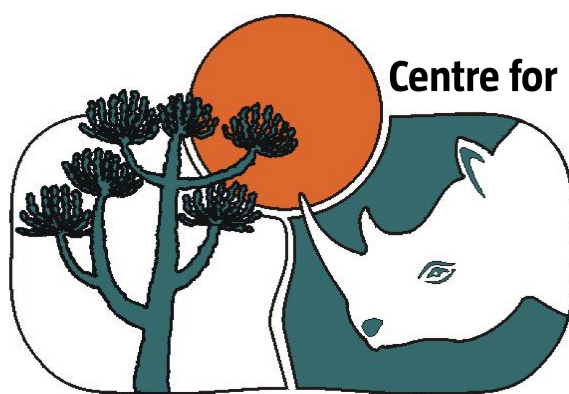


COMBINING CONSERVATION AND DEVELOPMENT ON PRIVATE LANDS: AN ASSESSMENT OF ECOTOURISM- BASED PRIVATE GAME RESERVES IN THE EASTERN CAPE

Jeffrey A. Langholz and Graham I. H. Kerley

**Center for African Conservation Ecology
Nelson Mandela Metropolitan University**



African Conservation Ecology

ecological research for tomorrow

A report commissioned by the Wilderness Foundation

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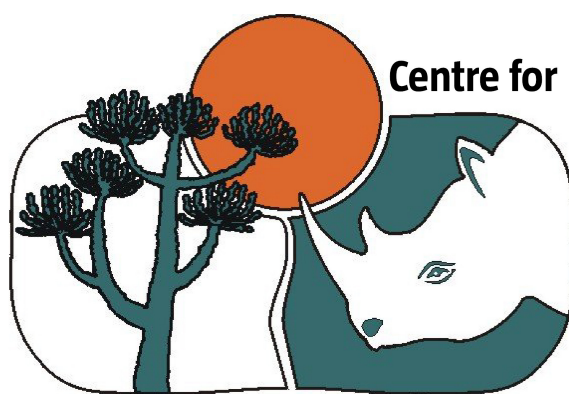
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1. EXECUTIVE SUMMARY

- The socio-economic profile of ten ecotourism-based private game reserves (PGRs) was established, using a self-completed questionnaire, in order to assess their contribution to conservation and development in the Eastern Cape region.
- This is a follow-up to a similar study for which data were collected during winter 2003 and published in 2004. The objectives of the current study were to: 1) validate findings from the 2004 study, using a larger sample size; 2) collect new information beyond what the previous study produced; and 3) identify changes among private game reserves (PGRs) that may have occurred since the original study.
- The PGRs varied widely in data provision, property size, and duration of operation, which limited the analyses possible. The findings are, however, of considerable value and are summarised here. Especially helpful is the fact that all seven PGRs from the 2004 study also participated in the 2006 study, plus three new respondents.
- In changing from farming to game-based ecotourism, the total number of employees increased by a factor of 4.5. This number reflects data from 10 reserves, and differs somewhat from the factor of 3.5 reported in 2004.
- Each of the 10 reserves is estimated to support an average of 107 full-time employees per reserve (median of 78), as well as an additional 375 people per reserve who are family members or other dependents of the full-time employees (median of 353). Thus, the 1,060 full-time employees across all ten PGRs support an estimated 3,745 dependents.
- Conversion from agriculture to ecotourism resulted in the average wage bill per PGR spiking from R121,145 to R3.87 million – a 32-fold increase. This number is based on a larger sample size than the 2004 study, which documented a 20-fold increase post-conversion (R160,367 to R3.2 million per annum).
- Average annual salary per full-time employee increased 4.8 fold, from R6,157 to R29,930. This post-conversion salary increase generally corroborates annual salary figures from the 2004 report (5.7 fold increase, from R 5,498 p.a. to 31,263).
- Private game reserves are moving upscale. Accommodations are increasingly luxurious and the average price charged per person has risen 37% compared to the 2004 study.
- The total cost of establishing a PGR has risen R10 million compared to 2004, to a new median of R42 million.
- Gross revenues, and revenues per hectare, have shown steady increases over the past four years and are projected to continue rising. A lack of data on operating costs, however, precludes any analysis of reserves' profitability.
- The ten PGRs in the study were protecting a total of 116,608 hectares (average of 11,661; median 6,993), representing six of South Africa's eight biomes and an immense diversity of plants and animals.
- Respondents are engaged in a wide variety of social development projects in and around their reserves.
- This survey has shown that PGRs provide a highly desirable land-use option in relation to traditional land uses in this area. A number of recommendations are presented, including the need to assess the full economic impacts of the industry, regularly updating these socio-economic surveys, auditing the contribution of the PGRs to biodiversity conservation, assessing the costs of extra-limital wildlife species and making these findings available to stakeholders and policymakers.

2. INTRODUCTION

South Africa's future hinges on developing land use options that are socially just, economically viable, and ecologically appropriate. Balancing all three components is difficult to accomplish, even under ideal circumstances. The mandate for innovative and practical approaches to sustainable development is particularly urgent in the Eastern Cape Province because of its high poverty levels and threatened natural resource base.

Private protected areas have recently emerged as innovative and powerful engines for sustainable development (De Alessi 2005, Krug 2001, Langholz and Lassoie 2001). Mounting evidence strongly suggests that privately owned conserved areas can protect biodiversity, succeed financially, and contribute to social upliftment (Mitchell 2006, Kramer *et al.* 2002). Recognizing private protected areas' unique and growing contribution worldwide, governments from 154 nations approved a *Private Protected Area Action Plan* at the 5th World Parks Congress held in Durban, South Africa (IUCN 2005). Approved in 2003, the plan calls for increased public and private sector investment in this type of conservation and development tool (Langholz and Krug 2004).

Despite ongoing expansion of private protected areas, little is known about them. The lack of information is especially acute in the Eastern Cape Province. For example, what contribution are private protected areas making to social upliftment in the Eastern Cape? What biological features are they protecting and in what amounts? Are they financially viable enterprises?

In an attempt to fill this information gap, the Eastern Cape Association of Private Game Reserves ("Indalo") commissioned an initial study of its membership. The resulting report provided a rare snapshot of private game reserves (PGRs) in the Eastern Cape (Sims-Castley *et al.* 2004). While the study provided groundbreaking new information, it also left many questions unanswered. Thus, Indalo members commissioned the current study, which has three objectives: 1) assess the validity of the 2004 study results, using a larger sample size; 2) collect new information on additional topics that were not addressed in the previous study; and 3) identify any important changes among private game reserves that may have occurred over the past two years.

3. METHODOLOGICAL APPROACH

A standard questionnaire was circulated electronically to the 13 private game reserves¹ (PGRs) who are all full members of Indalo (**TABLE 1**). The questionnaire was divided into five sections: 1) establishment of the reserve; 2) tourism-related activities; 3) employment; 4) conservation issues; and 5) policy issues.

Although the five sections mirrored those from the 2004 study, the 2006 questionnaire incorporated improvements from the earlier study, as well as several new questions on topics that emerged from the previous study. Respondents answered a combination of closed-ended, quantitative questions and open-ended qualitative items.

The survey was undertaken in February and March of 2006, and hence the findings refer to that time. Before undertaking the survey, the authors attended a meeting of Indalo members

¹ : All respondents are referred to as private game reserves even though ownership types and legal status may differ. They all derive their earnings primarily from wildlife-based ecotourism ventures.

in order to discuss the survey, answer questions, and generate verbal commitments to participate. After distributing the survey via email, two reminder notices were sent out. The first author visited three PGRs to interview key informants and make direct observations.

Given the sensitive nature of certain survey questions, it was important to guarantee confidentiality of the data and results. Thus, PGRs were assured that confidential business information such as revenues would be securely stored and reported only in aggregate form. Toward that end, this document primarily reports averages, medians, and totals. It does not include information that could potentially be linked to an individual PGR.

We realise that game reserves do not answer surveys; people do. For simplicity sake, however, this report attributes survey responses to groups of “PGRs” or to an individual “PGR,” e.g., “Ten PGRs completed the survey.”

TABLE 1. Indalo Membership as of January 2006. Note that not all Indalo members participated in this survey.

| Private Game Reserve (PGR) | Website |
|-----------------------------------|--|
| Amakhala Game Reserve | www.amakhala.co.za |
| Blaauwbosch Private Game Reserve | www.blaauwbosch.co.za |
| Bushman Sands Game Reserve | www.bushmansands.co.za |
| Hopewell Lodge | www.hopewell-lodge.com |
| Kariega Game Reserve | www.kariega.co.za |
| Kuzuko Wilderness Lodge | www.kuzuko.co.za |
| Kwandwe Private Game Reserve | www.kwandwereserve.co.za |
| Kwantu Private Game Reserve | www.kwantu.co.za |
| Lalibela Game Reserve | www.lalibela.co.za |
| Pumba Private Game Reserve | www.pumbagamereserve.com |
| Riverbend Lodge | www.riverbend.za.com |
| Samara Game Reserve | www.samara.co.za |
| Shamwari Game Reserve | www.shamwari.co.za |

4. DESCRIPTION OF THE RESERVES

Ten of the thirteen Indalo members returned completed surveys. The resulting 77% response rate is considered sufficient for the purposes of this study. One additional PGR returned a completed questionnaire too late for inclusion in this analysis. This particular PGR is still in the development phase, and has not yet hosted tourists or generated income, hence the inability to include this PGR’s data in this analysis will not materially influence the findings. Seven respondents also participated in the 2004 study.

All ten PGRs use wildlife-based ecotourism as their primary means of business. They range in size from 3,200 hectares (ha) to 26,932 ha., with an average size of 11,661 ha and a median size of 6,893 ha. Consistent with the 2004 study, a subset of PGRs (in this case, four) were much larger than the rest. Thus, this report distinguishes between large PGRs (>17, 000 ha) and small PGRs (<6,500ha). PGRs in the study are protecting a combined total of 116,608 hectares.

