

**ENVIRONMENTAL IMPACT ASSESSMENT FOR THE
PROPOSED MATIMBA-WITKOP NO. 2 400 kV
TRANSMISSION LINE, LIMPOPO PROVINCE**

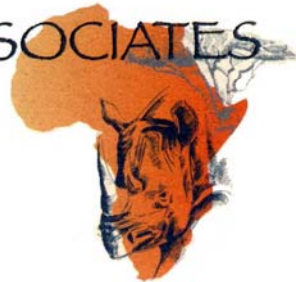
**SPECIALIST STUDY – TOURISM IMPACT
ASSESSMENT**

APPENDIX F

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ANNEXURE A: MARKET CONDITIONS IN SOUTH AFRICA

1. METHODOLOGY

The following activities were undertaken for the tourism impact assessment:

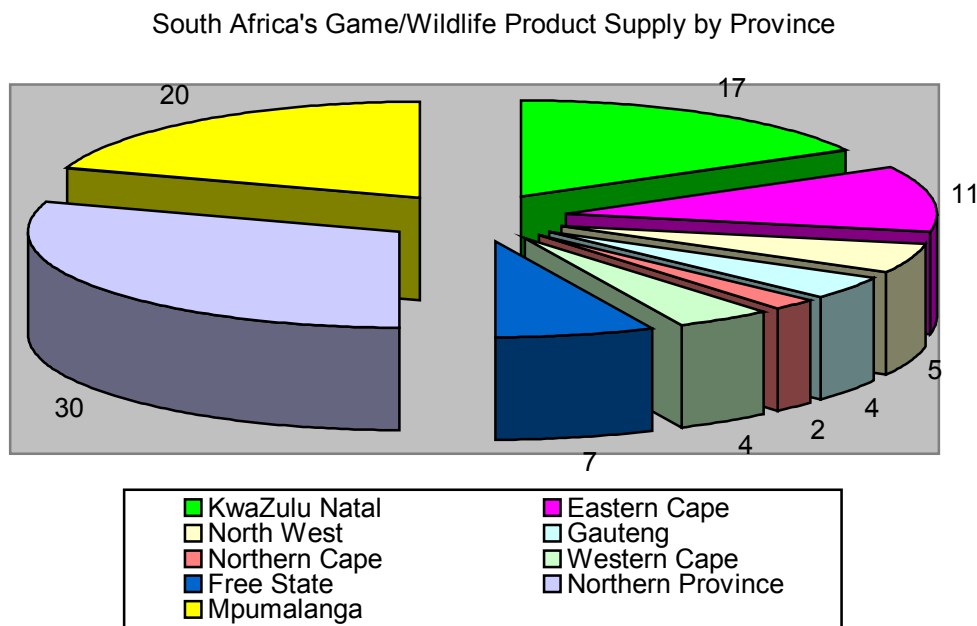
- A desktop analysis of the South African tourism industry from both a Provincial and National perspective, taking into consideration current operating dynamics and potentials.
- A desktop evaluation of nature reserves, private game reserves, private game farms and lodges, and eco-tourism attractions within the study area, particularly those which form part of the Waterberg Biosphere Reserve.
- A site inspection of the area was undertaken, during which consultation with pre-eminent owners of land within the Waterberg Biosphere Reserve and owners of smaller farms used for tourism and hunting activities in the area was undertaken.
- Arising out of the above, an analysis was undertaken regarding the potential impacts on the tourism industry associated with the proposed project, and final conclusions and recommendations were made.

2. OVERVIEW OF THE TOURISM INDUSTRY IN THE LIMPOPO PROVINCE

In order to understand the tourism potential currently evolving in southern Africa, which has specific relevance to the Limpopo Province, a detailed evaluation was undertaken of current trading conditions and demographics, currently prevailing in the South African and Limpopo Province tourism industries. These are briefly discussed below, and are further elaborated in Annexure 1.

2.1 Introduction to the Tourism Potential of the Limpopo Province

The Limpopo Province offers nearly a third of South Africa's game and wildlife product (30%), followed closely by Mpumalanga (20%), KwaZulu-Natal (17%) and the Eastern Cape (11%). The Limpopo Province and Mpumalanga together comprise close to half of South Africa's game and wildlife product.



It is evident that the popularity of the Limpopo Province and particularly the Waterberg Region for eco-tourism development is related to the following issues:

- The area is deemed to be malaria free.
- There is a tremendous diversity of landscape and vegetation, including mountain, riverine, middle-bushveld, and savannah woodland.
- The tremendous diversity of wildlife and bird species.
- The abundance of San Rock Art sites.
- Easy access from Gauteng.

Statistics extrapolated from the Grant Thornton Kessel Feinstein Tourism Report (2001) indicates that the Limpopo Province accounts for 13% of domestic tourism. This is a 2% increase over the last survey undertaken in 1999/2000, which indicated that domestic tourism in the Limpopo Province accounted for 11% of the national figure.

The events of 11 September 2001 have had a positive impact on foreign arrivals to South Africa, as the country is now perceived by the international market as a safe destination. A 3,5% increase has been tabulated during the months of October 2001 to March 2002. As 65% of foreign arrivals visit a national park or private game reserve, it is projected that this will have a positive impact on tourism growth in the Limpopo Province.

The proposed Matimba-Witkop No. 2 400 kV Transmission line is to extend eastwards from Lephalale to Polokwane, and therefore traverses the Greater Waterberg Biosphere Reserve. Although only in its infancy, this Conservancy has

tremendous long term eco-tourism potential, particularly due to the fact that the entire western segment of the Limpopo Province is deemed to be malaria free. The habitat is also conducive to a high carrying capacity of a diverse range of wildlife species, including white and black rhino, elephant, sable and roan antelope, as well as numerous predators. The potential for tourism growth, particularly in the western segment of the Limpopo Province, is therefore considered to be substantial.

3. OVERVIEW OF GAME AND NATURE RESERVES, TOURISM ATTRACTIONS, ECOLOGICAL PROJECTS AND AFFECTED COMMUNITIES WITHIN THE STUDY AREA

3.1. Introduction

An in depth study, both desktop and field research, of all the game reserves, nature reserves and eco-tourism attractions within the study area has been undertaken. It must be noted that the most significant tourism/environmental project within the study area is considered to be the Waterberg Biosphere Reserve. This section of the report provides a brief overview of significant tourism/wildlife attractions within the study.

