

# **Integrating biodiversity into spatial planning and environmental assessment**

**Southern Africa Regional Workshop for the  
Revision, Updating and Implementation of NBSAPs**

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**Kasane, Botswana, 14-21 March 2011**



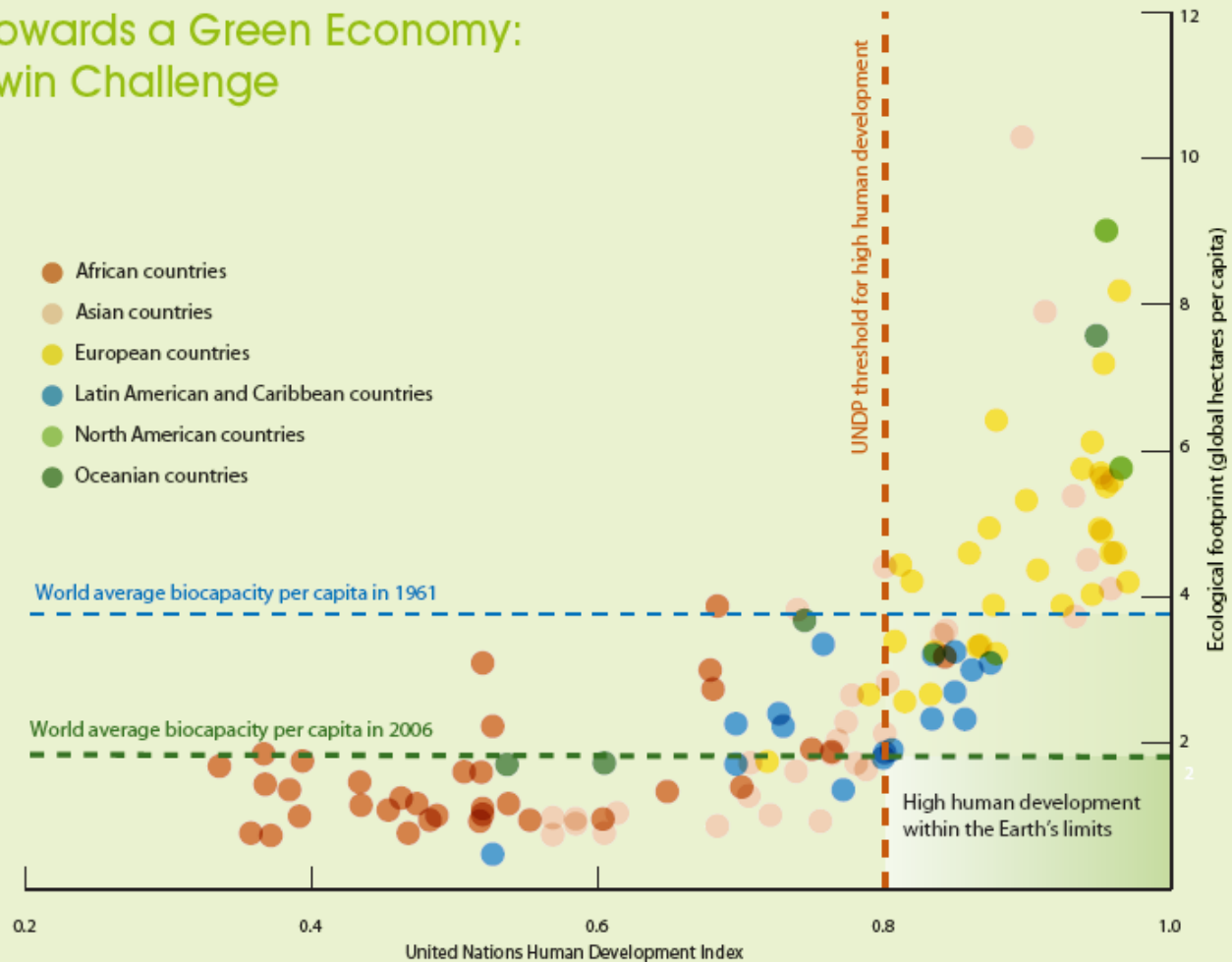
# Strategic Plan 2011-2020: Aichi Biodiversity Targets

*Strategic goal A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society*

**Target 2:** By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and **planning processes** and are being incorporated into national accounting, as appropriate, and reporting systems.

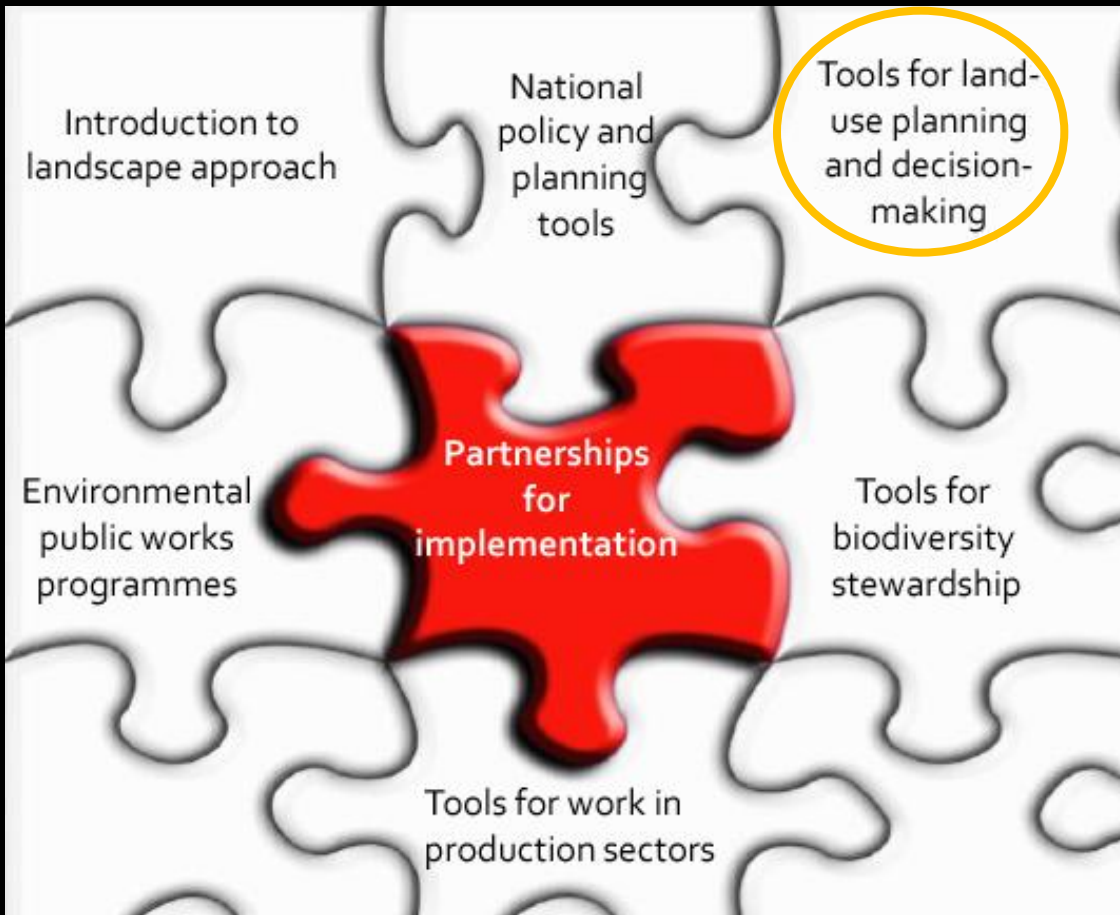
# Challenge facing African economies...

