FAHIMA DANIELS (SANBI)
Framework for Identifying and developing spatial biodiversity economy nodes

PHILIP DESMET (NMMU)
Proposed categorisation framework for the wildlife ranching sector in SA and spatial analysis of its impact

MATTHEW CHILD (SANBI)
WHERE ARE THE WILD THINGS? A FOUNDATIONAL FRAMEWORK FOR MEASURING THE CONSERVATION VALUE OF MANAGED POPULATIONS

BOYD ESCOTT (EKZNW)
KZN WILDLIFE ECONOMY NODES
CONTENTS

- Overview of the Biodiversity Economy Lab
- Bioprospecting Economy Outcomes
- Wildlife Economy Outcomes
OVERVIEW OF THE BIODIVERSITY DELIVERY LAB
The lab is a collaboration between Tourism and DEA to advance the economic potential of South Africa’s natural resources.

Context

- The 2014 Ocean’s Economy Lab and 2015 National Biodiversity Economy Strategy described opportunities to implement initiatives for growth of SA’s Biodiversity Economy.
- Tourism and DEA jointly decided to use the implementation lab methodology to create detailed implementation plans to achieve that growth.
- The Lab was convened from 10 April to 13 May.

The Department of Tourism and Department of Environmental Affairs and have taken the initiative to conduct an ‘implementation lab’ on how South Africa’s biodiversity can be used for transformation purposes.

- Marine & Coastal Tourism
- Bioprospecting
- Wildlife
South Africa is the 3rd most biodiverse country in the world

- 2% of the world’s land area
- 7% of the world’s reptiles, birds and mammals
- 15% of the world’s coastal marine species
- 10% of the world’s plants
- 1500 RARE PLANTS (Tilla)
In line with Operation Phakisa methodology there was wide stakeholder engagement.
The Lab has produced 29 initiatives and several recommendations to address the key challenges experienced by the streams

<table>
<thead>
<tr>
<th>Wildlife</th>
<th>C&amp;M Tourism</th>
<th>Bioprospecting</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Actively facilitate transformation of the sector through land access and support programmes for new entrants</td>
<td>▪ Identify and elevate events, routes and attractions along the coastline</td>
<td>▪ Increase supply through mass cultivation and sustainable harvesting</td>
</tr>
<tr>
<td>▪ Drive growth through unlocking demand, and promoting ‘value’ and products (e.g. game meat)</td>
<td>▪ Support high potential projects by unlocking roadblocks that are delaying implementation</td>
<td>▪ Increase demand and local value addition through better coordination of stakeholders harnessing existing initiatives and addressing the innovation chasm</td>
</tr>
<tr>
<td>▪ Create an enabling environment for the wildlife sector</td>
<td>▪ Promote SA as a coastal and marine tourism</td>
<td>▪ Simplify the regulatory environment to enhance growth</td>
</tr>
<tr>
<td>▪ Address the reputational and conservational risks of the sector</td>
<td>▪ Enhance skills and SMME creation</td>
<td>▪ Transform the sector through direct involvement of communities and TK holders</td>
</tr>
</tbody>
</table>

15 initiatives and 6 suggestions

9 initiatives

5 initiatives
**Vision:** South Africa is globally recognised for the sustainable and inclusive commercial use of its biodiversity

**KEY INITIATIVES**

<table>
<thead>
<tr>
<th>How do we increase the supply?</th>
<th>How do we increase demand and local value addition?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Promote a mass cultivation drive of 25 plant species of strategic importance and increase cultivation by 500 hectares per annum</td>
<td>3. Establish a coordinating and facilitating BioPANZA (Bio Products Advancement Network South Africa) to harness existing initiatives and to address the innovation chasm</td>
</tr>
<tr>
<td>2. Define management plans to ensure sustainable wild harvesting of 7 high value plant species to safeguard long term supply</td>
<td>- Promote applied research, local processing, innovation and product development; and to promote the use and awareness of products with IBRs</td>
</tr>
</tbody>
</table>

