A Mainstreaming Strategy for South Africa's Grasslands Biome

the principles, policy and approach

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grasslands LIVING IN A WORKING LANDSCAPE

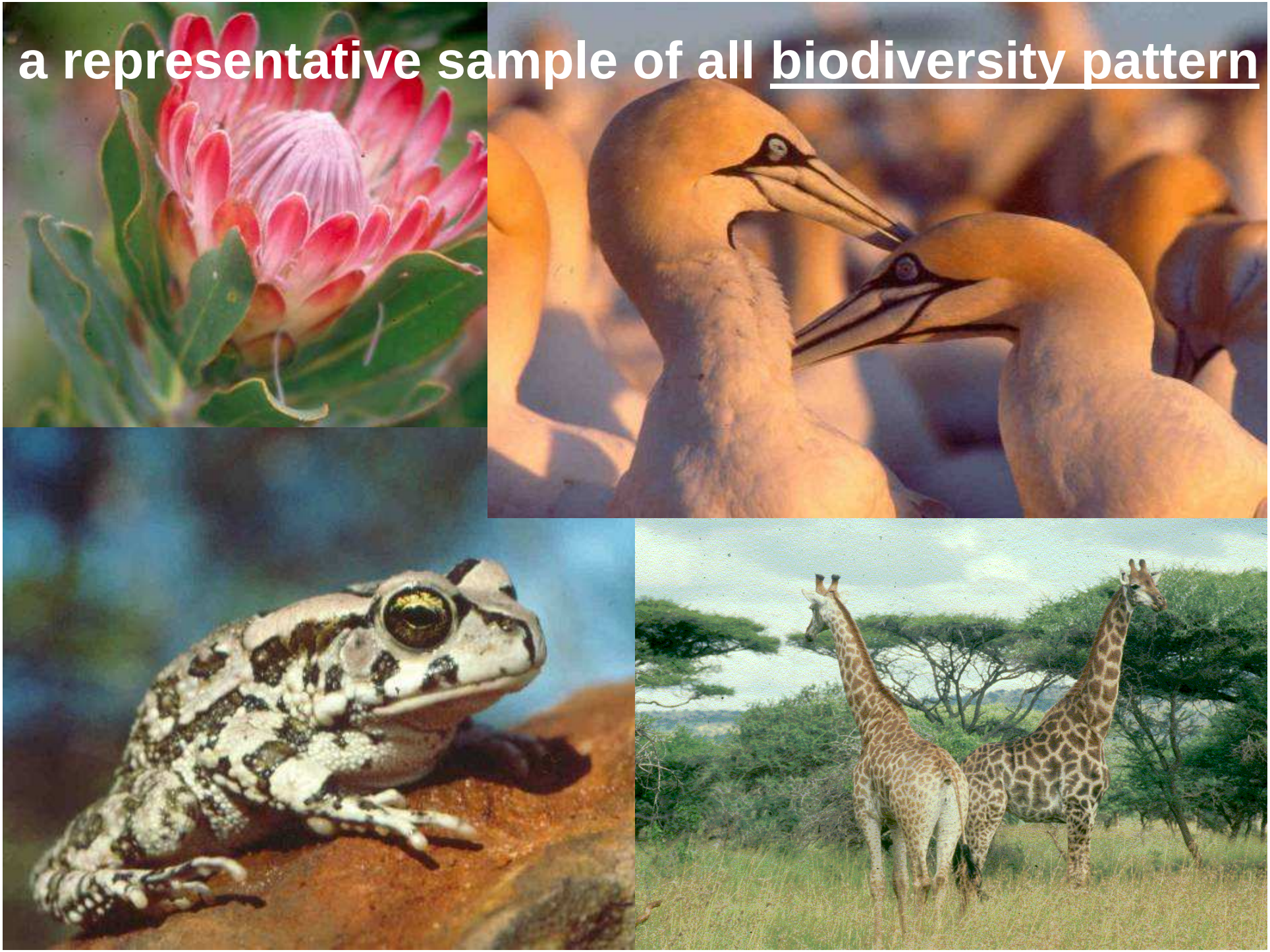
Overview

- **Principles**…the building blocks of systematic conservation planning
- **Policy**…the biodiversity policy context
- **Approach**…developing a grasslands conservation strategy for implementation

- *Addressing national biodiversity priorities, through the national policy framework, in conservation implementation*

In order to conserve biodiversity effectively, we need to conserve…

a representative sample of all biodiversity pattern

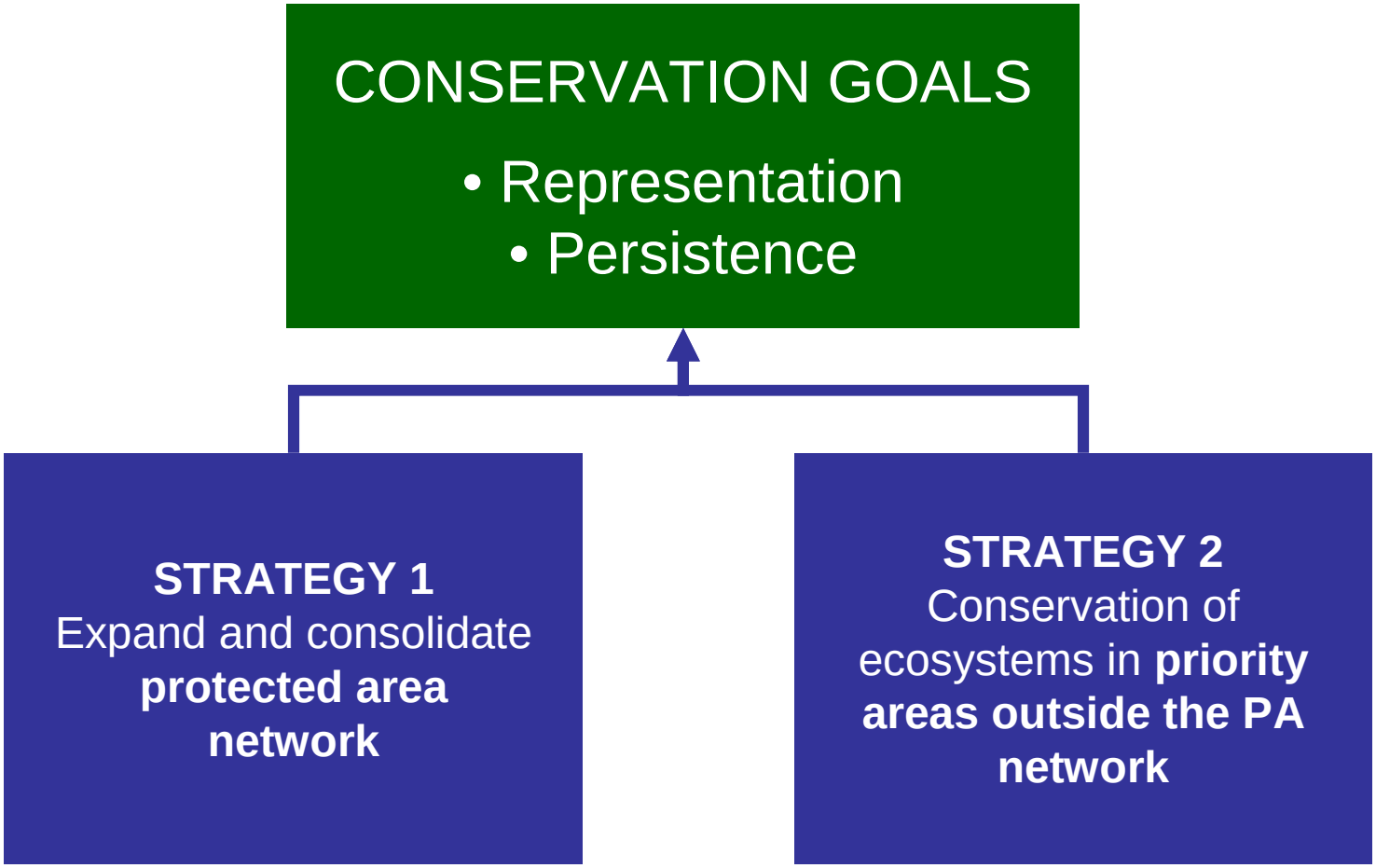



ecological processes...
...at the local scale


…and at the landscape scale

In order to conserve biodiversity effectively, we need to conserve…

- A representative sample of all biodiversity pattern or components of biodiversity – principle of representation
- Ecological and evolutionary processes – principle of persistence