## Box 1. Towards a Green Economy: Twin Challenge



Source: *The Ecological Wealth of Nations: Earth's Biocapacity as a New Framework for International Cooperation*. Global Footprint Network (2010), p. 13; Human Development Index data from *Human Development Report 2009 – Overcoming Barriers: Human Mobility and Development*. UNDP (2009).

# A. Working across production landscapes

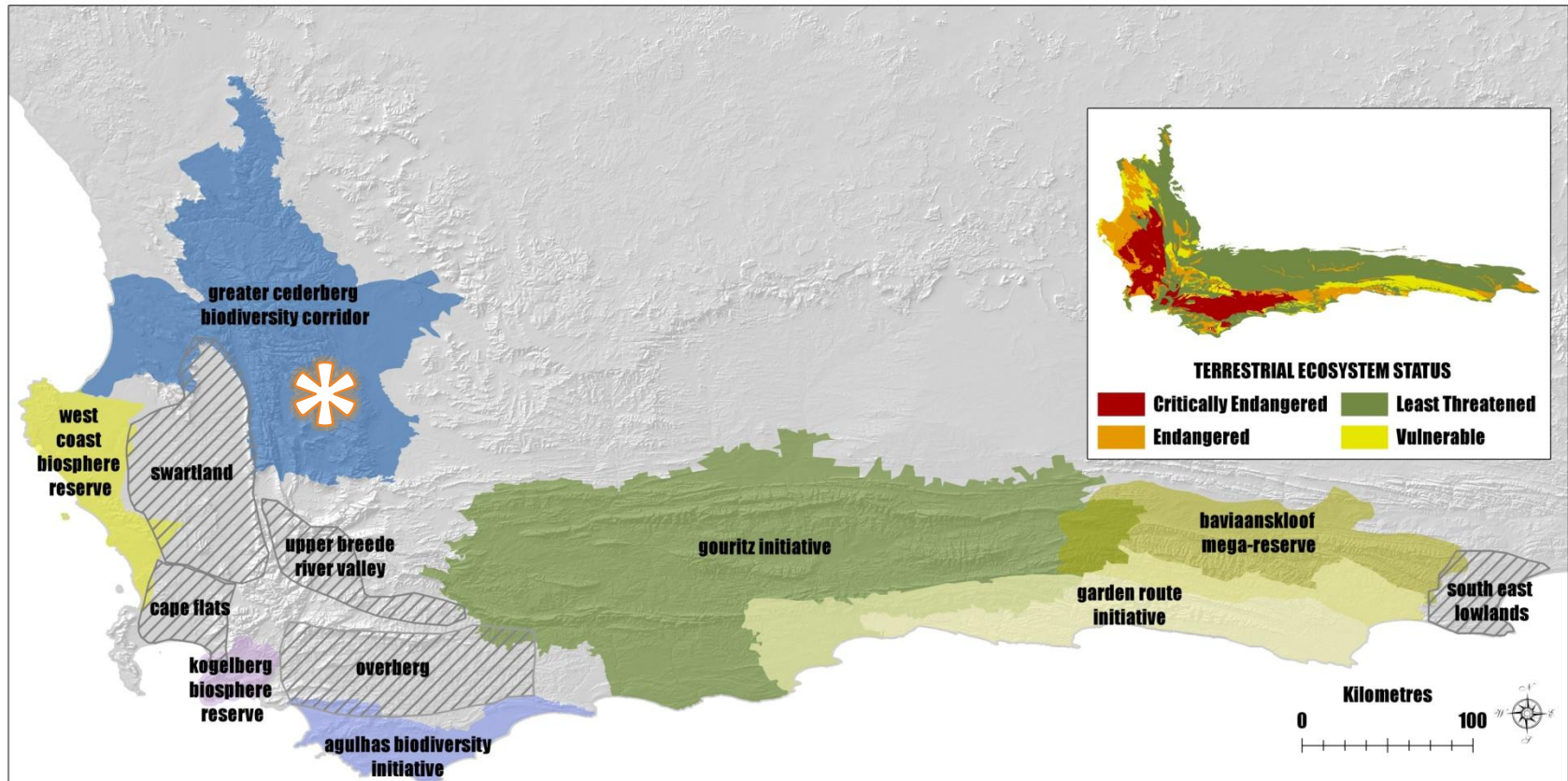


## Biodiversity for Development





South Africa's landscape approach to conserving biodiversity and promoting ecosystem resilience