In addition to size differences, comparing across PGRs is also difficult because of their different developmental stages. For example, the PGR that has been fully operational for 16 years can provide much richer data than the ones that have not yet hosted their first paying tourist. Two PGRs have been operating for 15 or more years. The remainder (8 PGRs) have been functional for 6 or fewer years. Two PGR were in their first year of hosting tourists, while another has yet to open its doors. This is an important feature of the survey in that it highlights the variable cost and revenue profiles associated with these different phases, and how these profiles change with time.

Ownership of the PGRs is mainly in the form of registered companies with multiple shareholders. In some instances, individual landowners have formed cooperative partnerships with their neighbours, e.g. a conservancy. One PGR leases land as a concession within a national park. The remaining companies own their land outright.

Consistent with the 2004 study, livestock farming (beef, dairy) and small stock farming (merino sheep, angora goats) were the overwhelmingly dominant land uses before conversion to wildlife tourism. Two PGRs also mentioned minor chicory production, and another listed ostrich farming. Overall, cultivation of crops was minimal, covering only a small area on two of the reserves.

In all cases, creating a viable PGR required consolidating smaller farms into a larger holding. PGRs acquired 84 farms to create their current conservation estate, ranging from 2 to 17 farms per PGR. The average number of farms consolidated was 8.4 farms, with an average size of 1,388 ha per farm before consolidation.

An open-ended question regarding motivations behind reserve establishment both confirmed and expanded upon previous findings. Without a doubt, two powerful forces have driven PGR establishment thus far: conservation and cash. On one extreme, financial profits were mentioned as the PGR's main purpose (e.g., "tourism was the motivation"). On the other extreme, resource protection served as main motivator (e.g., "passionate about conservation"). Most respondents fall somewhere between the two extremes. In general, PGRs seek to blend earnings with ecology and business with biodiversity, offering a land-use that reconciles resource protection with financial profits. As one representative respondent explained, we are "...motivated by combination of economic necessity and desire/passion to be part of wildlife development."

5. DESCRIPTION OF THE ECOTOURISM PRODUCT

5.1. Biggest attractions

Consistent with the 2004 study, respondents confirmed that wildlife was the single most important attraction to their PGRs. Nine of the ten PGRs listed "big game", "biodiversity" or some other wildlife descriptor as a major drawcard. Also consistent with the 2004 study, the second most important feature was the landscape. In particular, six respondents (60%) commented on landscape attributes such as "pristine nature," "scenic beauty," and "beautiful, unspoiled wilderness", as well as the lack of noise and visual pollution.

Rounding out the list of most frequently mentioned attractions were "proximity to Port Elizabeth and the Garden Route" and "high quality accommodation and service." With

respect to location, the PGRs are situated between 68 to 280 km from the Port Elizabeth airport, with an average distance of 116 km (median of 98 km). All offer upscale accommodations that will be discussed in **Section 5.3** below.

Other attractions mentioned included the reserve's malaria-free location, safe hiking, proximity to neighbouring communities, owner-managed lodges, and access to a good national highway.

The results send a clear message to current and future PGR owners: the most important asset is wildlife. But this wildlife must occur in as natural a setting as possible and in conjunction with high quality tourist accommodation and service.

5.2. Wildlife viewing

PGRs conduct a wide variety of activities in their reserves, ranging from live game sales and canoeing, to hiking and river cruising. By far, the most common activity is wildlife viewing. Eight PGRs providing data reported that wildlife viewing contributes an average of 82% of their gross income. Five PGRs mentioned "live game sales" as a supplemental revenue generator, contributing an average of 13% of these PGRs' income.

As noted in the 2004 report, it is well documented that tourists only appreciate a small proportion of vertebrate biodiversity, favouring the so-called charismatic megafauna exemplified by the "Big 5", namely elephant, rhinoceros, lion, leopard and buffalo (Kerley *et al.* 2003). As a result, these species are used as a major drawcard by the tourism market (Goodwin & Leader-Williams 2000).

Not surprisingly, elephants were the most frequently mentioned high profile animal among PGRs. Eight of ten respondents mentioned elephants as an important tourism drawcard. PGRs report a median of 14 elephants per reserve. Lion and rhino were the next most frequently listed "Big 5" species. Seven reserves have from 2 to 44 black and/or white rhino (median = 6). A total of 45 lions occur across seven PGRs, with a median of 6 lions per reserve. The three PGRs that mentioned leopards as an important attraction (1 to 4 leopard per reserve) were the same ones to specify buffalo (median = 13 per reserve).

The stocking of extra-limital species remains a contentious issue in terms of biodiversity conservation because of their potentially detrimental impact on the ecosystem (Castley *et al.* 2001). In addition, national legislation (NEMA: Biodiversity Act, Act 10 of 2004) requires the removal of extralimital species from conservation areas. The presence of these species may therefore compromise future attempts by these PGRs to achieve legally recognised status as private conservation areas. Furthermore, this may exclude such PGRs from accessing conservation incentives (tax rebates, etc) currently being developed. Nevertheless, six of the ten PGRs stock giraffes and report them as an important drawcard (median = 20 giraffe per reserve). As noted in the 2004 report, research has shown that introductions of giraffe to thicket have resulted in altered forms of certain tree species, namely *Schotia* sp. and *Sideroxylon inerme*. Despite the appeal to tourists, stocking such a species that is not native to the Eastern Cape may create a significant cost to these PGRs in the long-term.

5.3. Tourist accommodation: capacity, prices, income potential

TABLE 2 provides data on the number of beds offered by PGRs in 2003 and 2006, as well as how much PGRs charge per night and the total income potential per night.

TABLE 2.

| <u>Accommodation Capacity, Prices, and Income Potential</u> | | |
|--|--------------------------|--------------------------|
| | <u>2004 Study</u> | <u>2006 Study</u> |
| Total No. Respondents Providing Data | 4 | 10 |
| <u>CAPACITY:</u> | | |
| Total No. Beds | 278 | 421 |
| Average No. Beds | 70 | 42 |
| Median No. Beds | 71 | 32 |
| Range in No. Beds (Minimum/Maximum) | 24 to 112 | 6 to 110 |
| <u>PRICES (Rand):</u> | | |
| Average Price per person per night | 1,913 | 2,626 |
| Median price per person per night | 1,475 | 2,250 |
| Range in price (Minimum / Maximum) | 475 to 4,500 | 1500 to 4750 |
| <u>INCOME POTENTIAL (Rand):</u> | | |
| Maximum potential income per night | 671,950 | 1,282,950 |
| Ave. maximum potential income per night | 167,988 | 128,295 |
| Median Maximum potential income per night | 105,400 | 104,400 |
| Range in potential income (Min/Max) | 41,150 to 450,000 | 9,000 to 522,500 |

With data from ten PGRs instead of only four, the current study provides a much more accurate picture of tourism at PGRs. This improved picture highlights three important changes.

First, the “Capacity” section of **TABLE 2** shows that the average number of beds provided per PGR dropped from 70 to 42. This drop was caused by the new data from four recently launched PGRs whose total number of beds was 6, 12, 16, and 28 respectively. The average will probably rise over time because these PGRs intend to expand capacity.

Second, the “Cost” section of **TABLE 2** reveals that tariffs charged to tourists have risen.. From 2003, the average price per person per night (p.p.p.n.) went up 37% to R 2,626 p.p.p.n. The median price spiked 53% to R 2,250 p.p.p.n. Consistent with the baseline study, respondents provided a general tariff information instead of differentiating “high” and “low” season prices. Future iterations of this study may want to explore seasonal price differences.

Third, the “Income Potential” section of **TABLE 2** indicates that the median maximum income potential per PGR has held steady. In other words, the total revenue a PGR could make in a given night if all beds were full has remained roughly the same since 2003. A likely explanation for this is that the rising prices charged per night have been offset by the smaller number of beds, on average, offered by participants in the current study. Instead of “more and cheaper” accommodations, PGRs are offering “fewer and pricier” beds compared to the 2004 survey period.

It is also worth noting that the 2004 respondents mentioned a variety of accommodation types reflecting a broad spectrum of tariffs. Examples include lodges, guesthouses, chalets, suites, and a wagon camp. But in 2006, nine of the ten respondents only mentioned “lodges”. A single “wagon camp” was the only exception. The evidence clearly suggests that PGRs provide a luxury tourist package that is getting more upscale with time.

5.4. Tourist numbers: arrivals and accuracy of projections

In spite of the apparently lofty prices, overnight tourist visits to these exclusive reserves have risen. The four PGRs that provided tourism data for the 2004 study revealed a climb in overnight visitation between the years 2000 to 2003. The current study confirms that finding while also adding data for two more years and from two additional PGRs (**TABLE 3**). Although the total number of overnight tourists to PGRs has risen, the median and mean number of tourists per PGR has stayed relatively stable. This is likely a result of newer PGRs with fewer beds offsetting the increased capacity that has happened at older, more established reserves.

