indicates that a local guide has been assessed as competent against national standards and is legally able to guide. Only 2 of the 36 local guides had a capacity building score of lower than 4 and the remainder of the guides scored between 4 (assessed as competent against national standards but made little progress thereafter) and 7 (made excellent progress in furthering his/her birding, guiding, business development and conservation skills since assessment). The critical barriers, obstacles and challenges in the capacity building and guide development process are discussed in section 4.4.

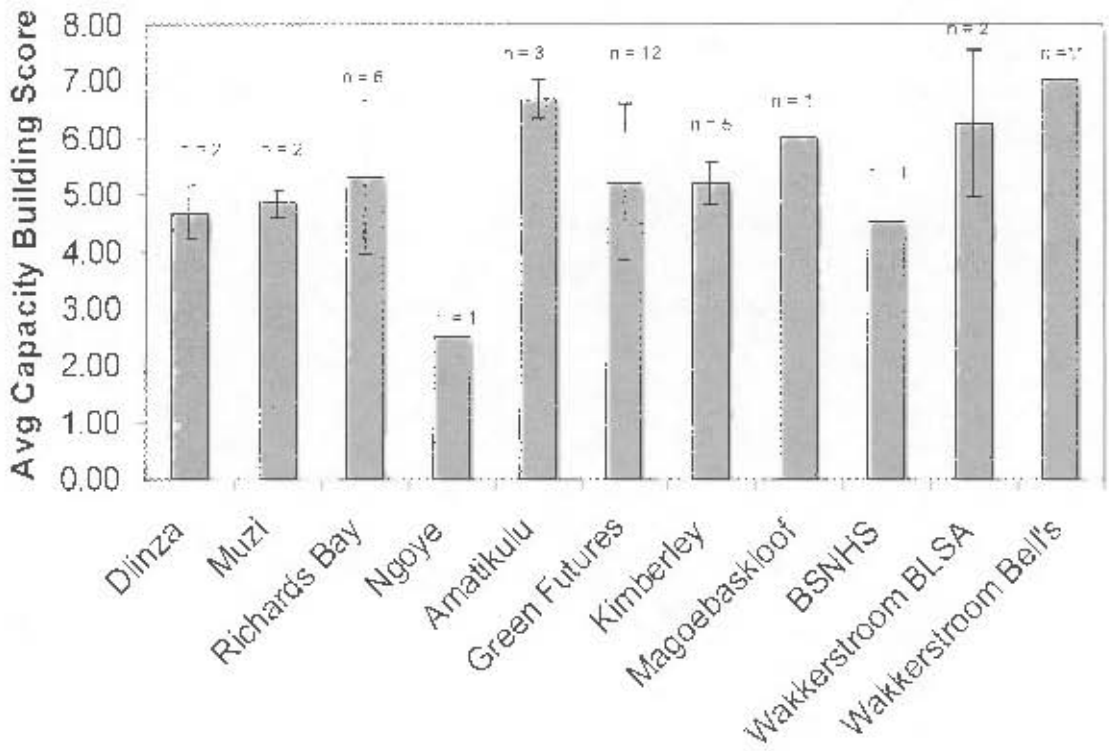



**Figure 3.25: Average capacity building Scores for guides/ beneficiaries in the different projects. The scale ranking details are provided in section 2.3.7. Note that the local guide from Ngoye forest was attending courses at the University of Zululand in 2005 and was not available on site to guide.**

***Only the local guide was available to score himself in this case.**

*Empowerment benefits*

Many of the local guides indicated a noteworthy increase in their sense of self-worth and a dramatic shift in what they feel they can achieve in life. These are indicative of substantial empowerment benefits that stem from community based avitourism initiatives. Empowerment is defined as giving someone a greater ability to take charge of their own future according to their own goals and criteria (de Beer and Swannepoel 1998). The following quotes from interviews with local guides are an indication of these empowerment benefits:

*July Dingani, Green Futures:* Now I can go out and do something valuable with my life that can make a difference

*Gilbert Mathlokho, Kimberley:* I have become a much more responsible person and it has made me famous. I am now famous and I must use this fame in a positive way

*Dave Letsoalo, Magoebaskloof:* This project has changed my life tremendously in a positive way.

*David Nkosi, Wakkerstroom:* Learning about bird identification bird behaviour and bird ringing and measuring has opened a whole new world to me. By taking out schoolchildren this awareness can be widened

## 3.5. Conservation benefits

### 3.5.1. TRA evaluation and scores

The conservation benefits as measured by the TRA evaluation process as well as the threats to each site are indicated in Table 3.13.

**Table 3.13: Summary table of the TRA analysis for each site. An X denotes that a threat is present at a site. The TRA % score is defined as the extent to which the threats to a particular site have been reduced as a result of the project (see section 2.3.6. for details on the TRA method)**

| Project | Dlinza | Muzi Pan | Richards Bay | Ngoye Forest Reserve | Amatikuu Nature Reserve | Green Futures | Kimberley | BSNHS | Magoebaskloof | Wakkerstroom |
|---|---|---|---|---|---|---|---|---|---|---|
| *Direct Threats* | | | | | | | | | | |
| Alien Invasives | X | X | | X | X | X | | X | X | |
| Unsustainable harvesting of natural resources | X | X | | X | X | X | X | | X | |
| Fragmentation by urban development | X | | | | | | | | | |
| Domestic pets | X | | | | | | X | | | |
| Overutilisation by tourists | X | | | | | | | | | |
| Habitat transformation*** | | X | X | | | X | | | X | X |
| Pollution and industrial spills | | | X | | | | X | | | |
| Siltation | | | X | | | | | | | |
| Cattle/ Livestock Grazing | | | | X | | | X | X | | X |
| Trampling by vehicles | | | | X | | | | | | |
| Unfavourable burning practices | | | | X | X | X | X | | | X |
| Prospecting and mining | | | | | | | X | X | X | |
| Illegal Access | | | | | | | X | X | | X |
| TRA Score % | 19 | 24 | 53 | 3* | 3 | 33 | 0 | 24 | 7 | 6** |

***The projected score for Ngoye once the birding lodge is up and running was calculated at 33.70%.**The TRA score for Wakkerstroom is attributed 50% to the Bell's guides project and 50% to the BLSA project as the combined extent of influence on conservation in the Wakkerstroom area has been similar. *** The causes of habitat transformation were subsistence agriculture at Muzi Pan, industrial development at Richards Bay, housing and agricultural development at Green Futures and commercial forestry expansion in the Magoebaskloof and Wakkerstroom.**

### 3.5.2. Conservation Awareness and Conservation Action benefits

The conservation awareness and conservation action benefits at each site are indicated in Table 3.14. A total of 36557 people who were exposed to a conservation message by attending an outing, talk or event arranged and conducted by one of the local guides on the community-based avitourism projects (Table 3.14). A conservation action labour day is defined as being equal to 8 hours of conservation-directed labour activity by 1 adult. A total of 2393 labour days were contributed to conservation activities as a result of the projects included in this study (Table 3.14).

**Table 3.14: Summary of conservation action and conservation awareness at all the sites. A conservation action event represents an outing involving one person or more during which specific conservation action was taken. A conservation awareness event represents a talk or event during which a conservation awareness activity takes place.**

| Project | Olinza | Muzi Pan | Richards Bay | Ngoye Forest | Amatikuu Nature Reserve | Green Futures* | Kimberley | BSNHS | Magoebaskloof | Wakkerstroom BLSA | Wakkerstroom Bell's |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Conservation Action** | | | | | | | | | | | |
| Nr of Conservation Action labour days* | 203 | neg. | 321 | 168 | neg. | 640 | neg. | 100 | 52 | 459 | 450 |
| Nr of conservation action outings/events of ≥ 1 person. | 72 | neg. | 35 | 168 | neg. | 160 | neg. | 444 | 74 | 930 | 30 |
| Median nr of people per event/outing | 15 | neg. | 50 | 1 | neg. | 4 | neg. | 1 | 1 | 1 | 30 |
| **Conservation Awareness** | | | | | | | | | | | |
| Total nr of people attending outings, talks or events conducted by local guides | 15140 | 385 | 6630 | neg. | 600 | 640 | neg. | 380 | 672 | 12000** | 110 |
| Total nr of conservation awareness events/outings | 62 | 27 | 40 | neg. | 3 | 160 | neg. | 19 | 108 | neg. | 122 |
| Typical nr of participants | 70 | 50 | 45 | neg. | 600*** | 4 | neg. | 45 | 45 | neg. | 30 |

***At Green Futures the Conservation Action and Conservation Awareness was closely linked and that is why the same number of people are involved in conservation action and conservation awareness. ** The figure of 12000 represents the number of people Samson Pikati who was trained as a local guide in Wakkerstroom roached as part of his conservation awaroness work with the EWT. *** At Amatikulu Nature Reserve, the same school of 600 pupils visited the site 3**

**times a year to learn about the environment and related to this the local guide managed to prevent the burning of a patch of grassland where the threatened Swamp Nightjar was breeding. neg. = negligible**

### 3.5.3. Factors associated with a higher threat reduction score

There is a positive and significant relationship (after the application of the Bonferroni correction) at the 0.05 level between the extent of threat reduction targeted (measured by a Likert Score of between 1 and 7) and the TRA score (Figure 3.26a). There is a positive but not statistically significant relationship after the application of the Bonferroni correction between the extent of total project support and the TRA score (Figure 3.26b). The extent of total project support is a combined measure and its calculation is indicated in Table 3.15.

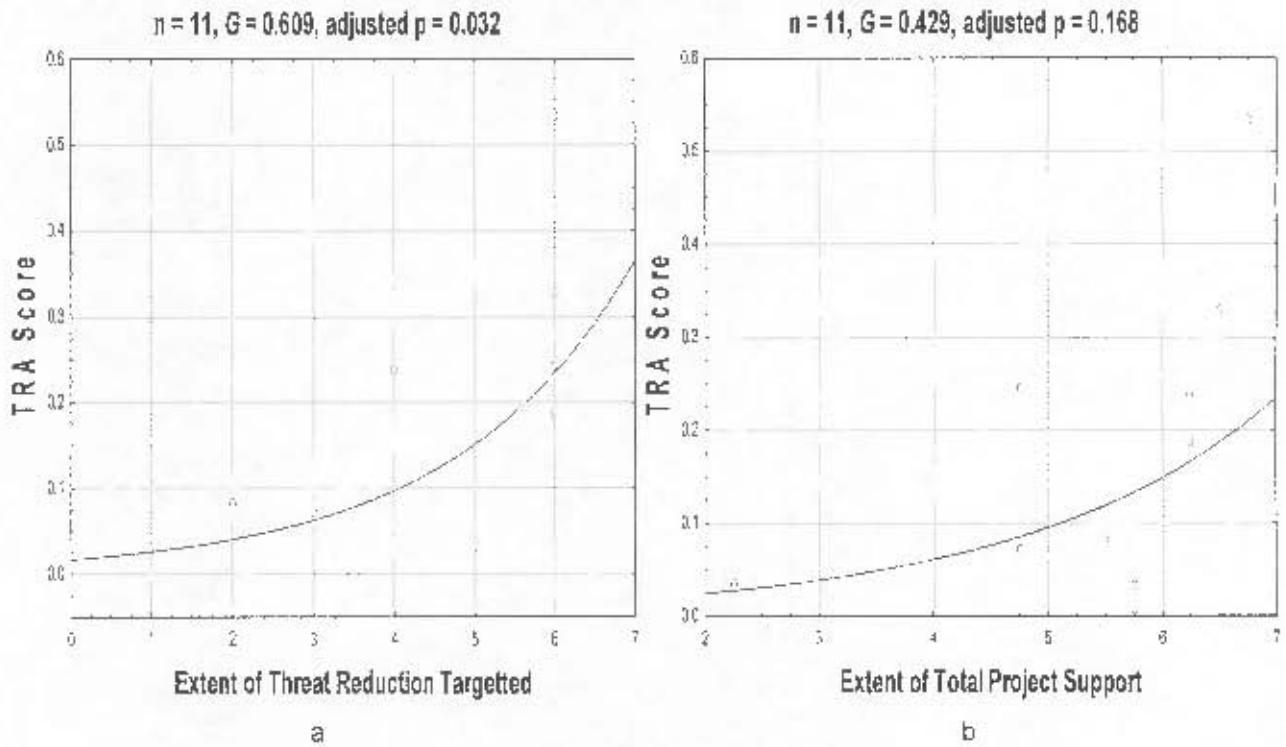



**Figure 3.26 a) The relationship between the Threat Reduction Assessment score and the extent of Threat Reduction targeted and b) the TRA score and the index of the extent of total project support. The trend-lines are included to indicate the direction and type of relationships and have not been tested statistically**

