

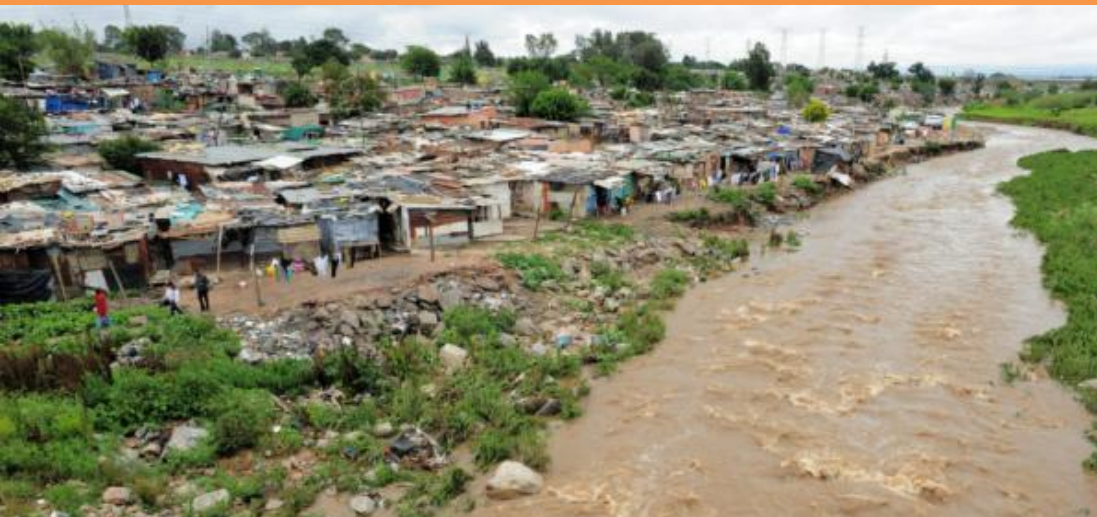


# Ecological Infrastructure

key considerations for planning

Jeffrey Manuel  
Biodiversity Planning and Mainstreaming  
j.manuel@sanbi.org.za

# The Planning and Development Challenge



Municipalities invest in infrastructure, but often not to address this challenge.



IDP priorities:

- Housing
- Access to Services
- Infrastructure

Investment is to:

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

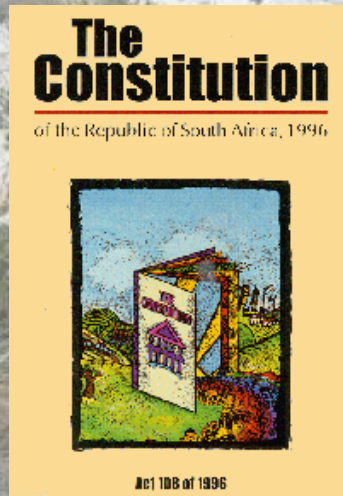
# Paradox

- Despite
  - Good integrated planning frameworks;
  - Sound environmental management policies;
  - Excellent ecological information;
- **Environment often positioned as an obstacle to development.**
- Chasing 6% growth through construction and extraction-based development model **will** result in environment being an obstacle.
- Need to shift our development (and therefore planning) frameworks.