TABLE 3. Overnight Tourists at PGRs

| | No. PGRs Providing Data | Total No. Overnight Tourists | Ave. No. Overnight Tourists | Median Overnight Tourists |
|-------------------------------|--|---|--|--|
| 2000/2001 | 2 | 11,500 | 5,750 | 5,750 |
| 2001/2002 | 4 | 38,391 | 7,678 | 6,219 |
| 2002/2003 | 6 | 48,717 | 8,120 | 5,228 |
| 2003/2004 | 6 | 52,845 | 8,808 | 6,980 |
| 2004/2005 | 6 | 56,457 | 9,410 | 7,521 |
| 2005/2006 ¹ | 8 | 70,329 | 8,791 | 6,338 |

¹ projected for 2005/2006 tourist season

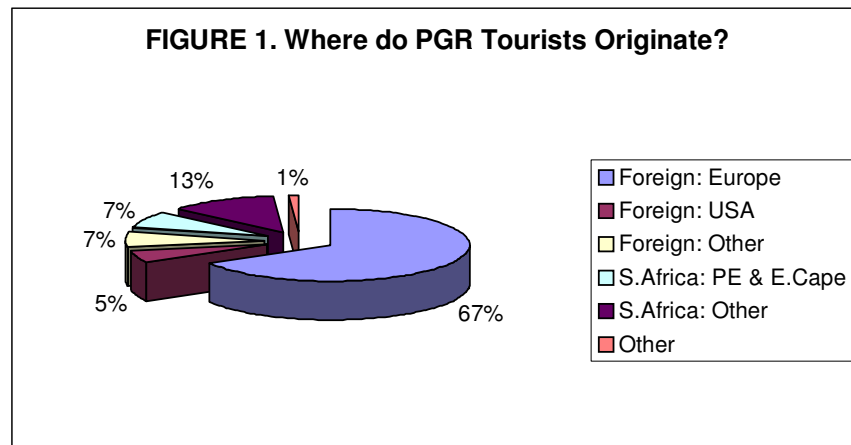
Previous Projections. In the 2004 study, PGRs projected the anticipated number of tourists for the 2003/2004 season. The four PGRs then providing data predicted an average tourism increase of 12.7% over the previous year (2002/2003). With the benefit of hindsight and actual data, it is now possible to check the accuracy of their predictions. For these four PGRs, actual increase in visitation from 2002/2003 to 2003/2004 was 4.4% (**TABLE 4**). Thus, while PGRs were correct in predicting a fourth straight year of overall growth in tourism numbers, they overestimated the magnitude of that increase.

TABLE 4.

| Projected and Actual Numbers of Overnight Tourists for 2003/2004 for 4 PGRs Providing Complete Data) | | | |
|---|--------------|----------------|--------------------------------------|
| Overnight Tourists | Total | Average | % increase from 2002/2003 |
| Actual bednights for 2002/2003 | 46,579 | 11,645 | n/a |
| Projected bednights for 2003/2004 | 52,500 | 13,125 | 12.7% |
| Actual bednights for 2003/2004 | 48,620 | 12,155 | 4.4% |

5.5. Tourist origination

Given the high prices charged, PGRs' marketing mostly targets the foreign market at upper income groups. As shown in **FIGURE 1**, the overwhelming majority of visitors to PGRs (67%) come from Europe, including the UK. The second largest group comes from within South Africa but outside Port Elizabeth and the Eastern Cape (13%). This group may be coming from affluent populations in Pretoria and Johannesburg in particular. The USA accounts for only 5% of visitors. These figures closely mirror those generated in the 2004 study, which suggests little change in target markets.



Note: Based on data from 8 PGRs that have hosted ecotourists for at least one full season.

5.6. Plans for next five years

Nine of the ten PGRs answered an open-ended question regarding plans for the next half decade. Overwhelmingly, respondents indicated ambitious plans to expand and improve operations. With respect to physical expansion, six PGRs plan either to enlarge existing lodges or build new ones ranging from 8 to 24 beds. This group includes the three PGRs with the fewest numbers of beds currently. One plans to construct a conference center. Three PGRs plan to increase the size of their land holdings. Four PGRs will increase wildlife holdings, either by introducing new species (e.g., leopard, black rhino, wild dog), or by increasing populations of existing species (e.g., giraffe, buffalo).

In terms of improving existing operations, four PGRs plan to invest in Black Economic Empowerment (BEE) and social development projects. Specific goals range from creating 60 additional "sustainable" jobs to constructing a training facility for disadvantaged youth that focuses on environmental topics. Another is planning a detailed vegetation assessment. One PGR plans to upgrade existing accommodations and improving its level of customer service. Three will focus on marketing. This includes increased penetration of South African, U.S., and other non-European markets, as well as improved occupancy during winter months.

The 2004 report indicated several planned improvements and expansions through 2009. Looking back, it is clear that many of these plans have been accomplished after only two

years (e.g., reserve expansion, lodge construction, more wildlife, social upliftment). Clearly, PGRs have shown significant quantitative and qualitative improvements over recent years, and show signs of continuing that improvement during the next five years.

TABLE 5: Cost of Establishing a Private Game Reserve ¹

| 2003 ² | | | | | |
|--------------------------|------------------------------|---------------------------|---------------------------|----------------------------|--------------------|
| | Ave Cost to Establish | Minimum Total Cost | Maximum Total Cost | Ave % of Total Cost | Ave Cost/ha |
| Land purchase | 13,750,000 | 3,500,000 | 30,000,000 | 40.8% | 1,565 |
| Ext buildings | 8,995,164 | 3,000,000 | 20,000,000 | 19.8% | 3,049 |
| Int buildings | 850,000 | 400,000 | 1,500,000 | 2.4% | 158 |
| Infrastructure | 2,814,790 | 800,000 | 11,088,740 | 11.9% | 311 |
| Equipment | 1,820,042 | 550,000 | 3,500,000 | 5.2% | 471 |
| Game purchase | 5,514,814 | 750,000 | 13,771,038 | 17.0% | 774 |
| Rehabilitation | 391,667 | 50,000 | 1,000,000 | 1.2% | 52 |
| Other | 600,000 | 0 | 2,500,000 | 1.8% | n/a |
| 2006 ³ | | | | | |
| | Ave Cost to Establish | Minimum Total Cost | Maximum Total Cost | Ave % of Total Cost | Ave Cost/ha |
| Land purchase | 21,488,889 | 3,500,000 | 56,000,000 | 33.6% | 1,977 |
| Ext buildings | 11,828,235 | 50,000 | 28,100,000 | 23.0% | 1,393 |
| Int buildings | 4,527,667 | 1,000,000 | 16,345,000 | 10.4% | 594 |
| Infrastructure | 3,902,889 | 1,500,000 | 12,700,000 | 8.3% | 476 |
| Equipment | 3,866,667 | 1,000,000 | 9,500,000 | 8.2% | 480 |
| Game purchase | 6,302,432 | 2,000,000 | 18,000,000 | 12.5% | 713 |
| Rehabilitation | 844,444 | 100,000 | 3,500,000 | 1.7% | 101 |
| Other | 2,987,500 | 0 | 8,300,000 | 2.3% | 240 |

¹ all costs are in Rand, not adjusted for inflation

² based on data from 5 PGRs

³ based on data from 8 PGRs

6 ECONOMIC APPRAISAL

6.1 Capital costs

Survey results indicate that setting up a PGR is a costly undertaking, requiring an initial outlay of anywhere from R15 million to as much as R124 million (average of R55 million; median R42 million). These numbers are noticeably higher than what the 2004 sample group reported (average of R34 million; median R32 million). Total expenditure each PGR spent on each cost category depended on numerous factors, including management focus, nature of ownership and size of property.

Primary expenditures associated with establishing a PGR include: land purchase, construction and renovation of buildings, interior décor, game purchase, infrastructure (e.g., roads, waterholes, fencing), equipment (e.g. vehicles), and rehabilitation (e.g. erosion control and

removing alien vegetation). **TABLE 5** summarises costs for each category, using data from 2003 and 2006.

Consistent with the 2004 report, land purchases constituted the highest proportion of total expenditure (33.6%), followed by constructing buildings (23.0%) and purchasing game (12.5%). Not surprisingly, the cost of land has risen. The 2006 respondents paid an average of R21.5 million to acquire the land (average of R1,977 per hectare), whereas the 2004 sample group bought their land for only R13.8 million (R1,565 per hectare).

6.2 Employment, Wages, and Benefits

TABLE 6 provides numbers relating to employment both before and after the lands were converted from agricultural use to ecotourism. In changing from farming to game-based ecotourism, the **total number of employees increased by a factor of 4.5**. This number reflects data from 10 reserves, and differs somewhat from the factor of 3.5 reported in 2004. Previously 260 people were employed on the farms before they were converted to PGRs (average of 26 employees per PGR). This number increased to 1 172 when ecotourism was adopted as the land-use.

The average numbers of employees per PGR (117) and per square kilometer (1.0) corroborate numbers calculated in the 2004 study (109 employees/PGR and 0.9 employees per km²).

We found no significant evidence of farm workers being laid off in the establishment of the PGRs. The overwhelming majority were either employed by the PGR or moved with their original employer, e.g., to other farms. The remainder either went on pension or passed away, except in the case of one PGR that mentioned a small number of original employees who moved to urban centers. The percentage of original farm workers who are currently employed by the PGR varied from zero to 100%, with an average of 51.8% (median of 50%). This percentage will no doubt drop over time as workers voluntarily retire or move on. For example, one PGR noted, “all 13 were hired initially, but after 15 years 8 remain.” Another mentioned “none after nine years.”

Conversion from agriculture to ecotourism resulted in the average wage bill per PGR spiking from R121,145 to R3.87 million – a 32-fold increase. This number is based on a larger sample size than the 2004 study, which documented a 20-fold increase post-conversion (R160,367 to R3.2 million per annum).