3.2. D’Nyala Game Reserve

D’Nyala Nature Reserve, 8 281 ha in extent, was established approximately 10 years ago and is situated approximately 10 km south of Lephalale on the new Vaalwater road. Tourism-related activities within this reserve include a picnic area, a hiking trail, a game viewing route, and bird-watching facilities. Game within this reserve include blue wildebeest, hartebeest, kudu, waterbuck, tsessebe, impala, mountain reedbuck, nyala, white rhino, giraffe and Burchell’s zebra

3.3. Ellington Ranch

Ellington Ranch (also known as Zingela Lodge) is situated approximately 18 km west of Lephalale. The 9 600 ha reserve is a combination of four freehold farms. The reserve is used exclusively for commercial hunting and the breeding of endangered species, such as sable antelope. The existing Matimba-Witkop No 1 400 kV Transmission line passes through a portion of Ellington Ranch.

3.4. Rhinoland Safaris

Situated west of Marken, Rhinoland Safaris comprises of a 14 000 ha game farm, which is used for both hunting and photographic safaris. Wildlife species include white rhino, giraffe, sable, impala, blue wildebeest, zebra, tsessebe, gemsbok,

nyala and eland as well as numerous other antelope species. The existing Matimba-Witkop No 1 400 kV Transmission line passes through a portion of Rhinoland Safaris.

3.5. The Waterberg Biosphere Reserve

The Waterberg Biosphere Reserve was initiated in 1995 and formally registered in March 2001 and accredited to the "Man and Biospheres" programme (MaB) UNESCO. This biosphere reserve and is one of four South African biosphere reserves accredited to the MaB UNESCO programme. The Waterberg Biosphere Reserve, presently extends over an area of 150 000 ha, incorporating in excess of 35 adjoining landowners, both freehold and provincial. The current membership is listed as follows:

- Ant Africa Safaris – Vaalwater
- Boekenhout / Driehoek - Vaalwater
- Born Wild Lodge – Vaalwater
- Cattelands Cottage – Vaalwater
- Intabeni Game Reserve – Vaalwater
- Equus Horse Safaris – Marken
- Izinhaba Lodge – Vaalwater
- Keta Nature Reserve – Marken
- Kwalata Wilderness – Vaalwater
- Kudu Canyon – Lephalale
- Lagnaha Farm – Vaalwater
- Lapalala Wilderness - Vaalwater
- Lindani – Vaalwater
- Mokolo River Nature Reserve
- Nkonka Bush Farm – Vaalwater
- Podica Lodges – Vaalwater
- The Shepherds Lodge – Vaalwater
- Slangkuil – Vaalwater
- Summer Place – Vaalwater
- Three Leopard Brothers – Vaalwater
- Triple B Ranch – Vaalwater
- Twiga Wildlife Sanctuary – Marken
- Touchstone Game Ranch - Marken
- Waterberg Game Reserve – Vaalwater
- Welgevonden – Vaalwater

In accordance with the parameters laid down by UNESCO, the Waterberg Biosphere is structured as follows:

- A core area of 114 571 ha. This is required to be an area within the total biosphere system that has high status and is linked to some significant ecological factor, such as the protection of rare plants.
- A buffer zone of 150 000 ha. It is within this zone that general activities, such as hunting, tourism and environmental education, may be practised. The principle objective within this zone must, however, be conservation.
- A transitional zone of 1 500 ha. It is within this zone that farming activities and communities can be accommodated.

The area is jointly administered by the Waterberg Biosphere Reserve Committee and the Provincial Department of Land Agriculture and Environment, who co-ordinates the Provincial MaB programme.

The Waterberg Biosphere range incorporates many rivers, streams and wetlands, stretching for 150 km in a long arc from Thabazimbi in the west, Nylstroom in the centre to Mogalakwena in the east. The mountains include many game sanctuaries, nature reserves and farms. There are 75 mammal species present including elephant, lion, white and black rhino, hippo, leopard and buffalo. Numerous antelope species, including sable, roan and tsessebe have been reintroduced by several landowners and have successfully adapted to the Waterberg eco system. The African python and the Nile crocodile are also resident. The Waterberg is rich in birdlife, with more than 300 bird species recorded. The area is ideally suited for tourism, eco-tourism and hunting due to its wildlife, habitat and its being malaria free.

The Waterberg has a long history of human occupation and been inhabited by people over hundreds of thousands of years. From Stone Age people to the San, the Khoikhoi herders, to Iron Age people, leaving artefacts, paintings and iron smelting furnaces. The Waterberg is one of the most important San rock art sites in South Africa and it must be pointed out that cultural and ethnic tourism are becoming significant tourism attractions throughout southern Africa.

Activities and attractions within the Biosphere area include the Rhino Museum, which is devoted entirely to the conservation of rhinoceros, Waterberg Museum which is situated on the original Melkriver School, Church of St John the Baptist (designed by Sir Herbert Baker), many San Rock Art and geological sites, Mokolo Dam and Nature Reserve, as well as unique photographic opportunities.

A number of luxury game lodges and eco-tourism ventures have been initiated within the Biosphere, including:

- Lapalala Wilderness, a 26 000 ha reserve.
- Touchstone Game Lodge, a luxury game lodge situated within a 17 500 ha reserve.

- Keta Private Nature Reserve, a private luxury game hunting lodge situated within a 18 000 acre reserve.
- Mangweni Game Lodge, a luxury game lodge situated within the central Waterberg Biosphere.
- Kwalata Game Ranch, a game lodge situated in a 900 ha reserve situated approximately 20 km south of the study area.

Numerous other small lodge operations are located on member properties. However, these have not been detailed due to their southerly location within the Biosphere which is far removed from the study area of the proposed Matimba-Witkop No. 2 400 kV Transmission line.

3.5.1. Masebe Nature Reserve

Masebe Nature Reserve falls within the Waterberg Biosphere, and is a thickly wooded, mixed bushveld reserve of 4 546 ha in extent on the Mogalakwena/Marken road. Game in the reserve include Tsessebe, sable eland, impala, red hartebeest, bushbuck, kudu, nyala, reedbuck, waterbuck and zebra. San paintings are found on some of the cliffs typical found in this reserve. Two trails of 11 km and 17 km traverse the reserve.

3.5.2. Moepel Farms Nature Reserve

Moepel Farms is situated within the Waterberg Biosphere Reserve and comprises of a number of freehold farms, which have been settled on by previously disadvantaged communities. The main activity in this area is cattle farming, although some subsistence agricultural activities are undertaken.