**Regulatory**

| 4. Fast tracking amendments of Chapter 6 of National Environmental Management Biodiversity Act (NEM:BA) to ease compliance while ensuring protection of the rights and benefits of traditional knowledge (TK) holders and alignment with Nagoya Protocol on Access and Benefit Sharing |
| 5. Improve efficiencies in the Bioprospecting Access and Benefit Sharing (BABS) permitting system |

**Transformation is a cross cutting essential**
Top 25 species for cultivation

1. **Hoodia gordonii** (Hoodia)
2. **Agathosma betulina** (Buchu)
3. **Aspalathus** (Rooibos)
4. **Buchu crenulata** (Buchu)
5. **Bulbine frutescens** (Burn Jelly)
6. **Cyclopia intermedia** (Honeybush)
7. **Cyclopia genistoides** (Honeybush)
8. **Eriosema kraussianum** (Bangalala)
9. **Harpagophytum procumbens** (Devil's claw)
10. **Helichrysum odoratissimum** (Golden everlasting, African potato)
11. **Hypoxis hemerocallidea** (African potato)
12. **Kigelia africana** (Sausage tree)
13. **Lobostemon fruticosus** (Lobostemon)
14. **Pelargonium reniforme** (Kidney leaved pelargonium)
15. **Pelargonium sidoides** (Kalverbossie)
16. **Sceletium tortuosum** (Kanna)
17. **Siphonochilus aethopicus** (Wild Ginger)
18. **Sutherlandia frutescens** (Cancer bush, balloon pea)
19. **Trichilia emetic** (Mafura – oil)
20. **Tylolemma esculentum** (Marama bean – oil)
21. **Warburgia salutaris** (Pepperbark tree)
22. **Ximenia americana** (Sour plum – fruit and oil)
23. **X. caffra** (Sour plum – fruit and oil)
24. **Xysmalobium undulatum** (Uzara)
25. **Lippia javanica**
These crops have the potential to generate 1,000 jobs per annum and will cover all 9 provinces.

25 identified strategic and high value plant resources

9 provinces where plants are naturally occurring

~500 hectares per annum

~1,000 cultivation jobs per annum est.
Top 7 species earmarked for sustainable harvesting

- Aloe ferox
- Adansonia digitata (Baobab)
- Sclerocarya birrea (Marula)
- Cyclopia intermedia (Honeybush)
- Agathosma betulina (Buchu)
- Harpagophytum procumbens (Devil’s claws)
- Cyclopia genistoides (Honeybush)
These crops have the potential to provide livelihoods to harvesting communities and will cover 8 provinces.

7 identified strategic and high value plant resources

8 provinces where plants are naturally occurring
“A THRIVING, INCLUSIVE AND SUSTAINABLE WILDLIFE ECONOMY FOR THE WELL-BEING OF ALL SOUTH AFRICANS”
The wildlife sector comprises 3 sub-sectors:

<table>
<thead>
<tr>
<th>Wildlife ranching</th>
<th>Wildlife activities</th>
<th>Wildlife products</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Primary activities:</td>
<td>▪ Primary activities:</td>
<td>▪ Primary activities:</td>
</tr>
<tr>
<td>– Breeding</td>
<td>– Wildlife Viewing</td>
<td>– Game Meat Processing</td>
</tr>
<tr>
<td>– Live sale</td>
<td>– Trophy Hunting</td>
<td>– Skin and Hide Production</td>
</tr>
<tr>
<td>▪ Secondary contributors:</td>
<td>▪ Secondary contributors:</td>
<td>▪ Secondary contributors:</td>
</tr>
<tr>
<td>– Live captures</td>
<td>– Accommodation</td>
<td>– Other products (e.g. curios and decorations)</td>
</tr>
<tr>
<td>– Translocation Services</td>
<td>– Transport</td>
<td></td>
</tr>
<tr>
<td>– Veterinary Services</td>
<td>– Equipment &amp; Supplies (Arms, Ammunition etc.)</td>
<td></td>
</tr>
<tr>
<td>– Fencing and maintenance</td>
<td>– Taxidermy</td>
<td>– Packaging and Transportation</td>
</tr>
</tbody>
</table>
The Wildlife sector has been growing consistently faster than the general economy, contributing R 3 billion to GDP in 2014