After conversion to agriculture, average annual salary per full-time employee increased 4.8 fold, from R6,157 to R29,930. This post-conversion salary increase generally corroborates annual salary figures from the 2004 report (5.7 fold increase, from R5,498 p.a. to R31,263). Part of the difference may stem from the relatively high salaries received by senior staff such as reserve managers, hotel/lodge managers, maintenance directors, and CEOs. Thus, **we recommend that the next iteration of this study examine salary differences between operational staff and management.**

| TABLE 6. Employees and Salaries Before and After Conversion from Agriculture to Ecotourism ¹ | | | | |
|---|----------------------------|-----------------------------|---------------------------|----------------------------|
| | PRE- Conversion | POST- Conversion | Percent Change | Factor Increase |
| Total employees, all PGRs ² | 260 | 1172 | 451% | 4.5 |
| Average No. employees per PGR ² | 26 | 117 | 451% | 4.5 |
| Average No. employees per ha ² | 0.002 | 0.010 | 512% | 5.1 |
| Average employees per km ² ² | 0.20 | 1.00 | 512% | 5.1 |
| Total annual wage bill, all PGRs ³ | 1,211,450 | 38,667,577 | 3192% | 31.9 |
| Average annual wage bill, per PGR ³ | 121,145 | 3,866,758 | 3192% | 31.9 |
| Ave. Annual Salary per Employee ⁴ | 6,157 | 29,930 | 486% | 4.9 |
| ¹ Based on year 2006 data provided by 10 PGRs ² "Employees" includes full-time staff as well as part-time and contract workers ³ Amounts given in Rand ⁴ Only includes full-time employees | | | | |

Employee Benefits. Employment and salary figures tell only part of the story. To understand PGRs' impact on rural economies and livelihoods, it is important to look at other factors such as benefits and employee dependents. For example, PGRs identified a wide range of additional benefits provided to staff. All ten PGRs provide food for employees. Eight of PGRs reported providing housing for staff. As noted in the 2004 report, staff housing is particularly important given that many farm employees formerly lived in houses that lacked electricity, running water, water-borne sewage, ceilings, and other modern amenities. Eight PGRs also mentioned ongoing training that they provide. Other benefits included: medical aid, pensions, uniforms/clothing, free water, and a funeral plan, unemployment insurance, group life insurance, transportation for staff, transportation to school for children of staff.

A field visit to one reserve revealed an additional benefit that respondents did not mention. Anyone who has done agricultural work for a living understands that it can be physically demanding. One staff member interviewed for this study had been working the same land for a total of 30 years – 23 years as an agricultural labourer, and 7 years in ecotourism. When asked which type he preferred, this elderly gentleman expressed a clear preference for ecotourism. "It's easier," he insisted.

Staff Training. When it comes to staffing, PGRs face a dilemma. On one hand, PGRs have demonstrated a strong commitment to hiring employees primarily from the local populations rather than from afar. But on the other hand, operating a luxury lodge requires skills that the rural poor do not typically possess. PGRs tackle this dilemma via intensive and ongoing enrichment and training programs for their staff. Sample training topics include: English language, tracking, cooking, housekeeping, and guiding. Others include hotel management skills and marketing. One PGR has gone so far as to create a permanent guiding school on the reserve in order to ensure a continuous supply of skilled staff. Another commented, "we do on the job training and promote from within wherever possible." Clearly, the reliance on a local rural population to provide an upscale tourism service presents a daunting challenge. Yet PGRs are finding creative ways to meet tourists' high expectations for superb service

while also honouring their commitment to local communities. **We recommend that the next iteration of this study examine the investment into and outcomes of such training programmes.**

As noted in the 2004 report, PGRs outsource work that requires certain technical expertise. The most frequently cited activities requiring contractors were construction of game fencing and capture of game. Other contracted activities included electric fencing, construction, security, and laundry. Contracted activities that were mentioned in the 2004 study, but not listed this time, included internal fence removal, general clean-up (of previously agricultural properties), and alien plant control. The four PGRs that provided financial expenses spent an average of R317,500 per year on contracted activities.

Although detailed employee demographic data were not collected, we suspect that the employee profile is changing. Interviews with staff and anecdotal information both suggest that staff are increasingly young, of urban origin, single, and formally educated rather than older, rural, married, and lacking formal education.

For example, we interviewed a female staff member who was young (mid-20s), urban (from Port Elizabeth), and unmarried. During her university studies in hospitality, she interned at a PGR, which eventually led to a permanent position there. She reports that her girlfriends back in Port Elizabeth are envious of her and often ask how she managed to land such a good position.

If true, then this trend may be caused by the increasingly upscale product provided by the PGRs. A five star tourist destination requires masseuses, guides, marketers, and hospitality staff who possess impeccable language skills and other abilities that are difficult to source in rural areas. This trend is significant as it reverses the generally recognised pattern of increasing urbanization and may contribute to the re-population of rural areas. **We suggest that PGRs collect detailed staff demographic information as part of their ongoing operations, in order to monitor significant social impacts and trends.**

6.3 Multiplier effects

As detailed in the 2004 study, PGRs create several multiplier effects in the regional economy. This section highlights five such effects.

First, visitors to PGRs make other direct expenditures in the Eastern Cape. These include buying crafts, staying in hotels, renting cars, flying in planes, buying petrol, purchasing clothes, visiting other attractions, and dining in restaurants (Geach 2002). Therefore, ecotourists' true economic impact is much wider than what is spent at the PGRs. Assuming a 70% multiplier effect documented by the Namibian Department of Environment and Tourism and cited in Humavindu & Barnes (2003), the R105.8 million in revenue generated by PGRs in 2004/2005 translates into a total infusion of R179.9 million into the regional economy.

Second, PGRs' presence increases the diversity of attractions in the Eastern Cape. This encourages tourists to stay longer in the province, thus increasing their impact in the region.

Third, PGRs diversify the rural economy. Agriculture has long dominated the Eastern Cape, but has proven to be unstable and on the decline. PGRs serve as economic engines in areas

that are suffering ongoing economic decline, providing alternatives to agriculture that are economically and ecologically attractive.

Fourth, PGRs likely increase land values. As documented in other “Big 5” areas such as in Mpumalanga near Kruger National Park and in KwaZulu Natal, the presence of private game reserves allows local land owners to reap significant real estate appreciation. Instead of selling their land to a stock farmer for only R700/ha, land owners can sell for more than twice that amount (Geach 2002).

Fifth, PGRs support family members who are not directly employed by the reserve. Ten PGRs provided estimates regarding full-time employees who serve as the primary wage earner in his or her family, i.e., the main source of income. Respondents provided estimates ranging from 40% to 100% of their staff (median of 80%). These primary wage earners are estimated to support anywhere from 4 to 7 family members each (median of 4.5). Combining these numbers with employment data per individual PGR, **we estimate that each of the 10 reserves is supporting not just an average of 107 full-time employees per reserve (median of 78), but also an additional 375 people per reserve who are dependents of the full-time employees (median of 353). Thus, the 1,060 full-time employees across all ten PGRs support an estimated 3,745 dependents.** Note that these numbers do not include dependents who may be partially supported by seasonal or contract workers.

6.4 Revenues

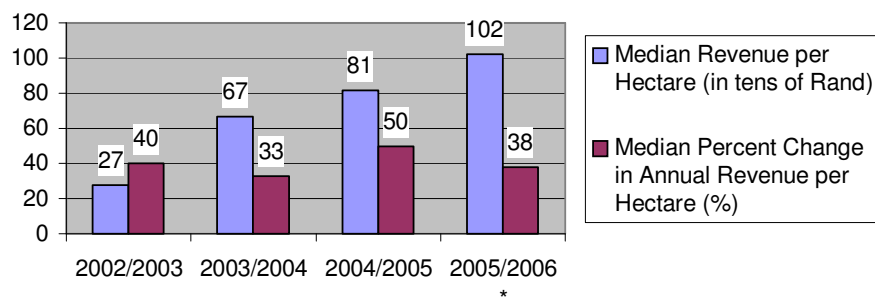
Seven PGRs provided full revenue data for the most recent complete tourist season (2004/2005). Eight PGRs provided revenue projections for the season during which this survey occurred (2005/2006). **TABLE 7** summarises this revenue information. The revenue figures in **TABLE 7** tell only a portion of the financial story. **FIGURE 3** links revenue and reserve size, calculating revenue on a per hectare basis. Based on data provided by seven PGRs, revenue on a per hectare basis has climbed steadily from R 270 per hectare in 2002/2003 to R 810 per hectare in 2004/2005. Including data from an 8th PGR that recently commenced operations, gross revenue per hectare is projected to continue increasing through 2005/2006 to a total of R 1020 per hectare.

Meanwhile, PGRs have generated strong annual increases in revenue per hectare. As shown in **FIGURE 3**, annual increases range from a low of 33% in 2003/2004 to a high of 50% in 2004/2005. PGRs (including a newly opened 8th one) project an additional 38% rise in per hectare income for 2005/2006. These are impressive numbers compared to alternative land uses, and suggest that PGRs are still in a period of rapid growth and expanding revenues.