**Table 3.15 The calculation of the extent of total project support. All scores are given on a Likert Scale of 1 to 7 and the calculation of scores A1 to A7 is described in section 2.3.5. Appendix 1 contains a detailed description of each measure.**

| Project | Extent of marketing support (A1) | Extent of capacity building support (A2) | Extent of coordination support (A3) | Extent of network building support (A7) | Combined average score of extent of total project support |
|---|---|---|---|---|---|
| BSNHS | 5 | 4 | 5 | 5 | 4.75 |
| Magoebaskloof | 3 | 5 | 4 | 7 | 4.75 |
| Kimberley | 6 | 7 | 3 | 7 | 5.75 |
| Wakkerstroom BLSA guides | 6 | 5 | 7 | 5 | 5.75 |
| Wakkerstroom Bells guides | 2 | 2 | 1 | 4 | 2.25 |
| Green Futures | 7 | 7 | 7 | 5 | 6.50 |
| Richards Bay | 7 | 7 | 7 | 6 | 6.75 |
| Amatikulu | 4 | 5 | 7 | 6 | 5.50 |
| Muzi | 7 | 5 | 7 | 6 | 6.25 |
| Dlinza | 7 | 6 | 7 | 5 | 6.25 |
| Ngoye | 6 | 6 | 6 | 5 | 5.75 |

Table 3.16. indicates additional relationships between conservation benefit measured by the TRA score and various other factors that were considered important. There were no significant relationships between the TRA score and the total number of guides operating at a site, the TRA score and the extent to which a site is a birding and eco-touring attraction and the TRA score and the extent of site accessibility to the potential market. The relationship between the TRA score and the extent of the linkage to established and relevant tour operators is positive and significant. This relationship is no longer significant once the Bonferroni correction is applied. There is no conceptual basis for such a strong relationship between these two variables and it is considered a spurious correlation.

**Table 3.16. Relationship between TRA and four institutional features. P values are not adjusted with the Bonferroni correction and the risk of a type 1 error through multiple testing is acknowledged.**

| Relationship | Valid n | Gamma score | p value |
|---|---|---|---|
| TRA Score and total number of guides at a site | 10 | 0.282 | 0.291 |
| TRA Score and the extent of linkage to established and relevant tour operators (A11) | 11 | 0.619 | 0.02 |
| TRA Score and the extent of site accessibility to the potential market (A13) | 11 | 0.256 | 0.328 |
| TRA Score and the extent of birding and eco-touring attraction (A14) | 11 | -0.474 | 0.08 |

## 3.6 Economic benefits

### 3.6.1. Current monthly income

Figure 3.27 provides a summary measure of the average monthly income to all project sites. Across all sites the mean monthly income is R2240 (SD±1660, n = 39). The average number of dependents supported by the income of the local guides is 5.58 (SD±3.06, n = 26). Out of the 39 guides/beneficiaries that were included in this study that are still at least partially active in an activity related to what they were trained in 23 are employed and 16 operate on a part time basis. Thirty nine out of the 63 guides/beneficiaries that were trained in the projects are still active in activities related to their training. It was not possible to obtain detailed information on the whereabouts and activities of the 24 who are no longer active in guiding but most of them have moved to more lucrative positions in other sectors (pers. comm. Duncan Pritchard). A number of local guides have mentioned that the confidence and life skills that were gained through the community-based avitourism training and development process has put them in a better position to seek any type of employment. This is indicated in the following quote:

*Eugene, local guide:* The communication and life skills and confidence that I gained from the (guide development) program enabled me to get my current job at Eskom (an Electricity Supply company).

*Supplementing of income from other sources*

Although specific data was not collected on this matter an important additional point to note is that many local guides supplement their guiding income from other sources, particularly in the early stages of their guiding work.

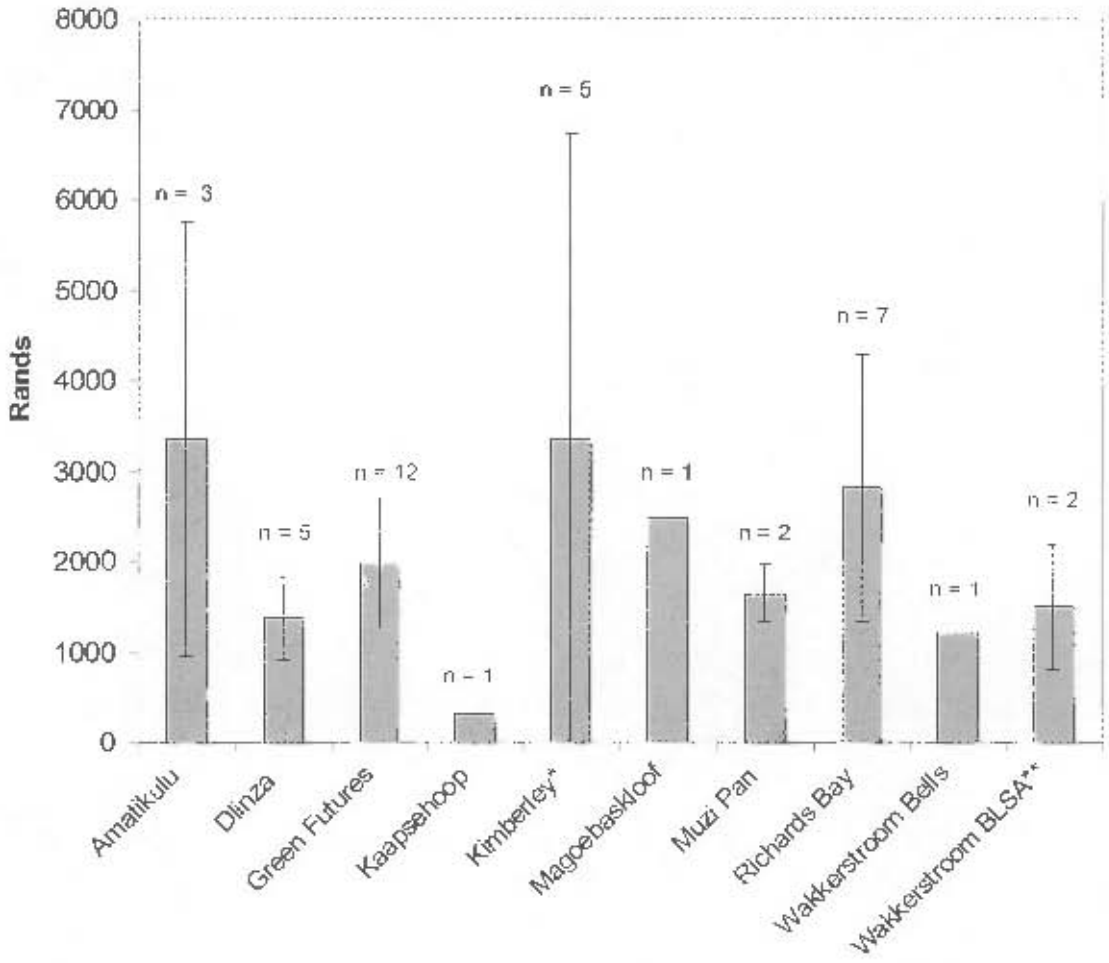



**Figure 3.27. Average gross monthly income of local guides at project sites.*Two of the five local guides in Kimberley have earn over 90% of their monthly income from non-guiding work and this amounts to 85% of the total monthly income to the Kimberley guides. This non-guiding income has been included in the figures and analysis in this chapter for these guides as one of them is working in a related field to his training and the other obtained his current position as a result of the training and development process he went through on the community-based avitourism project. **Currently only one guide is left at the Wakkerstroom BLSA project, the other resigned in January 2005.**

### 3.6.2. Change in monthly income

The average change in monthly income defined as what local guides are earning at the time of field research compared to what they were earning before amounted to ZAR1642 (± SD1668, n = 26) (Figure 3.28). There is a significant difference between the current monthly income to local guides and what they were earning before they were selected and trained as local guides ($t = -4.426$, $p < 0.001$, $df = 64$).