3.6. Twiga Wildlife Sanctuary

Twiga Wildlife Sanctuary is situated approximately 9 km south-west of Marken, and comprises of a total area of approximately 2 300 ha. Approximately 600 ha have been set aside as an endangered breeding species sanctuary and currently tuberculosis (TB) free buffalo, roan antelope and white rhino are being bred under supervised conditions within this reserve.

The Marken Game Farmers Association are currently in the process of establishing a 60 000 ha conservancy in the area, of which Twiga Wildlife Sanctuary is to form the core. The reserve is presently not open for tourism but it is likely to expand its operation and open an eco-tourism operation, day visitors only.

3.7. Witvinger Nature Reserve

The Witvinger Nature Reserve is approximately 4 450 ha in extent, and is situated to the south of the study area between Mogalakwena and Polokwane. The reserve has a variety of habitats and landscape, including open plains and mountains. Wildlife species include bushbuck, kudu, reedbuck, tsessebe, leopard and zebra. It is not envisaged that the reserve will be developed for tourism-related activities in the foreseeable future.

3.8. Percy Fyfe Nature Reserve

Percy Fyfe Nature Reserve is situated to the south of the study area, approximately 35 km north-east of Polokwane. This reserve has been successfully used to breed threatened antelope, especially roan and tsessebe. The breeding programme has been very successful, and surplus animals have been moved to the other reserves. Tsessebe is bred at one of the smaller camps, while the other is maintained as a multi-species camp.

Tourism-related activities within the reserve include camping facilities, game viewing, a one-day hiking trail and a circular mountain-bike trail, which forms part of the Thabaphaswa Mountain Bike Trails

3.9. Kuschke Nature Reserve

Kuschke Nature Reserve is situated south of Polokwane and in close proximity to the existing Witkop Substation. The reserve comprises of two separate farm portions, totalling approximately 2 100 ha in extent. The activities currently undertaken on the farm portions include pig farming, chicken farming, nature conservation, beef farming and tourism-related activities. Wildlife species include warthog, impala, blesbuck, bushpig, anteater, and a variety of bird species. This reserve is a well establish Agricultural School, which was founded on 6 July 1935.

3.10. Other Tourism Attractions in the Study Area

Numerous small eco-tourism and hunting operations have been identified within the study area, mainly between Lephalale and Marken. Some farmers in the Marken area are in the process of forming a conservancy of several thousands of hectares (approximately 60 000 ha) aiming to promote conservation and tourism related activities and thereby creating employment opportunities for the local community.

4. EVALUATION OF THE POTENTIAL IMPACTS ASSOCIATED WITH THE PROPOSED MATIMBA-WITKOP No. 2 400 kV TRANSMISSION LINE ON TOURISM OPERATIONS AND FUTURE TOURISM POTENTIAL

4.1. D’Nyala Game Reserve

Nature of Impact:

The 8 281 ha Reserve is situated to the south of the town of Lephalale and is in close proximity to Corridors 1, 4 and 5. There are a variety of accommodation facilities, including log chalets, conference centre and wilderness trails. Should Corridor 1 be utilised for the Transmission line, there may be a marginal visual and aesthetic impact on the future tourism potential of the reserve.

| Nature | Extent | Duration | Probability | Significance | Status |
|----------------------------------|--------|----------------------------------|-------------|--------------|----------|
| Impact on D’Nyala Nature Reserve | Local | Short-term (during construction) | Probable | Medium | Negative |

4.2. Ellington Ranch

Nature of Impact:

The 9 600 ha reserve is situated approximately 15 km east of Lephalale and within the study area. The reserve is used exclusively for hunting purposes, primarily for the international market. The existing Matimba-Witkop 400 kV Transmission line traverses portions of the consolidated farms, which comprise Ellington Ranch. The owner, Mr GAM Ravazzotti has indicated that a second Transmission line being erected alongside the existing servitude would have a significant negative impact on his hunting operation. Proposed corridor 1 could, therefore, have a significant impact on the hunting operation from a visual perspective.

However, it is anticipated that the potential impact will be minimised if the proposed Transmission line is constructed in parallel to the existing Transmission line as it is considered reasonable to assume that this existing line has been taken into account in the planning of the existing tourism-related activities. A short-term impact is, however, anticipated during construction.

The construction of the proposed Transmission line within corridor 5 in the vicinity of Ellington Ranch will minimise the impact associated with two Transmission lines in parallel traversing these properties. However, the land between the existing Matimba-Witkop No 1 400 kV Transmission line and the proposed Transmission

line will be “boxed-in” by Transmission line infrastructure, which will result in an increased visual impact on this portion of land. This is anticipated to increase the impact on the tourism potential of this portion of land.

| Nature | Extent | Duration | Probability | Significance | Status |
|--|---------------|-----------------|--------------------|---------------------|---------------|
| Impact on Ellington Ranch (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Ellington Ranch (operation) | Local | Long-term | Probable | Low | Negative |

4.3. Rhinoland Safaris

Nature of Impact:

The 12 000 ha Reserve is situated approximately 40 km east of Lephalale and within the study area. The reserve is used both for photographic and hunting purposes, but there is thought to expand the eco-tourism operation. The existing Matimba-Witkop Transmission line traverses the farm (Spektakal) from which Rhinoland Safaris operates its commercial ranching and tourism operation. Proposed corridors 1, 2 and 5 traverse the property. It is anticipated that the potential impact will be minimised if the proposed Transmission line is constructed in parallel to the existing Transmission line (i.e. within corridors 1 and 5) as it is considered reasonable to assume that this existing line has been taken into account in the planning of the existing tourism-related activities. A short-term impact is, however, anticipated during construction.

The construction of the proposed Transmission line within corridor 5 in the vicinity of Rhinoland Safaris will minimise the impact associated with two Transmission lines in parallel traversing these properties. However, the land between the existing Matimba-Witkop No 1 400 kV Transmission line and the proposed Transmission line will be “boxed-in” by Transmission line infrastructure, which will result in an increased visual impact on this portion of land. This is anticipated to increase the impact on the tourism potential of this portion of land.