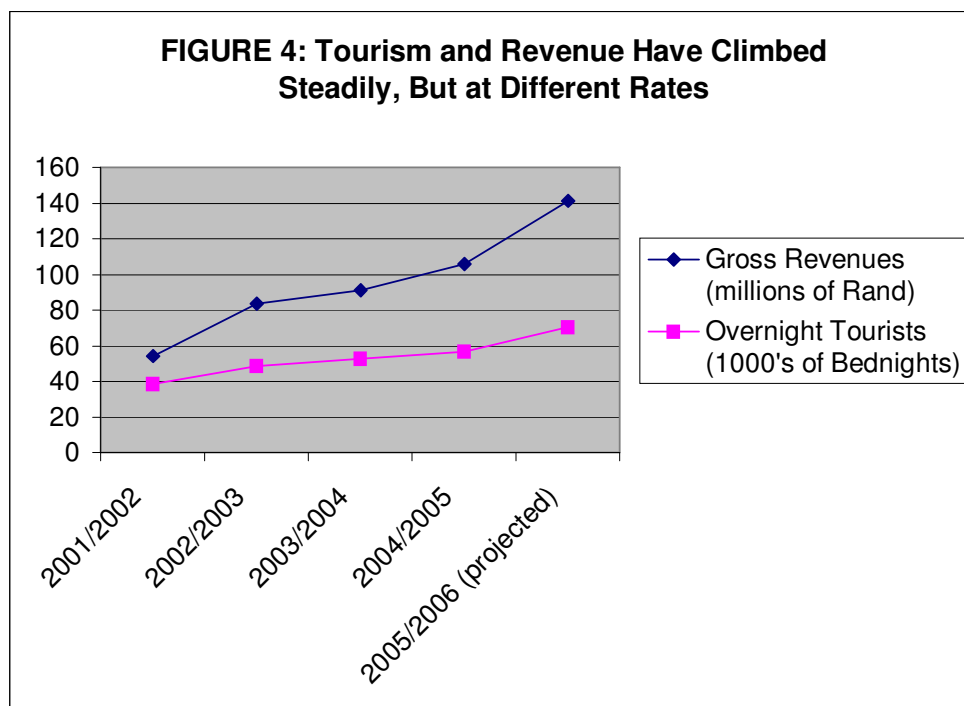
Table 7. Recent and Projected PGR Revenues

| | |
|---|---------------|
| <u>Gross Revenues</u> | |
| Combined Revenue for 2004/05 | R 105,820,998 |
| Average Revenue for 2004/05 | R 15,117,285 |
| Median Revenue for 2004/05 | R 11,500,000 |
| <u>Changes in Revenue</u> | |
| Average %change, 2003/04 to 2004/05 | 50.9% |
| Median %change, 2003/04 to 2004/05 | 50.0% |
| Average Annual Change over Life of PGR | 57.6% |
| Median Annual Change over Life of PGR | 46.4% |
| <u>Revenue per Hectare</u> | |
| Average Revenue/Ha in 2004/05 | R 976 |
| Median Revenue/Ha in 2004/05 | R 813 |
| Average 1-yr Change, 2003/04 to 2004/05 | 50.9% |
| Average Rev/Ha Change, over Life of PGR | 66.1% |
| Median Rev/Ha Change, over Life of PGR | 33.3% |
| <u>Revenue Projections for 2005/2006</u> | |
| Combined Revenue Total for all PGRs | R 141,230,465 |
| Average %Increase from 2004/05 | 38.2% |
| Median %Increase from 2004/05 | 38.2% |
| Minimum %Increase Predicted by a PGR | 16.2% |
| Maximum %Increase Predicted by a PGR | 65.2% |

FIGURE 3: Median Revenue Per Hectare for Seven Private Game Reserves



The data on tourist arrivals tell an interesting story when we add revenue figures. As noted above, tourism has continued its increase. But revenues have increased at a faster rate, as indicated by the diverging lines in **FIGURE 4**. Specifically, data from nine PGRs show that the total number of overnight tourists between 2001/2002 and 2005/2006 jumped from 38,391 to 70,329 – an 83% increase over the four-year period. Yet the same nine PGRs reported a combined 262% increase in revenues over the same time period, from R 53,929,758 to R141,230,465.



What explains the diverging lines in **FIGURE 4**? If these nine PGRs depend on tourism for practically all of their income, then one could expect their revenue figures to parallel their tourism figures. Why would revenue grow at a faster rate?

Three factors could potentially explain the divergence. First, numbers for the final year are projections (2005/2006) rather than actual arrivals. As noted earlier, PGRs can be overly optimistic about future growth. Yet, even without the projections, the two lines in **FIGURE 4** have diverged considerably by 2004/2005, the last year for which actual visitation data exist. Some other factor or factors must be at play.

Second, changes in the number of *day visitors* could potentially account for the increased revenue. By 2002/2003, four of the nine PGRs were hosting day visitors. This would add to the group's combined revenue, yet would not be reflected in the total number of overnight visitors. An examination of day visitors, however, reveals that this does not contribute to the diverging lines. In fact, the total number of day visitors to the PGRs decreased from 9,663 in 2002/2003 to only 6,073 in 2004/2005 – a 37% drop. If projections for 2005/2006 are accurate (6,193 day visitors), then the drop from 2002/2003 would still be 36%. Either way, day visitors do not explain the faster rate of revenue growth compared to overnight tourist growth.

The third potential explanation is the strongest. Put simply, prices have gone up. As we have seen before (**Section 5.3**), tariffs charged p.p.p.n. have risen. Accommodations and services are moving upscale. This is probably the principal explanation behind the revenue totals rising faster than overnight tourist numbers. Thus far, concerns that PGRs might “price themselves out of the market” appear to be completely unfounded.

In the previous study, we asked PGRs to make tourism projections for the coming year – 2003/2004. Four PGRs provided data. Together, the four PGRs predicted sizable increases in tourist bednights for 2003/2004. Data in **TABLE 8** clearly show that the anticipated tourism growth did not materialise.

| TABLE 8. Projected and Actual Numbers of Overnight Tourists for 2003/2004, for 4 PGRs Providing Complete Data) | | | |
|---|--------------|----------------|--------------------------------------|
| Overnight Tourists | Total | Average | % increase from 2002/2003 |
| Actual bednights for 2002/2003 | 46,579 | 11,645 | n/a |
| Projected bednights for 2003/2004 | 52,500 | 13,125 | 12.7% |
| Actual bednights for 2003/2004 | 48,620 | 12,155 | 4.4% |

In the 2004 study, we also asked PGRs to make revenue projections for 2003/2004. As shown in **TABLE 9**, PGRs realized a large revenue spike in 2003/2004 (24.7%). But this was less than half of the anticipated increase (54.6%). Thus, while PGR optimism is extremely well justified, PGR owners clearly overestimated the returns for that particular period.

| TABLE 9. Projected and Actual Gross Revenue for 2003/2004 (for 4 PGRs Providing Complete Data) | | | |
|---|--------------|----------------|--------------------------------------|
| Revenues | Total | Average | % increase from 2002/2003 |
| Actual gross revenue for 2002/2003 | 21,860,000 | 5,465,000 | n/a |
| Projected gross revenue for 2003/2004 | 33,800,000 | 8,450,000 | 54.6% |
| Actual gross revenue for 2003/2004 | 27,250,000 | 6,812,500 | 24.7% |

6.5 Carrying capacity: Too many private game reserves?

The rise of PGRs in the Eastern Cape over the past several years (including many that are not Indalo members) raises an important question about carrying capacity. What is the optimal number of PGRs for the area? Is there a risk of having “too many” PGRs? How can Indalo members see the ceiling coming and respond to it before hitting it? The 2004 report raised the issue of “market competition” as a possible concern. Thus, we asked PGRs to respond to the following statement:

“There are too many private game reserves in the Eastern Cape for the amount of tourists who come here”

PGRs were given four response options representing a spectrum of opinions: “Strongly Agree,” “Mildly Agree,” “Mildly Disagree,” and “Strongly Disagree.”. The lack of a middle option (“Unsure” or “Undecided”) forced respondents to take a stand.

Nine of the ten respondents (90%) chose “Mildly Disagree.” The remaining respondent chose “Mildly Agree”. The group’s sentiment is as surprising as it is resounding. It appears that market competition is not a concern. Our interpretation is that PGRs consider Eastern Cape tourism to be in its infancy, with ample room for expansion. PGRs have been witnessing significant growth in tourism and revenue over recent years. Based on their individual and collective financial returns, optimism appears warranted.

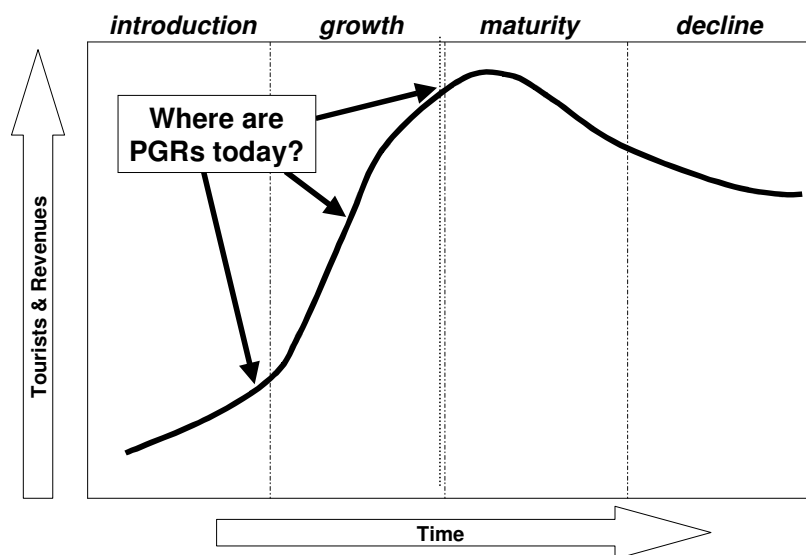
Limits to tourism arrivals and the number of PGRs surely exist, even if they are not yet in sight. As shown in **FIGURE 5**, tourism follows a highly predictable evolutionary path. It is impossible to pinpoint the exact location of Indalo reserves on the curve shown in **FIGURE 5**. We can be certain, however, that the current rapid growth phase will come to an end eventually (i.e, reach the curve's peak). The heady days of phenomenal growth and rapid entry into the market by newcomers will give way to industry consolidation, saturation, and weakening revenues.

The single best way to anticipate the arrival of the ceiling is for Indalo members to continue monitoring the group's combined numbers in terms of revenues. We recommend that Indalo members repeat this survey bi-annually as a mechanism for monitoring trends. PGRs do not want to be caught undertaking expensive expansions just when the market begins to taper off.

In addition, **members should consider providing financial information that is more meaningful than mere gross revenues.** This could include profits, returns on investment, and other standard ratios. This information would paint a clearer financial picture of the Indalo group. The numbers would be strictly confidential and for exclusive internal use.

Finally, PGRs may want to consider conducting an optimality analysis that guides decisions regarding reserve size. As competition grows and the market saturates, larger PGRs may feel the strain more than others. From financial and ecological perspectives, what would be the optimal PGR size?