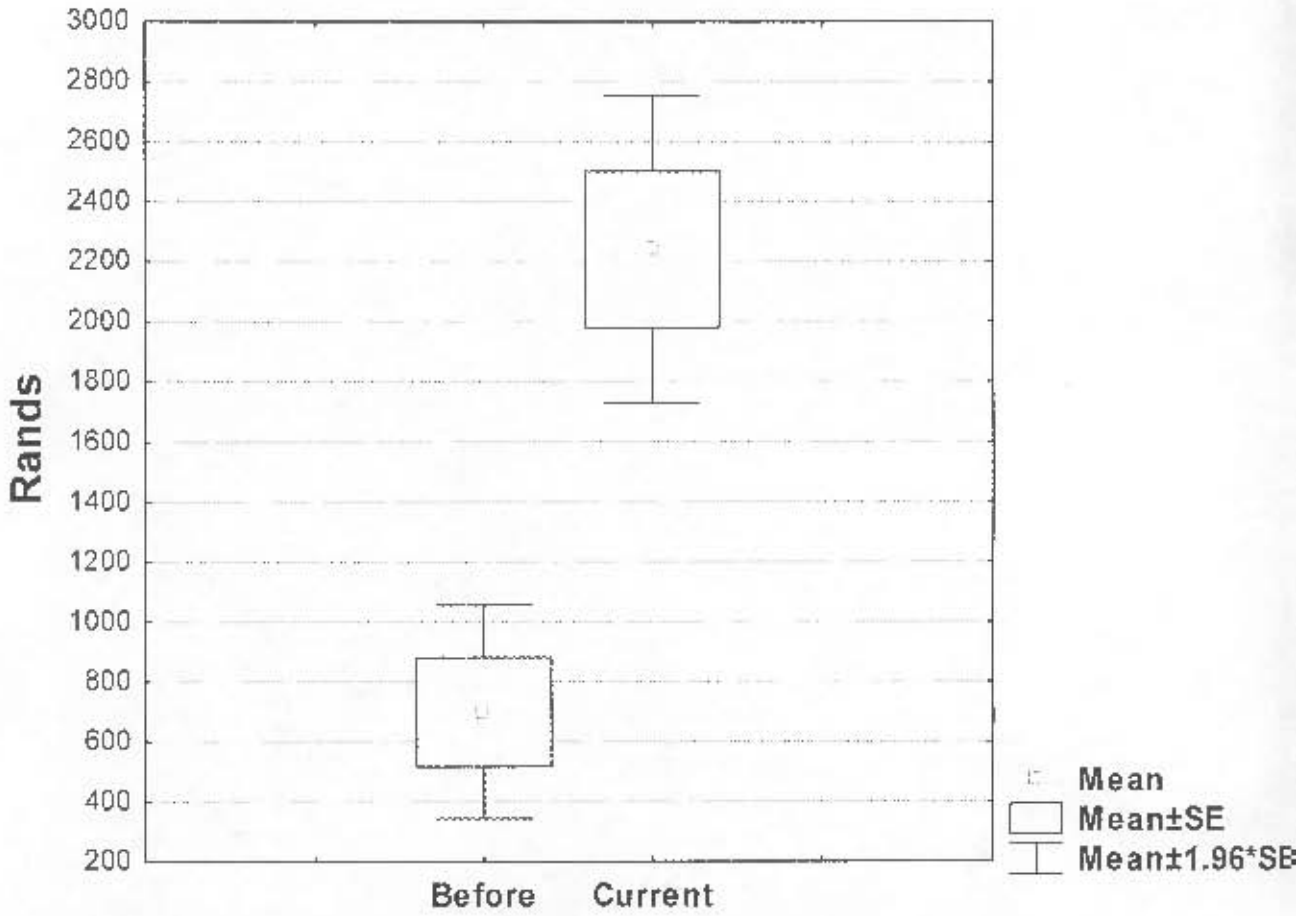



**Fig 3.28. Summary figure of the difference between the current average monthly income (at the time of field research) to local guides and the average monthly income before they were selected and trained as local guides.**

### 3.6.3. Factors associated with higher economic benefits

Fig 3.29 shows the relationships between total monthly income and extent of marketing and extent of total project support. There is a positive and significant relationship (after the application of the Bonferroni correction) at the 0.05 level between marketing (measured by a Likert Score of between 1 and 7) and total monthly income (Figure 3.29a). There is also a positive and statistically significant relationship after the application of the Bonferroni correction between the extent of total project support and total monthly income (Figure 3.29b). The extent of total project support is a combined measure and its calculation is indicated in Table 3.15. There is a strong positive and significant correlation between the number of guides and mean total monthly income (Figure 3.30). Relationships between total monthly income and eight institutional and other factors is indicated in Appendix 5.

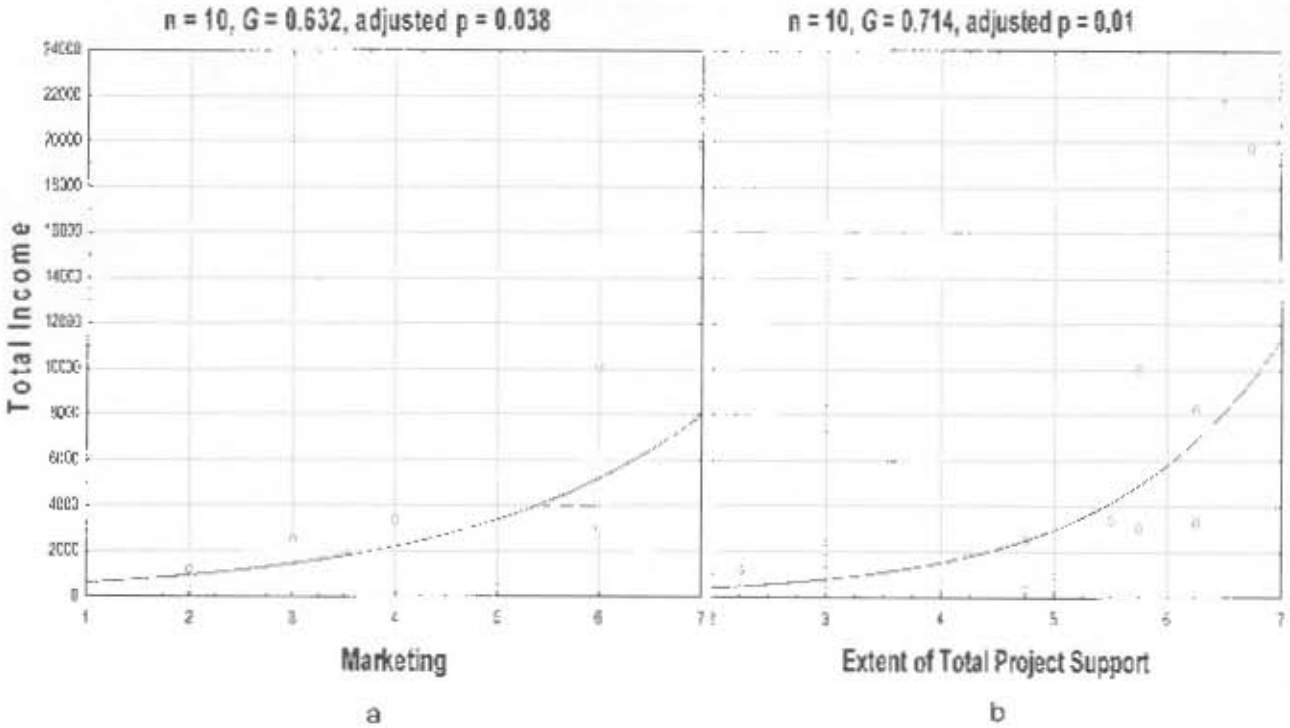



Fig 3.29a) The relationship between the marketing score and mean total monthly income and b) the index of the extent of total project support and mean total monthly income. The trend-lines are included to indicate the direction and type of relationships and have not been tested statistically.

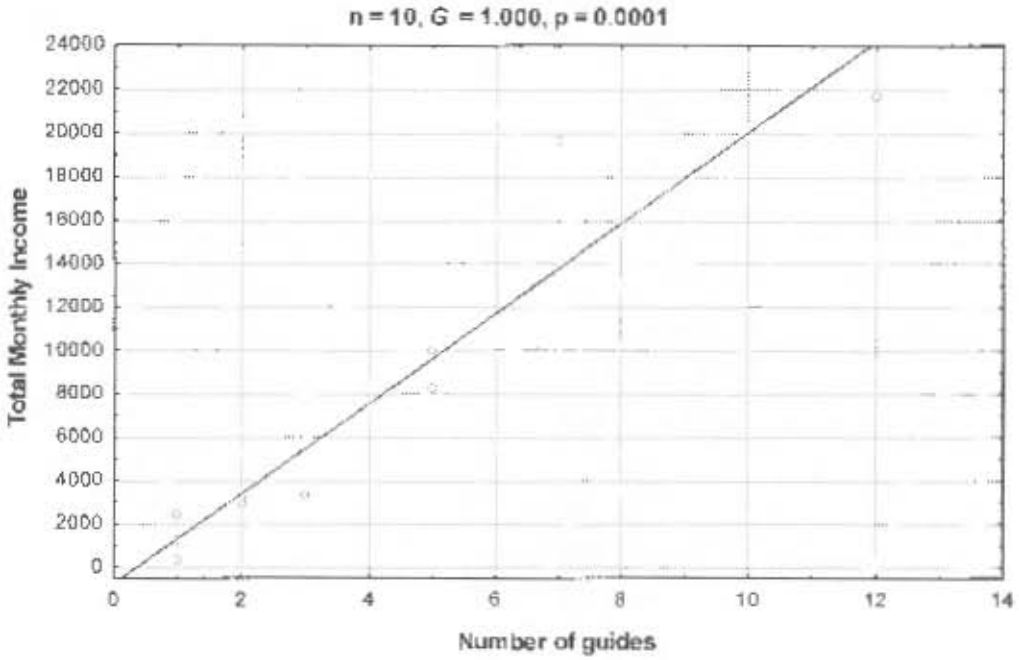



Figure 3.30 Relationship between the number of guides at a project site and mean total monthly income

### 3.6.4. The link between conservation and development

The two projects with the highest total income also had the highest TRA score, but there was no generally significant correlation between income and the TRA score (Figure 3.31).

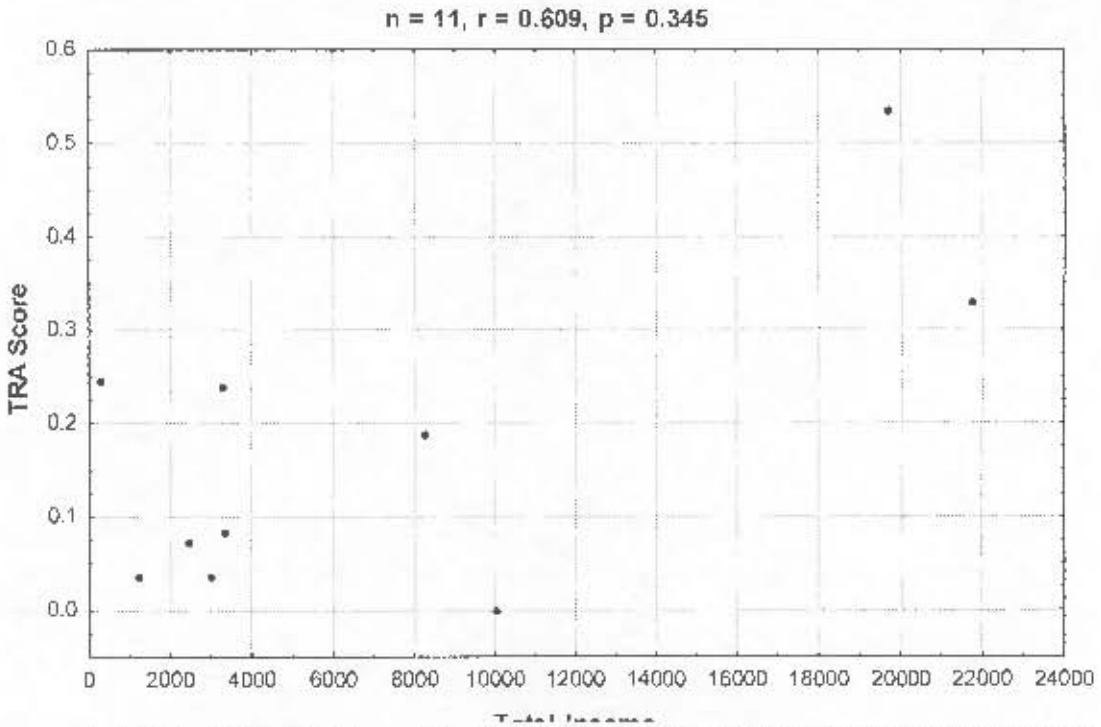



**Fig 3.31 Relationship between the Threat Reduction Assessment score and total monthly income**

### 3.6.5. Project expenditure vs local guide's income

Projected project income in relation to project expenditure is indicated in Fig 3.32. The project with the lowest income (the BSNHS) and the group of projects with the highest income (ZBR) both have a ratio of guides income to expenditure of less than 1. The high income to expenditure ratio of 7.05 at the Magoebaskloof project site is due to a highly competent guide becoming successful with a very small project budget. Data on this aspect was not available for the Wakkerstroom Bell's and the Wakkerstroom BLSA guides. The well-resourced ZBR projects are still in the development and project implementations stage and this is an important factor in evaluating the low ratio of guide's income to project expenditure of 0.39 for these sites.