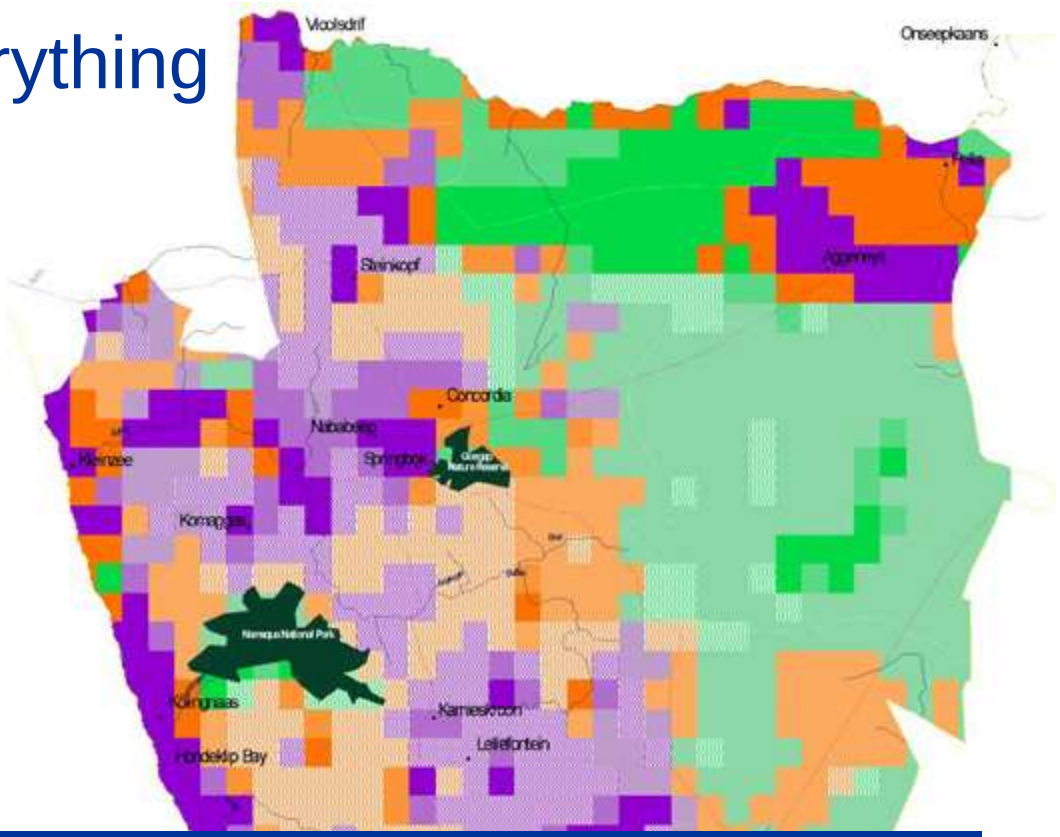


Historical emphasis

Little attention paid to this in the past

What is biodiversity planning?

- Can’t conserve everything
- Need to prioritise

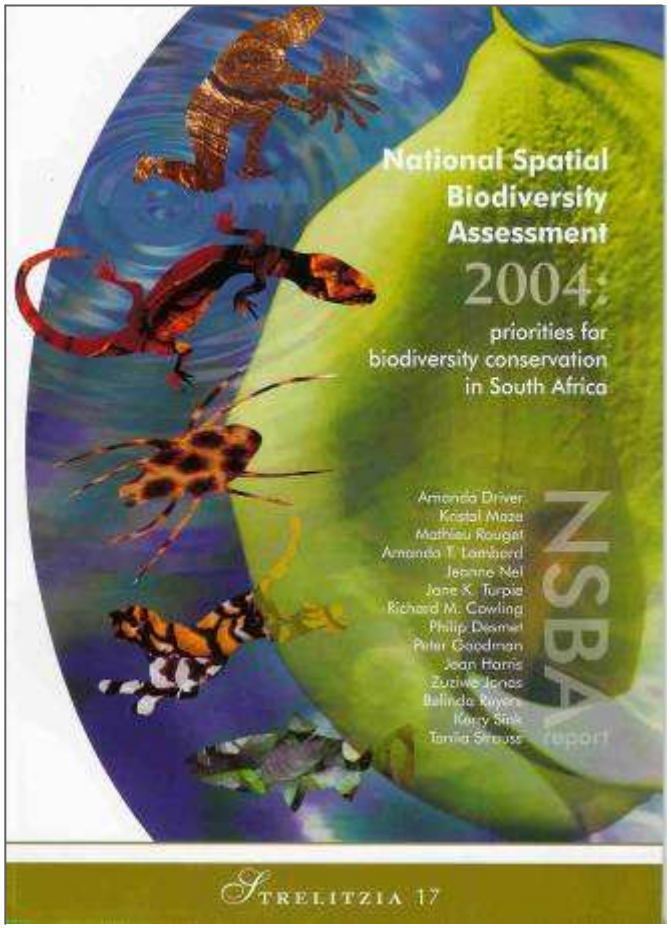


Systematic biodiversity planning identifies
critical biodiversity areas

Systematic approach to biodiversity planning

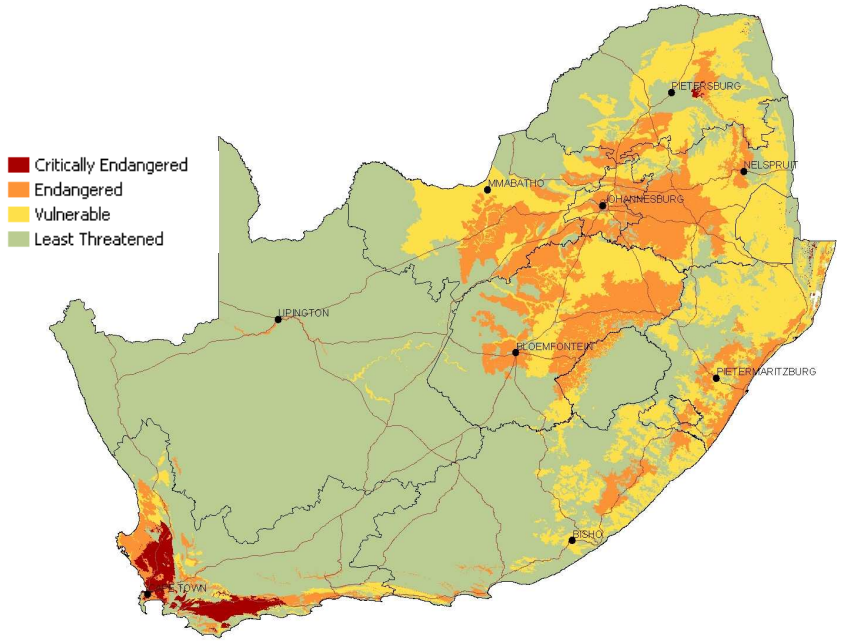
- Conserve a **representative sample** of **biodiversity pattern** (principle of representation)
- Conserve/maintain key **ecological processes** (principle of persistence)
- Set **biodiversity targets** – how much do we need to representation and persistence?
  - Based on ecological characteristics of biodiversity (veg types, species, aquatic and other features)
  - Set in National Spatial Biodiversity Assessment (NSBA)
- Basics of **bioregional planning**