FIGURE 5. Typical Evolutionary Path for Tourism Industry



Source: Adapted from Porter (1980)

7 CONSERVATION ISSUES

7.1 *Protected natural resources*

The ten PGRs in the study were protecting a total of 116,608 ha (average of 11,661; median 6,993). Their combined conservation estate protects a rich diversity of vegetation types, including six of South Africa's eight biomes, namely grassland, nama karoo, thicket, savanna, forest, and fynbos. Those PGRs providing numbers indicated an average of 45 mammal species, 266 bird species, 43 reptile species, 17 tree species, 29 grass species, and 88 other plant species. These numbers generally corroborate the figures produced in the 2004 study.

As noted in the 2004 report, it is not clear whether these biodiversity data have been collected in a systematic fashion. What is clear, though, is that the PGRs make a substantial contribution to biodiversity conservation, and that this contribution should be more rigorously quantified and recognised.

7.2 *Management planning*

All ten PGRs indicated that they have a formal management plan. Plans contain numerous conservation components, including: key species, alien plant removal, ecological assessments, monitoring programs, stocking rates, carrying capacities, water management, burning programs, soil conservation, and disease control.

Consistent with the 2004 findings, these components serve a larger vision that is, as one PGR respondent described it, both "social and environmental". PGRs seem focused on long-term ecological, financial, and social sustainability of their reserves. A well protected natural resource base is viewed as key to progress on all three fronts. One respondent articulated this larger vision as "suitable use of land, fauna and flora so as to create a model for a safe and economical sustainable environment for both its people and surroundings".

7.3 *Key Issues and actions*

Stocking densities & carrying capacity. PGRs described efforts to monitor vegetation and wildlife in an attempt to stay below carrying capacities. It is not however clear on what these "carrying capacities" are based. Elephants and lions are of particular concern, in terms of the potential impact of elephant on biodiversity and the fact that lions (and other predators) significantly depress herbivores numbers.

Poaching. Across the board, PGRs described poaching as a very minor problem. Poachers may "occasionally snare" animals, or take "the odd kudu." The low incidence of poaching may be caused by the presence of anti-poaching units in many reserves that regularly patrol the fenceline. This sets Eastern Cape PGRs apart from others in the world. For example, Langholz (1996) has documented that "poaching" persists as a major problem for private nature reserves in many parts of Sub-Saharan Africa and Latin America.

Problem animals. Respondents had little to say about problem animals within their reserves. The few responses provided suggest that elephants are a concern. Elephant problems included aggressive behaviour and population growth (and accompanying habitat degradation). None of the handful of options (culling, contraception, translocation, habitat expansion) that exist for dealing with a rapidly increasing elephant population are easy or inexpensive (Owen-Smith *et al.* in press). Respondents also mentioned black flies in the Fish River, as well as jackals as problem animals.

Alien and invasive species. All PGRs described problems with alien plant species. Many are taking active steps to remove species such as: Port Jackson wattle, prickly pear, jointed cactus, queen of the night, hakea, and Mexican agave. One PGR described alien invasives as a “serious problem” and an “economic drain on the reserve,” citing blue gum, black wattle, and Port Jackson wattle in particular. Another respondent is experimenting with alternative methods to control jointed cactus, including biological control instead of the standard approach that entails using an arsenic-based poison. One PGR mentioned “systematic removal of extralimitals”, referring to the removal of alien animal species.

Soil erosion. Six PGRs indicated efforts to reduce negative consequences of soil erosion. Activities focused on rehabilitating eroded areas as well as preventing future erosion. Focal areas are roads and steep slopes along water courses. One PGR has gone so far as to create a GIS map that assists in prioritising erosion prevention and rehabilitation.

Water availability and quality. In a country that receives half the global average of rainfall, water persists as an important issue. PGRs varied widely in their descriptions of water issues, ranging from “no problem” to “big problem”. As noted in the 2004 study, PGRs access water from dams, water holes, bore holes, natural vleis, and via pipes from the Great Fish River, Kariega River and Alicedale dam. Where water is a concern, PGRs must invest in ensuring a suitable water supply. Sample investments range from ongoing monitoring for quality to constructing an expensive purification plant. One PGR keeps a close watch on water consumption, noting that “our environmentalist keeps records of all water usage.”

7.4 Sustainable land use and biodiversity conservation

As noted in the 2004 report, ecotourism-based game farming has long been described as a sustainable alternative to livestock farming (e.g., Kerley *et al.* 1995), especially in semi-arid areas where low rainfall precludes cropping and livestock production is marginal. Such ventures face inherent risks, however, when owners undermine their natural resource base in an attempt to satisfy tourists and maximise profits (e.g., Kerley *et al.* 2003, Radder 2001).

Anecdotal evidence suggests that certain PGRs are: (a) stocking very high numbers of charismatic species in an attempt to appease tourists (e.g. lion and leopard); (b) stocking extra limital species that do not historically occur in the Eastern Cape (e.g., giraffe, white rhino); and (c) favouring false savanna landscapes (e.g., altered thicket that increases wildlife visibility). All of these practices have adverse effects on ecosystem function and biodiversity.

For example, six PGRs reported a total of 104 giraffes on their reserves (median of 20), despite evidence that giraffes do not naturally occur in the Eastern Cape (Skead 1987) and have been shown to alter the vegetation (Bond & Loffell, 2001, E. Jacobs, unpubl. data).

Seven reserves reported stocking a total of 65 rhino (median of 5), the majority of which we expect are extra-limital white rhino (only two of these PGRs are known to stock black rhinoceros, GIHK, unpubl). Some reserves stock elephants and lion at high rates, despite well documented negative impacts on biodiversity (Novellie, Knight & Hall-Martin 1996, Power 2003).

PGR owners and managers face a dilemma. On one hand, they can emphasize short-term gain by giving tourists what they want, even if tourists' desires are based on misperceptions and the resulting practices degrade the landscape over the long-term. On the other hand, PGRs can emphasize long-term economic and ecological health by implementing sound management practices that maintain their resource base indefinitely and justify a marketing claim of being a truly sustainable land use. We recommend the latter.

8 SOCIAL AND POLICY ISSUES

8.1 Most difficult aspects of establishing a reserve

We asked an open-ended question about the most difficult aspects of establishing a PGR. Respondents listed a total of 21 constraints. Unlike the 2004 results, which emphasized "government regulations and bureaucracy that slowed the process down" as the leading challenge, the current group focused on other issues. In fact, only three PGRs mentioned regulatory topics, both of which pertained to delays in government approvals for Environmental Impact Assessments.

Overwhelmingly, PGRs mentioned financial constraints as the biggest challenge. Among financial constraints, costs related to negotiating and purchasing land topped the list. Other financial challenges included: handling historical debt from pre-conversion farming, the lack of revenue during the development stage before tourists arrive, designing and building high quality infrastructure (especially in remote locations), and mounting a sufficient marketing effort.

Human resources were the next most frequently mentioned challenge. Examples include "lack of skilled staff slowing progress," "getting professional builders, services locally," and "training local staff in hospitality from an agricultural culture." A respondent representing a multi-member consortium commented on the challenges of "formulating a constitution to suite all members of the conservancy."

Consistent with the 2004 study, PGRs mentioned game introduction as the easiest part of establishing the PGR. Six of the nine respondents mentioned this item first. Other easy aspects included: having high profile protected areas (public and private) to learn from, land management given the owner's farming experience, and maintaining the current staff.

8.2 Challenges to sustainability of reserves

Government-related topics may not have been a major hurdle in PGR establishment (see above), but they dominate PGRs' concerns for the future. Among 24 obstacles to medium- and long-term sustainability specified by PGRs, three-fourth (n=18) directly or indirectly related to government policy. We placed concerns about government policy into four main

categories: 1) complying with Black Economic Empowerment (BEE) requirements; 2) land taxes; 3) land redistribution (including a possible moratorium on foreign ownership of land); and 4) wildlife policy (particularly relating to translocation of non-indigenous species). Other government related concerns included: political stability, fiscal policy (strength of the Rand), lack of municipal support, and government negativity towards private game farms and reserves.

Regarding the wildlife translocation policy, one respondent commented, “It will cause game reserves to have to consider going back into agriculture as game reserves do not have the fiscal backing that nature reserves and national parks have. We need the giraffe, wildebeest and impala etc. to sustain us.” This opinion that extralimital species are critical to the economic sustainability of the PGRs should be tested, especially in the light of possible ecological degradation that may accompany such species. As indicated above, at least one PGR reported a policy of removing such extralimital species. A recent survey of the perceptions of visitors’ to the Addo Elephant National Park showed that nearly 40% of the respondents stated that the presence of extralimital species diminished the quality of their wildlife experience (Boshoff *et al.* 2006). The consequences of these species on visitation rates and marketing opportunities need to be explored. The PGRs also need to evaluate the benefits of being able to align with national legislation in this regard, particularly in the light of emerging opportunities to access conservation incentives such as proposed tax rebates. Furthermore, removing extralimital animal species would allow PGRs to market themselves as undertaking conservation at the highest level and on a par with state conservation agencies.

With respect to fiscal policy, one respondent summarised the concern this way: “Strengthening of the rand makes it difficult for us to remain as competitive in the world terms and to achieve the escalations in our rates which will be necessary to cover ever-increasing operating costs.” The competitive advantage that these PGRs do enjoy in terms of global competition is their location within an area of Africa that boasts spectacular biodiversity, well-developed infrastructure and relatively low risk (in terms of disease and crime) for visitors. This should be exploited, while recognising that any economic activity dependent on foreign income will be vulnerable to foreign exchange variability.