A long-term impact is anticipated during operation if the proposed Transmission line is constructed within corridor 2. This impact is anticipated to be of high significance as a new impact will be introduced.

| Nature | Extent | Duration | Probability | Significance | Status |
|--|---------------|-----------------|--------------------|---------------------|---------------|
| Impact on Rhinoland Safaris (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Rhinoland Safaris (operation – corridor 1) | Local | Long-term | Probable | Low | Negative |
| Impact on Rhinoland Safaris (operation – corridor 5) | Local | Long-term | Probable | Low | Negative |
| Impact on Rhinoland Safaris (operation – corridor 2) | Local | Long-term | Probable | High | Negative |

4.4. Waterberg Biosphere Reserve

Corridors 1, 2 and 5 pass through the Waterberg Biosphere Reserve, and will therefore have implications on some of the properties within the reserve area. However, it is evident that due to the distance of the lines, there will be no impact on any properties located in the Vaalwater region of the Waterberg Biosphere Reserve. Due to this fact, these have been excluded from the evaluation. Properties which may be directly affected are considered in detail below.

4.4.1. Keta Private Nature Reserve

Nature of Impact:

Keta Nature Reserve operates a commercial hunting operation. The existing Matimba-Witkop No. 1 400 kV Transmission line is located in close proximity to the farm boundaries. The impacts of the new line are anticipated to be marginal due to the presence of the existing line, provided that the new line is constructed parallel to this existing line. Short-term impacts are, however, anticipated during the construction phase.

| Nature | Extent | Duration | Probability | Significance | Status |
|-------------------------------|---------------|-----------------|--------------------|---------------------|---------------|
| Impact on Keta (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Keta (operation) | Local | Long-term | Probable | Low | Negative |

4.4.2. Touchstone Game Ranch

Nature of Impact:

Touchstone Game Ranch is frequented by both domestic and international tourists. Touchstone is located in the northern sector of the Waterberg Biosphere reserve and south of Marken. Although it falls within the study area, no impact on the commercial operation of the lodge is anticipated to be associated with the proposed project.

4.4.3. Masebe Nature Reserve

Nature of Impact:

Masebe Nature Reserve is potentially impacted on by both corridors 1 and 2. However, the existing Matimba-Witkop No 1 400 kV Transmission line located within corridor 1 has an existing impact on the southern boundary of the reserve. Therefore, the potential impact associated with the construction of the new Transmission line within corridor 1 or 5 is anticipated to be restricted to the construction phase. However, should the Transmission line be constructed within corridor 2, a new impact will be introduced on the eastern and northern boundaries of the reserve, and the reserve would be essentially "boxed in" by Transmission line infrastructure. The impact on the Masebe Reserve associated with the construction of the Transmission line within corridor 2 is, therefore, anticipated to be of high significance.

| Nature | Extent | Duration | Probability | Significance | Status |
|---|---------------|-----------------|--------------------|---------------------|---------------|
| Impact on Masebe NR (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Masebe NR (operation – corridors 1 and 5) | Local | Long-term | Probable | Low | Negative |

| Nature | Extent | Duration | Probability | Significance | Status |
|--|--------|-----------|-------------|--------------|----------|
| Impact on Masebe NR (operation – corridor 2) | Local | Long-term | Probable | High | Negative |

4.5. Twiga Wildlife Sanctuary

Nature of Impact

Corridor 2 will directly traverse part of the 2300 ha wildlife sanctuary, and is anticipated to have a significant impact on tourism potential. Corridor 3 will marginally impact on the southern portion of the property, where the proposed line dissects the Farms of Goedgedacht 461 and Grobbelaars Hoek 462.

| Nature | Extent | Duration | Probability | Significance | Status |
|--|--------|------------|-------------|--------------|----------|
| Impact on Twiga (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Twiga (operation – corridor 2) | Local | Long-term | Probable | High | Negative |
| Impact on Twiga (operation – corridor 3) | Local | Long-term | Probable | Medium | Negative |

4.6. Witvinger Nature Reserve

Nature of Impact:

The 4 450 ha reserve has presently no tourism operation and is situated to the south of the study area. The proposed Matimba-Witkop No. 2 400 kV Transmission line will, therefore, have no impact on the operation of the reserve, or on its future tourism potential.

4.7. Percy Fyfe Nature Reserve

Nature of Impact:

Percy Fyfe is situated to the south of the study area (approximately 1km) and also approximately 10 km south of the existing Matimba-Witkop Transmission line. In view of this location and should the new line be placed close to the

southern boundary of the study area, there will be an aesthetic and visual impact on the reserve and its future tourism potential. However, should the proposed Transmission line be constructed parallel to the existing 400 kV Transmission line, no impact on this reserve is anticipated.

| Nature | Extent | Duration | Probability | Significance | Status |
|---|--------|-----------|-------------|--------------|----------|
| Impact on Percy Fyfe (operation – southern boundary of corridor) | Local | Long-term | Probable | High | Negative |
| Impact on Percy Fyfe (operation – parallel to existing line) | None | None | None | None | None |

4.8. Kuschke Nature Reserve

Nature of Impact:

It is anticipated that the proposed Matimba-Witkop No. 2 400 kV Transmission line will have a cumulative visual impact on the operation of the reserve, which is primarily nature conservation related, although there is a related eco tourism operation being contemplated.

| Nature | Extent | Duration | Probability | Significance | Status |
|----------------------------------|--------|------------|-------------|--------------|----------|
| Impact on Kuschke (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Kuschke (operation) | Local | Long-term | Probable | Low | Negative |

4.9. Impact on small Eco-Tourism / Hunting Operations

It must be noted that the existing Matimba-Witkop Transmission line has impacted on numerous small eco-tourism and hunting operations within the study area. In addition, it must be noted that this line is approximately 15 years old and that the majority of landowners bought their farms with the line already in place. Should the proposed Matimba-Witkop No. 2 400 kV Transmission line be constructed parallel to the existing line, the following issues must be borne in mind:

- There will be a higher impact on smaller farms as it will be more difficult to move operations away from the line than on larger farms.
- There will be a high impact during the construction period, both on small and large farm properties.
- The impact on hunting activities with the opening of the servitude will be limited, only during the construction period, provided that the entire servitude is not cleared during the maintenance phase.
- It is pertinent to state that the majority of tourism related activities and infrastructure have been sited away from the existing Transmission line and the servitude. Therefore the construction of the proposed line parallel to the existing line will have minimal impact on existing and proposed tourism operations.