Wildlife GDP contribution, R billions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>9.2%</td>
<td>-1.54%</td>
</tr>
<tr>
<td>2009</td>
<td>13.5%</td>
<td>3.04%</td>
</tr>
<tr>
<td>2010</td>
<td>9.9%</td>
<td>3.21%</td>
</tr>
<tr>
<td>2011</td>
<td>9.3%</td>
<td>2.22%</td>
</tr>
<tr>
<td>2012</td>
<td>4.5%</td>
<td>2.21%</td>
</tr>
<tr>
<td>2013</td>
<td>9.3%</td>
<td>1.52%</td>
</tr>
<tr>
<td>2014</td>
<td>3.01</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: National Biodiversity Economy Strategy & Stats SA
Through the Wildlife Economy Lab, our vision is to better establish an economy that contributes to the well-being of all South Africans.

### Aspiration
An inclusive, sustainable and responsive wildlife economy that grows at 10% p.a until at least 2030, while providing a foundation for **social well-being** and maintaining the ecological resource base.

### Objectives

<table>
<thead>
<tr>
<th></th>
<th>Economic growth</th>
<th>Transformation</th>
<th>Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Average yearly sector GDP increase of ~10%</td>
<td>30% of wildlife businesses <strong>PDI owned</strong></td>
<td>5 million ha of non-protected areas contributing towards conservation target (AICHI)</td>
</tr>
<tr>
<td></td>
<td>Create <strong>100,000</strong> new jobs</td>
<td>PDI ownership of &gt;5 million Ha, and access to another &gt;5 million Ha</td>
<td>3.5% animal population net growth p.a.</td>
</tr>
<tr>
<td>2</td>
<td><strong>4,000</strong> PDI owned SMMEs supported to engage in the wildlife economy¹</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Trained or directly linked to the wildlife supply chain
The Wildlife Economy faces several challenges preventing growth and transformation happen at full potential

### Barriers to transformation
- Insufficient access, ownership and inefficient utilization of land
- Lack of **infrastructure development** support for entrepreneurs
- Lack of access to ‘**startup**’ game
- Lack of **organized governance** amongst community and emerging entrepreneurs
- Lack of **technical skills**, oversight, business support and effective business and partnership models
- Lack of **access to finance** and incentives for transformation

### Risk of future growth stagnation
- Insufficient **government endorsement for hunting** as a tourism activity
- Untapped **black consumer potential**
- Insufficient **societal value** given to wildlife resources and understanding of the sustainable use concept
- Insufficient awareness and capitalisation of the value of **mixed wildlife/livestock interfaces**
- Insufficient mechanism addressing and containing **risks and threats to the ecological resource base** in further growing the biodiversity economy

### Unsupportive enabling environment
- Insufficient **interdepartmental coordination** and understanding of the benefits of the bio-economy
- Insufficient **knowledgebase** (research and access)
- Gaps in **industry standards** (and compliance)
- Excessive and inefficient **permitting**
- Unsupportive **legislative regime**
  - Misalignment of SPLUMA and PDALFB (Land use)
  - NEMBA lacking in enabling provisions
  - Misalignment of provincial and/or national hunting legislation
- Lack of sufficient **collaboration** platform for the industry
- Lack of **capacity** (human and financial) to effectively manage and harness the potential of wildlife resources
- Lack of a formal **game meat industry**
The Wildlife Economy Lab developed detailed plans for 15 initiatives and a further 6 recommendations.