Other concerns also have links to government action or inaction. Examples included: proposed development near reserves (e.g., Eskom powerlines), the HIV/AIDS pandemic, and the shortage of flights into Port Elizabeth. One of the advantage that the PGRs surveyed here do enjoy is their membership of Indalo does allow them to interact with government agencies in a concerted fashion, rather than as a series of isolated and unco-ordinated ventures.

Among the few topics not related to government policy, one centred on wildlife management, in particular over-population of elephant and lion. These issues are receiving considerable attention within the Centre for African Conservation Ecology (e.g. Hayward & Kerley 2005, Hayward *et al.* 2006a,b,c,d,e, Kerley & Landman, submitted), and the PGRs should capitalise on and encourage the development of local research capacity to address these challenges. The remaining topics focused on maintaining PGRs’ economic viability, e.g., covering running costs, handling maintenance expenses, and surviving the low-occupancy winter season.

Unlike 2004, and consistent with **Section 6.5** above, none of the respondents mentioned concerns about increased competition as PGRs grow in size and number. As indicated above, it may be appropriate for the members of Indalo to monitor their industry in order to detect

early warnings of such possible competition, as well as develop measures of optimal sizes and degree of development of individual PGRs.

8.3 External Support Received and Desired

Of the 49 questions contained in the survey, respondents had the least to say when it came to describing types of support they have received from external sources. Many did not answer the question. This suggests that PGRs consider their operations to be largely independent. Nevertheless, we have gleaned a few examples and put them into **TABLE 10** below. The table also includes examples of support that PGRs would like to receive.

TABLE 10: External Support Received & Desired by PGRs

| Source | Support Received (sample) | Support Desired (sample) |
|------------------------|--|--|
| National government | Some tourism promotion in UK and Europe. | <i>See following section</i> |
| Provincial government | Game permits Good support from Grahamstown office of Nature Conservation (DEAT). | <i>See following section</i> |
| Tourism agencies | Bookings from tour operators; marketing assistance, Eastern Cape Tourism Board, Sundays River Valley Tourism Association | Increased promotion of South Africa and Eastern Cape; familiarisation w/local tourism products |
| Local authorities | Department of Trade and Industries, Police | Assist with housing and services for local communities; recognize the value of the ecotourism industry |
| Financial institutions | Several existing loans from various sources (FNB, Absa, IDC) | Additional low-interest financing |
| Universities | Multiple on-site ecological / biological research projects | Additional research on specific PGRs and industry-wide; develop relevant training programs; make findings more available |
| Consultants | On-site wildlife studies and management training | Input into future developments, BEE models, cultural attractions. |
| Other | Beneficial strategic alliances with NGOs that add increased exposure and credibility | Assist with land acquisition and hospitality training |

What Government Can Do. The previous section highlighted the lack of government support perceived by PGRs. Exactly what kind of government support would PGRs prefer, if they could get it? We asked PGRs to articulate “the 3 most important actions government can take to assist in the establishment and medium-term sustainability of private reserves.”

Overwhelmingly, respondents’ top choice is government *recognition* for PGR efforts. Only one respondent did not mention this item. Four of eight PGRs listed it as their first choice. In respondents’ own words, government should recognize

“...the opportunities that private nature reserves present in terms of job creation, conservation, social upliftment , and foreign exchange earnings.”

Government should also:

“acknowledge the effort and money that the private land owners have put into the properties which as a result has had a huge impact on unemployment, job creation, increased level of skills on the local communities around the game reserves.”

Another wrote that government should:

“recognize Eco-tourism as a significant industry and its contribution to employment and GDP”.

Finally, government should:

“Recognise and support long-term protection of biodiversity by private sector as part of national objective.”

Clearly, PGRs owners and managers consider their efforts to be largely unrespected and under-appreciated by government. In part, Indalo has initiated a process to address this problem, though the information, and its synthesis and interpretation, provided in the 2004 survey and the current survey. The above sentiments may indicate a need to further mainstream these findings on the value of the PGRs to government conservation and development goals. However, it must also be recognised that the Indalo members do to some extent undermine their own case through their failure to deal with the problem of extralimital animal species and their consequent lack of clear commitment to the highest conservation standards.

Ironically, it would cost government very little money to meet this need for recognition by the PGRs. For example, governments in other countries have undertaken “recognition” programs that publicly acknowledge PGR contributions via media events, declarations, and other public fora. One example is a framed certificate signed by the president or an environmental minister that can be prominently displayed at the reserve. Another is a sign at the reserve entrance that specifies that the reserve is an official conservation partner of the environmental ministry. A third option is to include qualified PGRs on official maps of protected areas. All of these low-cost options, and others, lend credibility to PGR efforts. They make the owners, managers, and tourists understand the important contribution that PGRs make to a national conservation and development strategy. A worthwhile exercise for Indalo members would be to specify creative ways that government might acknowledge PGR efforts.

After “recognition,” the next most popular category of responses had to do with “financial assistance” for PGR operations. Examples of *direct* financial assistance included special consideration with respect to taxes. “The land tax should be looked at” according to one respondent, “as no other rural industry has done more for EC than game reserves”. A second respondent echoed this sentiment, requesting “tax relief incentives for conservation based land use with positive socio-economic benefits...” Others suggested direct financial assistance in the form of grants and soft loans, particularly for reserves that “already show considerable commitment to the process and success.” There is a growing understanding that such incentives are powerful tools to supporting private conservation efforts, and Indalo members should engage with this emerging process.

Four respondents also mentioned forms of *indirect* financial assistance. Suggestions focused on increasing international arrivals to the Eastern Cape via enhanced marketing efforts and supporting additional inbound flights.

Closely related to marketing was the desire by three respondents to see an emphasis on political and financial stability, including stabilising landowner issues such as land taxes and land claims – factors that encourage further investment in private conservation. Another PGR seeks government assistance in preventing public entities such as Eskom from transgressing protected natural areas. A final item was increased government investment in improving the living conditions and skills of rural communities.

8.4 Contribution to Black Economic Empowerment (BEE) and social development

PGRs are active in the area of Black Economic Empowerment (BEE). As one respondent noted, “A vast majority of suppliers are BEE. All sub contractors are BEE. Ownership stakes are under negotiation.” Another PGR has set a goal of reaching Level 4 on the BEE charter benchmark rating. A third respondent has launched a honey production project for which reserve staff are 50% shareholders. A fourth is drawing up plans to give black staff an ownership share of the reserve’s wildlife. A fifth is considering placing ownership equity in a Trust for the benefit of its black workers. Staff at one PGR collectively own 8% of the company, giving them a stake in profits and encouraging interest in the venture.

PGRs often consider a broader social development agenda to be part of their mission. As one respondent noted,

“We are expanding into other social transformation projects particularly agriculture and tourism services. Using our local management skills now established in an area of high endemic unemployment will facilitate sustainable economic development where none would have taken place without this ecotourism investment initiative”

Another PGR channels its commitment to social responsibility through a foundation it has formed for social development projects. According to the respondent:

“The ...Foundation is a charitable trust created by the owners ... to facilitate community development within ... and the broader Eastern Cape communities. The Foundation focuses on developing both infrastructure and skills development and is managed by six trustees including three representatives from the community.”

The foundation is involved with a wide range of socially responsible projects, among them: constructing and supporting a primary school; 2) creating, managing, and funding a pre-school crèche on the reserve for employees’ children; 3) establishing a vegetable garden project for unemployed residents; and 4) facilitating delivery of adult-based education training programs on the reserve.

A particularly empowering initiative is this PGR’s proposed development of a nature-based tourism venture in partnership with the local community and the Eastern Cape Parks Board. The new venture is intended to occur on land purchased by and adjacent to the PGR.

Given tangible and intangible returns on social development projects, including a probably marketing advantage, **it is recommended that PGRs systematically generate and allocate funds for such projects. Just as many state run protected areas are now charging a gate fee levy that is used for local community projects, Indalo members may want to begin collecting a small levy per tourist (e.g., R10 to R20) that goes into a social development fund.** Those PGRs with an established trust (see above) can manage the fund independently. Meanwhile, PGRs without such infrastructure can place the money in a social development fund held by Indalo. Indalo members can then appoint a social responsibility officer to visit Indalo reserves and recommend specific projects to support in the name of the association.

8.5 Toward a private game reserve “code of ethics”

A common step in the evolution of many industries is creation of a “code of ethics”. Examples include accountants, businesses, teachers, and hunters (e.g., Duska 2003, Bowie et al 2005). The codes provide guidelines that help maintain the credibility and reputation of a profession or an industry, particularly against external critics. We are aware of private nature reserve groups in Colombia, Costa Rica, and other countries that have developed codes of ethics. Indalo members may want to do the same.

We asked PGRs to suggest items that could potentially be included in a code of ethics for Indalo members. **TABLE 11** contains their responses to our open-ended question. Eight of the nine PGRs responded, offering a total of 31 suggestions covering a broad range of topics. We have attempted to categorize the wide-ranging responses below. Although we have organized their responses into groupings, we have refrained from ranking them or altering respondents’ original wording.

In general, responses fell into two major categories that we have labelled “commitment to conservation” and “commitment to people”. Conservation-related items pertained mostly to management of wildlife and other natural resources. Human-related items ranged more widely. They included guidelines for interacting with tourists, employees, local communities, government agencies, and fellow Indalo members.