5. SUMMARY OF IMPACTS

5.1. Parallel/adjacent to The Existing Matimba-Witkop No. 1 400kV Transmission line – Corridor 1 and Corridor 5

An evaluation of the impact of the proposed line on tourism operations are listed as follows:

- There will be a marginal accumulative impact on the Kuschke Nature Reserve from a visual perspective, but this impact is not anticipated to be detrimental to its tourism operation as an impact exists from the Witkop Substation and associated powerlines.
- The southern boundary of Corridor 1 passes in close proximity to the Percy Fyfe Nature Reserve (± 1 km). The reserve is an important breeding station for endangered species, including sable and roan antelope. Its potential for tourism purposes is significant, particularly in view of its close location to the N1 and Polokwane. Should the line be constructed along the southern periphery of corridor 1, there could be visual and aesthetic impacts, which could impact on the tourism potential of the reserve. However, if the proposed Transmission line is constructed in parallel to the existing line, no impact on this reserve is anticipated.
- The proposed Matimba - Witkop Transmission line has no effect on any tourism potential between the Witkop Substation and the Waterberg Biosphere Reserve. The entire area along this route is communal farming area with no future tourism potential.
- A substantial impact on the eastern and northern boundaries of Masebe Nature Reserve is anticipated should the Transmission line be constructed within corridor 2. In addition, this reserve would effectively be "boxed in" by Transmission line infrastructure with this option as the existing Matimba-Witkop No. 1 400 kV Transmission line has an existing impact on the southern boundary of this reserve.

- There will be marginal impact on the tourism potential / development of the northern extremity of the Waterberg Biosphere Reserve, where the proposed Transmission line is in close proximity to the Moepel Farms and Keta Private Game Reserve. This marginal impact will be lessened if the new Transmission line follows the existing Matimba-Witkop No. 1 400 kV Transmission line. The duration of the impact is perceived to be short-term and only during the construction period.
- Moepel Farms Nature Reserve has recently been added to the Waterberg Biosphere Reserve as a community-based eco-tourism development. It is envisaged that the proposed Matimba-Witkop No 2 400kV Transmission line will have a marginal, short term negative impact on the future operation of this reserve, during the construction period.
- The proposed Transmission line (Corridors 1 and 5) will have no negative impact on the D’Nyala Nature Reserve.
- The existing Matimba-Witkop line (Corridors 1 and 5) passes directly through the 12 000 ha Rhinoland Safari Ranch and Ellington Ranch. However, the existing Matimba-Witkop No 1 400 kV Transmission line traverses these properties. Therefore, it is reasonable to assume that current tourism activities have been planned away from this existing line. Should the new Transmission line is constructed parallel to the existing line, it is anticipated that the impact on tourism potential of these properties will be of low significance.
- The construction of the proposed Transmission line within corridor 5 in the vicinity of Ellington Ranch and Rhinoland Safaris will minimise the impact associated with two Transmission lines in parallel traversing these properties. However, the land between the existing Matimba-Witkop No 1 400 kV Transmission line and the proposed Transmission line will be “boxed-in” by Transmission line infrastructure, which will result in an increased visual impact on this portion of land. This is anticipated to increase the impact on the tourism potential of this portion of land.

On analysis on review of the above, it is envisaged that the impact of constructing the proposed Matimba-Witkop No. 2 400 kV Transmission line parallel to the existing line within corridors 1 or 5 will have a short-term impact, primarily during the construction phase. The impact on the tourism industry within the study area is, therefore, anticipated to be minimal.

5.2. Utilisation of the Extended Corridor for the Proposed Matimba-Witkop 400kV Transmission Line – Corridor 2

- Should corridor 2 be selected for the establishment of the proposed Matimba-Witkop No 2 400 kV Transmission line, there will be an impact on Twiga Wildlife Sanctuary, and other smaller game farms east of Marken. The impact will be of a permanent visual nature, detracting from the wilderness

environment of the northern sector of the Waterberg Biosphere Reserve. The extent of the impact will be localised to the immediate area adjacent to the Transmission line, dependant on the topography and landscape.

- Corridor 2 has impact between the villages of Gamalope and the village of Marken, where the new route traverses privately owned land which is predominantly utilised for hunting, game farming and/or eco-tourism activities. The impact will be of a permanent visual nature, detracting from the unspoilt environment of the Marken area. The extent of the impact will be localised to the immediate area adjacent to the transmission line.

It is envisaged that the impact of constructing the proposed Matimba-Witkop No. 2 400 kV Transmission line within corridor 2 will be of a temporary nature, primarily during the construction period. However, the visual impact during the operation phase will be of a permanent nature and only within a restricted local area from where the lines are visible. It is noted that the impact of constructing the Matimba-Witkop No. 2 400 kV Transmission line within corridor 2 will be significant within the Waterberg Biosphere area, on both existing and potential eco-tourism operations.

5.3. Corridor 3

Corridor 3 will have a minimal impact on the Twiga Wildlife Sanctuary, where the line traverses the Farms of Goedgedacht 461 and Grobbelaars Hoek 462. The extent of the impact will be localised to the immediate area adjacent to the Transmission line.

5.4. Corridor 4

From an evaluation of Corridor 4, it is apparent that there will be no impact on tourism potential of this zone, as the area is primarily used for agricultural activities and cattle ranching purposes

5.5. Summary of Impacts

Table 1: Summary of potential impacts on tourism operations within the study area

| Nature | Extent | Duration | Probability | Significance | Status |
|----------------------------------|--------|----------------------------------|-------------|--------------|----------|
| Impact on D'Nyala Nature Reserve | Local | Short-term (during construction) | Probable | Medium | Negative |

| Nature | Extent | Duration | Probability | Significance | Status |
|--|---------------|-----------------|--------------------|---------------------|---------------|
| Impact on Ellington Ranch (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Ellington Ranch (operation) | Local | Long-term | Probable | Low | Negative |
| Impact on Rhinoland Safaris (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Rhinoland Safaris (operation – corridor 1) | Local | Long-term | Probable | Low | Negative |
| Impact on Rhinoland Safaris (operation – corridor 5) | Local | Long-term | Probable | Low | Negative |
| Impact on Rhinoland Safaris (operation – corridor 2) | Local | Long-term | Probable | High | Negative |
| Impact on Keta (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Keta (operation) | Local | Long-term | Probable | Low | Negative |
| Impact on Masebe NR (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Masebe NR (operation – corridors 1 and 5) | Local | Long-term | Probable | Low | Negative |
| Impact on Masebe NR (operation – corridor 2) | Local | Long-term | Probable | High | Negative |

| Nature | Extent | Duration | Probability | Significance | Status |
|---|---------------|-----------------|--------------------|---------------------|---------------|
| Impact on Twiga (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Twiga (operation – corridor 2) | Local | Long-term | Probable | High | Negative |
| Impact on Twiga (operation – corridor 3) | Local | Long-term | Probable | Medium | Negative |
| Impact on Percy Fyfe (operation – southern boundary of corridor) | Local | Long-term | Probable | High | Negative |
| Impact on Percy Fyfe (operation – parallel to existing line) | None | None | None | None | None |
| Impact on Kuschke (construction) | Local | Short-term | Probable | High | Negative |
| Impact on Kuschke (operation) | Local | Long-term | Probable | Low | Negative |