# Landscape initiatives in the Cape Floristic Region

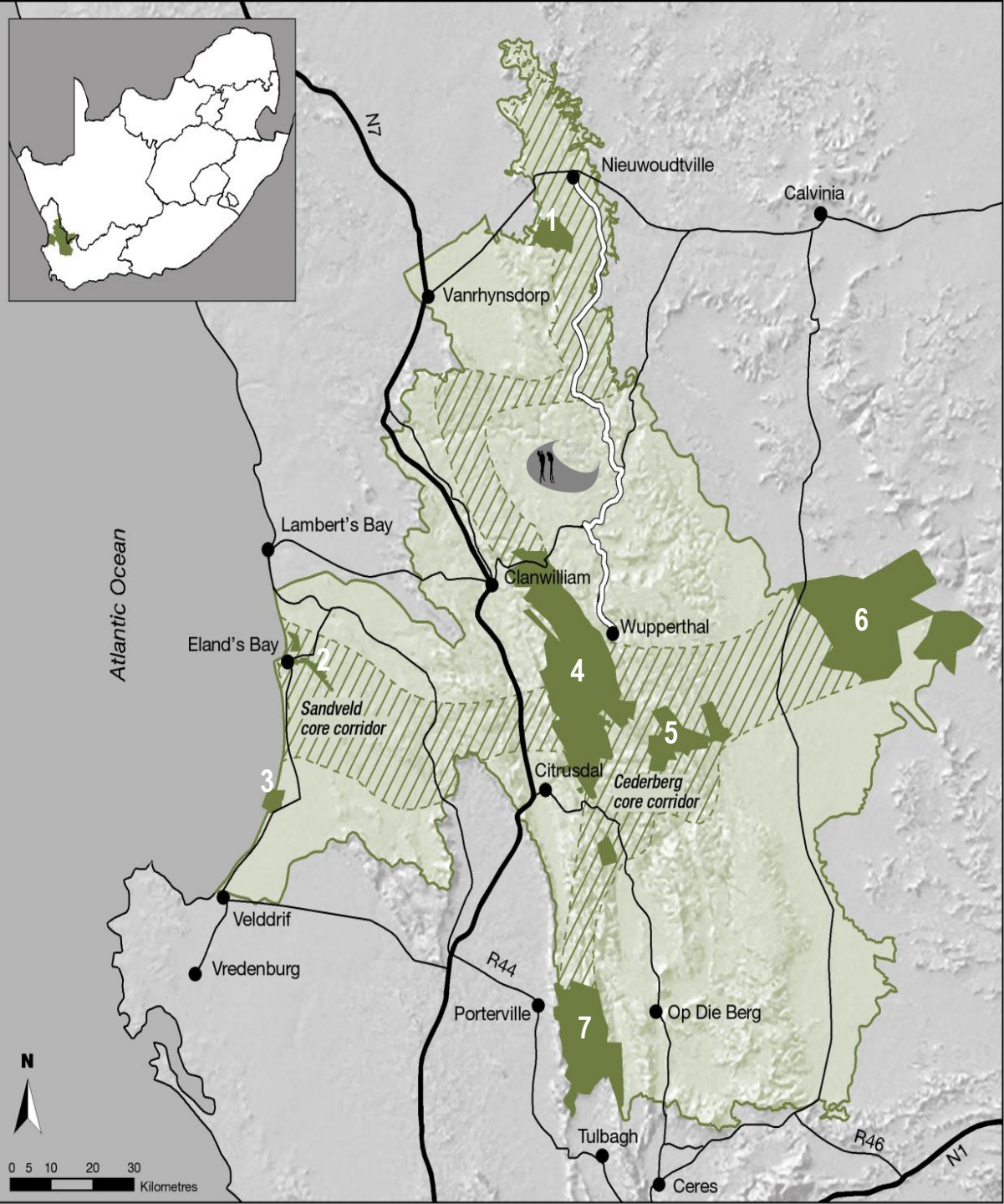


- Multi-stakeholder landscape-wide conservation initiatives in priority biodiversity areas
- Designed to maintain or restore connectivity across the landscape, build ecosystem-based resilience to climate change

-  Greater Cederberg Biodiversity Corridor
-  Proposed corridors
-  Reserves, national parks and wilderness areas
- 1 Oorlogskloof Nature Reserve
- 2 Verlorenvlei Nature Reserve
- 3 Rocherpan Nature Reserve
- 4 Cederberg Wilderness Area
- 5 Matjiesrivier Nature Reserve
- 6 Tanqua Karoo National Park
- 7 Groot Winterhoek Wilderness Area
-  Rooibos Heritage Route