<table>
<thead>
<tr>
<th>Facilitating transformation</th>
<th>Driving growth through promoting ‘value’ and products</th>
<th>Creating an enabling environment for the wildlife sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify and prioritize 10m Ha for transformation of wildlife economy</td>
<td>Formulate SA game meat market and create a network of game meat processing facilities</td>
<td>Create an enabling legislative environment through the amendment of NEMBA</td>
</tr>
<tr>
<td>Establish, develop and support new wildlife ranching entrants including business set up support, infrastructure and game ownership programmes</td>
<td>Implement a campaign that drives participative transformation and consumer growth for wildlife related activities and products</td>
<td>Develop and implement wildlife industry standards</td>
</tr>
<tr>
<td>Increase capacity and support for (at least) 300 CPA’s, trusts and traditional authorities</td>
<td></td>
<td>Develop and Implement a national wildlife economy certification scheme</td>
</tr>
<tr>
<td>Create supply linkages and capacitate 4,000 SMMEs (new and existing) to locally capture the value of ancillary goods and services to the wildlife economy</td>
<td></td>
<td>Develop and implement an electronic wildlife permitting system and centralised database</td>
</tr>
<tr>
<td>Operationalise 11 biodiversity economy nodes, that enhance the economic potential of Protected and non Protected Areas</td>
<td>Promote sustainable use as a foundation for conservation and growth of biodiversity economy</td>
<td>“Re-position” the Wildlife Forum as an efficient interdepartmental/ industry collaboration and co-ordination platform to promote the benefits of the Wildlife Economy</td>
</tr>
<tr>
<td>Empower 4,000 emerging entrepreneurs and farmers through focused capacity building programmes</td>
<td>Develop a strategic marketing campaign and value proposition for mixed game and livestock systems</td>
<td>Develop an integrated knowledge/evidence generating and sharing platform to support the wildlife economy</td>
</tr>
<tr>
<td>Develop a toolkit of effective wildlife business, stewardship and partnership models</td>
<td>Establish mechanisms to allow for holistic and integrated management of animal health and conflict issues at the livestock-wildlife interface</td>
<td>Leverage protected areas to unlock economic potential</td>
</tr>
<tr>
<td></td>
<td>Develop an appropriate mechanism to manage and mitigate risk</td>
<td></td>
</tr>
</tbody>
</table>

1 Recommendations will be included with high level activities, but these will not have 3ft plans.
The audit will look at alternative land uses, and prioritise land for the Wildlife Economy where there are no conflicts.

By selecting the most viable land use option, conservation and commercial risk is reduced.
Mapping of 10 million Hectares for Wildlife Economy Transformation
Mapping of 10 million Hectares for Wildlife Economy Transformation
26 high potential node locations have been already identified across the country; these will require further consultation.

**Province** | **Location**
--- | ---
Eastern Cape | Greater Camdeboe Node  
|  | Greater Mount Zebra Node  
|  | Greater Amatole Node  
|  | Greater Pondoland  
|  | Greater Addo  
|  | Greater Tsitsikama  
Free State | Greater Maloti-Drakensberg TFCA  
Gauteng | Greater Wesrand  
|  | Dinokeng  
Kwa-Zulu Natal | Hluhluwe Node  
|  | Mkahnnyakude  
Limpopo | Greater Makuleke  
|  | Greater Letaba  
|  | Greater Legalametsi  
|  | Greater Entabeni  
|  | Greater Masebe  
Mpumalanga | Mpumalanga Nodes  
|  | Barberton Node  
North West | Marico District Node  
|  | Greater Madikwe  
|  | Greater Brits Node  
|  | Greater Dellareyville Node  
Northern Cape | Melkbosrand (Augrabies)  
|  | Richtersveld  
|  | Knomani San (Kgalagadi)  
Western Cape | Western Coast Node
The launch of 11 biodiversity economy nodes across the country will accelerate growth of the wildlife economy

Nodes would be set up under DEA Biodiversity, and will promote the following activities

- Pooling resources for infrastructural development and game donations (Initiative 2)
- Assisting communities to become engagement ready (Initiative 3)
- Enabling market access and connecting to local SMME (Initiative 4)
- Creating supply chain linkages (Initiative 7)
- Developing sustainability certification (12)
- Promoting partnerships between Protected Areas, private sector and communities (Initiative 15)