# The Planning and Development Challenge

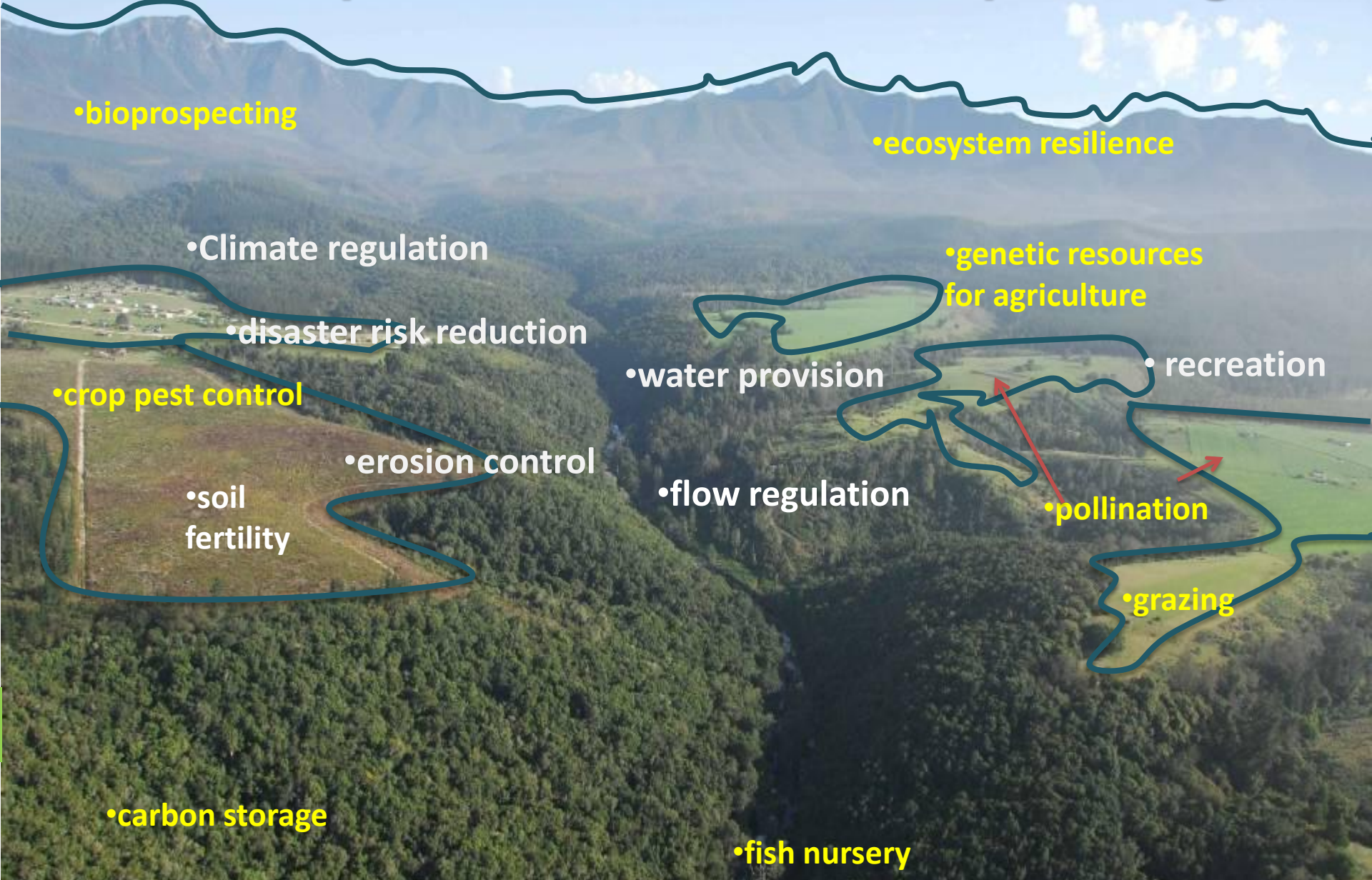


Everyone has the right to have the environment protected through reasonable laws or other means that

- Prevent ecological degradation
- Promote biodiversity conservation
- Secure **ecologically sustainable development** while promoting **justifiable economic and social development**



