LAND-USE MANAGEMENT MODEL FOR THE PRIVATE WILDLIFE INDUSTRY OF SOUTH AFRICA
WRSA CONFERENCE 2019

LAYOUT OF THE TALK

• Background
• Aim of the research
• Method
• Results
• Findings
• Conclusion
BACKGROUND TO THE STUDY

- Reason for growth (1960, hunting, game more suitable, tourism)
- Size of the industry in SA
- 16 mil ha – 20 mil ha
- State owned conservation land (national parks, provincial parks) (5.5 - 6 mil ha) (KNP 2.1mil ha)
- New industry – not sure about land-use
AIM OF THE RESEARCH

• To determine land-use management model for the private wildlife industry of South Africa
METHOD OF RESEARCH

• Qualitative research
• Wildlife auctions -2016, 2017 and 2018
• 14 wildlife auctions
• WRSA annual conference (2017)
• Interview 223 private wildlife establishment owners
RESULTS

• Profile of interviewees
• Capital lay out
• Income generation
• Land size versus land-use
• Model
• Challenges
PROFILE

- Location: Lim (52%), NC (17%), NW (12%)
- Land size: 30% - less than 1 000ha, 22% 1 001ha and 2 000ha, and 13% - 8 001ha and 70 000ha
- Less then 200ha (26%), 401ha - 600ha (22%), 201ha - 400ha (19%)
- Average size 4 744 ha
- 28 202 head of game
- Average years in existence 17.7yr (0-10yr/41% and 11-20yr/34%)
PROFILE

- Biome: Savannah and grassland
- Business: 40% sole proprietor, 26% trust, 20% PTY and 10% CC
- Permanent employed – 3,540 / part time 242
  - Technical, tourism and house keeping
  - 16 average employees
Capital spend

Land – 23% (R30 mil plus) 20% (R10 – R20 mil)
Infrastructure – 20% (R30 mil plus) 19% (R1 mil and less)
Animals – 27% (R30 mil plus) 16% (R1 mil and less)
LAND-USE

• Expenditure based on capital layout
• Average income
AVGEXPERIENCEEXPENDITUREOFCOSTSBASEDONCAPITALLAYOUTPERSANDLEANDLE-USEFORM

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Land-use Forms

Breeding  Mixed Farming  Ecotourism  By-products  Hunting  Other

Average Percentage Expenditure
0%  5%  10%  15%  20%  25%  30%  35%  40%  45%
AVERAGE INCOME GENERATED FROM LAND-USE FORMS

- Breeding: 42%
- Mixed Farming: 18%
- Ecotourism: 7%
- By-products: 3%
- Hunting: 30%
- Other: 2%

Land-use Forms

Breeding, Mixed Farming, Ecotourism, By-products, Hunting, Other
Average size versus average production output per land-use form.
SIZE VERSUS AVERAGE INCOME GENERATED PER LAND-USE FORM

The graph illustrates the average percentage income generated per land-use form, categorized by land size: <500ha, 501 - 1000ha, 1001 - 3000ha, 3000ha or more. The land-use forms include Breeding, Mixed Farming, Ecotourism, Hunting, By-Products, and Other. The data shows variations in income generation across different land sizes and uses.
## Province Breakdown: Income Generation

<table>
<thead>
<tr>
<th>Province</th>
<th>Land-use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gauteng</td>
<td>Breeding (58%)</td>
</tr>
<tr>
<td>Limpopo</td>
<td>Breeding (40%)</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>Mixed-farming (36%)</td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>Breeding (65%)</td>
</tr>
<tr>
<td>Western Cape</td>
<td>Mixed-farming (70%)</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>Breeding (45%)</td>
</tr>
<tr>
<td>North West</td>
<td>Breeding (46%)</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>Ecotourism (63%)</td>
</tr>
<tr>
<td>Free State</td>
<td>Breeding (53%)</td>
</tr>
</tbody>
</table>
## Wildlife Land-Use Management Model for South Africa

### Land-Use Forms

- **Hunting**
  - Trophy
  - Biltong
- **Breeding**
  - Plains Game
  - High value
- **Ecotourism** (photographic tours, game drives, hikes, bird watching)
- **Mixed farming**
  - Game and crop
  - Game and stock
- **By products**
  - Skin
  - Horns
  - Bones
  - Meat

### External Factors

- Market of game (auctions prices and demand and supply, number of hunters)
- Exchange rate
- Climate (Drought/Rain)
- Biomes and natural animal habitat
- Legislation (permit, licences, land claims)
- Animal diseases
- Government and politics

### Internal Factors

- Location (province and distance from market, cities, borders, airports and vets)
- High value or plains game species (genetics, number, type and combination)
- Carrying capacity
- Scenic beauty
- Farm size and options for land-expansion
- Infrastructure (fences, water, road, staff, tourists, hunting and other land-uses)
- Artificial water and feed
- Employee (number, type and area of specialisation)
- Industry (clients, coopetition, trust of other stakeholders, liaising with retailers)
- Management (overall industry knowledge, finances, time, anti-poaching and theft, problem animals, marketing, safety, quality of products)

### Most Productive Land-Use Forms

<table>
<thead>
<tr>
<th>Land-Use Form</th>
<th>Percentage Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeding</td>
<td>42%</td>
</tr>
<tr>
<td>Mixed Farming</td>
<td>18%</td>
</tr>
<tr>
<td>Ecotourism</td>
<td>7%</td>
</tr>
<tr>
<td>By products</td>
<td>3%</td>
</tr>
<tr>
<td>Hunting</td>
<td>30%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
</tbody>
</table>
**FINDINGS**

- Breeding and hunting are the two most popular land-use forms.
- Breeding and hunting, and ecotourism, are the most capital-intensive land-use forms and expensive to develop.
- Smaller farms focus on breeding and mixed farming.
- Larger farms—breeding, hunting and ecotourism.
- The province where the farm is located influences land-use.
- By-products such as meat products - potential for future growth.
- Decrease in breeding.
- Mixed farming is an important land-use.
CONCLUSIONS

- Land-use forms that are currently less developed, but which have growth potential
- Upcoming land-owners can learn from this
- Now we know the land-use forms of the private wildlife industry
- Future research? Size of industry, number of game etc.
THANK YOU

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