6. RECOMMENDATIONS

It must be pointed out that Eskom must recognise the implications of the Waterberg Biosphere reserve being formally registered in March 2001. As a registered biosphere it is formally administered and accredited to the UNESCO MaB programme and also the Provincial Department of Agriculture, Land and Environment. Refer UNESCO website: www.unesco.org.mab. The implications of this legal status relate specifically to preventing any negative man induced development, including housing, infrastructure, powerlines, damming of rivers, impact on water tables, tourism projects, etc. In view of the above implications, it is strongly recommended that Eskom arrange an official meeting with landowners and members of the Biosphere Reserve, in order to clarify the implications of proceeding with the proposed Matimba-Witkop No 2 400kV Transmission line.

In view of the above, the following recommendations on the mitigation of impacts on tourism development and operations are made:

- Arising out of the Tourism Impact Assessment, it is recommended that the proposed Matimba-Witkop No 2 400kV Transmission line follow, as much as is feasibly possible, the existing Matimba-Witkop No 1 400 kV Transmission line (corridors 1 and 5). The reason for this is that visual impacts are not significantly increased with the utilisation of an existing Transmission line route. The perception of tourism operators, lodge owners and eco-tourism entrepreneurs operating within the study area, support the use of the existing servitude, in preference to the creation of a new transmission line.
- It is strongly recommended that the proposed Matimba-Witkop No 2 400 kV Transmission line should not be constructed within corridor 2, particularly adjacent to Marken, as there will be long term visual and aesthetic implications on tourism development and tourism operations in this area.
- An alternative to the construction of the new line parallel to the existing Transmission line within corridor 1 or 5, where the line impacts on Ellington Ranch and Rhinoland Safaris should be considered as far as possible.
- The construction of the Transmission line within corridor 2 should not be considered, as this option will impact on the Twiga Wildlife Sanctuary, where the line traverses the Farm Goedgedacht 461.
- Corridor 3 has no impact on any tourism areas. Therefore, this alignment could be utilised if required.

Therefore, it is recommended that, in preference, the routing of the proposed Matimba-Witkop No 2 400 kV Transmission line be aligned parallel with the existing Matimba-Witkop No 1 400 kV Transmission line, as far as practically possible.

7. REFERENCES

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**ANNEXURE A:
MARKET CONDITIONS IN SOUTH AFRICA**

1.1. REVIEW OF THE SA TOURISM INDUSTRY: YEAR 2000

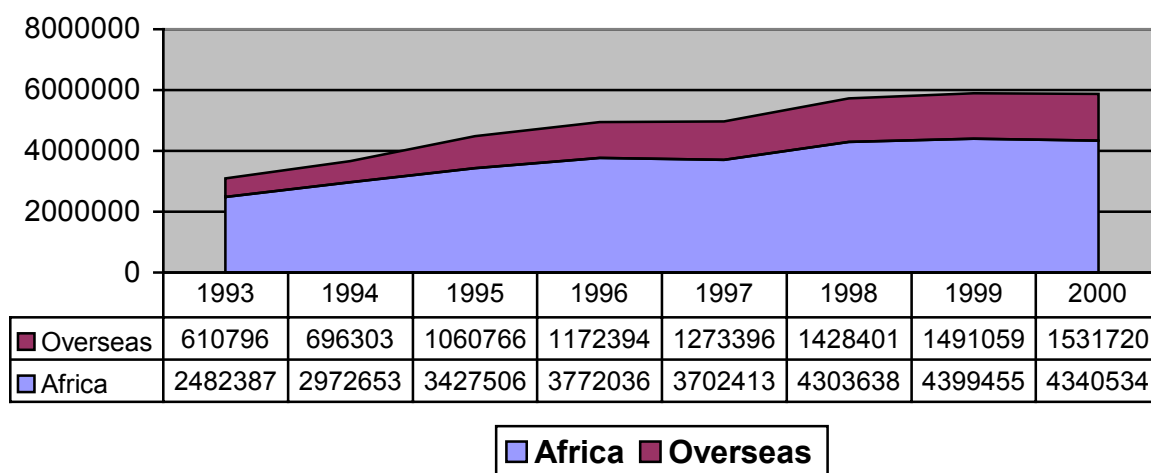
In April 2001, Statistics South Africa released its Tourism and Migration statistics for December 2000, providing us with the full picture for foreign arrivals during 2000, only four months after the end of the year. Following previous time lags of up to nine months, we have to commend the Department of Environmental Affairs and Tourism, Statistics South Africa and the Department of Home Affairs for their efforts to improve delivery of tourism statistics.

The Tourism and Migration releases for 2000 show that South Africa received 5,9 million foreign arrivals in 2000, representing a slight decline of 0,3% on 1999. This follows an annual growth of 2,3% in 1999 over 1998. This is the first year since 1986 that overall foreign tourism arrivals have declined, and it is certainly depressing at first glance.

However, the picture is not as bad as it seems. Arrivals from Africa declined by 1,3% to 4,3 million in 2000, but overseas arrivals grew by 2,7% from 1,49 million to 1,53 million.

When we analyse the number of 'real' tourists, namely overseas arrivals and African air arrivals to South Africa, a more encouraging picture emerges. In 2000 the number of overseas and African air arrival foreign tourists grew by 3,6% to 1,8 million. In fact, African air arrivals increased by 8,7% in 2000 to 281 000, following a growth of 6,1% and 6,6% in 1999 and 1998, respectively. This is very encouraging from an important and high-spend market, which in total (across all African countries) is a larger market than the German market and second in size after the UK market.