# Ecosystem goods and services – Links to municipal infrastructure and planning



•bioprospecting

•ecosystem resilience

•Climate regulation

•genetic resources  
for agriculture

•disaster risk reduction

•water provision

•recreation

•crop pest control

•erosion control

•flow regulation

•pollination

•soil  
fertility

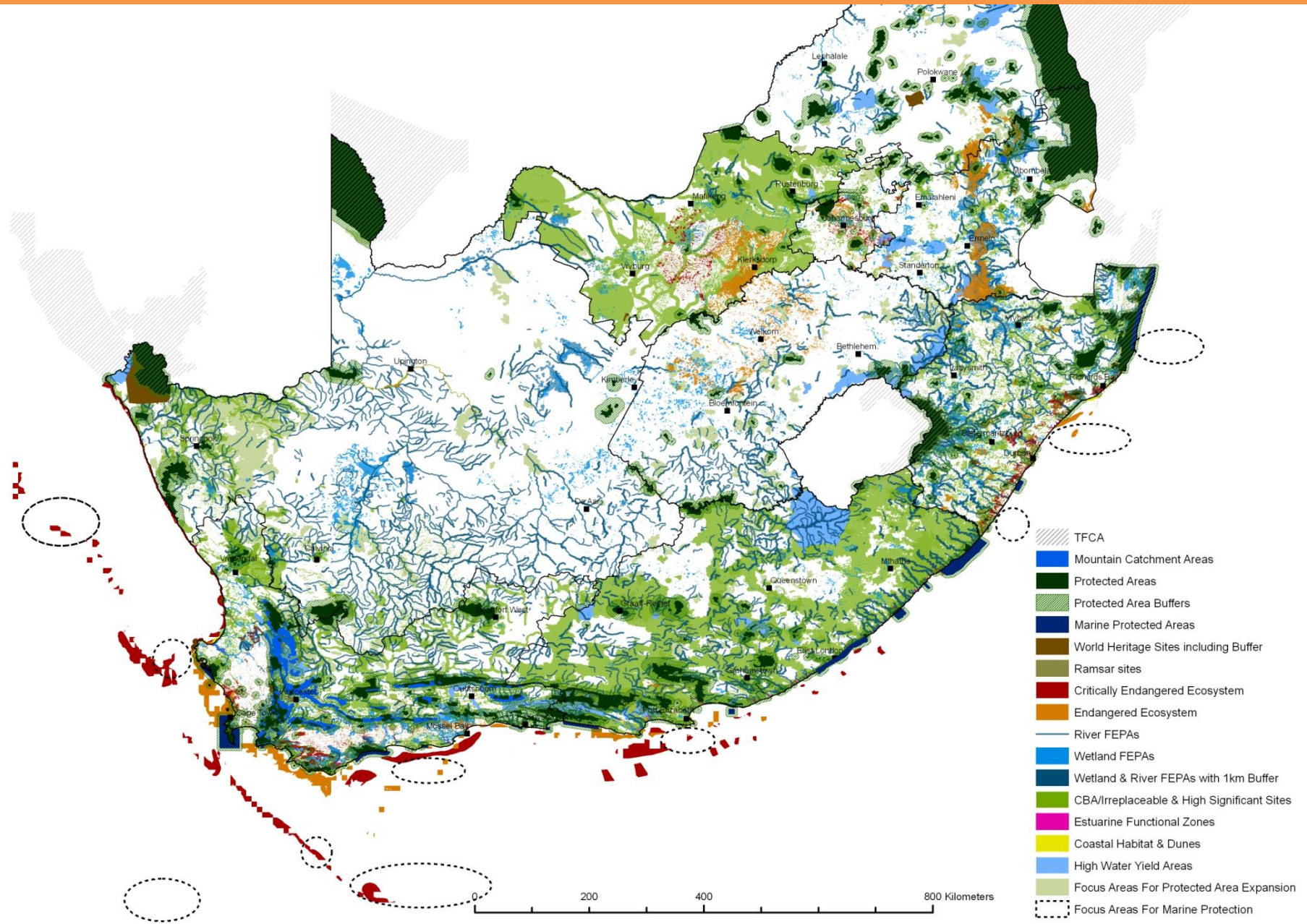
•grazing

•carbon storage

•fish nursery



# SA's Ecological Infrastructure and Biodiversity Assets



# The planning context

- Historically driven by **Zoning schemes**.