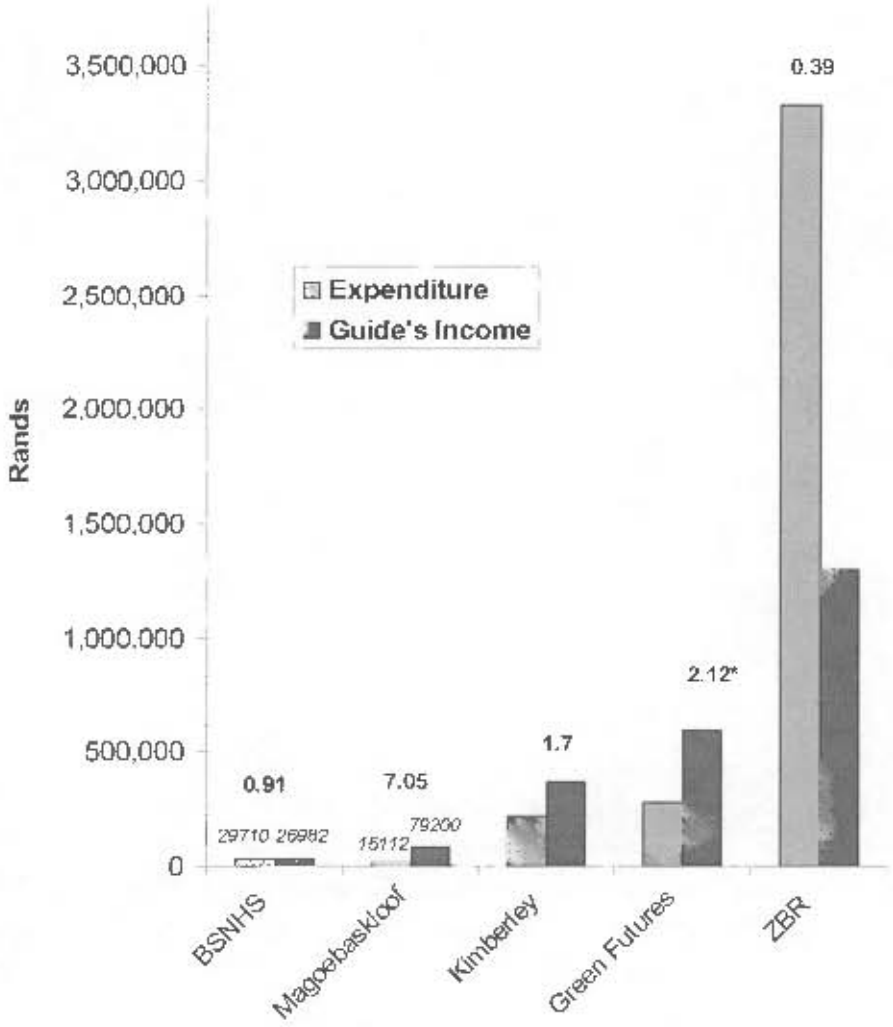



**Figure 3.32. A comparison of project expenditure and projected guides income after 4 years of project operation based on current income. The numbers in bold indicate the ratio of cumulative projected income to expenditure. The numbers in small italics indicate the values of low income and expenditure projects. The BSNHS project has been running for 4 years so actual figures were used. Data for the ZBR was only available for the ZBR as a whole and ZBR figures are for the entire ZBR including Dlinza forest, Muzi Pan, Richards Bay, Ngoye Forest and Amatikulu Nature Reserve projects as well as other sites not included elsewhere. *The net costs of the Green Futures project after taking account of R220 000 that the learners brought the project in income.**

By the fourth year, three (BSNHS, Magoebaskloof and Kimberley) of the four projects analysed had no project expenditure as the project implementation phases were or will be complete (Figure 3.33). This analysis considered only project costs and not local guide's operating costs which tend to be low and restricted to transport and mobile phone costs (pers. comm. Andre Botha, EWT; Sakamuzi Mhlongo; BLSA and Duncan Pritchard). The ratio of

guide's income to project expenditure of the ZBR projects in the fourth year of operation is more than twice the total ratio after four years indicated in Figure 3.26.

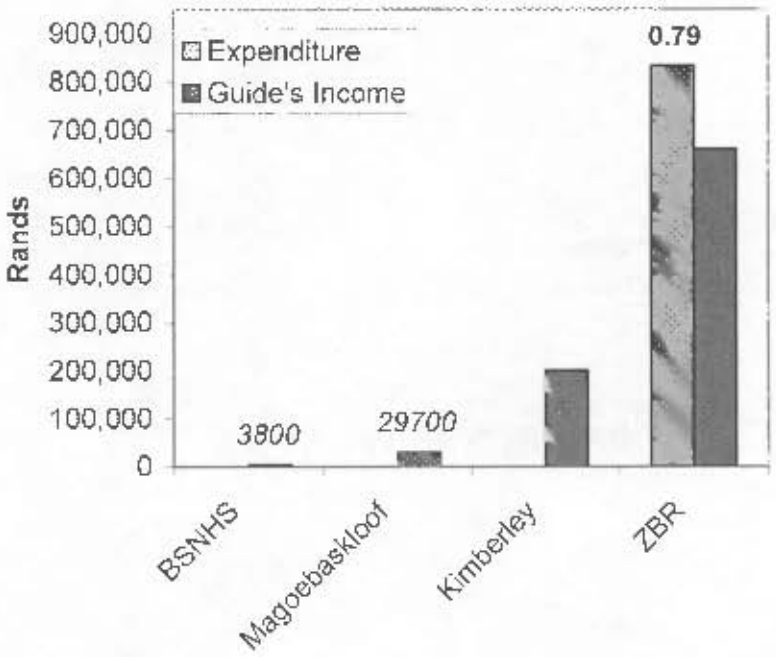



**Figure 3.33 A comparison of project expenditure and projected guides income in the 4th year of project operation based on current income levels. The number in bold indicates income to expenditure and italics indicate values for the low income projects. The BSNHS project has been running for 4 years so actual figures were used. Data for the ZBR was only available for the ZBR as a whole and ZBR include Dlinza forest, Muzi Pan, Richards Bay, Ngoye Forest and Amatikulu Nature Reserve projects as well as other sites.**

### 3.6.6. Cost of job creation through community-based avitourism

The cost per direct job created in community-based avitourism projects for which budget data are available is quite variable (Figure 3.34). In this context job creation refers to a situation in which the local guide is earning a living from guiding or an activity related to their training and capacity building for a period of one year or more. Magoebaskloof has the lowest cost per job created and this can largely be explained by the highly competent candidate present there, who was able to succeed with fairly limited funding and support (Figure 3.32). Although the ZBR has the highest cost per job created it is an initiative with a very strong marketing drive compared to other projects and it has developed birding infrastructure (in the form of hides, information offices and signs) far more extensively than any other project. These aspects may play an important role in the future growth and sustainability of the ZBR. The average cost of job creation in the community-based avitourism projects that were analysed is more than eleven times less than the average cost of job creation in the tourism sector in South Africa as indicated in Naude and Harmse (2001).

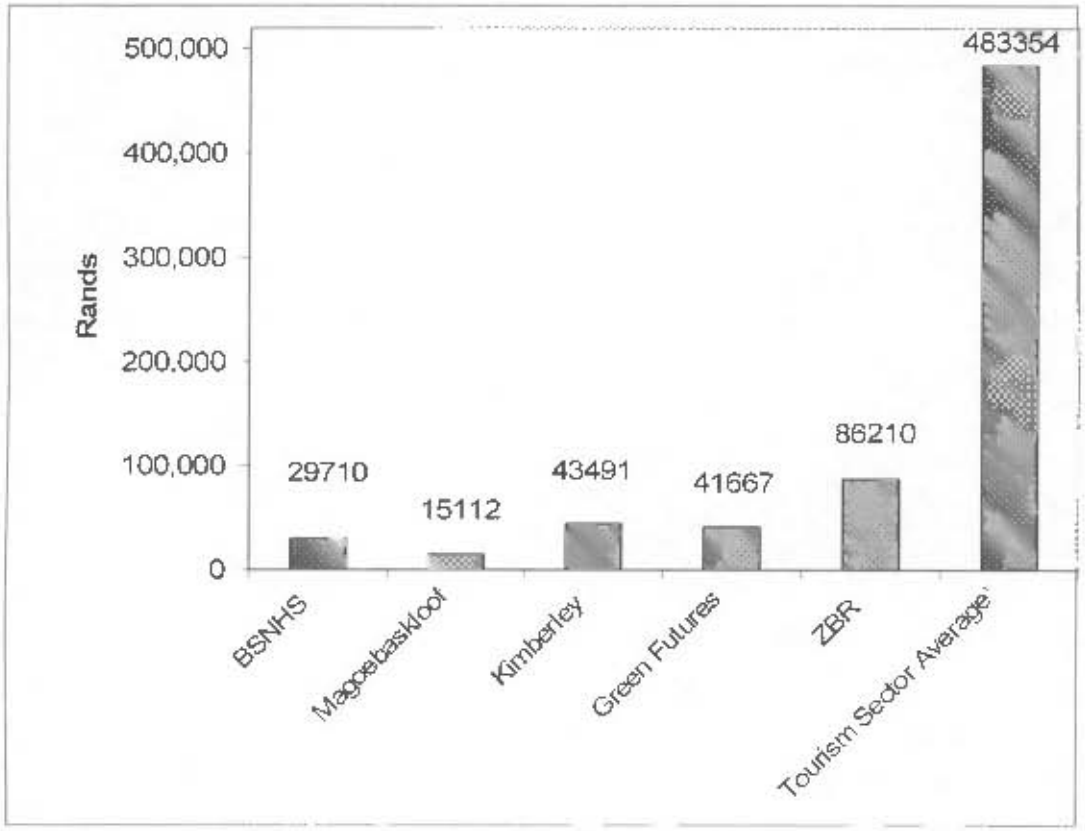



**Figure 3.34 A comparison of the cost per job created in different projects in comparison to the tourism sector average. *Source: Naude and Harmse (2001)**

# CHAPTER 4: DISCUSSION

## 4.1. Factors associated with increased conservation benefits

Understanding the factors that drive a higher conservation benefit measured through the TRA score will inform the design of management of future projects and is of key concern to the organisations implementing community-based avitourism initiatives. Where community-based avitourism projects have been specifically designed to counter certain threats to conservation, they have been effective at doing so (Fig 3.26a). Although not statistically significant in this study, the results suggest that the extent of total project support is also important (Figure 3.26b). The importance of adequate long term support to ICDPs and other initiatives in integrating biodiversity conservation and economic development is indicated in Sanderson (2005), Kiss (2004) and Salafsky *et al.* (2001).

Table 3.15 suggests that no other single factors are significantly associated with the extent of conservation benefit in these projects. TRA is not affected by the extent and strength of a site as a birding and eco-touring attraction but it is important to note that all the sites included in this study represented good quality birding and ecotourism destinations. Community-based avitourism projects are unlikely to work at sites which hold no or little birding or eco-touring attraction.