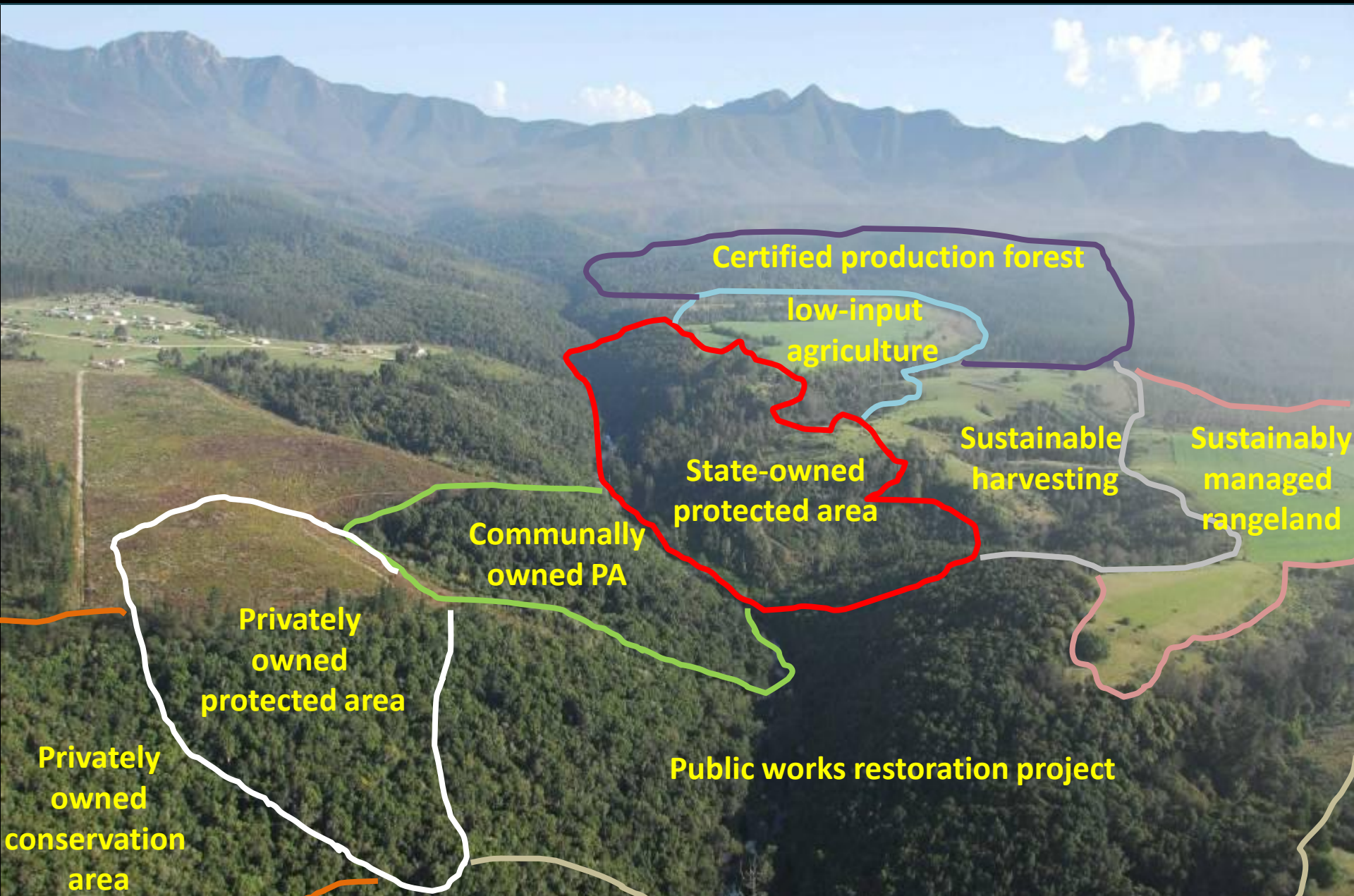
## ADAPTATION CORRIDORS

-  North-South corridor
-  Mountain-coast corridor



# Landscapes at transboundary scale

# Landscape approach - mosaic of land uses



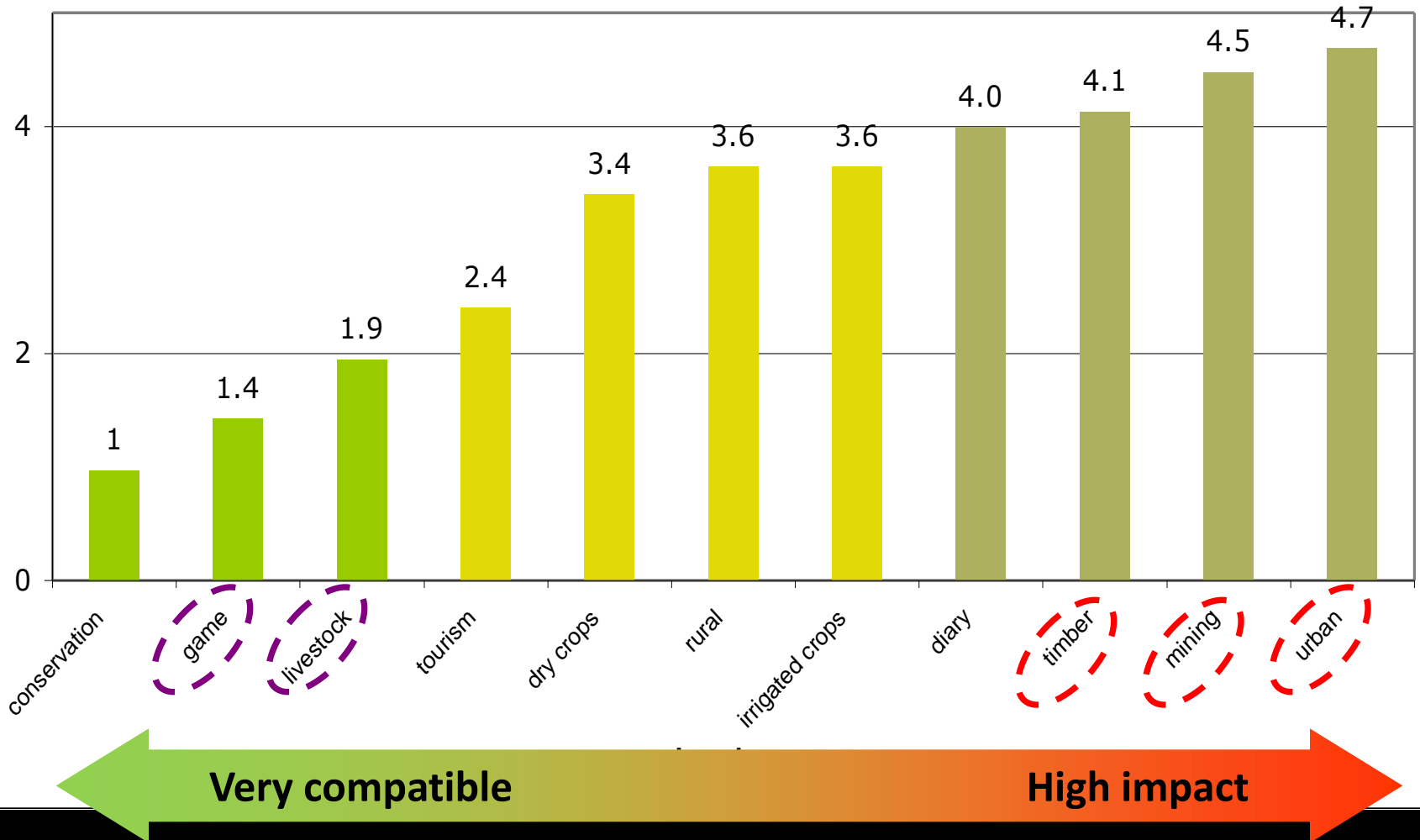


TYPE OF LANDSCAPE	PROTECTED LANDSCAPES		PRODUCTION LANDSCAPES		DEVELOPED LANDSCAPES
Type of land	State-owned and managed Protected areas (mostly natural/wild land) e.g. National Park	Mostly natural land of high biodiversity importance privately or communally owned and managed through partnerships e.g. Private Nature Reserve	Largely natural land with elements of biodiversity importance and low-impact production areas e.g. grazing	Land largely modified for intensive production e.g. commercial crops	Lightly to heavily modified landscapes with fragments of important biodiversity
Strategy for conserving biodiversity	Formal protected areas		Biodiversity Stewardship Best-practice production		Land-Use Planning and Decision Making
					
Our main biodiversity management tools	Proclaimed protected areas Protected Area management plans Protected Area Expansion Strategy	Biodiversity Stewardship Agreements (Statutory) Management plans	Biodiversity Stewardship agreements (contract law and informal) Management plans Industry best-practice production guidelines	Best-practice production guidelines and resource for well managed farms	Biodiversity Sector Plans CBAs incorporated into spatial development frameworks Ecosystem guidelines for environmental assessment



# Relative impact of land uses

Findings on the relative impact of land uses on grasslands (O'Connor, 2005)