The important step at this point is to begin to discuss a potential code of ethics. We expect that criticisms of PGRs will continue to increase in frequency and intensity over the coming years. It is in Indalo members’ best interest to act proactively to avoid such criticism. It may be the case that the Indalo constitution provides sufficient guidelines, i.e., specific behaviours that are required for membership, and grounds for expulsion and/or suspension of membership. **We recommend that members decide collectively if the Indalo charter is enough, or if they would like to develop a more specific set of guidelines. Either way, Indalo members should proactively strengthen PGRs’ long-term credibility by adopting and enforcing a code of ethics.**

TABLE 11: Toward a PGR “Code of Ethics”: List of Potential Guidelines

| Commitment to Conservation | |
|--|--|
| General | <i>High ethical standards of wildlife management</i> <i>Biodiversity conservation</i> |
| Hunting | <i>“Ethically Managed Hunting/Culling encouraged for control of species”</i> <i>“Hunting should be discouraged”</i> <i>“No illegal hunting activities”</i> |
| Individual Species | <i>“Management of dangerous animals”</i> <i>Dangerous game management plan.</i> <i>Key species management plan.</i> <i>Metapopulation management</i> |
| Planning | <i>All reserves to practice responsible land management and monitoring.</i> <i>High values in biodiversity management – implemented Conservation plan.</i> <i>Environmental assessment – impact of new structures i.e. roads</i> <i>“the implementation of a researched environmental management plan”</i> |
| Addressing & Preventing Problems | <i>Erosion control</i> <i>Impact of Alien species on species that naturally occur in the area</i> <i>Alien vegetation control</i> <i>Clearing old materials</i> |
| Commitment to People | |
| Benefiting Local Communities | <i>Social upliftment program that can be audited.</i> <i>A social document and the practicing of the included objectives.</i> <i>Best operation practices for employees conditions of employment.</i> <i>Employment and development of local population.</i> <i>All reserves to have a positive socio-economic benefit to their respective areas.</i> |
| Collaborating for Mutual Benefit | <i>Accountability towards a central association which promotes the welfare of the industry.</i> <i>Work closely with government and NGO’s to promote the development and monitoring of the industry.</i> <i>Encourage principles of competition without compromising the products of other reserves in the country/continent.</i> <i>Define a clear set of guide lines which categorise the nature and extent of utilization and conservation practices so that the tourism industry is aware of the differences in reserve products.</i> |
| Maintaining a High Quality Tourism Product | <i>the hiring of properly trained personnel ensuring proper service delivery</i> <i>All game guides should be of a certain standard</i> <i>Provision of guests with a quality value for money experience in line with expectations.</i> <i>No false marketing.</i> <i>Guest conservation education encouraged.</i> |

9. CONCLUSIONS AND RECOMMENDATIONS

- Overall, this follow-up study has resoundingly validated findings from the 2004 study, using a larger sample size. Numbers regarding employment generation, salaries, wage bills, and other topics were generally confirmed. The primary exception was average gross revenue per hectare, which is calculated to be in the vicinity of R976 (median R813) instead of the previously reported average of R1,605. This discrepancy can in part be explained by the fact that the previous survey included revenue for only three PGRs. **We strongly recommend that Indalo members continue conducting studies such as this on a biannual basis in order to improve and expand their understanding of the industry, and to stay apprised of changes. The next iteration should occur in winter 2008.**

2. Consistent with the 2004 study, respondents confirmed that wildlife was the single most important tourist attraction to PGRs, followed by a scenic and natural landscape. Wildlife viewing is the most common activity at PGRs, contributing an average of 82% of gross income. PGRs consider elephants, lions, and rhino to be their most important drawcard species.
3. Despite the detrimental impact that extralimital species have, 60% of PGRs stock giraffes and several PGRs stock white rhino. **We recommend that PGRs adopt a long-term strategy to maintaining ecological and financial viability by stocking only indigenous species.**
4. PGRs provide lodging ranging from 6 to 110 beds (median 32) and charge R1,500 to R4,750 per person per night (median R2,250). The average tariff charged to tourists has risen 37% since the 2004 study.
5. PGRs appear to be moving away from diverse accommodation types documented in 2004 such as guesthouses, chalets, suits, and wagon camps. They are focusing instead on a single type: luxury lodges.
6. Although the total number of overnight tourists to PGRs has risen dramatically over the past several years, the average number of overnight tourists per PGR has stayed relatively stable at around 6,000 per PGR. This is likely a result of newer PGRs with fewer beds offsetting the increased capacity that has happened at older, more established reserves.
7. A subset of four PGRs predicted in the 2004 study that the number of overnight tourists for the 2003/2004 season would rise 12.7% compared to the previous year. The actual increase was only 4.4%.
8. Target markets have not changed since 2004. The overwhelming majority of visitors still come from Europe and the UK (67%), followed by South African locations outside of the Eastern Cape (13%).
9. Overwhelmingly, PGRs indicated ambitious plans to expand and improve operations over the coming five years. Six PGRs plan either to enlarge existing lodges or build new ones ranging from 8 to 24 beds. Others plan to increase the size of their land holdings and wildlife numbers and diversity. Four PGRs specified plans to invest in Black Economic Empowerment (BEE) and social development projects.
10. The cost of establishing a PGR has risen. Participants in the 2004 study indicated a median cost of R32 million to establish a PGR. Current data indicated a median cost of R42 million, with a range of R15 million to R124 million.
11. Consistent with the 2004 findings, land purchase constituted the highest proportion of total expenditure (33.6%), followed by construction of buildings (23.0%) and purchasing game (12.5%). The 2006 respondents paid an average of R21.5 million to acquire the land (average of R1,977 per hectare), whereas the 2004 sample group bought their land for only R13.8 million (R1,565 per hectare).

12. In changing from farming to game-based ecotourism, the total number of employees increased by a factor of 4.5. This number reflects data from 10 reserves, and differs somewhat from the factor of 3.5 reported in 2004.
13. Each of the 10 reserves is estimated to support not just an average of 107 full-time employees per reserve (median of 78), but also an additional 375 people per reserve who are family members or other dependents of the full-time employees (median of 353). Thus, the 1,060 full-time employees across all ten PGRs support an estimated 3,745 dependents.
14. Conversion from agriculture to ecotourism resulted in the average wage bill per PGR spiking from R121,145 to R3.87 million – a 32-fold increase. This number is based on a larger sample size than the 2004 study, which documented a 20-fold increase post-conversion increase (R160,367 to R3.2 million per annum).
15. Average annual salary per full-time employee increased 4.8 fold, from R6,157 to R 29,930. This post-conversion salary increase generally corroborates annual salary figures from the 2004 report (5.7 fold increase, from R 5,498 p.a. to 31,263).
16. Including the “multiplier effect,” the R105.8 million in revenue generated by PGRs in 2004/2005 translates into an estimated total infusion of approximately R179.9 million into the Eastern Cape economy. **To assist PGRs in gaining recognition as significant role players in the economy, it is recommended that a more detailed economic analysis be carried out that assesses the full economic impact of the PGR industry on the regional and national economy.**
17. Eight PGRs providing data for the 2004/2005 season noted a median gross revenue of R11.5 million per reserve. On average, revenues jumped 50.9% from the previous year and are predicted to increase another 38.2% for 2005/2006. Average revenue per hectare was R976 for 2004/2005 – also a 50.9% jump from the previous year. While these gross revenue figures may appear impressive, their utility is severely limited by the absence of operating cost data. **We recommend that Indalo members consider providing more detailed financial information in the future that allows a comprehensive financial picture to emerge (e.g, net profits & losses). The information should be submitted and stored under the strictest confidentiality.**
18. Revenues have increased at a faster rate the number of overnight tourists. The main reason for this difference is that prices have risen. PGRs are moving upscale. Concerns that PGRs might “price themselves out of the market” appear to be unfounded at this juncture.
19. When asked if there are too many private game reserves in the Eastern Cape for the amount of tourists who come here, nine out of ten respondents (90%) chose to “mildly disagree.” Despite growth in the number of PGRs, respondents do not perceive the market to be saturated or overly competitive. **We recommend that Indalo members repeat this survey bi-annually as a mechanism for monitoring key financial and other indicators that will signal when the market begins to taper off. We further recommend that as the current high growth phase slows, Indalo members commission an optimality analysis that indicates the ideal reserve size for maximising income and minimising costs.**

20. The ten PGRs in the study were protecting a total of 116,608 ha (average of 11,661; median 6,993), representing six of South Africa's eight biomes and an immense diversity of plants and animals. **We recommend that Indalo members document their contribution to conservation and increase their capacity to monitor important floral and faunal changes by systematically collecting reserve-specific biodiversity information. This work can be contracted out or conducted in-house by qualified professionals.**
21. The issue of extralimital species has been highlighted again, as was done in the 2004 report. Indalo members need to evaluate the true costs and benefits of such species, including such aspects as long term ecological impacts, alignment with international and national conservation legislation, access to state conservation incentive schemes, visitor perceptions arising from the presence of such species and vulnerability of PGRs with such species to competitive marketing opportunities.
22. Although PGRs would appreciate financial assistance from governments, there is one thing they seek even more: public "recognition" for their substantial contribution to biodiversity conservation and local economic development. Meeting this need would cost the government little money. What's more, it can be accomplished through a wide variety of creative mechanisms that have been used in other countries. **We recommend that Indalo members brainstorm inexpensive forms that public respect and recognition might take, and that government at all levels seriously consider providing such acknowledgement.**
23. Respondents suggested guidelines that could potentially form part of a "code of ethics" for PGRs. Most pertained either to conservation (e.g., management of wildlife) or to people (e.g., interactions with tourists, employees, local communities, government agencies, and fellow Indalo members). **We recommend that Indalo members proactively strengthen their long-term credibility and reputation by adopting and enforcing either a new stand-alone code of ethics, or a set of more stringent requirements for membership in the Indalo organization.**
24. Following the example of a PGR with a social responsibility foundation described above, **we strongly recommend that PGRs improve their long-term social and political viability through continued investing in social development projects, and that such investments steadily increase over time. This includes creation of an Indalo Social Development Fund that is financed by small tourist levies, and supports projects in and around Indalo reserves.**
25. Given the value of the information provided in this report, **it is recommended that major portions of this report be released to the public**, in order to improve the perceptions of the public, industry stakeholders and policy makers as to the value of PGRs to society. This could be achieved through the publication of an edited version of this report in a reputable journal.

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