In some cases, such as Green Futures, a project operates within a broader conservation initiative. In such cases, it becomes quite difficult to ascertain to what extent there has been a strengthening of conservation due to the guiding development activities alone. Immeasurable impacts also often spread way broader than the local site of immediate conservation interest.

## 4.2. Factors associated with increased economic benefits

The importance of development and livelihood benefits from community-based avitourism projects means that understanding which factors play critical roles in determining these is key. Marketing and long term project support including support for coordination, capacity building and network building are critical for attaining a higher level of monthly income (Figure 3.29). Sanderson (2005), Kiss (2004) and Salafsky *et al.* (2001) mention the essential need of this type of long term support in enterprise-based projects.

The majority of the support to community-based avitourism projects usually comes directly from the project implementing and coordinating agency. There are however examples of where direct support to a project is of a lower level and a high level of external support has been very important in ensuring the success of a project.

The positive and significant relationship, between the extent of focus on candidate selection and average monthly income indicates the importance of designing appropriate processes

and budgeting adequate resources for candidate selection in these projects (Appendix 5). This is consistent with business and management wisdom that good recruitment practices are essential.

Statistically non-significant relationships between total monthly income and the extent of site accessibility and potential market and total monthly income and the extent of birding and eco-touring attraction suggests that these factors are of a lesser importance. It should be noted that all the sites included in this study represented good quality birding and ecotourism destinations.

### 4.3. Linkages between conservation success and income

There was no clear relationship between total income and conservation benefit measured by the TRA score (Figure 3.31). The two projects in Figure 3.31 with a high TRA score and a high level of income were two large projects which had a relatively large pool of resources to direct towards training, developing and marketing a relatively large number of guides and conservation activities. The project in Figure 3.31 with a low TRA score and a comparatively high monthly income of around R10000 per month was one which was focussed more on the training and development of local guides and the creation of environmental awareness than on direct conservation interventions.

Institutional characteristics such as the extent of focus on conservation have a much clearer impact on the TRA score (Figure 3.26). Salafsky *et al.* (2001) mention that the amount, frequency, timing, distribution or variability of cash benefits in ICDPs had no association with conservation success but that the amount of non-cash benefits had a positive association with higher conservation success. Fabricius *et al.* (2001) mention that non-cash benefits such as the extent of perceived local ownership and the strength of local ownership are often more important than direct cash benefits in affecting a higher level of conservation benefit. Berkes (2004) states that incentives that make community-based conservation initiatives successful are multidimensional and that equity and empowerment are often more important than monetary incentives. Muchapondo (2003) shows results of a bio-economic model which suggests that conservation is more successful under regimes where local communities get a profit share from hunting and tourism but that this should be augmented by inflows of external funding. Thus, although cash benefits can be important, non-cash benefits may play an even more important role in the extent of conservation benefit. This is an aspect that requires further investigation in the community-based avitourism context as these types of initiatives continue to expand.

*Community-based avitourism vs other conservation and development tools*

The cost-effectiveness of community-based ecotourism as a conservation tool has been brought into question (Kiss 2004). Ferraro and Kiss (2002) raise the issue of the

effectiveness of direct payments to conserve biodiversity as opposed to indirect strategies such as community-based avitourism. Further investigation into the effectiveness of community-based avitourism initiatives as a conservation and development tool is necessary and application of community-based avitourism as a conservation tool should be done considering the potential costs and benefits of other approaches. Although this aspect was not specifically investigated in this thesis, Community-based avitourism is likely to be an effective tool as part of a combined strategy for achieving conservation and development goals.

### 4.4. Institutional factors and barriers in the development of local guides

*Local guide development process and critical barriers*

The community-based avitourism projects under investigation aim to take someone from a financially poor, rural community and over time and develop them into a self-sustaining successful local guide which contributes effectively to local conservation efforts.

Based on the comments by the interviewers there is a general perception on community-based avitourism projects that various barriers hamper the successful development of local guides: 1) differences in cultures and ideology between the different project participants are a key source of misunderstanding and conflict;2) in the post-Apartheid South African socio-economic environment the legacy of a history of oppression and a resulting lack of entrepreneurship and confidence by the local guides pose a serious challenge in these projects; 3) high levels of community and family problems and chaos which prevent local guides from getting to appointments or meetings are an associated problem; 4) local guides have mostly grown up with very little exposure to western business norms and creating an understanding of these norms is a challenging and costly process; 5) local guides often lack the resources for even the most basic of expenses, such as a taxi fare to meet a client or attend an important meeting. The following quotes from the interviews are included as an indication of these barriers and challenges:

*Local guide:* "If we are making an arrangement with a white person, it is very difficult to say, no, I can't make it on Sunday morning to go birding. It is easier and more acceptable for us to say yes, we can make it, knowing that we can't and then we just don't show up."

*Supporting individual:* (with reference to the same project as the above quote) "I am not going to keep putting my time into the local guides if they don't want to help themselves. If I am prepared to give up my Sunday morning to help them and then they don't show up, it really frustrates me and I lose interest in helping them any further."

Project coordinators and supporting individuals often express frustration and disappointment at the local guide's inability to succeed in light of what project coordinators and supporting individuals see as good opportunities that are being presented for to them. An associated feature is that project coordinators and supporting individuals feel that local guides often behave in an unprofessional manner. The following verbatim quotes are an indication of this:

*Project coordinator*: "The local guides do not seem to be able to see or have the capacity to utilise the opportunities that are being created for them or understand the consequences of their actions."

*Supporting individual:* "Sometimes I wish I could give the local guides a good slap so that they can come right".

A related issue is that local guides, project coordinators and stakeholders sometimes have very different perspectives on the level of success achieved by the same project:

*Local guide:* "I think the project has been a tremendous success and we should all be very proud of what has been achieved."

*Supporting individual:* (with reference to the same project at the above quote) "The local guides have not put the required effort in and used the opportunities that we created for them and now the project is largely a failure."

*Critical Interventions for success*

The findings of this study suggest that to achieve high levels of success in developing self-sustaining, self-employed guides, a long period of intensive training and development support is required. This period should be followed by a lower level of sustained support thereafter. The initiatives that form part of the ZBR have provided 4 to 5 years of intensive support towards the development of self-employed local guides. The general perception of the interviewees is that this is the type of support that is required for the successful development of self-employed local guides. For the ZBR projects this has translated into direct project expenditure (not including in-kind external support) of R56 818 per guide. At this level of expense, out of the 44 local guides that have been trained on the ZBR, 29 (66%) are in still in operation in guiding or a related field. The ZBR projects are an example of a large-budget, self-employed project model (Figure 3.23). In a number of interviews it was mentioned that the severe challenges faced by these initiatives and the high level of effort required mean that these projects cannot rely on volunteers alone and resources should be budgeted for paid staff to work on these initiatives. An alternative model is to set the local guides up with employment at a bed and breakfast, hotel or tourism establishment as soon as they have initially been trained and selected. The institutional arrangements around such an innovative employment model are depicted in Figure 3.24. A major advantage with this model is that the

onus for marketing to ensure sufficient market demand for the services of the local guides is on the employer and many employers may already have the system for this marketing in place. This model also saves on the large costs involved in an external funding agency marketing the services of the local guides and building capacity in the local guides to market themselves. The small, self-employed project model (shown in Figure 3.22) can be cost-effective and successful if very strong candidates are selected for training and development and a high level of external support is provided to the project (e.g. Magoebaskloof project in Fig 3.34). These aspects cannot be consistently be relied on and this leads to variation in the outcomes of projects that follow the small, self-employed project model. Although this topic was not specifically investigated an important point to note is that many of the local guides in the interviews indicated a strong preference for being employed, or having clients sent to them as opposed to having to start up their own businesses or micro-enterprises and create demand for their services on their own. The following verbatim quotes from the interviews indicate this sentiment.

*Project stakeholder:* "There is a perception among guides that once they are trained they should be earning an income – this is a really important perception to be aware of."

*Local guide:* "We have been trained and put in a direction and BirdLife South Africa have not come up with something for us to do."

*Local guide:* "We really at least need some income. Some type of stipend and basic support is critical."

Lastly, a clear indication of the challenges faced by local guides is indicated by Biggs (2005) who found that the potential market demand for the development of local guides at the Blue Swallow Natural Heritage Site in Mpumalanga province, South Africa amounted to ZAR113327 per annum. The actual levels of realized demand by the local guide amounted to ZAR7462 per annum.

*Where can community-based avitourism work?*

Based on the findings of this research, Table 4.1 indicates the conditions under which community-based avitourism is likely to succeed and the factors that should be considered in its development and implementation.

**Table 4.1: Conditions under which community-based avitourism is likely to**

| Factors | Conditions for success | | | | *Conditionality |
|---|---|---|---|---|---|
| | ***Highly unlikely to succeed*** | ***Unlikely to succeed*** | ***Could conditionally* succeed*** | ***Will probably succeed*** | |
| Attractiveness of birding opportunities at the site. i.e. a high number of 'endemics' and 'specials' | None or very few | A small number | A moderate number | A very large number and/or species restricted to the site only | If close to major source of tourists, linked to other tourist products or availability of strong marketing budget. |
| Accessibility | Highly inaccessible | Moderately inaccessible | Moderately accessible | Highly accessible | If a very high number of 'endemics' and 'specials'. |
| Available funding for training support and development | None or very limited | Little and/or for less than 12 months | Moderate levels or only for 1 to 4 years | High levels and for 4 years or more | Candidate/s for training is/are highly competent or there is the presence of good private sector partners or a strong stakeholder support group. |
| Presence of local stakeholder group to support project/ local guides | | Not present or weak and/or very new | Present | Strong and established | If there is a high level of project funding for long period of time or strong private sector partner |
| Presence of potential strong private sector partners | | None | Limited and/or with only moderate support and enthusiasm for the idea | Potential partner/s present with a strong support for idea | If there is a high level of project funding for >5 years or strong and committed stakeholder support group |
| Availability of candidates for training | Very small pool with limited English knowledge | Small, some with English knowledge | Medium | Large with many English speakers and many with existing exposure to tourism. | If there is a large, long term training budget and committed candidates |
| Nature of threat & potential for successful conservation impact | | Sites disparate spatially and/or institutionally and threat source diverse | | A single small site or a group of sites where stakeholders are likely to be negatively impacted by a loss of biodiversity and strong local institutions exist to counter threats | Project is large and long term with potential significant tourism development and conservation awareness benefits |

## 4.5 Institutional factors and financial efficiency

*Factors that drive a higher income to expenditure ratio*

Understanding how to maximize conservation and development benefits per unit of investment is an important consideration in the design and implementation of community-based avitourism initiatives. The project that has by far the highest income to expenditure ratio is the Magoebaskloof project where the local guide is a strong entrepreneur, a good communicator and has a passion for the environment and a strong sense of self belief (Figure 3.32 and 3.33). Designing a cost-effective selection process which accurately evaluates these traits is difficult and it is seldom that candidates are selected that require relatively little support and are able to self-start to a large extent. Designing appropriate processes for and spending adequate resources on the candidate selection process may reduce the resources required for supporting the local guides after training but it also means that fewer resources are available for other components of projects. The result is that most of the local guides require a high level of support and development for an extended period of time to put them in a position where they can successfully run their own micro-enterprise.