- **Little proactive planning in rural domain** & scant consideration of landscapes.
- **Rural development**: poor capacity, overlapping jurisdictions, different objectives.
- Landscape level planning = **new paradigm** to municipal land-use planning.

# Land-use planning

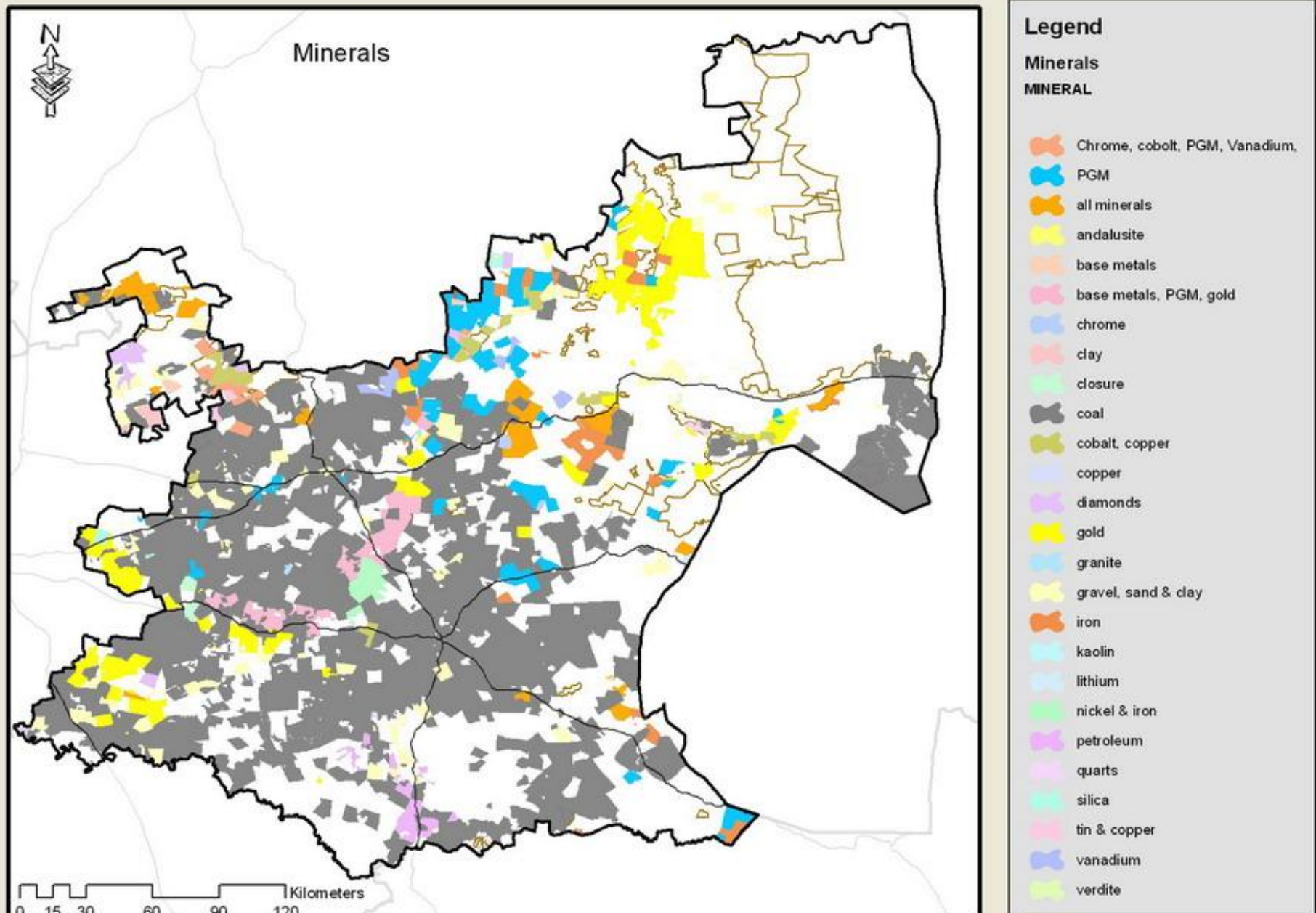
- not just a process to decide on development applications.
- **Social policy** to inform the spatial layout (and therefore impact) of human activity.
- Aims that land
  - is **used efficiently**.
  - is used for the **benefit of the wider society**.
- Aim to **prevent land-use conflicts**.



