At the coal face
Mainstreaming biodiversity into forestry, mining & agriculture in South Africa’s grasslands
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Outline

• The grasslands biome
• The project
• Approach to mainstreaming
• Experiences in forestry, mining & agriculture
• Lessons
• Ensuring returns
South Africa’s Grasslands Biome

A working landscape – with globally significant biodiversity

- 30% of SA’s land surface

- More spp per unit area than the fynbos – 82 spp per 1000m²

- Half of SA’s endemic mammal spp

- An endemic bird area with 52 of SA’s 122 important bird areas; 10 of SA’s 14 globally threatened bird spp

- 20% of SA’s endemic reptiles

- 5 Ramsar sites & mountains & wetlands that provide water for millions

- 3 world heritage sites

- Supports production sectors & urban centres core to SA’s economy...

2.34% of biome under formal protection – 12% more needed to meet PA targets
The National Grasslands Biodiversity Programme
Science foundation

- Systematic biodiversity planning
- Identifies spatial priorities
- Informs management priorities on the ground
- Informs policy priorities
CONSERVATION GOALS

- Representation
- Persistence

STRATEGY 1
Expand and consolidate protected area network

STRATEGY 2
Conservation of ecosystems in priority areas outside the PA network

STRATEGY 3
Restoration of ecosystems in priority areas

Protect
Reduce loss
Restore
### Mainstreaming across landscapes

<table>
<thead>
<tr>
<th>PROTECTED</th>
<th>PRODUCTION</th>
<th>DEVELOPED</th>
</tr>
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<tbody>
<tr>
<td>State owned and managed protected areas</td>
<td>Largely natural, elements of biodiversity importance; low impact production sectors</td>
<td>Largely modified for intensive production, e.g., commercial crops</td>
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</tbody>
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- **Protected areas**: Mostly natural, high biodiversity importance; private/communally owned. Biodiversity stewardship & best-practice production.
- **Production sectors**: Largely modified for intensive production, e.g., commercial crops. Biodiversity stewardship & best-practice production.
- **Developed areas**: Light to heavily modified or degraded fragments of biodiversity. Land-use planning & decision making.

### Mainstreaming ‘tools’:
- Biodiversity stewardship; maps; guidelines; regulatory instruments & decision-support systems...
Mainstreaming into plantation forestry

**Locating Biodiversity Values**
- Systematic conservation planning

**Protecting Biodiversity Values**
- Management planning
- Biodiversity stewardship

**Improved Forestry Management**
- Better management (aliens, fire, etc)
- Small grower extension

**Monitoring**
- Improved certification (FSC)
- Monitoring plots
Small grower extension

- Forestry as an ‘anchor tenant’ in well-managed, functional landscapes
  - Increase forestry production without increasing footprint → improved forestry skills & jobs
  - Landscape approach to certification → market opportunities
  - Stewardship → protection of biodiversity
Mainstreaming into plantation forestry

Results:
- Expansion of protected area estate by 33 000 ha
- More resilient landscapes with functional connectivity and continued ability to deliver ecosystem services over 270 000 ha (+ 60 000 ha soon)
- Reduction in the rate of loss with 0 ha of new plantation development in biodiversity priority areas
- Industry certification system & standards (FSC) better incorporates biodiversity
Mainstreaming into mining

**MITIGATION HIERARCHY**

- **Avoid or prevent**
- **Minimise**
- **Rehabilitate**
- **Offset**

**Mining & Biodiversity Guidelines**

- Biodiversity Information
- Protection
>250 people trained & many more to come...
Avoid or prevent

Minimise

Rehabilitate

Offset

Mining & Biodiversity Guidelines

Rehabilitation Guidelines

Wetland Offset Guidelines

Wetland Offset Pilot

Mining Land Use Advisor
Mpumalanga High Risk Wetlands Atlas
Proactive Stewardship

Biodiversity Information
Protection

Mainstreaming into mining
Mainstreaming into mining

Results:

- Capacity & governance strengthened
  - Two endorsed regulatory tools that improve decision-making
  - 250++ sector officials, practitioners & decision-makers trained
  - Reduction in rate of loss

- Expansion of protected area estate
  - Reactive stewardship: 119ha important wetlands
  - Proactive stewardship: 9200ha critical biodiversity & strategic water source area
  - Protection of biodiversity & maintenance of ecosystem function
Mainstreaming into agriculture

• Challenges...long hook
  – Overstated match between land use compatibility & biodiversity
  – Huge, diverse sector – no ‘easy’ institutional entry point for mainstreaming
  – On-going policy reform
  – Farmer & market interest in certification
  – Public sector capacity

• Successes...short hook
  – Biodiversity stewardship – protection & better management
  – More recently traction with industry standard – building on pilots
Lessons

- Six key ingredients applied in cases of effective mainstreaming of biodiversity

Practioners’ principles for mainstreaming

- Provide science-based leadership & expertise
- Deliver high quality tools
- Make the case for biodiversity
- Strengthen capacity to mainstream biodiversity
- Convene focussed discussion platforms
- Provide science-based policy advice
Lessons

• Same budget & twice the timeframe – allowing for sustainable improvement

• Combination of long & short hook approaches is necessary – aim for systemic change but build up from pilots & demonstration

• Design, plan & implement with the future in mind – dynamic, uncertain context

• Outcomes are goal posts but adapt the strategy – setting sensible targets is extremely difficult
Ensuring returns

• Catalytic project designed with sustainability in mind
• First five years has laid foundation for a good ROI
  – Delivered results at foundational & impact level
  – Ensured biodiversity is aligned with production
  – Managed risk through adaptive leadership, flexibility & innovation
  – Scaled up projects & seen replication
  – Shown the value of a focused strategy and consultative and reflective planning for sustainability
  – Catalysed deep, systemic mainstreaming for improved investment in and security of biodiversity and ecological infrastructure
Thank you

...from a team of innovators