# Landscape scale

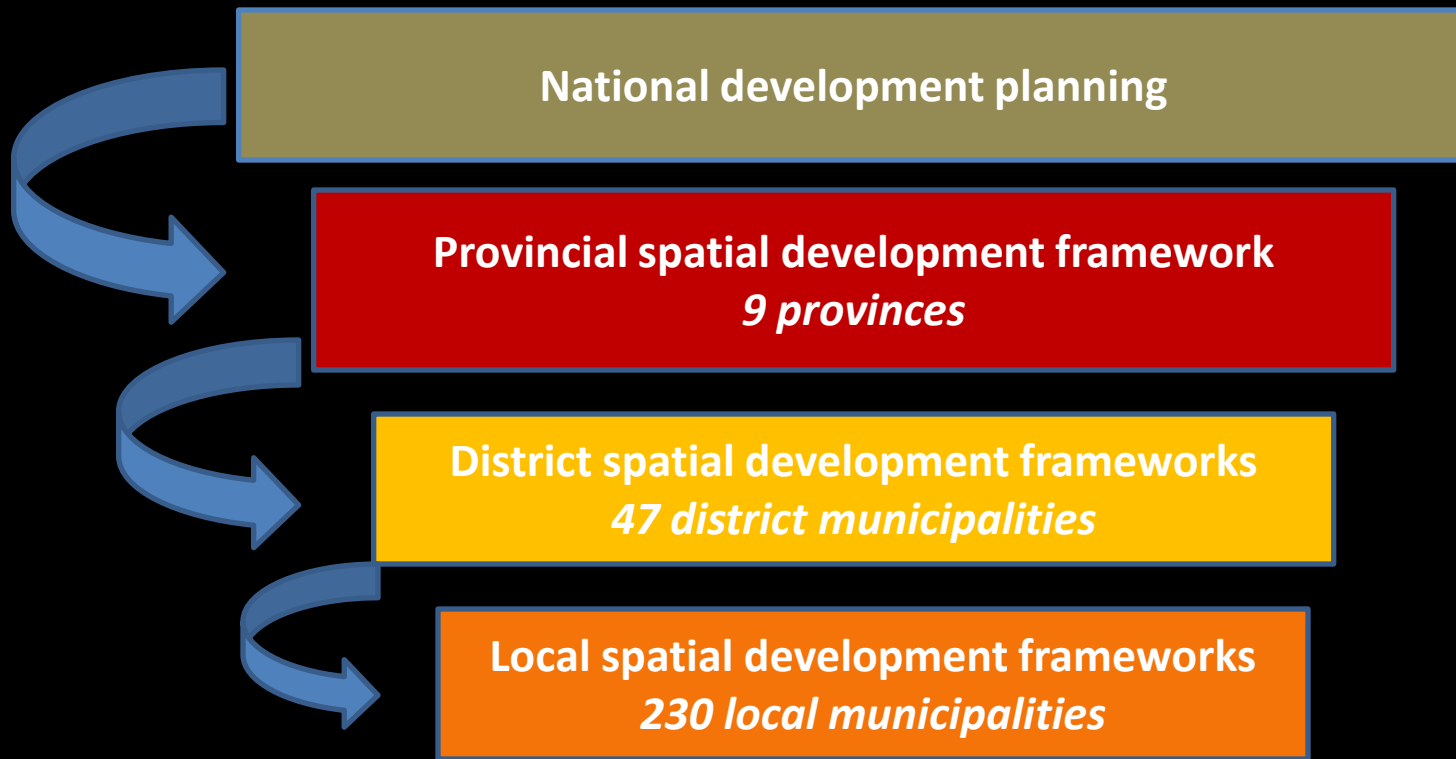


**vs political boundaries**



## B. Integrating biodiversity into spatial and development planning

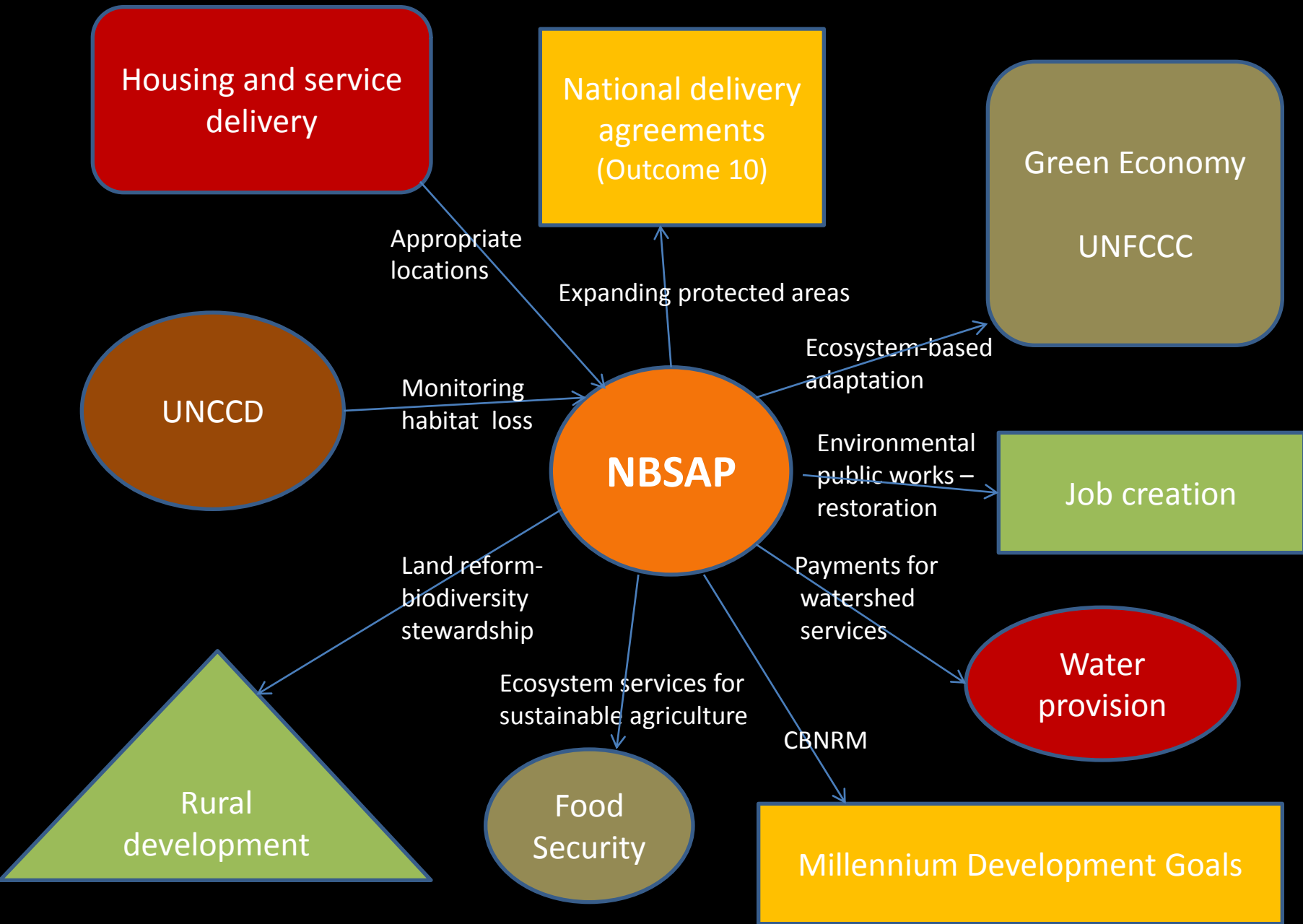
A nested system of spatial planning



# National development planning

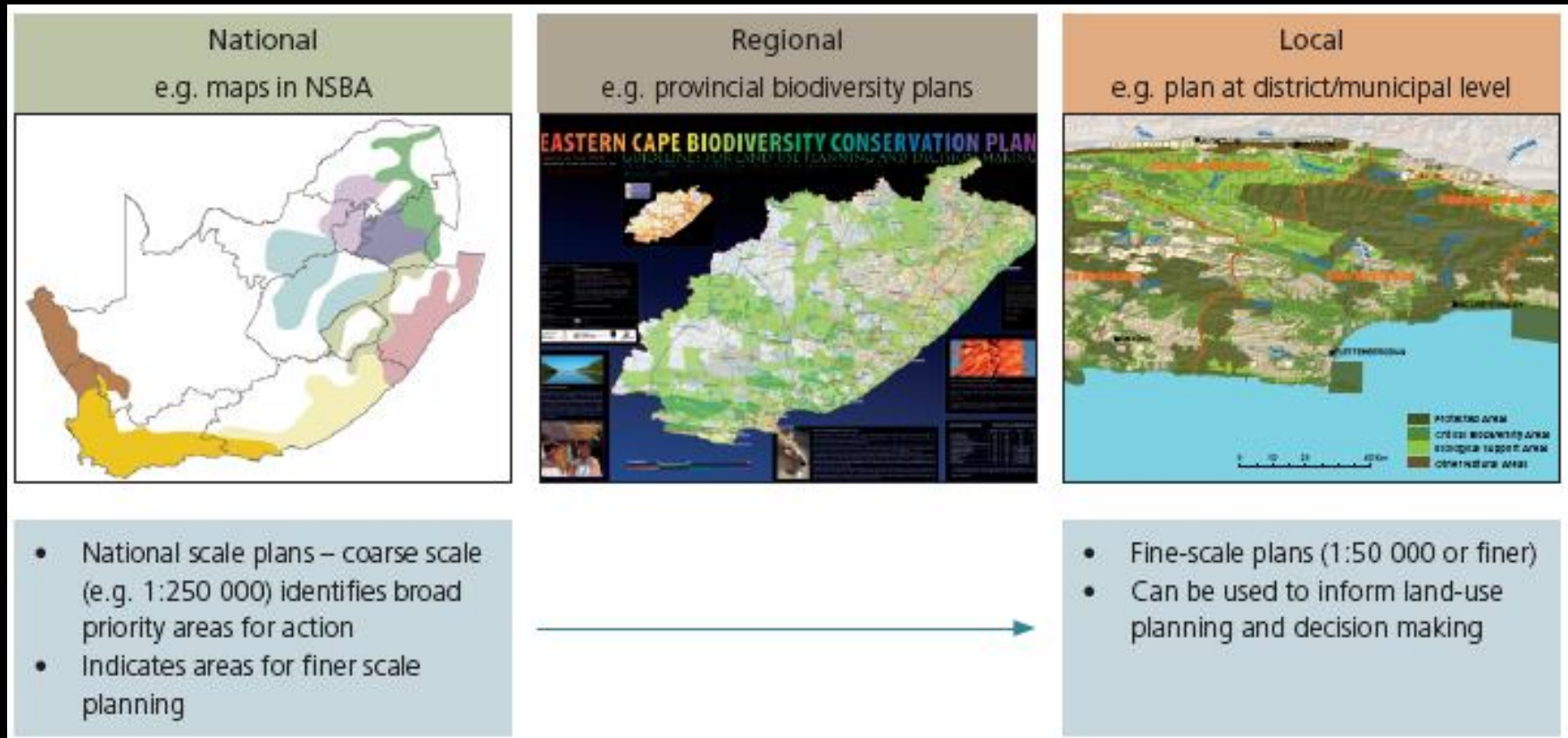
- Government has five priorities:
  - Creating decent jobs
  - Enhancing education & skills
  - Improving health outcomes
  - Rural development & agriculture
  - Fighting crime and corruption
- Also concerned about:
  - Delivering services
  - Addressing energy and water needs
  - Reducing carbon emissions





# Tools for land-use planning and decision-making

- Maps and land use guidelines at various scales
- Biodiversity sector's input into spatial planning