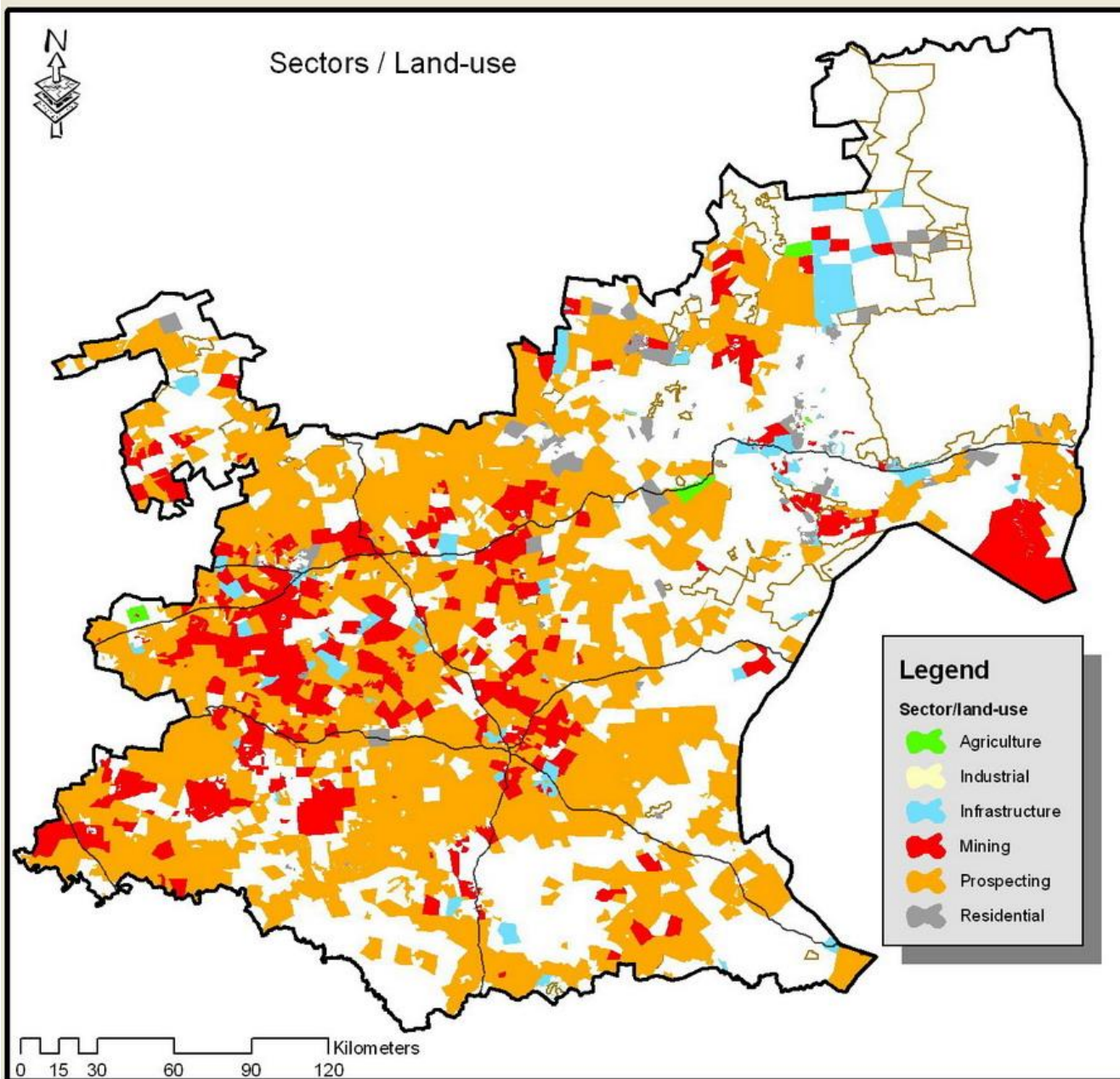
# Why municipal planning is important



# Mining potential







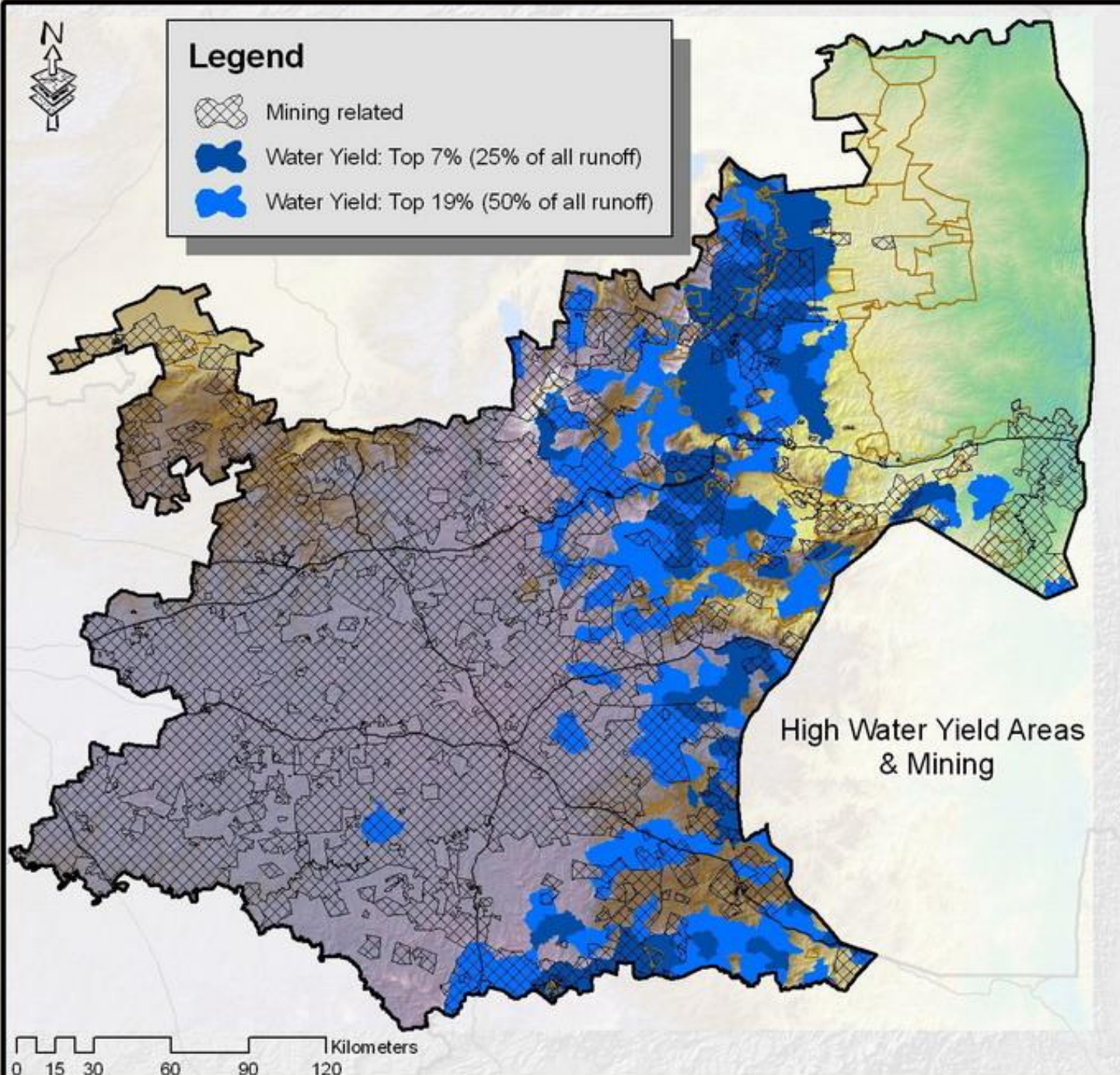
- 49 companies have applied to mine or prospect in 53% of protected areas of the province