This means that for the successful development of self-employed guides in general, the level of expenditure comparable to that of the ZBR is probably required for these projects to stand a good chance of being successful. The ZBR has a low income to cost ratio as a result of: 1) long term intensive support, 2) high level marketing to the domestic and international market and 3) infrastructure development (Figure 3.32 and 3.33). These factors should strengthen long term sustainability and provide a basis for greater long term growth. The ZBR projects are seen to be the most successful projects and are perceived internationally as a flagship for community-based avitourism. As the projects are still being implemented it is unclear to what extent the local guides would be able to keep going if the ZBR coordinating office were to close down. Probably only the very competent and entrepreneurial guides would survive. Indeed, most of the local guides on the ZBR have indicated that if the ZBR coordinating office closes down they will probably not make it. It is unclear what level of long term expenditure is required to keep the ZBR growing and reaping the benefit of the past and current high level expenditure relative to other community-based avitourism projects. It is also not known how long it will take before the annual or total income of the local guides exceeds the annual or total expenditure on the ZBR's project. The ratio indicated in Fig 3.33 does suggest that annual income to local guides on the ZBR is now approaching annual expenditure.

Providing the level of support required for the development of self-employed guides is a costly process but through the development of innovative employment partnerships for the employment of the local guides, as described in the innovative employment model (section 4.4.3), many of these costs may be reduced. The innovative employment model is likely to be the most successful institutional framework in any project which does not have access to large amounts of funding over the long term.

*Does project size or structure matter more?*

An interviewee posed the question whether project structure is more important than project size and whether there is a threshold project size. There is a strong positive and significant correlation between the number of guides and total monthly income (Figure 3.30). Whereas this result may seem intuitive, it does indicate, that where more guides are trained and developed there is a concurrent increase in total monthly income to the site and community provided that sufficient support is provided to these guides. The presence of more than one guide at a site is likely to have the added advantage of fostering healthy competition between the guides but maintaining this healthy competition is an aspect that requires thoughtful management. In most projects, based on observations of the birding tourism market, sufficient potential demand probably exists for the training and development of a small number of extra guides provided that this is associated with a strong marketing and support drive. Lack of funding is the primary constraint on training, marketing and support and with unlimited funding, most projects would probably be successful in training and developing extra guides and increasing total income to the site.

The results of this study suggest, however, that there is no simple answer to the question of whether project size is more important than project structure. On a cumulative income basis, the second smallest and the largest projects in terms of budget are the only two in which local guides' income after four years of operation does not exceed project expenditure (Figure 3.32). An important point here is that the ZBR projects were the only projects that were still in the implementation phase at the time of this research. The cost of job creation in community-based avitourism projects shown in Figure 3.34 shows that the cost of job creation in ZBR projects is substantially higher than in the others. The ZBR birding projects have expended by far the most resources on marketing, signage and birding infrastructure development which may put these projects in a better position for future growth and sustainability compared with the others.

Generally, projects should probably target the training and development of at least two guides as the guides can compete and spur each other on which should lead to more competent services being offered, although this not always the case. A second guide also represents a backup if one guide were to leave the project. Substantial per-guide cost savings in terms of training, capacity building and marketing are possible on larger projects involving more guides. Larger projects such as Kimberley, Green Futures and the ZBR lead to considerably higher levels of total income to local guides (Figure 3.32). However, the project with by far the highest ratio of local guide's income to project expenditure is the Magoebaskloof project site which is a small project involving only one guide. One of the primary reasons for the success at this project site has been that the local guide is a very competent individual with a strong entrepreneurial drive, excellent communication skills and a high level of enthusiasm for birds, the environment and guiding. The selection and presence of such individuals is rare in

community-based avitourism projects and it cannot be assumed in project design, but the guide's success does show that the small project model can be cost-effective and financially efficient.

*Relative cost and sustainability of job creation through community-based avitourism*

In chapter 2 the creation of one job was defined as the creation of an employment opportunity for one person that would be sustainable for one year or longer depending on government's continued commitment to invest (Urban-Econ 2000 ). (Urban-Econ 2000) estimates that the cost of direct job creation in government-assisted housing schemes amounts to between R44 422 and R213 812 per job created depending on the type of housing. COSATU (2001) estimate the average cost of job creation in the capital intensive defence sector at R425 000 per job created. Naude and Harmse (2001) estimate the average capital required per job created in South African Spatial Development Initiatives across 21 economic sectors at an average of R375 148. There is a high degree of variation around this average with the lowest cost per job created being in the fishing and marine products sector at R1 486 and the highest cost in the food and beverages sector at R2 674 440 per job created. The cost of per job created in the tourism sector of Spatial Development Initiatives is estimated at R483 354 (Naude and Harmse 2001). In the context of the above definition of job creation, community-based avitourism projects are successful at creating jobs at a low cost compared to other industries (Figure 3.34). The small self-employed project model (depicted in Figure 3.22 and represented by the BSNHS, Kimberley and Magoebaskloof projects in Figure 3.34) are the cheapest way to create jobs in community-based avitourism projects. The long term sustainability of these jobs is however dependent on: a) the competitiveness of the local guide/s, b) the extent of the existence of a strong and sustainable local support network for the guide/s or c) the ability of the project implementer to source further funding for long term support which means that over a longer time period the cost of job creation has increased. The large-budget self-employed model (depicted in Figure 3.23 and represented by the projects of the ZBR in Figure 3.34) enables job creation that is more sustainable over the longer term. This job creation does take place at higher cost but is still substantially lower than the average cost of job creation in the tourism sector. The extent to which it may be necessary to raise further funding in the ZBR projects to sustain the jobs that have been created will also determine the extent to which the cost of job creation over a five to ten year period is increased. The innovative employment model (depicted in Figure 3.24 and represented by the Green Futures project in Figure 3.34) presents an opportunity for relatively low-cost and sustainable job creation. The key issues here is that the sustainability of the job/s created will depend on the extent to which relationship between the local guide and the employer/ project partner is sustained over the long term. Many of the costs of job creation in this model are absorbed as part of existing costs. The costs of marketing the local guide can be minimal as the availability of a local guide is added to existing or marketing brochures. There would usually be existing space for the local guide to operate from. Future

assessments of the cost of job creation using this model should calculate the cost of the local guide/s to the enterprise over and above costs that would have been incurred anyway.

## 4.6 Other factors affecting the sustainability of community-based avitourism

*Crossing a critical threshold of success*

A key driver of success of the ZBR has been that projects have been successful enough so that there is an awareness of the value of birds and biodiversity and from this basis a lot of stakeholder support is directed towards biodiversity conservation. A related feature is that because of the success that the ZBR has achieved in promoting local development, it is now able to lobby for conservation more effectively. Comparing the level of external support received by the ZBR in comparison to the other projects, it seems as though individuals and organisations really want to see a project working well before they support it.

*Impact of HIV/AIDS*

The impact of HIV/AIDS was not investigated in this study, its potential impact is substantial in the South African context (UNAIDS/WHO 2004). There are differing opinions about HIV/AIDS and its potential impact on community-based avitourism projects and some of controversy as to how the issue of HIV/AIDS should be dealt with as indicated by the quotes from the interviews:

*Project Coordinator*: "It is difficult to talk to local guides about HIV and AIDS. I think I have a really good relationship with the local guides and I do not want to impact on it. It really isn't my place to discuss their private lives with them like that."

*Local guide*: (with reference to the same project as the above quote) "I don't think that HIV or AIDS will impact on this (community-based avitourism) project at all, I can't see how it would."

*Local guide*: "HIV AIDS is an important issue that affects all of us and I think that it is something the (community-based avitourism) project should pay much more attention to."

*Stakeholder*: "AIDS is a critical issue that will impact on these (community-based avitourism) projects and is something that needs to be dealt with."

While most individuals indicated that HIV/AIDS is clearly a vital issue that needs to be dealt with in community-based avitourism projects but how to best do this requires further investigation and understanding.

*Barriers posed by legislation and weak government capacity*

The problem of small and start-up businesses in developing countries facing serious legal and institutional barriers to market entry is well documented (Rondinelli and Kasarda 1992, Collier and Gunning 1999, Leidholm 2002). Community-based avitourism initiatives have also had to face up to these challenges and some local guides have experienced many problems with the

costly, lengthy and bureaucratic process of local guide assessment and registration which is required by legislation. This is indicated in the following quote from an interview:

*Local guide:* "Because BirdLife (BLSA) and THETA have taken so long to get back to me on my assessment, I am worried and I feel I cannot move forward because I am not a recognised legal guide".

*Local guide:* "We keep waiting and waiting and waiting to get our documents and badges to show that we are qualified and legal guides".

The result of these institutional barriers is that only guides that are connected to a bigger support project or organisation can cover these costs and successfully become registered as there is support for them to negotiate the system. Local guides that try to operate and engage with this process on their own could well face the prospect of either closing down or operating illegally. Matlou (2001) and DEAT (2002) mention that the stated vision of the Department of Environmental Affairs and Tourism (DEAT) in South Africa is to integrate tourism growth with sound environmental management, and to link job creation, rural development and poverty alleviation. The issues of weak government capacity and prohibitive legislation need to be addressed urgently to facilitate and enable the effective development of local tourist guides from previously disadvantaged communities.

*Catalytic role played by ornithological researchers*

At some sites, in particular Wakkerstroom and the BSNHS, the presence of ornithological researchers played a key role in creating a prior awareness of birds and conservation in surrounding communities. This paved the way for much easier development and implementation of community-based avitourism initiatives. In Wakkerstroom the presence of researchers meant that there was already an awareness of birds and conservation in the local community and there were a number of community members who already had some birding skills that could be trained and developed further as bird guides. An enthusiastic birder and/or conservationist at a site could play a similar role.

*Volatility of the ecotourism market and need for alternative income streams*

It is widely acknowledged that one of the major challenges in engaging in the tourism market is its volatility (Ashley *et al.* 2001, Christie and Crompton 2001 and Sakr and Massoud 2003). Although the South African tourism market is certainly exposed to this volatility, the strength of the domestic tourism market plays an important role in buffering its effects. In the case of community-based avitourism initiatives Biggs (2001) shows that 96% of potential demand for the services of a local guide at the BSNHS is from the domestic market. Although this amount may be lower at other sites, the majority of demand across all the sites is from the domestic market which reduces the exposure of local guides to the dangers of the volatility of the

international tourist market. In considering community-based avitourism as a development and livelihoods strengthening strategy, it should not be seen as a stand-alone approach and should be integrated into a diverse range of strategies. This is supported by Fabricius *et al.* (2004) who mention that maintaining a diverse and flexible range of livelihood options is an important principle in the application of Community-based Natural Resource Management (CBNRM) programs.

## 4.7 Community-based avitourism in context

*The context of community-based ecotourism and pro-poor tourism research*

The challenges faced by community-based avitourism initiatives as described in this thesis concur with the findings of Ashley (2006) with respect to pro-poor tourism. Other studies on community-based tourism have come to similar conclusions. An assessment of South Africa's Wild Coast by Fabricius *et al.* (unpublished) found that only guides who received good support from established tourism operators were invariably successful in the long term. A good example of partnerships between community guides and the private sector can be found at the Mbotyi River Lodge, on South Africa's Wild Coast, where self-employed community guides trained through the River Ranger program are based on the Lodge premises and their services are marketed in the reception area and in Lodge's marketing materials (http://www.mbotyi.co.za/%5BRiver%20Rangers%5D.html). Emerging tourism operators in South Africa's Western Cape were also found to be unsuccessful, if not supported by larger tourism establishments (Ashley 2006). Cattarinich (2001) in a study on pro-poor tourism in six developing countries, mentions that overcoming the challenges that are faced in pro-poor tourism requires long term support and effective partnerships.

