Context and preliminary thoughts on the Biodiversity Component of the Shale Gas SEA
State of current Shale Gas knowledge

- Resource guesstimated at 18-300 tcf
  - Econometrix study focused on 20 and 50 tcf models
  - Extent of resource not yet quantified

- Need to drill to verify resource
- Production model not yet known
- Utilisation model not yet known
- Debate internationally re: associated impacts
- 2014 Learning exchange with EPA highlighted need to consider land-use implications of shale gas.
Spatial biodiversity information
Potential ecological risk from the 2012 Interim report on the potential opportunities and risks related to shale gas extraction in the Western Cape
Key outputs for the biodiversity component

- Risk analysis, linked to scenarios
  - Production and utilisation
- Limits of acceptable change
- Mitigation recommendations
- Spatial outputs
- Ecosystem scale
- Identify areas:
  - No-go / Avoid
  - Restricted
  - Proceed with Standard Conditions
Multi-author team approach

- Team still to be assembled & approved
  - Represent range of competencies
- To be supported by SANBI, working with partners.
- Cross-team interactions (water, spatial, agric, visual, etc)
Species work

- **Purpose:**
  - To fill in data gaps
  - Improve knowledge occurrence; distribution
  - Contribute to spatial refinement of the risk assessment

- **Digitising, Expert workshops, Bioblitzes**
  - **Plants:** threatened and endemic.
  - **Animals:** also include spp representative of different habitats and ecological roles
  - Mammals, birds, invertabrates
**Spatial analysis**

- Less constrained landscape
  - low land-use pressure; small built footprint
- Undertake spatial refinement w.r.t irreplaceable features.
- Model impact of scenarios at ecosystem level
  - safeguard functional landscape
  - representivity and persistence