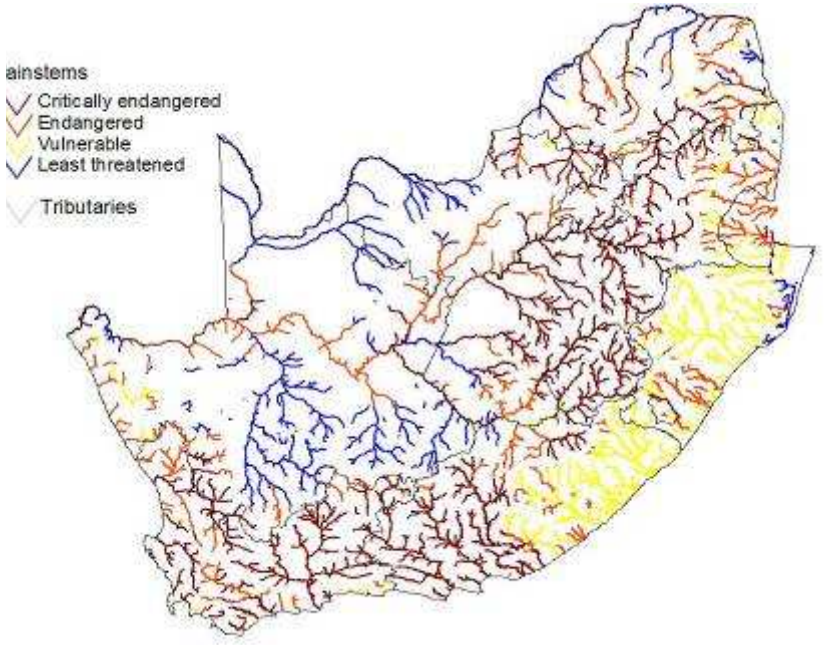
National Spatial Biodiversity Assessment (NSBA)

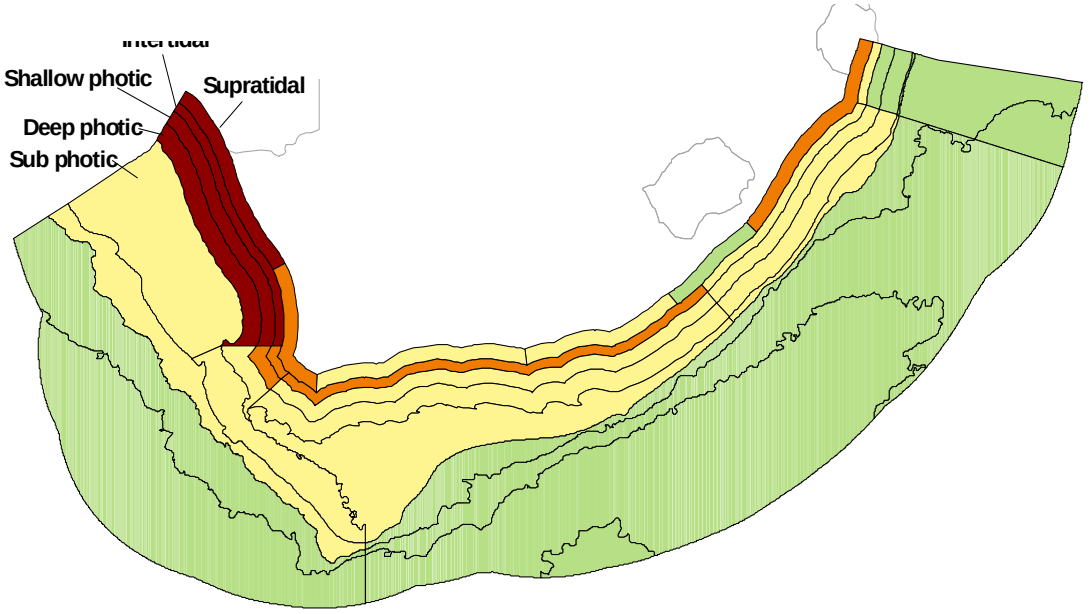


- Spatial component of the NBSAP
- Conducted 2004, published 2005
- First national assessment of biodiversity
- Identifies **biodiversity priority areas** in marine, terrestrial, river and estuarine environments
- Will be updated every five years

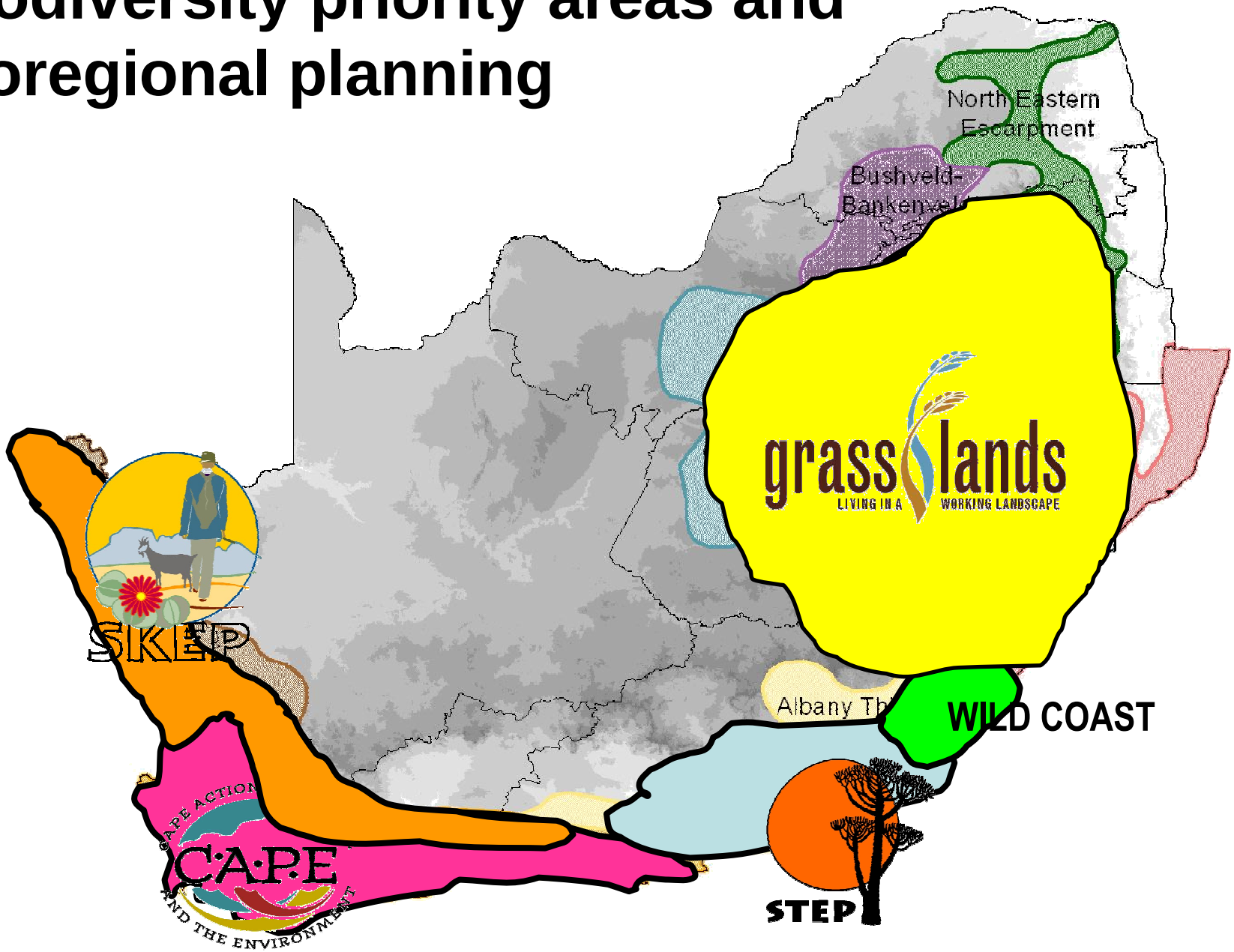
NSBA Ecosystem Status: Terrestrial, River, Marine