# Biodiversity Sector Plans

CBA map of spatial  
biodiversity  
priorities

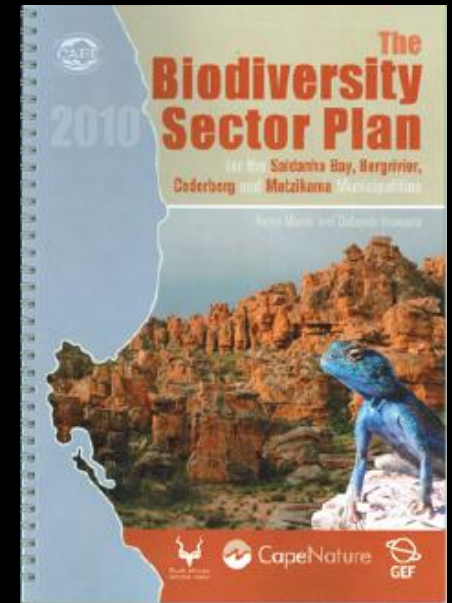


Contextual  
information



Land-use  
guidelines

Biodiversity Sector Plan





# Key questions answered by systematic biodiversity planning

**WHAT** do we need to conserve?

**HOW MUCH** of it do we need?

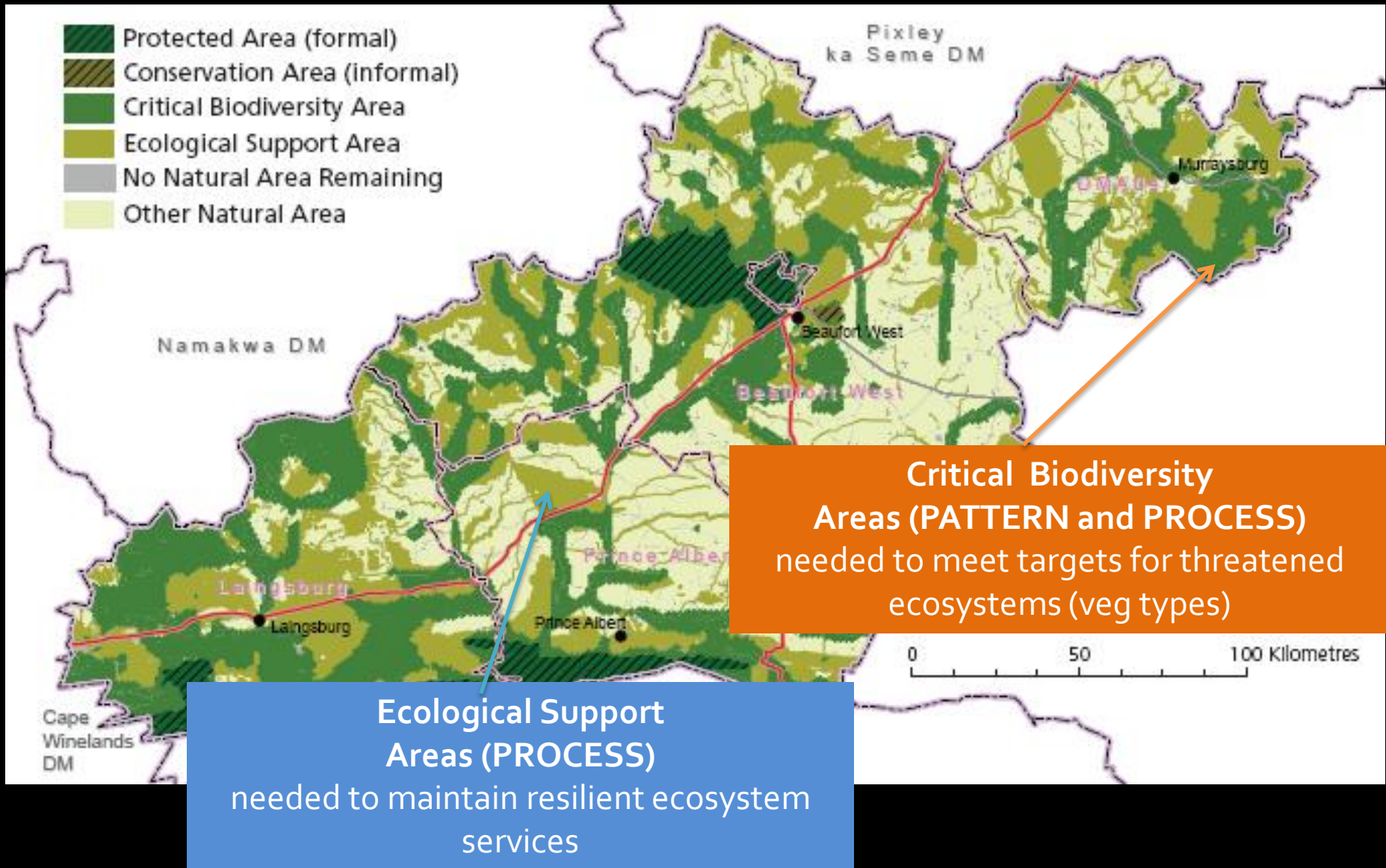
**WHERE** do we need to conserve it?

**HOW** should it be managed?

How can this information be  
**PRESENTED?**



# Maps of Critical Biodiversity Areas and Ecological Support Areas



# Example

Most of floodplain habitat = **Ecological Support Area**  
must remain *functional* for:

- habitat connectivity
- hydrological processes
- reducing flood damage

One part of floodplain = **Critical Biodiversity Area**  
must be kept as close to *pristine* as possible:

- threatened ecosystem
- rare species
- key upland-lowland migration route for several species



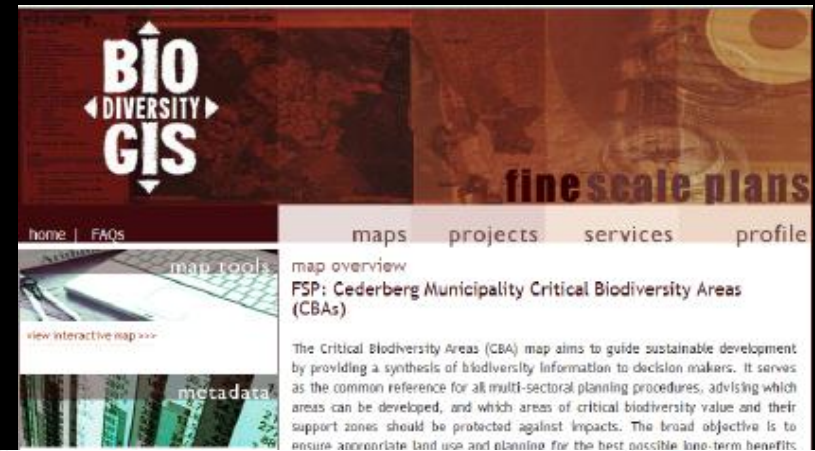
# C. Integrating biodiversity into environmental assessment

- Reactive environmental assessment – revisions in EIA legislation impose stricter conditions in CBAs
- Proactive environmental assessment –
  - Strategic Environmental Assessment
  - Environmental Management Frameworks
- CBAs and ESAs being used as conservation zones



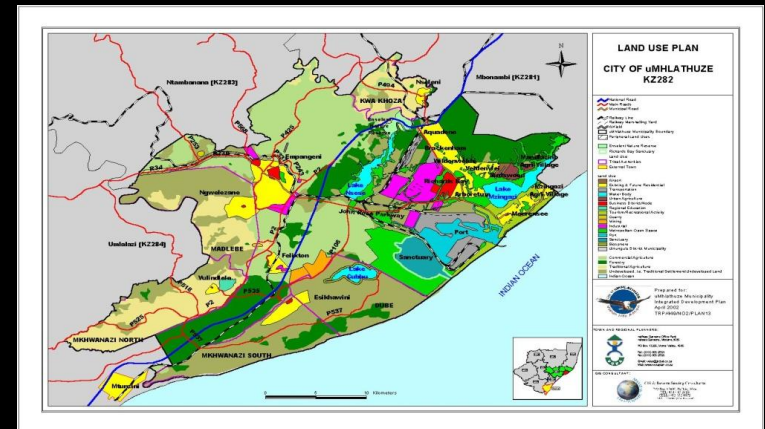
# On-line access to spatial BD information

- single web portal with all info
- 3 000 registered users of site, 300 hits per day
- used by consultants doing EIAs
- SANBI provides hands-on training
- land-use decision support tool can be used for individual sites
- [www.bgis.sanbi.org](http://www.bgis.sanbi.org)