## Legend

-  Mining related
-  Water Yield: Top 7% (25% of all runoff)
-  Water Yield: Top 19% (50% of all runoff)



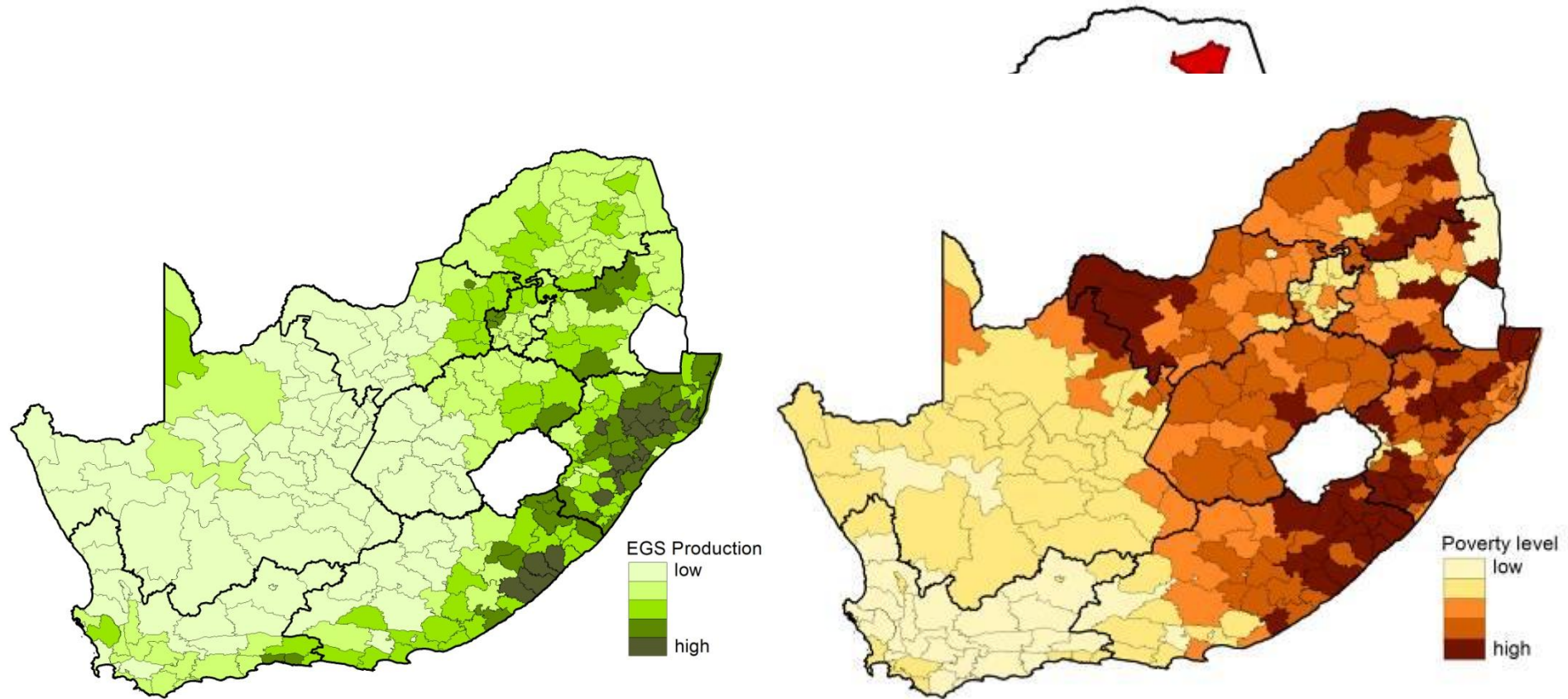
0 15 30 60 90 120 Kilometers




# Implementing the optimal development futures hypothesis

- Ideal mix of land-uses to secure the productive, extractive, and non-extractive economic activities in the long term?
- Level of realignment of infrastructure investment required to support a scenario?
- Level of skilling/reskilling required & job opportunities created/lost through a scenario?