*Reducing the need for external funding through partnerships*

An important concern of many conservation and development donors is that projects should ultimately become self-sustaining. However, Salafsky et al (2001) mentions that enterprises in conservation and development projects need not necessarily cover 100% of their costs if they are providing environmental and social benefits, as community-based avitourism projects are intended to do. Quality management, professional marketing and adequate, long term training and capacity building are the aspects community-based avitourism projects that require the most external funding and support. Effective marketing includes the development of websites, brochures, posters and attendance of national and international travel fairs and is a particularly resource-intensive activity which takes time to deliver results and needs to be budgeted and planned for. Facilitating and supporting effective partnerships with private sector tourist operators and other role players could reduce the need for these subsidies. The development of a strong network and synergistic partnerships with different levels and sectors of government, the private sector, non-governmental organizations, individuals and community-based groups is also important in securing sustainability and may be a valuable source of additional funding and support (Nicanor 2001; Ashley 2006).

*Value of this study for broader community-based ecotourism ventures*

The principles that community-based avitourism is based on are the same underlying principles that are important in any community-based or enterprise-based conservation and development approach. The findings of this study are thus of relevance to a range of situations involving attempts at integrating conservation and development. The results of the institutional analysis and the importance of understanding the institutional context in which community-based avitourism operates are likely to have substantial broader application.

## 4.8 Methodological limitations and constraints and directions for future research

*Methodological limitations and constraints*

The research approach that was applied to researching community-based avitourism, based on Salafsky *et al.* (2001), enabled the assessment of benefits, trends and project dynamics across a range of project sites. Furthermore this study investigated the institutional characteristics which underpin the success of community-based avitourism and described the institutional context in which community-based avitourism projects operate. This study does not, however, allow for a detailed understanding of the impacts and dynamics of one specific project as a single-site study like Walpole and Goodwin (2000) would do. Ideally, initiatives such as community-based avitourism and the factors that impact on conservation and economic benefits should be investigated with a multiple regression or multivariate analysis. This was not possible due to limitations on sample size which was limited by the number of community-based avitourism projects in South Africa and the relationships between factors in this study were investigated through qualitative bivariate analyses.

This study used Likert scales to collect data on the ordinal scale. Data collected on institutional characteristics collected at the interval or ratio scale would enable a more rigorous, quantitative assessment of community-based avitourism projects. This study did not collect baseline data at the start of the community-based avitourism projects under investigation and the analyses that has been conducted is a cross-sectional and historical prospective analysis rather than a true prospective analysis. Due to logistic constraints, not all local guides at all sites were interviewed and this does limit representativity of the results. This study also did not follow up with the local guides which had dropped out of the community-based avitourism projects and this may have provided additional important insights.

All of the community-based avitourism projects in South Africa have been in operation for less than 6 years. There are differences in the time period that has elapsed since the project implementation phases have ended. This may have an important impact on the results and is

difficult to correct for. A similar study to this one 5 years from now may deliver substantially different results because of this factor. Lastly, community-based avitourism projects are types of ICDPs which operate in complex realms and present what Ludwig (2001) defined as a 'wicked problem' (i.e. a problem with no definitive formulation, no test for a solution and problems that cannot be separated from values, equity and social justice). The results of this study should therefore be interpreted in the context of the complex socio-ecological system in which community-based avitourism projects operate.

*Investigating scale*

The influence of scale was not explicitly taken account of in this research. There is a continued focus within BirdLife South Africa's Avitourism Division to base community-based avitourism development projects around birding routes such as to gain the benefits of the economies of scale that emerge around larger structures. The Zululand Birding Route, five sites of which formed part of this research, has been very successful in implementing a route-based tourism development model, and it is this model which is being expanded to other areas. Berkes (2004) and Sanderson (2005) allude to the importance of scale in community-based conservation and development interventions and as community-based avitourism initiatives continue to expand, an investigation which takes explicit account of scale is warranted. The types of questions that can be asked in such an investigation are: a) How does the scale of operation affect the economics and conservation benefits of a community-based avitourism venture?; b) Are project institutions strengthened by larger spatial and longer temporal scales of organisation and if they are how, under which circumstances are these gains most likely? and c) What impact does scale have on the sustainability of these initiatives over time?

*Other future research*

Detailed studies of a single project site and the linkages between the conservation, economics and community interaction will add important insights into the understanding of community-based avitourism. Studies which include a larger number of sites and are able to obtain more quantitative data on institutional characteristics will enable more extensive and more rigorous statistical testing which will enhance the understanding of community-based avitourism. Future studies which conduct a greater number of interviews at each project site, particularly with more stakeholders and also with community members from which the local guides originate would provide additional insights into these projects. International, cross-country comparisons may yield informative results and provide an opportunity for learning to take place between countries. Further research could focus on the unique characteristics of community-based avitourism in comparison to other approaches such as CBNRM and ICDP projects. Research targeted at identifying situations in which community-based avitourism is more likely to be effective than other approaches to conservation or where it is best used in combination with other approaches would have substantial conservation application. More

detailed analysis of the economics of community-based avitourism including projections of the future income of local guides in comparison to their running costs and to project expenditure will be of value.

The history of land tenure around protected areas and sites of conservation interest is a key issue in community-based conservation (pers comm. Frank Matose, Program for Land and Agrarian Studies, University of the Western Cape). This is an aspect that this study did not focus on and further research into this component of community-based avitourism is needed. The importance of power relations in tourism and tourism to developing countries representing a "form of neo-colonialism" is described in Mowforth and Munt (1998). Power relations between project implementers and local guides and between local guides and their clients are strongly rooted in a post-colonial and post-Apartheid context and research into this component would be of interest and value.

# CHAPTER 5: CONCLUSION

This study has described the institutional arrangements and conditions under which conservation and development benefits in community-based avitourism projects can be achieved. These results provide key insights to NGOs, ecotourism operators, conservation and development agencies and other organisations involved in funding, developing and implementing community-based avitourism or similar initiatives. Additionally, these findings provide policy-makers with a case study of a tourism sector which may provide some insights into the policy and legal environment which enables the emergence and effective operation of the kinds of institutions which are required to support initiatives such as community-based avitourism.

*Key Findings*

Community-based avitourism presents an opportunity for government, civil society and the private sector to address biodiversity conservation and development challenges in an innovative and integrated fashion. The success of these initiatives in reducing the threats to the conservation of sites has been demonstrated where conservation is targeted as a specific objective. Community-based avitourism provides substantial economic and capacity building benefits to local guides and their immediate dependents. Furthermore, the cost of job creation in community-based avitourism is lower than the average cost of job creation in the tourism industry in South Africa, although ensuring long term sustainability of the jobs created is something that needs to be carefully planned for. Conservation awareness benefits in community-based avitourism initiatives are substantial, especially considering the relatively small number of guides that have been trained.

*Key determinants of success*

Adequate resources and time should be budgeted for the candidate selection process. Good quality candidates with strong entrepreneurial and communication skills, a strong sense of self confidence and a passion for birds and the outdoors increase the likelihood of high income to expenditure ratios and strengthened conservation benefits. A strong and effective marketing drive is key to the success of community-based avitourism, but as this requires substantial resources and time to deliver results this needs to be budgeted and planned for. Community-based avitourism should be seen as one component of a broader strategy involving a range of development, livelihood and conservation options that maintains flexibility through a process of adaptive management. The development of self-employed local guides is a lengthy and costly process that requires five years or more of intensive support. Innovative partnerships with prospective employers of the local guides can play a critical cost-saving role and this option should be investigated further. The development of a strong network and synergistic partnerships with different levels and sectors of government, the

private sector, NGOs, individuals and community-based groups is critical. As Fabricius *et al.* (2004) state with reference to CBNRM and Ludwig (2001) states with reference to the 'wicked' problems community-based interventions present, community-based avitourism projects cannot be successfully developed and managed through the implementation of blueprint-type guidelines and plans and there should be room for experimentation and adaptation.

*A last word*

As a succinct indication of what is needed to successfully develop the potential community-based avitourism holds for integrating biodiversity conservation and development I conclude with a quote from Sanderson (2005):

*"To increase our success in integrating poverty alleviation and conservation we need to further our understanding of local scale complexities, develop deep local knowledge and extend long term micro-scale support."*

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# APPENDICES

## APPENDIX 1: LIST OF ACRONYMS

BLSA – BirdLife South Africa

BSNHS – Blue Swallow Natural Heritage Site

CBNRM – Community-based Natural Resource Management

DEAT – National Department of Environmental Affairs and Tourism

DEG – German Investment and Development Company

DWAF – National Department of Water Affairs and Forestry

EWT – Endangered Wildlife Trust

EWT BSWG – Endangered Wildlife Trust - Blue Swallow Working Group

ICDP – Integrated Conservation Development Project

IBA – Important Bird Area

NCDTEC – Northern Cape Department of Tourism, Environment & Conservation (previously the Department of Agriculture, Land Reform, Environment and Conservation)

NCTA – Northern Cape Tourism Authority

KZN Wildlife – Kwazulu Natal Provincial Conservation Authority

PFIAO – Percy Fitzpatrick Institute of African Ornithology

RBM – Richards Bay Minerals

TRA – Threat Reduction Assessment

WESSA – Wildlife and Environment Society of South Africa.