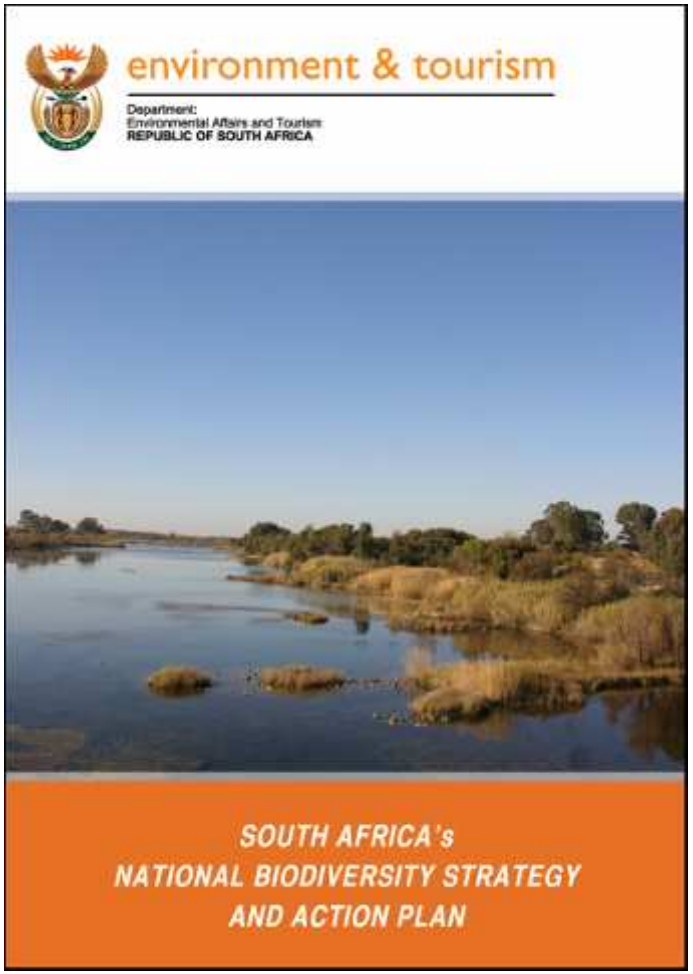


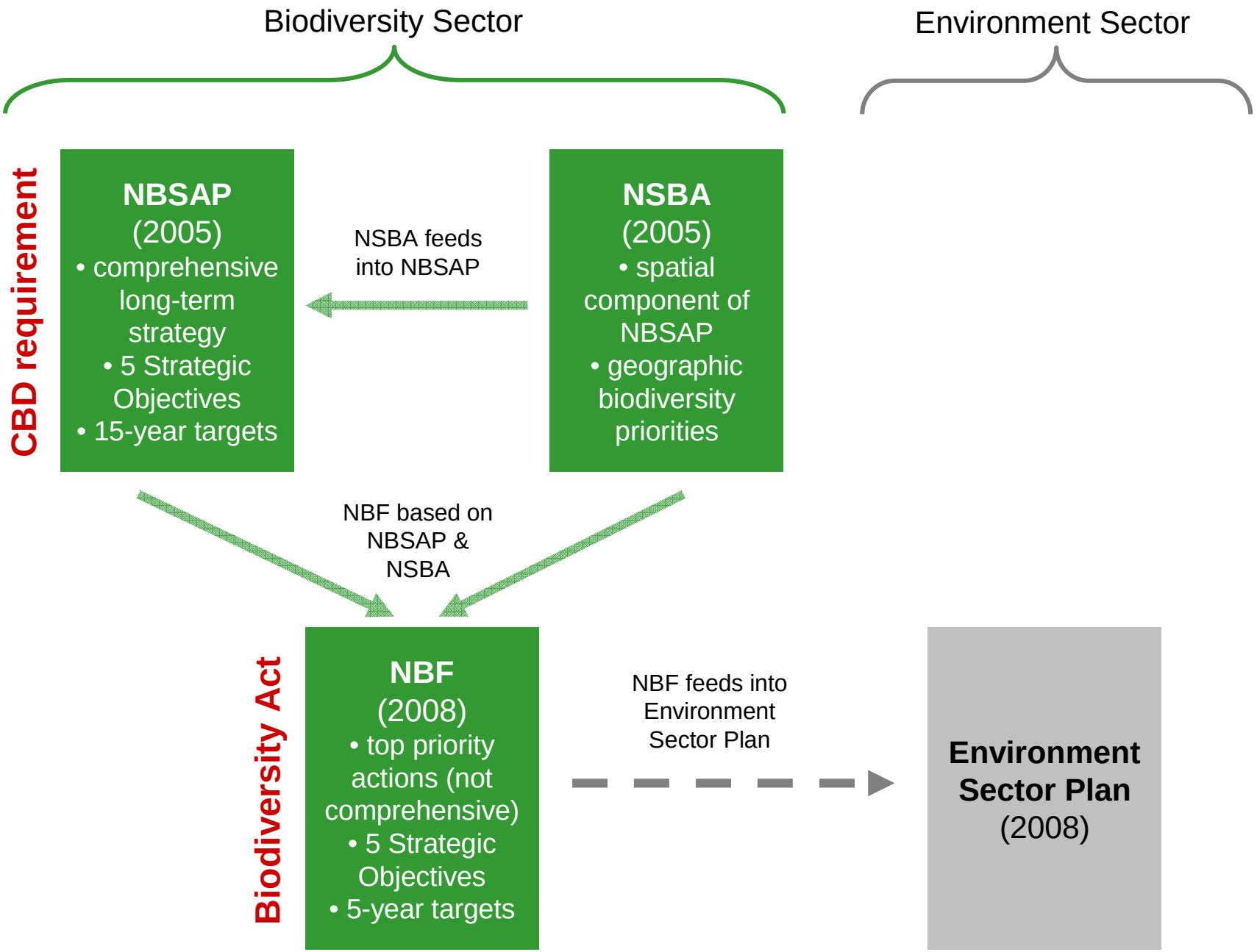
Biodiversity priority areas and bioregional planning



NBSAP Strategic Objectives (SOs)