Process to operationalize a node

1. Use land audit data to identify high land-use capability and low risk from competitive land uses
2. Appoint node champions to facilitate alignment and strategic focus of public and private sector interventions
3. Conduct socio-economic study to identify high impact interventions and investment opportunities
4. Conduct strategic environmental assessment (reduce regulatory impediments)
5. Facilitate PPC partnerships and mentorship programmes
6. Develop operational plan for the node
7. Coordinate implementation and support
Greater Mfolozi Biodiversity Economy Node

Partnership initiatives in progress

- Link PA with additional 20 000ha communal areas – 6000ha proclaimed as PA
- Achieve protected area and conservation targets – wilddog and rhino
- Developing 13 000ha communal areas a game farm
- Leveraged R130 Mill private sector investment onto community land
- 800 jobs (400 permanent) – huge potential to be quantified
- SMME opportunities in value chain tourism; hunting; meat processing; taxidermy; tannery; curio; fencing; alien plant clearing.
- Support industries: airport; transport; education; etc
- Focus government intervention: NRM; Agri-parks; EPIP; RECAP; SRI
- R25 million spent on land purchase of...
Initiative 5: Operationalise 11 biodiversity economy nodes, that enhance the economic potential of Protected and non Protected Areas

Confirmed Biodiversity Economy nodes through syndication:

1) KwaZulu Natal Province
   - Greater UMfolozi BEN
   - Greater Isimangaliso

2) North West Province
   - Molopo BEN
   - Great Pilanesburg Heritage Park BEN
   - Greater Groot Marico

3) Limpopo Province
   - Greater Makuya BEN
   - Greater Letaba BEN
   - Greater Schuinsdraai BEN
Initiative 5: Operationalise 11 biodiversity economy nodes, that enhance the economic potential of Protected and non Protected Areas

3) Limpopo Province
   • Greater Lekgalametsi BEN
   • Greater Masebe/Moepel BEN

4) Mpumalanga Province
   • Greater Barberton Makhonjwa BEN
   • Greater Bushbuckridge BEN

5) Northern Cape Province
   • Greater Kimberley Node
   • Greater Colesburg Node
   • Greater Kuruman Node
   • Greater Kgalagadi Node
   • Richtersveld Node
   • Greater Augrabies
The lab has set the following short- to mid-term targets for these initiatives

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Year</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify and prioritize 10m Ha for transformation of wildlife economy</td>
<td>2018</td>
<td>10m ha land mapped and prioritised</td>
</tr>
<tr>
<td>Establish, develop and support new wildlife ranching entrants through infrastructure support and game donation programmes</td>
<td>2020</td>
<td>60 projects completed (90,000 heads of game)</td>
</tr>
<tr>
<td>Operationalise 11 biodiversity economy nodes (BENs)</td>
<td>2021</td>
<td>11 BENs established</td>
</tr>
<tr>
<td>Formalize SA game meat market and create a network of game meat processing facilities</td>
<td>2021</td>
<td>2,500 jobs created, 18.5K tons of game meat</td>
</tr>
<tr>
<td>Develop and Implement a national wildlife economy certification scheme</td>
<td>2019</td>
<td>Scheme established</td>
</tr>
</tbody>
</table>
Mandela goes Green

A hunting trip converts the ANC leader to conservation
IT CAN’T BE BUSINESS AS USUAL....

QUESTIONS AND DISCUSSIONS....
FAHIMA DANIELS (SANBI)
Framework for Identifying and developing spatial biodiversity economy nodes

PHILIP DESMET (NMMU)
Proposed categorisation framework for the wildlife ranching sector in SA and spatial analysis of its impact

MATTHEW CHILD (SANBI)
WHERE ARE THE WILD THINGS? A FOUNDATIONAL FRAMEWORK FOR MEASURING THE CONSERVATION VALUE OF MANAGED POPULATIONS

BOYD ESCOTT (EKZNW)
KZN WILDLIFE ECONOMY NODES
Announcement

DEA has called for an expression of interest for Wildlife and Bioprospecting Support:
in the following newspapers:
• The Star Business Report (Today)
• Isolezwe Newspaper (Friday)

If interested, submit a proposal by the 7th of July 2017.

Thanks
Thank You