Application of Biodiversity Planning

S.A. legal context and examples
Everyone has the right to have the environment protected through reasonable laws or other means that

- Prevent ecological degradation
- Promote biodiversity conservation
- Secure ecologically sustainable development while promoting justifiable economic and social development
South Africa’s development paradigm

- Mining and Agriculture drives infrastructure development
- Inadequate Infrastructure on a 20 year backlog.
- Settlements patterns are socio-economically and env’ally inefficient.
- Government under pressure to meet 6% econ growth.
- Econ growth model based on construction-based development.
  - Expanded Public Works
  - National Development Plan
    - Strategic Integrated Projects

Accelerating/Unlocking development:

NEMA amendments
SPLUMB
MPRDA
Infrastructure Bill
Municipalities invest in housing and infrastructure, but often not to address this challenge.

Investment is to:
- enable construction linked to economic growth,
- create jobs,
- eventually increase municipal revenue to address this challenge.

IDP priorities:
- Housing
- Access to Services
- Infrastructure
Growing concern over impacts on water resources

E.g. of media releases

Maps show rivers and wetlands that should be cherished

Waterbronner onder druk

The story goes that an astronaut and a brain surgeon were arguing about the existence of unseen phenomena. The astronaut scoffed, “I have orbited the earth, countless times and have never seen an angel and therefore angels do not exist.” The surgeon replied, “I have performed brain surgery countless times and have never seen a thought!”

The project connected thoughts, however. I have seen the results of connected thoughts. Many of our freshwater systems show such results and they are depressing.

As you can imagine my delight when I learned of the completion of a CSIR-GSANI collaborative led project to map National Freshwater Ecosystem Priority Areas (NFPEA). This project connected thoughts:

The public launch of the “Atlas of Freshwater Ecosystem Priority Areas in South Africa” maps to support sustainable development of water resources. Launched on 14 September 2011 in Pretoria.
Oversubscribed and Overworked catchments

- NB for mining and agriculture
  - Biggest source of coal; 2\textsuperscript{nd} biggest irrigation scheme
- High human population; failing sewage works
  - < 5\% good audit; 55\% need drastic improvement
- Intensive cattle feedlotting
  - Multiple pressures on water resources $\rightarrow$ eutrophication
    - Crop failure; health risks, esp. to rural poor subsistence
      farmers who irrigate with run-of river flows; crocodile
      deaths
- Regime shifts to eutrophic state impacts water, energy
  and agric services
  - Loskop Dam in this state since 2008
• s38-39 National Biodiversity Framework

• s40-42 Bioregions & bioregional plans

• s43 Biodiversity management plans for ecosystems or indigenous or migratory species
• s52 **Listing of threatened ecosystems** – Critically endangered, endangered & vulnerable – & protected ecosystems that are not listed

• s53 **Threatening processes in listed ecosystems** – specified activities in terms of s24(2)(b) of NEMA

• s54 **Provincial EIPs & municipal IDPs MUST take into account the need for protection of listed ecosystems**
Everyone has the right to have the environment protected through reasonable laws or other means that

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How we apply knowledge of biodiversity priority areas:

- Biodiversity stewardship
- Identify biodiversity priorities that need protection
- Identify biodiversity priorities in production landscapes that require improvement/management
- Environmental & Land-use planning and regulation
Biodiversity Sector

NSBA (2005)
- spatial component of NBSAP
- geographic biodiversity priorities

NBSAP (2005)
- comprehensive long-term strategy
- 5 Strategic Objectives
- 15-year targets

NSBA feeds into NBSAP

NBF (2008)
- top priority actions (not comprehensive)
- 5 Strategic Objectives
- 5-year targets

NBF based on NBSAP & NSBA

Biodiversity Act

CBD requirement

Environment Sector

NBF feeds into Environment Sector Plan

Environment Sector Plan (2008-13)
<table>
<thead>
<tr>
<th>NBF PRIORITY ACTIONS</th>
<th>ENVIRONMENTAL SECTOR PLAN PRIORITY ACTIONS</th>
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<tbody>
<tr>
<td>DEA, SANBI, Provincial EA and Cons Agencies</td>
<td>DEA, SANBI, Provincial EA and Cons Agencies, and Local Government</td>
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<tr>
<td>Policy Framework for Biodiversity Offsets</td>
<td>Integrate biodiversity considerations into land use planning and decision-making, by developing tools for</td>
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<td>supporting and streamlining environmental decision making</td>
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<td>Ecosystem-specific guidelines to guide EA</td>
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<td>Provincial conservation plans in place</td>
<td>Integrated terrestrial and aquatic management minimises the impact of threatening processes on biodiversity,</td>
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<td>enhances ecosystem services and improved social and economic Security</td>
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<td>Published Bioregional plans inform land-use decision making</td>
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<td>Threatened ecosystems have been identified, listed and inform land-use decision making</td>
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<td>Protected Areas Expansion Strategy finalised</td>
<td>A network of conservation areas conserves a sample of biodiversity and maintains key Ecological processes</td>
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<td>across the landscape and seascape</td>
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<td>8% of terrestrial area included in PA network</td>
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<td>5 provinces have stewardship programmes</td>
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<td>BGIS established and running</td>
<td>Improve biodiversity information management</td>
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Our toolkit, enabled through policy, legislation and strategy:

- Protected
- Production
- Urban and developed

NEMPAA: Protected area expansion

NEMBA: Biodi orientated land-use planning and mgmnt

NEMA: Linking Biodiversity info and tools to env management

SP & LUM: Linking Biodiversity info and tools to land-use