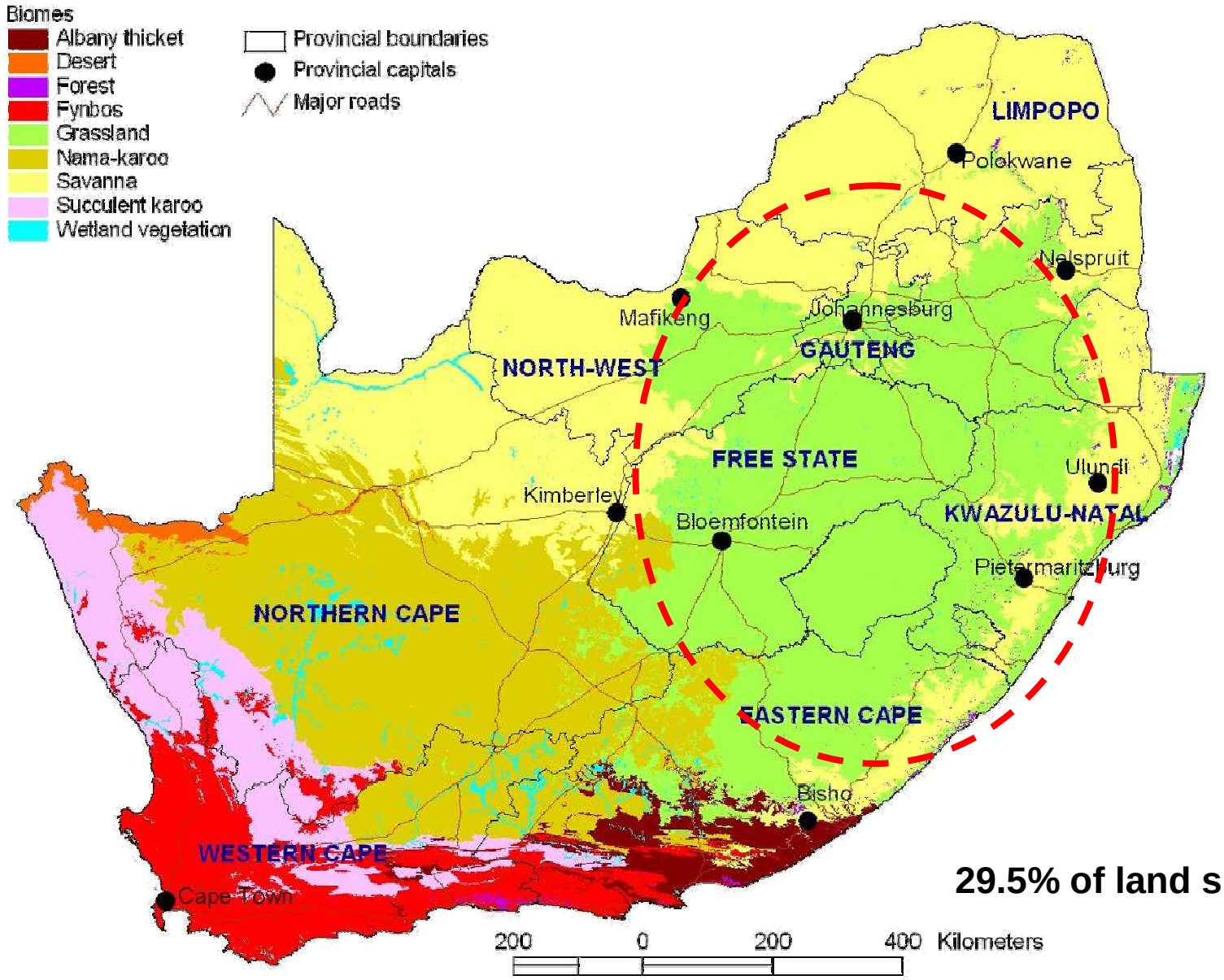
- SO1 **Policy framework** for biodiversity management
- SO2 **Institutional framework** for biodiversity management
- SO3 **Integrated management** of terrestrial and aquatic ecosystems
- SO4 **Sustainable use** of biological resources
- SO5 **Conservation areas**




Biodiversity Sector
Environment Sector
CBD requirement
NBSAP
(2005)
• comprehensive long-term strategy
• 5 Strategic Objectives
• 15-year targets
NSBA feeds into NBSAP
NSBA
(2005)
• spatial component of NBSAP
• geographic biodiversity priorities
NBF based on NBSAP & NSBA
Biodiversity Act
NBF
(2008)
• top priority actions (not comprehensive)
• 5 Strategic Objectives
• 5-year targets
NBF feeds into Environment Sector Plan
Environment Sector Plan
(2008)

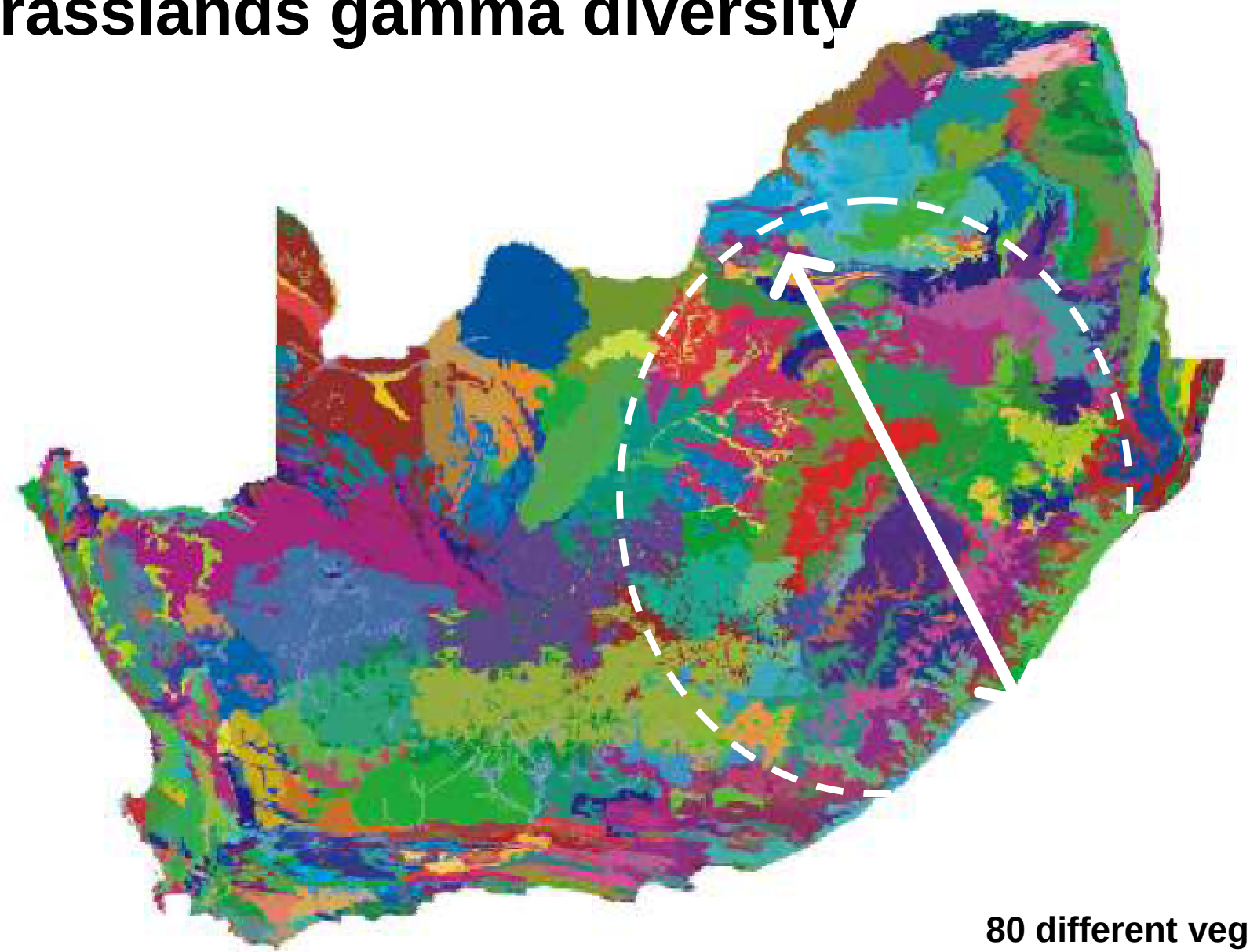
Developing a strategy for conserving the grasslands