Total Foreign Arrivals

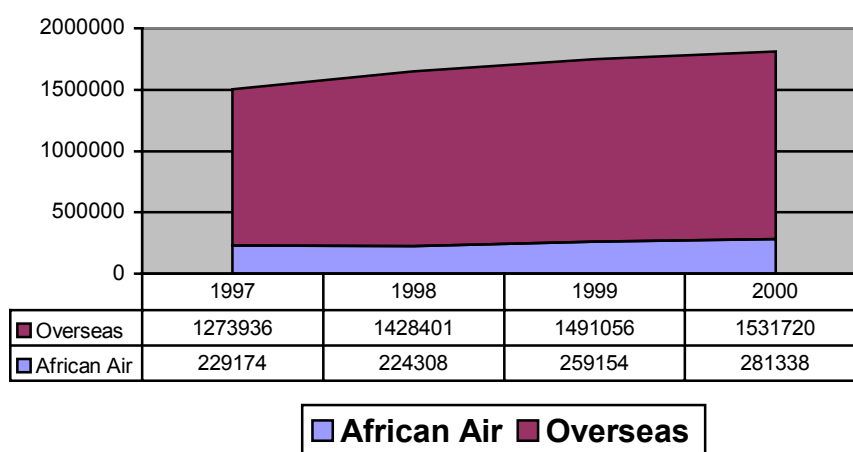


Source: Statistics South Africa

On the other hand, African cross-border arrivals declined by 0,02%, a marginal decline, but given the large size of the base of 4,1 million, it represents a decrease of more than 80 000 in absolute numbers. An observation has been made, that, "Although little is known about these tourists, we have no doubt that they have some importance for our economy, particularly for certain sectors of the retail and wholesale trade and for certain border towns. With an economic crises in Zimbabwe, and the issue of the HIV/Aids pandemic impact in neighbouring countries, these markets may further drop off for South Africa with some as yet unknown effects." It is believed that we are seeing the beginning of this trend and that it is an issue that requires research and attention, as it will impact on certain economic sectors and certain towns.

South Africa's main overseas source markets recorded growth, with UK arrivals growing at 4,6% to 350 000, French arrivals growing at 6,1% to 90 000, Netherlands arrivals by 6,5% to 91 000 and USA arrivals growing by 5,1% to 175 000 in 2000. These growth rates, whilst disappointing against the background of prior year achievements and SA Tourism targets, are not a disgrace. World-wide foreign tourism growth is not expected to exceed the 4,5% growth level on average, and whilst we do not have the outbound statistics from these markets yet, in prior years outbound growth was not that high. On average, outbound tourism from the UK grew by 4,5% per annum in the decade to 1997, whilst the same figure for the USA was 2,7%, from France 3,4% and from the Netherlands 4,5%.

Total Foreign Tourist Arrivals



Source: Statistics South Africa

The World Tourism Organisation (WTO) is predicting that ongoing European tourism to Africa will grow at 4,4% per annum to 2020; this appears to be the longer term growth trend and it is sustained, then at least South Africa has held its own in most of these markets last year. This is not bad in a year when we had

huge floods and an economic, political and social crisis on our doorstep in Zimbabwe.

The UK, Germany, Netherlands and France were four of SA Tourism's 'big six' markets, targeted last year in the destination marketing campaign, and the fact that reasonable growth was achieved in these markets is no doubt due, in part, to the campaigns.

However, arrivals from two of the 'big six' were less satisfactory. German arrivals grew by 22% to 210 000 in 2000 – perhaps the most disappointing – together with Italy from which arrivals shrank by 1,5% to 38 000. German outbound tourism declined in the mid-nineties and is now only expected to grow at 1% -2% per annum. Again, while it was not a good year for German tourism to South Africa, we probably held our market share. Italy was, therefore, the only real disappointment as a generator in 2000.

Visitors from new markets such as Central and South America recorded an increase of 9% to 46 000. The WTO has predicted that a major source of growth in tourists to Africa in the next decade or so will be tourists from Eastern Europe. Unfortunately, the detailed per country arrival report for 2000 has not yet been released, and so we cannot differentiate Eastern European tourists from other non-specified European countries. However, it is encouraging that in 1999 tourist arrivals from Eastern Europe grew by 30%, so we hope that the trend continued in 2000.

1.2. REVIEW OF GAME RESERVE / ECO-TOURISM IN SOUTH AFRICA

According to the South African Tourism Foreign Tourist Surveys, South Africa's natural beauty, and particularly its wildlife, remains the most important and enduring attraction for international tourists. As the showcase for the country's wildlife, game reserves are a key component of the South African tourism industry.

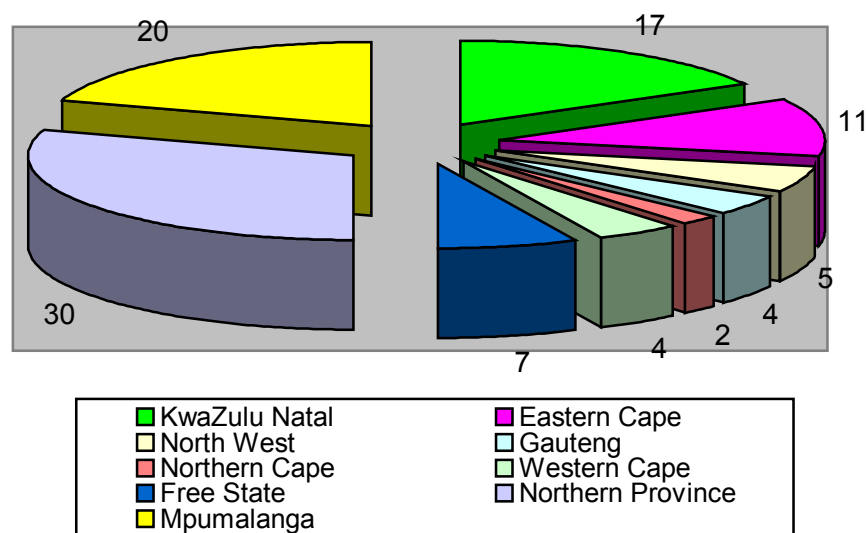
1.2.1. Supply & Demand

According to research carried out by Grant Thornton Kessel Feinstein, South Africa offered around 450 game and wildlife products in official marketing material in 2000. Game and wildlife products include national, provincial and private game reserves and other game or wildlife products such as research centres, etc. The following graph shows the breakdown by province of the South African Game/Wildlife product offering.