ZBR – Zululand Birding Route

## APPENDIX 2: NAMES AND AFFILIATIONS OF PEOPLE REFERENCED

Mark Anderson: Northern Cape Department of Tourism, Environment & Conservation (previously the Department of Agriculture, Land Reform, Environment and Conservation)

Andre Botha: Endangered Wildlife Trust (previously local guide training manager for BirdLife South Africa)

Greg Distiller: Department of Statistical Sciences, University of Cape Town

Professor Tim Dunne: Department of Statisitical Sciences, University of Cape Town

Rudi du Plessis: Business owner and local conservation and tourism stakeholder, Kaapsehoop town, at the Blue Swallow Natural Heritage Site

Steven Evans: Endangered Wildlife Trust (previously Important Bird Areas Manager for BirdLife South Africa)

Graham Keet:: KZN Wildlife

Dr Frank Matose: Program for Land and Agrarian Studies, University of the Western Cape

Counsellor Mbonkazi: Tribal leader, Uthungulu District Municipality

Sakamuzi Mhlongo: Zululand Birding Route, Project Coordinator, BirdLife South Africa

Counsellor Powell: Uthungulu District Municipality

Duncan Pritchard: Zululand Birding Route, Project Coordinator, BirdLife South Africa

Dr Nick Salafsky: Foundations of Success

Isaak Smit: Scientific Services, South African National Parks

Dr Anna Spenceley: Trans-boundary Protected Area Research Initiative, University of the Witwatersrand

## APPENDIX 3: INSTITUTIONAL FEATURES RELEVANT TO PROJECT SUCCESS

T1 Extent of threat reduction targeted

| T1 | |
|---|---|
| Rating | Description |
| 1 | Limited project focus on the reduction of threats to a specific site/s and a project and the focus is more on the training and development of local guides and the creation of general awareness of birds, the environment and conservation (very weak). |
| 2 | |
| 3 | |
| 4 | A moderate focus on the reduction of threats to the conservation of a site or specific site/s (moderate). |
| 5 | |
| 6 | |
| 7 | A very strong focus on the reduction of threats to the conservation of a specific site/s (very strong) |

A1 Extent and strength of the marketing arm by project

| A1 | |
|---|---|
| Rating | Description |
| 1 | A very poorly developed or very weak marketing arm. (Very weak) |
| 2 | (weak) |
| 3 | (moderately weak) |
| 4 | The marketing arm is developed to a moderate degree.(moderate) |
| 5 | (moderately strong) |
| 6 | (strong) |
| 7 | The marketing arm is well-developed and strong (very strong) |

A2 Extent of long term support for capacity building by project

| A2 | |
|---|---|
| Rating | Description |
| 1 | Provision only made for initial intensive training course (Poorly developed) |
| 2 | Provision only made for initial intensive training course and for costs of assessment against national standards |
| 3 | |
| 4 | Provision made for above & moderate level of support for preparing beneficiaries for assessment. (Moderate) |
| 5 | Provision made for 1 & 2 and a higher level of support for preparing beneficiaries for assessment as well provision for capacity building in related fields e.g. business development, cultural and other ecological attractions in their area of operation. |
| 6 | |
| 7 | Provision made for 1 & 2 and a very high level of support for preparing beneficiaries for assessment as well provision for capacity building in related fields e.g. business development, cultural and other ecological attractions in their area of operation including further capacity building provisions beyond assessment. (Well developed & Strong) |

A3 Extent of long term support for coordination by project

| A3 | |
|---|---|
| Rating | Description |
| 1 | A poorly developed or weak coordination support –very little support coordination support is given to guides. |
| 2 | |
| 3 | |
| 4 | Long term coordination support is developed to a moderate degree – coordination support is provided on a fairly regular basis for a range of activities associated with project beneficiaries taking tours. |
| 5 | |
| 6 | |
| 7 | A well-developed and strong system of providing long term coordination support. Coordination support is provided for most reservations and bookings and interactions of guides with clients. |

A4 Extent of embedment of project in institution with continuity.

| A4 | |
|---|---|
| Rating | Description |
| 1 | Non-existent or low level of embedment in institution with continuity |
| 2 | |
| 3 | |
| 4 | Moderate level of embedment in institution with continuity. An institution with continuity is involved and supports the project but is not a 50/50 or key strategic player in project implementation. |
| 5 | |
| 6 | |
| 7 | A high level of embedment in institution with continuity. An institution with continuity is a key partner, takes up a large share of project responsibility in implementation and has a strong interest and commitment to project success. |

A6 Extent of key individual driving project support in the post-project long term

| A6 | |
|---|---|
| Rating | Description |
| 1 | Non-existent or a key individual only plays a role at a very low level. (weak) |
| 2 | |
| 3 | |
| 4 | A key individual is playing a role in driving and supporting the post-project period to a moderate extent. (moderate) |
| 5 | |
| 6 | |
| 7 | A key individual is playing a strong and high level role in the driving project activities forward during the post-project period. (strong) |

A7 Extent of project focus on building a support network for guides.

| A7 | |
|---|---|
| Rating | Description |
| 1 | No or very little attention paid to this aspect. (weak) |
| 2 | |
| 3 | |
| 4 | A moderate level of attention is paid to this aspect. (moderate) |
| 5 | |
| 6 | |
| 7 | A high level of attention is paid to this aspect and includes active engagement and facilitation of the development of networks on a regular and sustained basis. (strong) |

A8 Extent of Emergence of non-direct project support structure for the project and conservation during the project

| A8 | |
|---|---|
| Rating | Description |
| 1 | There was no or only a very weak support structure in place. (very weak) |
| 2 | (weak) |
| 3 | (moderately weak) |
| 4 | A support structure is in place which provides a moderate level of support to the guides. (moderate) |
| 5 | (moderately strong) |
| 6 | (strong) |
| 7 | A well developed and very strong support structure is in place which provides guides with a very high level of regular and sustained support. (very strong) |

A9 Extent of emergence of a post-project long term support structure.

| A9 | |
|---|---|
| Rating | Description |
| 1 | There was no or only a very weak support structure in place. (very weak) |
| 2 | (weak) |
| 3 | (moderately weak) |
| 4 | A support structure is in place which provides a moderate level of support to the guides. (moderate) |
| 5 | (moderately strong) |
| 6 | (strong) |
| 7 | A well developed and very strong support structure is in place which provides guides with a very high level of regular and sustained support. (very strong) |

A10 Extent of link to employment opportunities

| A10 | |
|---|---|
| Rating | Description |
| 1 | There was no or only a very weak focus on this aspect. (very weak) |
| 2 | (weak) |
| 3 | (moderately weak) |
| 4 | There was a moderate focus on ensuring that employment opportunities were found for the guides. (moderate) |
| 5 | (moderately strong) |
| 6 | (strong) |
| 7 | A well developed and very strong support structure is in place which provides guides with a very high level of regular and sustained support. (very strong) |

A11 Extent of linkage to established and relevant tour operators

| A11 | |
|---|---|
| Rating | Description |
| 1 | There was no or only a very weak linkage to established bird tour operators. (very weak) |
| 2 | (weak) |
| 3 | (moderately weak) |
| 4 | A moderate linkage was in place between established operators and local guides. (moderate) |
| 5 | (moderately strong) |
| 6 | (strong) |
| 7 | A well developed and very strong linkage is in place including regular use of guides by established operators. (very strong) |

A12 Extent of focus on the candidate selection process.

| A12 | |
|---|---|
| Rating | Description |
| 1 | There was a minimal and very limited expenditure of resources on this candidate selection process. (very weak) |
| 2 | (weak) |
| 3 | (moderately weak) |
| 4 | There was a moderate focus and a moderate expenditure of resources on these components. (moderate) |
| 5 | (moderately strong) |
| 6 | (strong) |
| 7 | A well-developed and very strong and stringent candidate selection process was followed. (very strong) |

A13 Extent of site accessibility to potential market

| A13 | |
|---|---|
| Rating | Description |
| 1 | The site is far out and very inaccessible. (very inaccessible) |
| 2 | (inaccessible) |
| 3 | (moderately inaccessible) |
| 4 | Accessibility is moderate. (moderate) |
| 5 | Accessibility is moderately good. (moderately good) |
| 6 | Accessibility is easy and good. (good) |
| 7 | Accessibility is very easy and very good. (very good) |

A14 Extent of birding and eco-touring attraction

| A14 | |
|---|---|
| Rating | Description |
| 1 | A limited number of specials and limited opportunities for good birding (limited relative to other good birding spots) |
| 2 | |
| 3 | |
| 4 | A moderate number of specials in comparison to other good birding sites. (Moderate – a standard good birding spot) |
| 5 | |
| 6 | |
| 7 | An excellent birding hotspot, providing for a large number of specials and excellent birding opportunities. (Excellent birding spot) |

A15 Site accessibility without a guide

This includes 3 components:

- a) Legal and logistical requirements.

| A15a | Legal & Access |
|---|---|
| Rating | Description |
| 1 | (very limited need for guide) |
| 2 | (limited) |
| 3 | (moderately limited) |
| 4 | (moderate need for guide) |
| 5 | (moderately strong) |
| 6 | (strong) |
| 7 | (very strong need guide) |

- b) security & personal safety.

| A15b | Security component |
|---|---|
| Rating | Description |
| 1 | (very limited need for guide) |
| 2 | (limited) |
| 3 | (moderately limited) |
| 4 | (moderate need for guide) |
| 5 | (moderately strong) |
| 6 | (strong) |
| 7 | Perceived very high security & personal safety risk if area is visited without a guide. (very strong need guide) |

- c) Finding your way around

| A15c | Finding your way around |
|---|---|
| Rating | Description |
| 1 | (very limited need for guide) |
| 2 | (limited) |
| 3 | (moderately limited) |
| 4 | (moderate need for guide) |
| 5 | (moderately strong) |
| 6 | (strong) |
| 7 | Very high probability of getting lost and not getting to the right place without the use of a local guide. (very strong need guide) |

A15 overall: Also, respondents were asked to provide an overall score, considering these three and other possibly relevant factors in the extent to which a guide needs to be used.

| A15 | Overall rating for need of a guide |
|---|---|
| Rating | Description |
| 1 | (very limited need for guide) |
| 2 | (limited) |
| 3 | (moderately limited) |
| 4 | (moderate need for guide) |
| 5 | (moderately strong) |
| 6 | (strong) |
| 7 | (very strong need of guide) |

A16 The frequency of complaints by clients or problems with clients.

| A16 | Problems with clients/ complaints |
|---|---|
| Rating | Description |
| 1 | Very Frequent complaints, at least once for every 5 tours/outings. |
| 2 | Frequent complaints, at least once for every 10 tours. |
| 3 | Moderately frequent complaints, at least once for every 25 tours. |
| 4 | Moderate number of complaints/ problems, at least once for every 40 tours. |
| 5 | Infrequent complaints, limited to less than one per 80 tours. |
| 6 | Very infrequent complaints, limited to less than one per 150 tours. |
| 7 | No complaints/ problems at all. |

## APPENDIX 4: THREAT REDUCTION ASSESSMENT

| | Criteria Ratings | | | Total Ranking | % Threat Reduced | Raw Score |
|---|---|---|---|---|---|---|
| Threat | Area | Intensity | Urgency | | | |
| | | | | | | |
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| | | | | | | |
| TOTAL | | | | | | |

**TRA INDEX % = Total Raw Score / Total Ranking X 100**

## APPENDIX 5: RELATIONSHIPS BETWEEN TOTAL MONTHLY INCOME AND EIGHT INSTITUTIONAL AND OTHER FACTORS

The table below indicates relationships between total monthly income and various other factors. The only significant relationships (before the application of the Bonferroni correction) were a positive relationship between the average monthly income and the extent of focus on the candidate selection process (measured on a 7 point Likert scale) and a negative relationship between the total monthly income and the extent of a birding and eco-touring attraction (measured on a 7 point Likert scale). The relationships between average and total monthly income and a range of other factors were all non-significant.

| Relationship | Valid n | Gamma score | p value |
|---|---|---|---|
| Average monthly income and average capacity building score (B1) | 10 | -0.289 | 0.245 |
| Total monthly income and the extent of external project support (A8 and A9 averaged) | 10 | 0.514 | 0.06 |
| Total monthly income and the extent of linkage to established and relevant tour operators (A11) | 10 | 0.389 | 0.162 |
| Average monthly income and the extent of focus on the candidate selection process (A12) | 10 | 0.647 | 0.024 |
| Total monthly income and the extent of site accessibility to the potential market (A13) | 10 | -0.033 | 0.251 |
| Total monthly income and the extent of birding and eco-touring attraction (A14) | 10 | -0.625 | 0.03 |
| Total monthly income and the extent of perceived need for a guide (A15) | 9 | -0.0185 | 0.547 |
| Total monthly income and the extent of complaints about the services of local guides (A16) | 10 | 0.231 | 0.387 |