South Africa's biomes



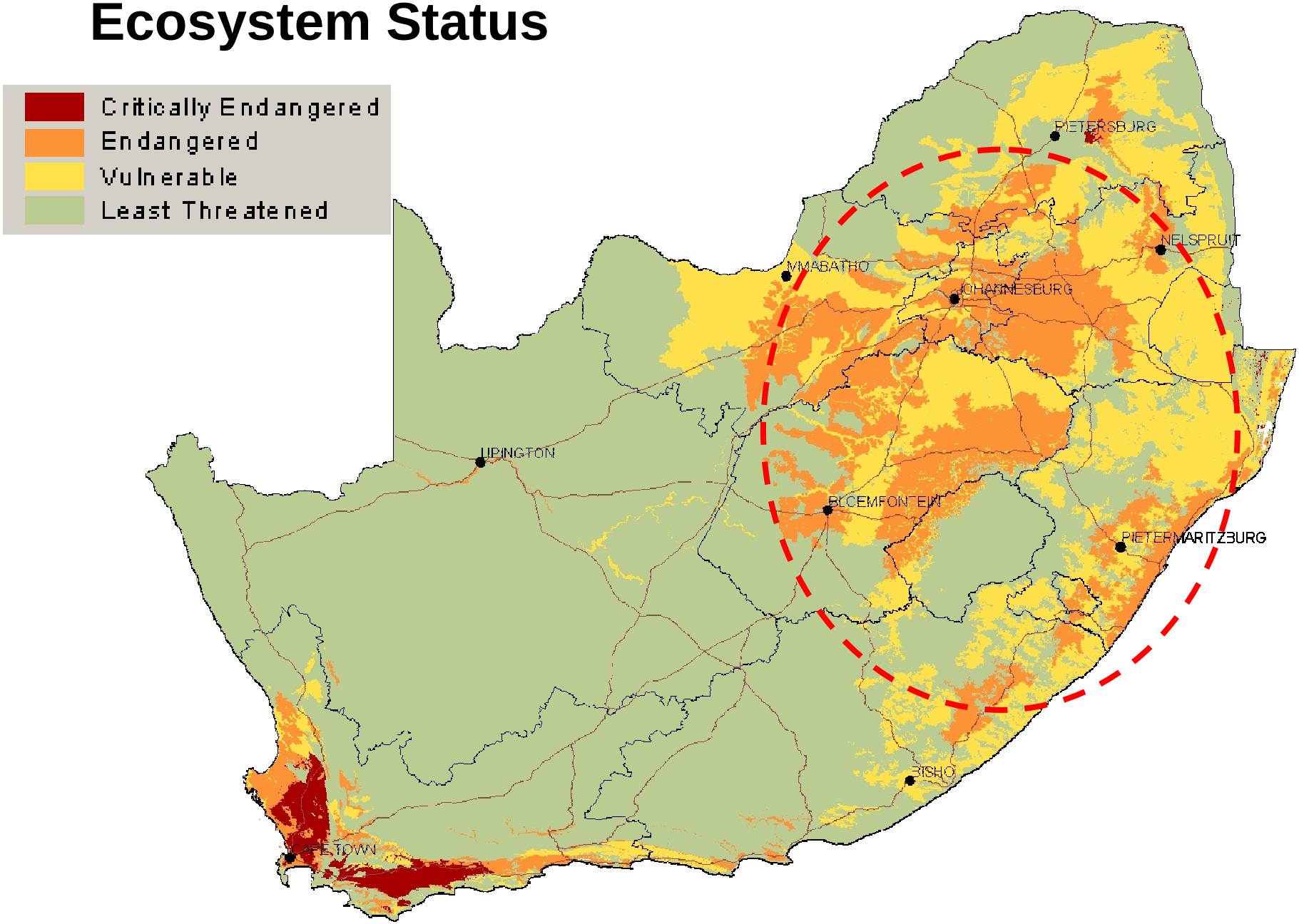
29.5% of land surface

Grasslands gamma diversity



80 different veg types

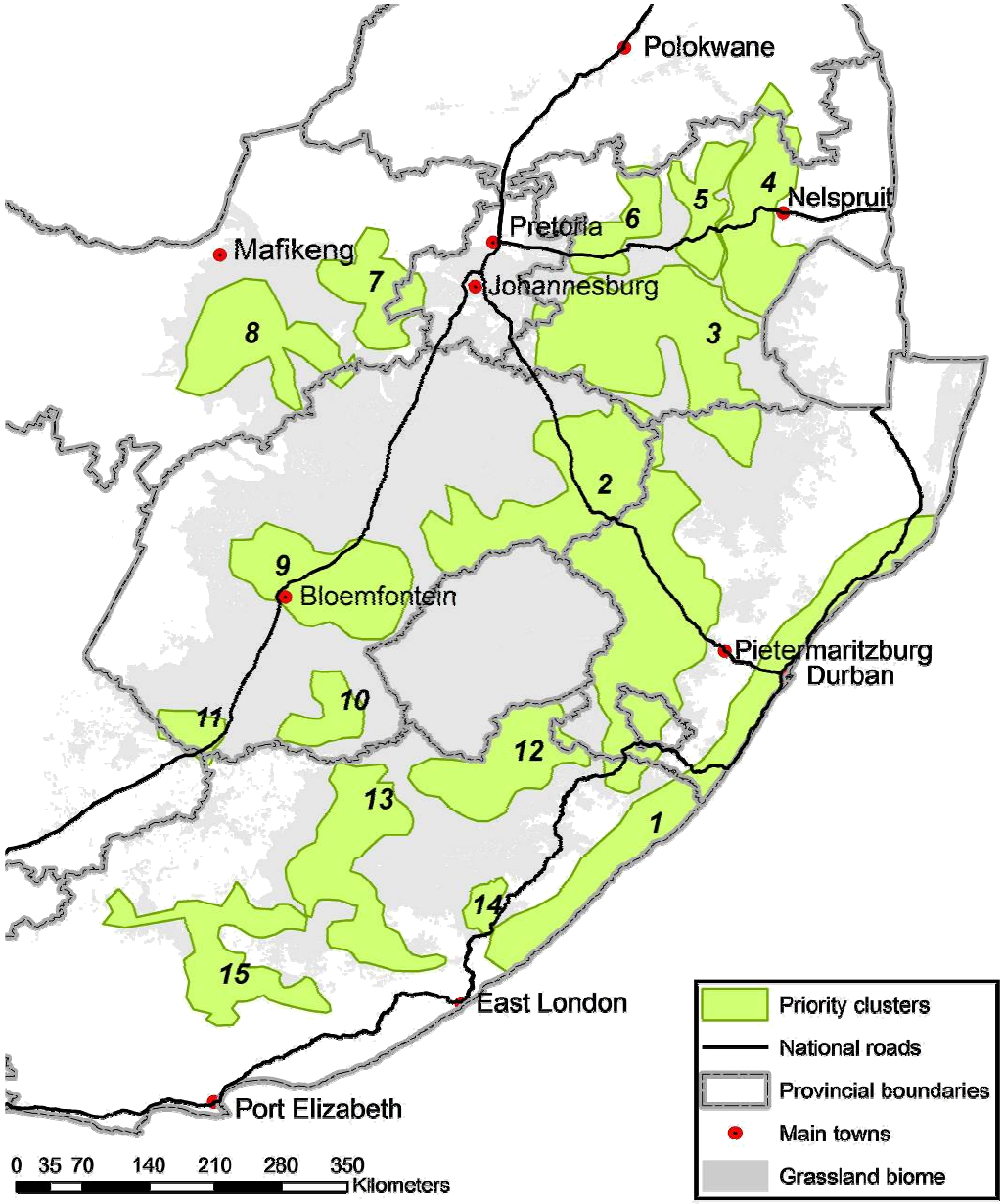
Ecosystem Status



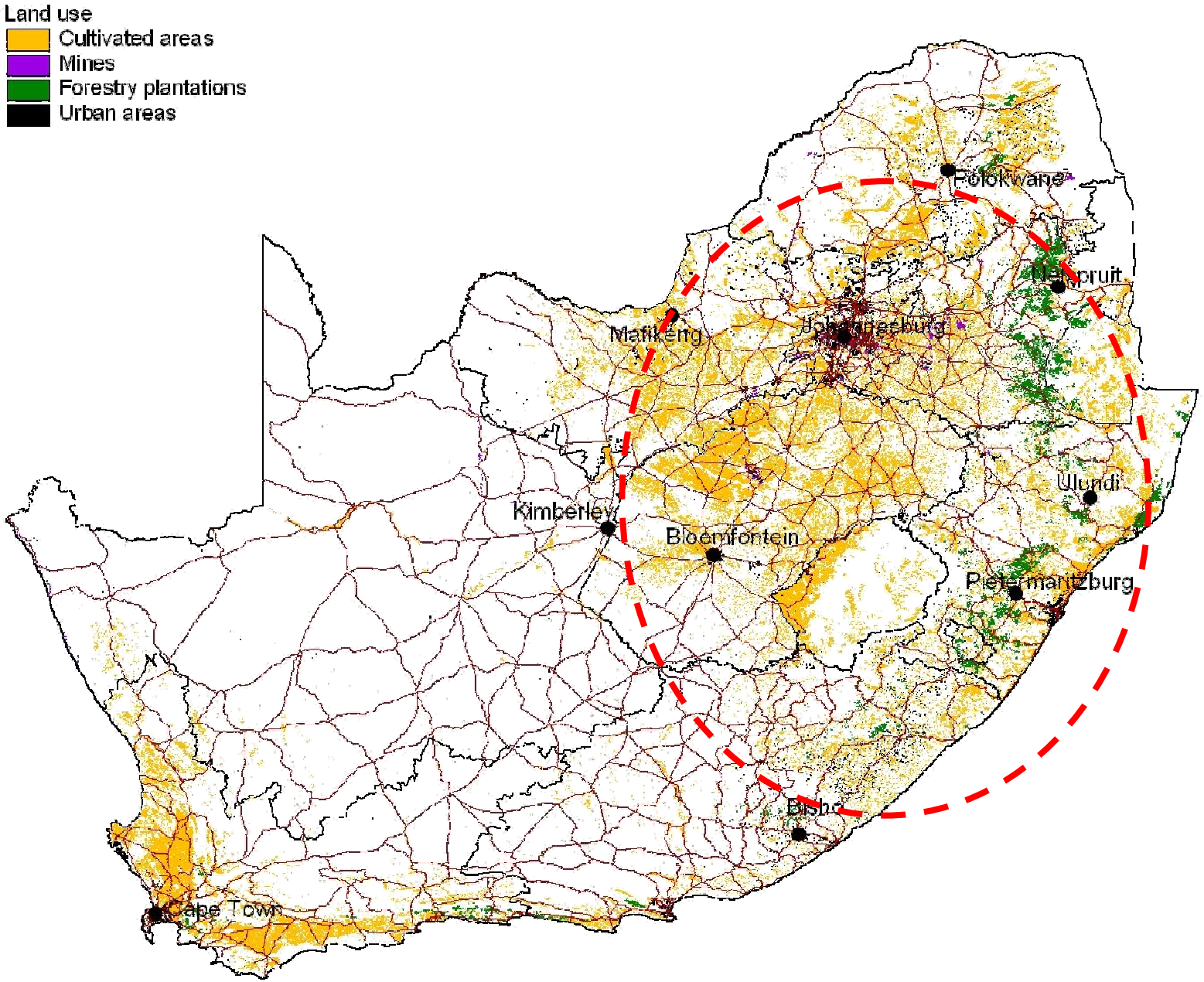
Understanding the biome

- Approach to the design informed by:
  - Spatial biodiversity assessment
  - Agricultural assessment
  - Land use compatibility assessment
  - Coal mining assessment
  - Monetary valuation of grasslands, feasibilities and market surveys for interventions