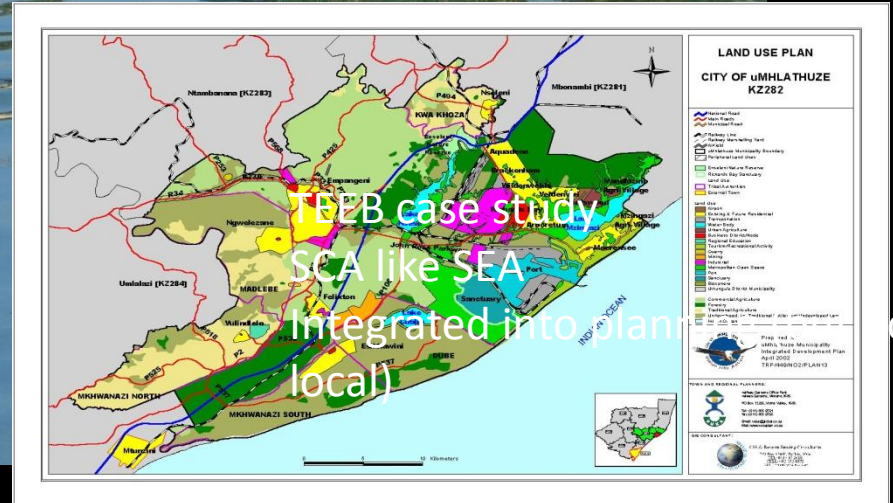
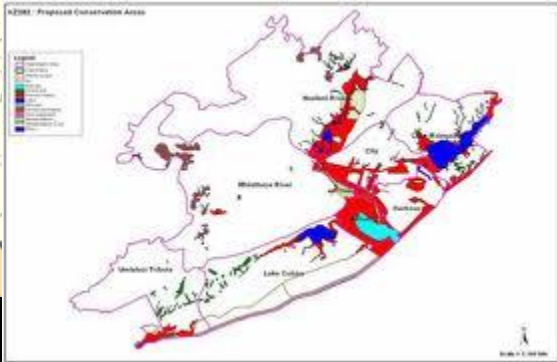
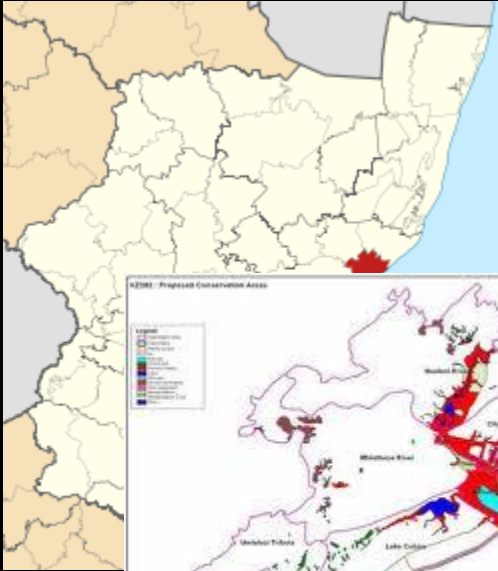
# Strategic Environmental Assessment (SEA)

- provide decision makers with information on potential environmental impacts of activities & policies
- consider cumulative, synergistic, indirect, long range, delayed and global impacts
- examine potential alternatives and mitigation measures



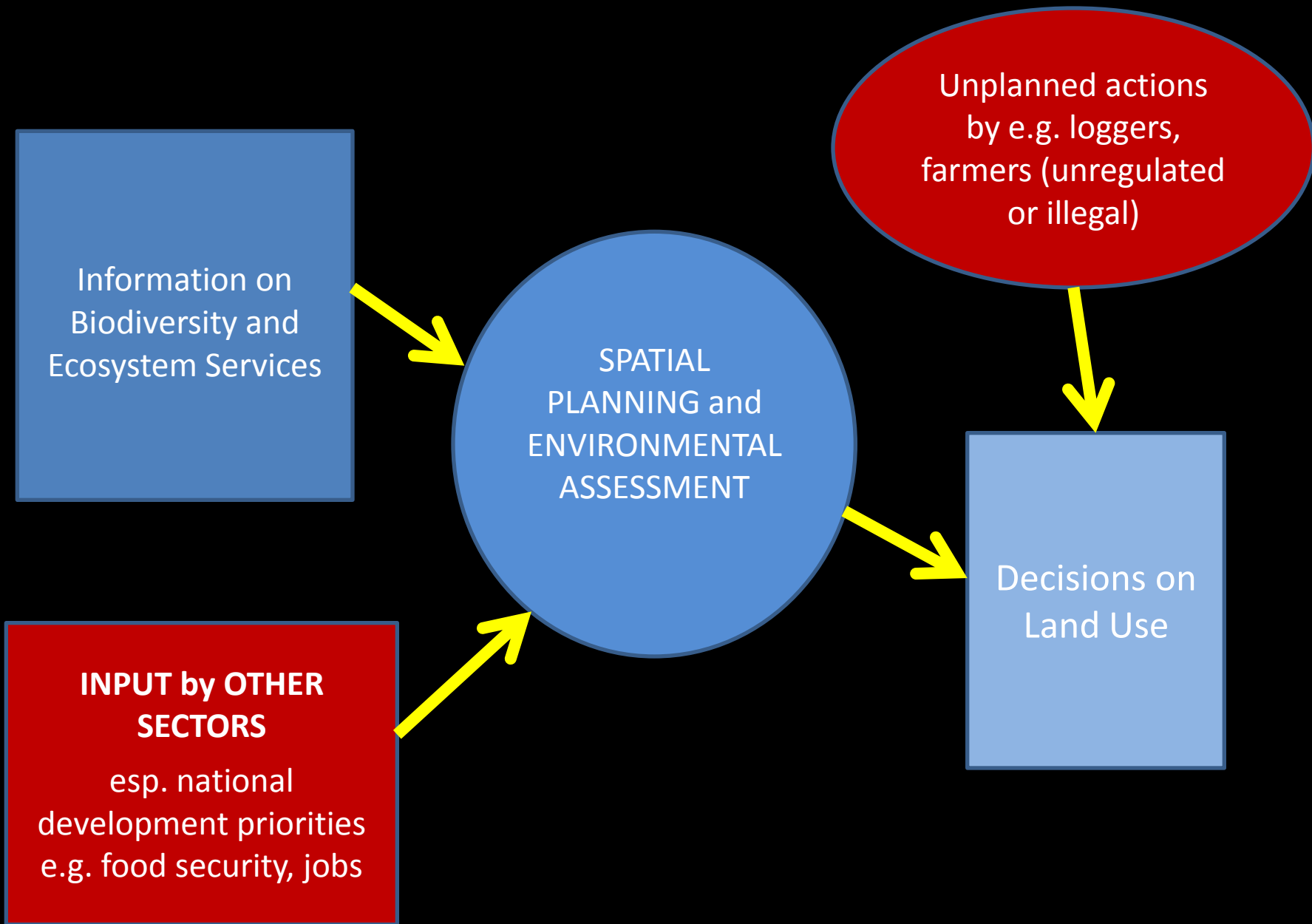


# CASE STUDY: Strategic Catchment Assessment in Mhlathuze, South Africa

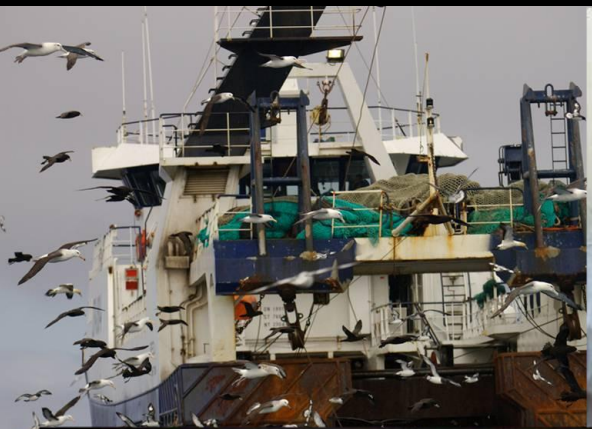


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**THANK YOU!**

