Status of Biosphere Reserves in South Africa

By Tendamudzimu Munyai

Acknowledgement: Fhatani Ranwashe
Contents

• Introduction
• Spatial Zonation of Biosphere Reserves
• Functions of a Biosphere Reserve
• Global status of Biosphere Reserve (2013)
• Distribution of Biosphere Reserves in SA (2014)
• Biodiversity Priority Areas for Vhembe BR (2013)
• Ecosystem Threat Status & Protection Level
• Way forward
**Introduction**

**Biosphere reserves** are areas identified either on terrestrial or marine ecosystems (or both) that are internationally recognized under the framework of UNESCO’s Man and Biosphere (MAB) programme.

**MAB is..**

- is an intergovernmental scientific programme aiming to ensure harmonious coexistence of people with nature.
- It is housed in and supported by UNESCO
Spatial Zonation of a Biosphere Reserve

- **Core zone/s** - these are areas that must have a legal/long term protection status in terms of national laws
- **Buffer zone/s** – these areas *usually* surround or adjoin the core zones
- **Transition zone** – is the area which contains diversity of sustainable activities
Spatial Zonation in reality (Vhembe BR)

- Core zones
- Buffer zones
- Transition zone
- International boundary
Functions of a Biosphere Reserve

- Exchange of experience & sharing knowledge
- These functions serve to implement and support projects to demonstrate critical ways to resolve land use conflicts and ensure protection of biodiversity while promoting sustainable development.
Why Biosphere Reserve In South Africa

• They integrate fragmented spatial and non-spatial information of the area
• Present an opportunity to prioritize the use of existing information to influence decision
• Contribute to mainstreaming of biodiversity information into municipal spatial plans
• International recognized – vehicle to attract international donors
Global Status of Biosphere Reserves (2013)

There are 621 BR in 117 countries, Including 12 TBR

- Europe & North America with 289 in 34 Countries (8 Tran-boundary)
- Arab States with 27 BR in 11 Countries & 1 Intercontinental BR (b/n Morocco & Spain)
- Latin America & the Caribbean with 117 BR in 21 Countries (1 Trans-boundary)
- Asian & the Pacific with 124 BR in 23 Countries
- Africa with 64 BR & 2 Trans-boundary in 28 Countries
Vhembe Biosphere Reserve
2009
3 037 590ha

Kruger to Canyon Biosphere Reserve
2001
2 874 810ha

Cape West Coast Biosphere Reserve
2000
378 090ha

Cape Winelands Biosphere Reserve
2007
322 028ha

Kogelberg Biosphere Reserve
1998
108 290ha

Spatial distribution of BRs in SA (2014)
7 351 780ha
Biodiversity Priority Areas Map
Biodiversity Priority Areas Map of Vhembe BR (3 037 590ha)
Spatial Zonation in reality (Vhembe BR)

- Core zones
- Buffer zones
- Transition zone
- International boundary
### Biodiversity Priority Areas Stats for Vhembe BR (3 037 590ha)

<table>
<thead>
<tr>
<th>BPAs</th>
<th>Area (ha)</th>
<th>Length (km)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Based Protected Areas</td>
<td>492 977</td>
<td></td>
<td>16.2%</td>
</tr>
<tr>
<td>Critical Biodiversity Areas</td>
<td>1 119 972</td>
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<td>36.9%</td>
</tr>
<tr>
<td>Focus Areas for Land-Based Protected Areas Expansion</td>
<td>132 237</td>
<td></td>
<td>4.4%</td>
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<tr>
<td>Strategic Water Source Areas</td>
<td>152 848</td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>Ramsar Sites</td>
<td>10 393</td>
<td></td>
<td>0.3%</td>
</tr>
<tr>
<td>Wetlands</td>
<td>15 483</td>
<td></td>
<td>0.5%</td>
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<tr>
<td>Wetlands FEPAs</td>
<td>2 057</td>
<td></td>
<td>0.06%</td>
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<tr>
<td>Rivers</td>
<td>2 905</td>
<td></td>
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<tr>
<td>Rivers FEPAs</td>
<td>798</td>
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<td>0.02%</td>
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</tbody>
</table>
### Ecosystem Threat Status & Protection Level for Vhembe BR

#### River Threat Status
- **Critically Endangered**
  - 43km (5%)
  - 73km (9%)
  - 112km (14%)
- **Endangered**
  - 570km (72%)
- **Vulnerable**
  - 178km (6%)
  - 178km (15%)
  - 361km (13%)
- **Least Threatened**
  - 1920km (66%)

#### Rivers Protection Level
- **Well protected**
  - 481ha (23%)
  - 43ha (2%)
  - 1336km (65%)
- **Moderately protected**
  - 1255ha (8%)
  - 150ha (1%)
- **Poorly protected**
  - 3587ha (23%)
- **Not protected**
  - 10491ha (68%)

#### Wetlands Threat Status
- **Critically Endangered**
  - 481ha (23%)
  - 197ha (10%)
  - 43ha (2%)
- **Endangered**
  - 1336km (65%)
- **Vulnerable**
  - 1355ha (8%)
  - 150ha (1%)
- **Least Threatened**
  - 3587ha (23%)

#### Wetlands Protection Level
- **Well protected**
  - 348ha (17%)
  - 178ha (9%)
  - 911ha (44%)
  - 620ha (30%)
  - 784ha (5%)
  - 547ha (4%)
- **Moderately protected**
  - 3587ha (23%)
  - 150ha (1%)
- **Poorly protected**
  - 10491ha (68%)
- **Not protected**
  - 11813ha (76%)
Way Forward

Constraints

• BRs are poorly documented in SA
• lack of capacity is not/poorly recognized
• Some BRs have no man. Plan
• Outdated/old management plans

Opportunities

• DEA will soon embark on the process of developing National Strategy for BR
He uses WiFi