The Limpopo Province offers nearly a third of South Africa's game and wildlife product (30%), followed closely by Mpumalanga (20%), KwaZulu-Natal (17%)

and the Eastern Cape (11%). The Limpopo Province and Mpumalanga together comprise close to half of South Africa's game and wildlife product.

South Africa's Game/Wildlife Product Supply by Province



Source: Grant Thornton Kessel Feinstein

1.2.2. Foreign Tourism Demand

Around 50% of foreign tourists to South Africa visit a game reserve attraction whilst in the country. The following table lists the main game reserve attractions in South Africa for foreign tourists. Game reserves are more popular attractions in winter months (attract a higher proportion of the total foreign tourists visiting the country at that time) than in summer months. The Kruger National Park (KNP) is the most popular game reserve attraction for foreign tourists, capturing around 40% of all foreign tourist game reserve visits. The KwaZulu-Natal and the Eastern Cape Reserves are also popular, capturing around 18% and 14%, respectively, of all foreign tourist game reserve visits.

Based on these statistics, the number of foreign tourist visitors to game reserves equates to around 820 000 in 1999 and around 850 000 in 2000.

Breakdown of Foreign Tourists who Visited the Main Game Reserve Attractions

| Game Reserve Attraction | 1997 | | 1998 | | 1999 | |
|-----------------------------|--------|--------|--------|--------|--------|--------|
| | Summer | Winter | Summer | Winter | Summer | Winter |
| Kruger National Park | 13,5% | 24,6% | 17,8% | 22,8% | 16,5% | 20,0% |
| KwaZulu-Natal Game Reserves | 6,9% | 11,2% | 6,9% | 11,3% | 7,8% | 10,8% |
| Eastern Cape Game Reserves | 5,7% | 7,0% | 7,7% | 5,6% | 6,4% | 5,9% |
| Mpumalanga Game Reserves | 4,4% | 6,0% | 5,4% | 6,5% | 4,9% | 7,8% |
| Pilanesberg National Park | 3,4% | 3,2% | 2,3% | 3,6% | 2,9% | 2,6% |

| | | | | | | |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Limpopo Province Game Reserves | 1,4% | 1,5% | 1,0% | 2,0% | 1,7% | 1,7% |
| Golden Gate National Park | 1,2% | 1,9% | 1,2% | 1,7% | 1,2% | 1,1% |
| Kalahari Gemsbok National Park | 0,9% | 2,0% | 1,3% | 1,3% | 0,6% | 1,5% |
| Madikwe Game Reserve | - | - | 0,2% | 0,2% | 0,2% | 0,2% |
| Willem Pretorius Game Park | 0,3% | 0,4% | 0,2% | 0,2% | 0,1% | 0,1% |
| Total | 37,7% | 57,8% | 44,0% | 55,2% | 42,3% | 57,7% |

Source: SA Tourism: The SA International Tourism Market Survey "Summer & Winter 1997, 1998 & 1999

1.2.3. Domestic Tourism Demand

According to the 1996 South African Tourism Domestic Survey, 2% of domestic holidaymakers' main destination was a game reserve or a national park, equating to around 61 000 domestic game reserve holiday trips (given 30,4 million domestic holiday trips in 1996). This figure is conservative as it excludes all domestic tourists that visited a game reserve as an activity during their holiday as well as business tourists staying over or conferencing at game reserves.

The KNP primarily attracts its domestic visitors from Gauteng and Mpumalanga, with limited demand from the Eastern and Western Cape, KwaZulu-Natal game reserves receive strong support from domestic tourists originating within that province.

Breakdown of Domestic Tourists to game Reserves by Source Province

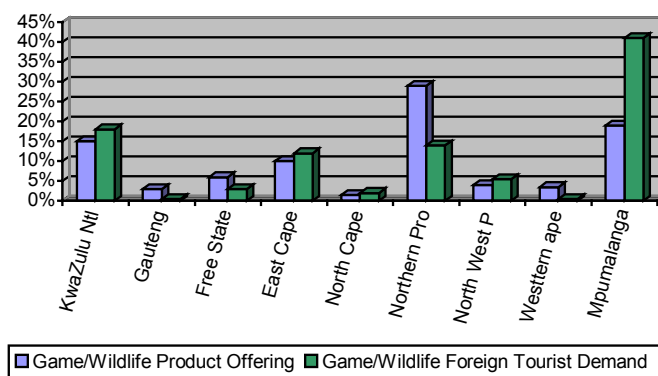
| Province of Origin | Kruger National Park | Other Reserves & Parks |
|---------------------------|-----------------------------|-----------------------------------|
| Gauteng | 55,1% | 6,5% |
| Limpopo Province | - | 4,2% |
| Mpumalanga | 19,5% | 1,2% |
| North West | 6,8% | 4,6% |
| Free State | 8,5% | 8,1% |
| Northern Cape | 4,2% | - |
| KwaZulu-Natal | 5,9% | 50% |
| Eastern Cape | - | 6,5% |
| Western Cape | - | 18,8% |
| TOTAL | 100% | 100% |

1.2.4. Market Share – Supply vs. Demand

Although the Limpopo Province has the largest share in respect of wildlife product offering, it only achieves third place in respect of foreign tourist market share. Mpumalanga and KwaZulu-Natal achieve larger foreign market shares.

Mpumalanga achieves far in excess of its fair market share, whilst Limpopo Province achieves far less than its fair market share. Interestingly, several other provinces are also achieving in excess of fair market share, viz. KwaZulu-Natal, Eastern Cape and North West.

Game/Wildlife Product Offering vs Game Wildlife Foreign Tourist Demand by Province



Source: SA Tourism: The SA International Tourism Market Survey 1999" & Grant Thornton Kessel Feinstein

2. CONCLUSIONS ON SA TOURISM 2001

Seaton Thomson & Associates have concluded that the South African tourism industry has achieved substantial growth for the period 1994 to 2000. The predominant growth has originated from Africa, whilst growth from the international market has increased from 650 000 arrivals (1994) to approximately 1,8 million arrivals (2000). The marketing spend by South African tourism has been substantially increased from R65 million (1999) to in excess of R400 million in 2000. It is expected that this increased marketing budget will substantially increase international arrivals in 2002/2003. This projected increase will have substantial spin-off benefits for adjacent SADC countries, and in particular Botswana and Namibia.