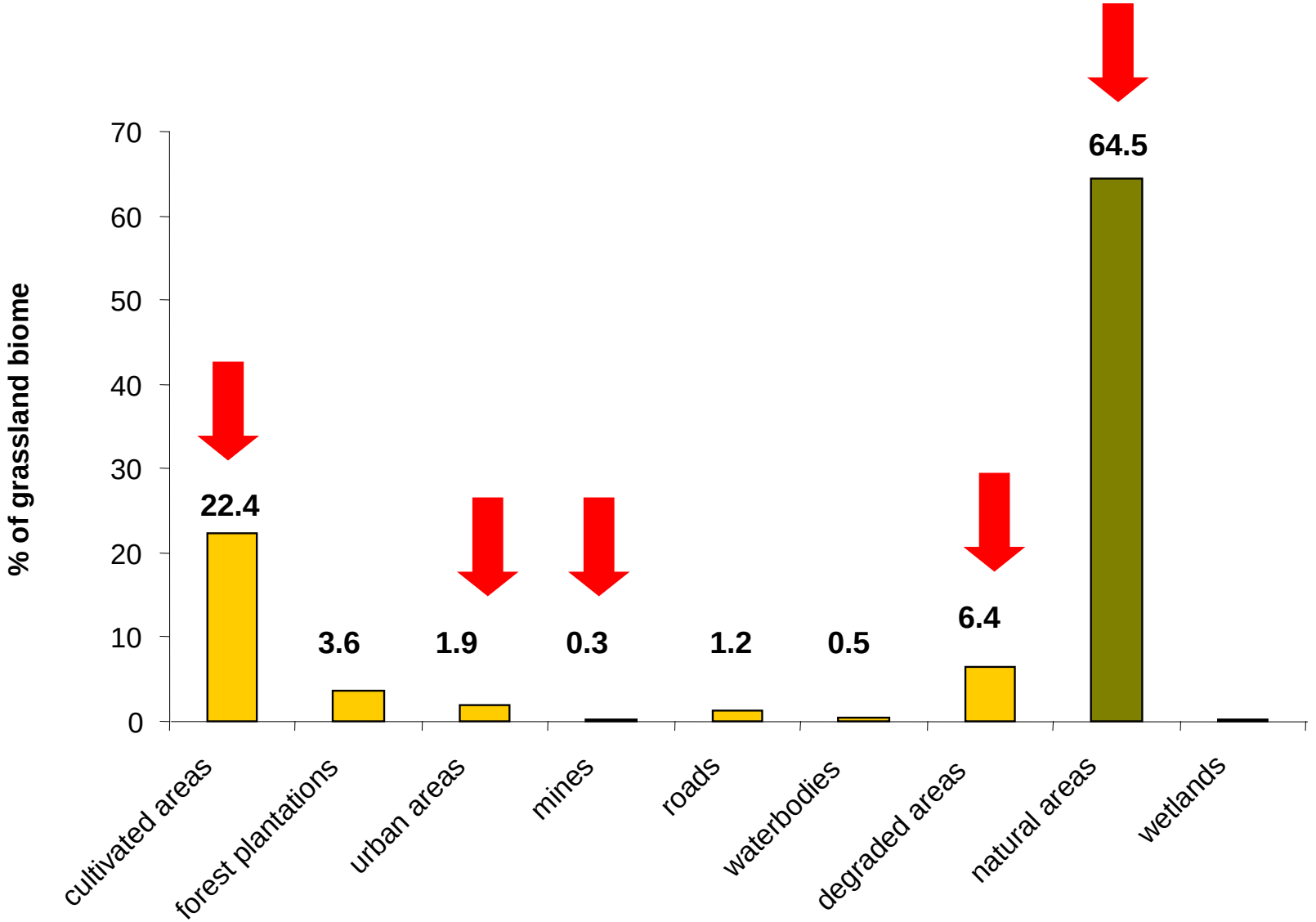
Priority clusters



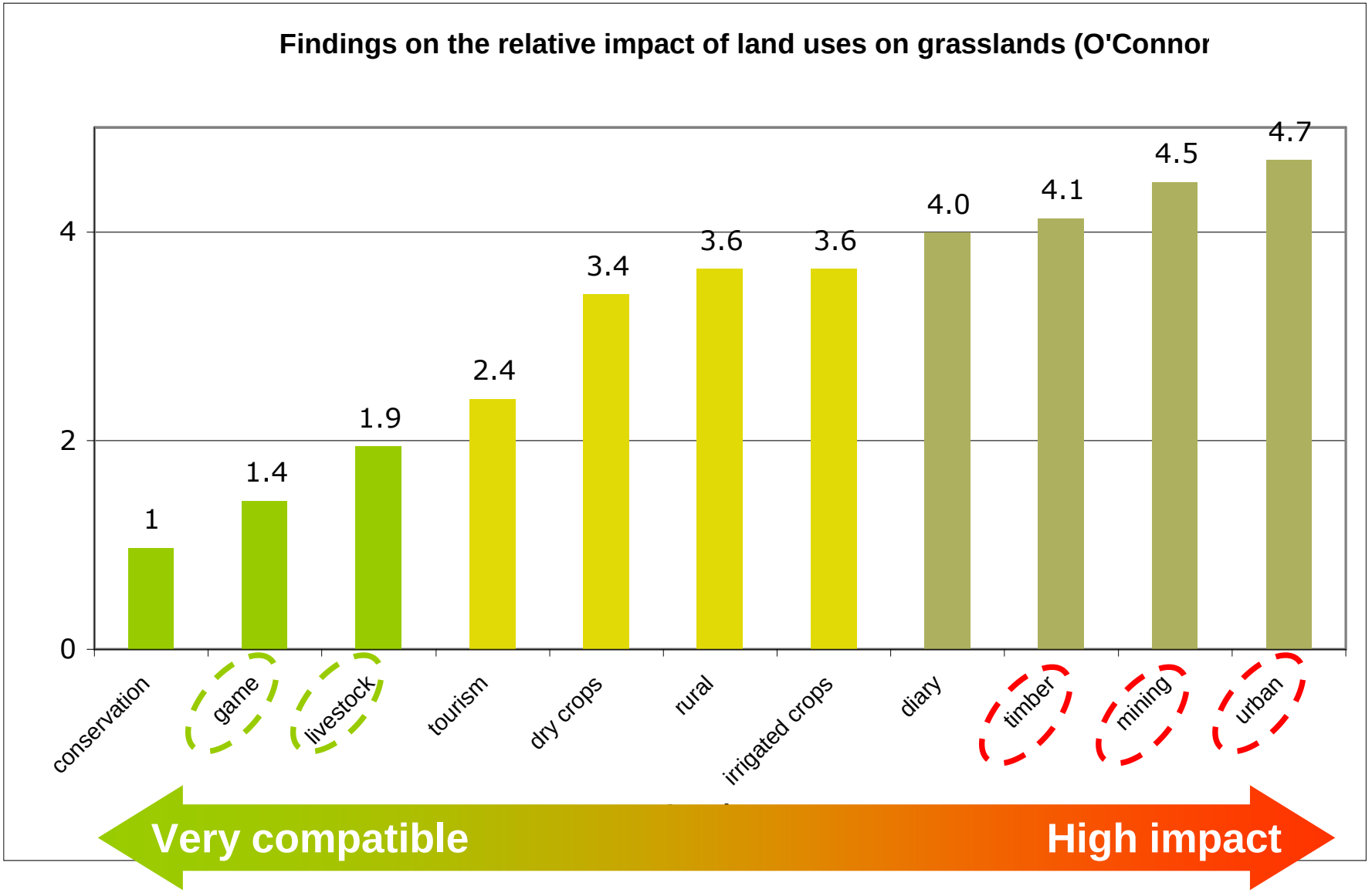
Land use


Land use
Cultivated areas
Mines
Forestry plantations
Urban areas
Polokwane
Mafikeng
Ulundi
Kimberley
Bloemfontein
Pietermaritzburg
Cape Town

Extent of land uses in the grasslands

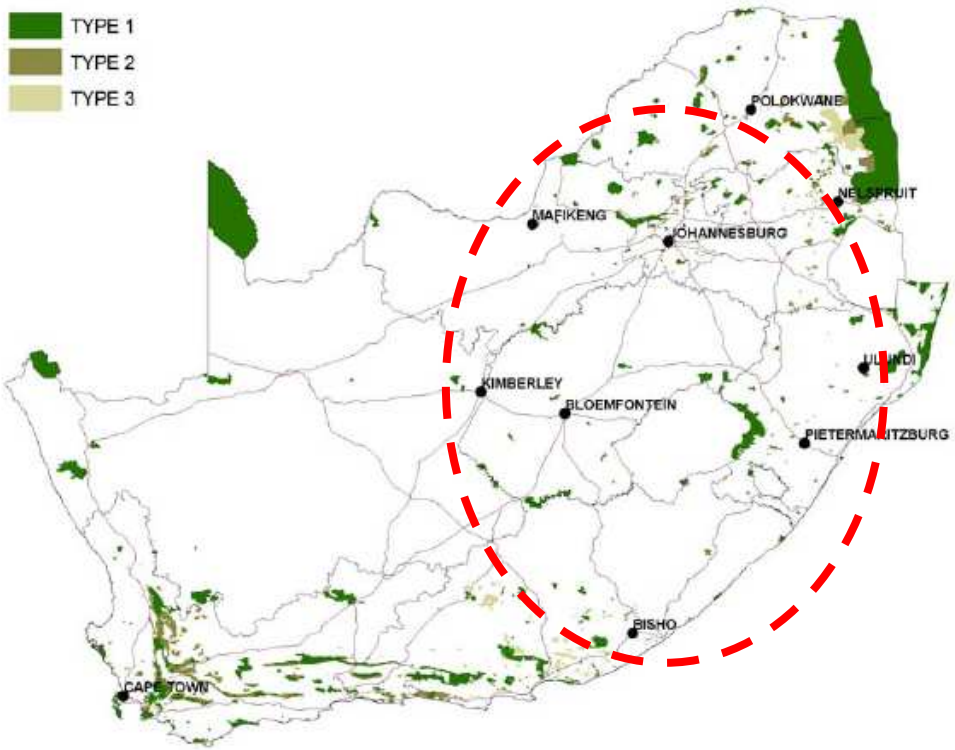


Relative impact of land uses



Achieving conservation goals

- Protected areas
  - One mega national park
  - Many small parks



Achieving conservation goals

- Protected areas
  - One mega national park
  - Many small parks
- Mainstream biodiversity into production sectors
  - High turnover of biodiversity across the landscape
  - Bulk of biodiversity resides in production landscapes
  - Critical to capture the value of grasslands ecosystem services
- Desired situation
  - Outcomes that accommodate biodiversity needs in production

Barriers

- Address key barriers to mainstreaming
  - Market failure and lack of incentives
  - Systemic and institutional capacity weaknesses
  - Management tools and information

Mainstreaming strategy

- Reduce impacts and improve conditions for compatible land uses
  - Vest responsibility for mainstreaming in production sectors
  - Engagement across entire supply chain
- Three levels
  - Policy and regulation
  - Markets: negotiate trade offs between production and conservation needs through market mechanisms and incentives
  - Ground: Demonstration and stewardship
- Sectors
  - Agriculture, forestry, coal mining, urban

Agriculture

- Lessons
  - Land use decisions depend on cost/benefit assessment, biodiversity considerations undervalued
  - Need to diagnose
    - economic drivers in the sector
    - causes of biodiversity loss in different farming systems
    - and tailor interventions accordingly
- Intervention example
  - Pilot improved rangeland management systems
  - Support biodiversity friendly certification for red meat
  - Incorporate biodiversity into agricultural policy

Coal mining

- Lesson
  - Limited on-site impacts: mining companies are major owners of land containing important biodiversity
  - Significant off-site impacts: wetlands and water bodies affected by abstraction and acid mine drainage
- Intervention
  - Develop framework and pilot offset schemes in threatened wetlands through wetland mitigation banking
  - Ensure biodiversity information is integrated into the planning of mining operations

Lessons learnt

- Success of mainstreaming dependent on cost benefit calculations
  - Receptive production sector and capacity in conservation
  - Access to markets
  - Recognition
  - Financial incentives and penalties
- Other key lessons
  - Know what you need to conserve
  - Supportive policy framework, regulatory drivers needed
  - Common understanding of mainstreaming


Thank you
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