# High supply of ecosystem services is mainly in financially poor rural areas!



High poverty munic.s: where 40% or more HHs are poor (annual income < R4 800/HH)  3

Sources: SANBI & 2<sup>nd</sup> ecn. report



# Investing in ecological infrastructure



- Labour intensive, long-term jobs
- Cost savings
  - Disaster relief
  - Disaster risk management
  - Overall infrastructure spending
  - Reducing economic downtime
- Ecologically sustainable landscapes

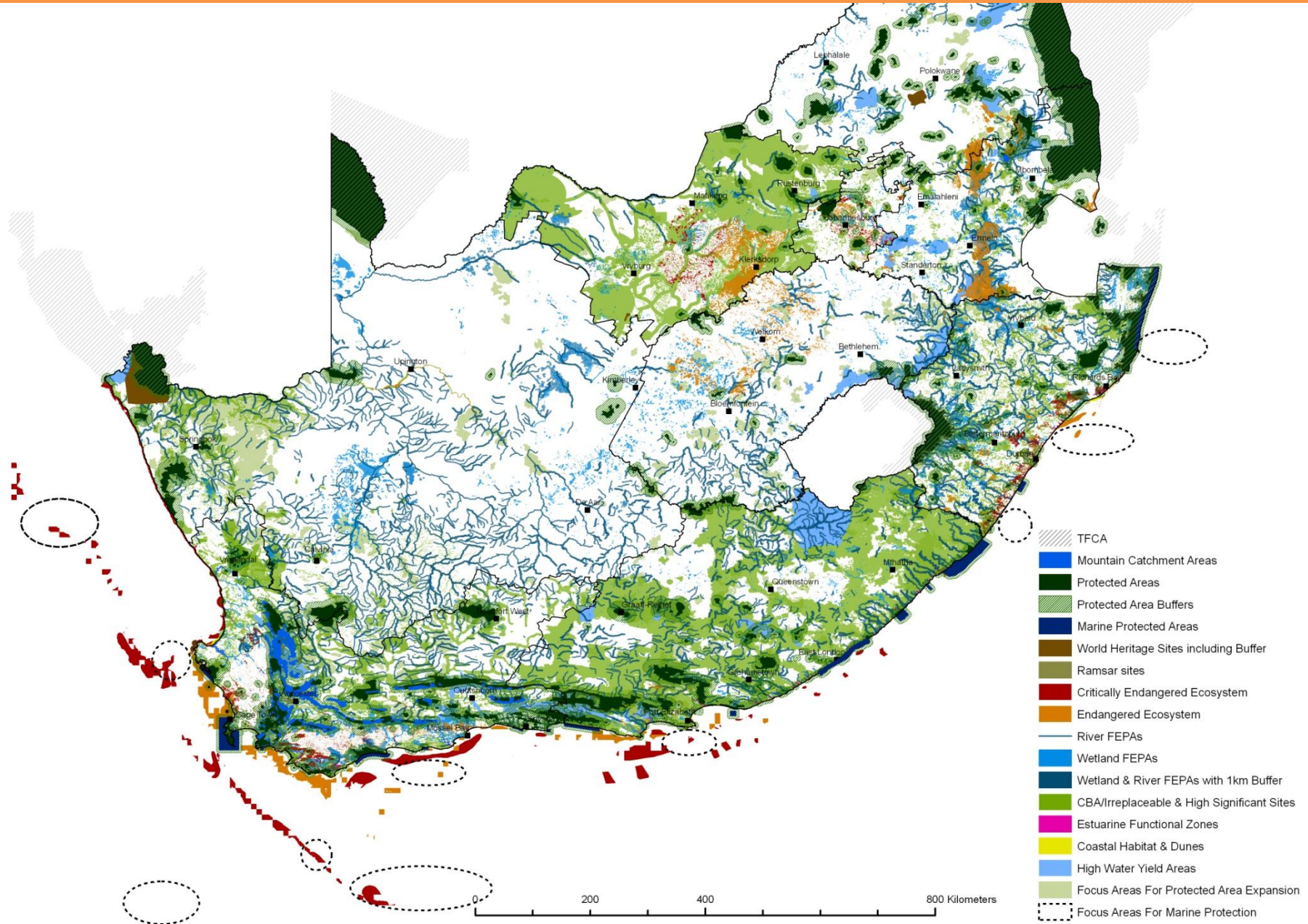


# Not investing in ecological infrastructure

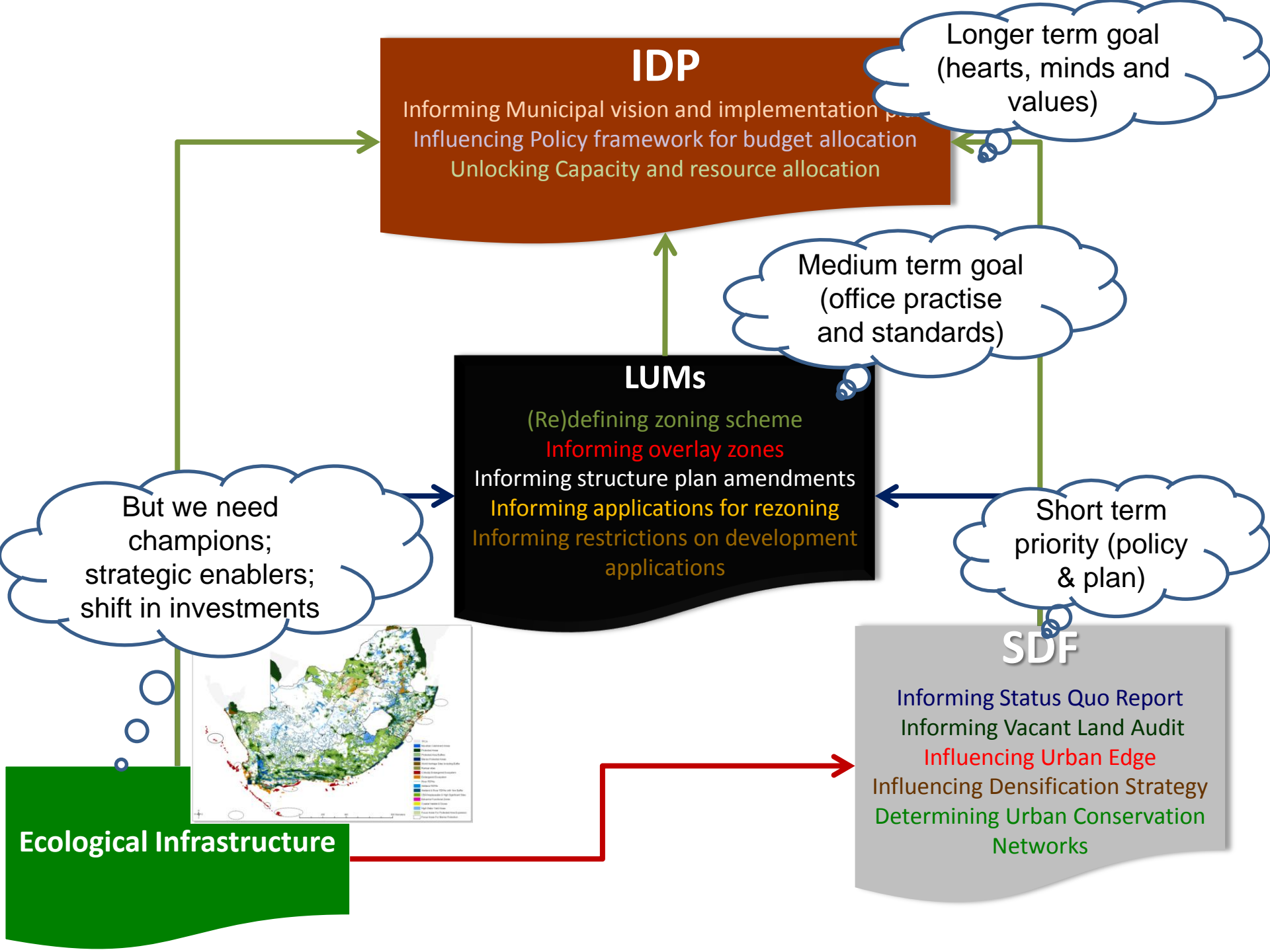




# Why not invest in Ecological Infrastructure?







# IDP

Informing Municipal vision and implementation plan  
 Influencing Policy framework for budget allocation  
 Unlocking Capacity and resource allocation

Longer term goal  
 (hearts, minds and values)

# LUMs

(Re)defining zoning scheme  
 Informing overlay zones  
 Informing structure plan amendments  
 Informing applications for rezoning  
 Informing restrictions on development applications

Medium term goal  
 (office practise and standards)

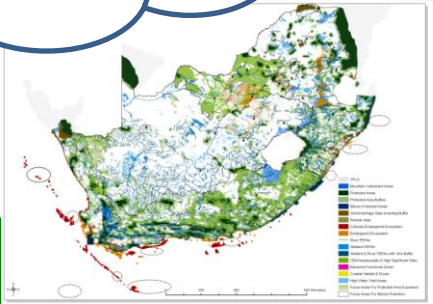
But we need champions;  
 strategic enablers;  
 shift in investments

Short term priority (policy & plan)

# SDF

Informing Status Quo Report  
 Informing Vacant Land Audit  
 Influencing Urban Edge  
 Influencing Densification Strategy  
 Determining Urban Conservation Networks

# Ecological Infrastructure



# Ecological infrastructure: services from nature that underpin

- BETTER RETURN ON STATE INVESTMENT
- Improved services – urban and rural
- Job creation – through proper management of ecological infrastructure
- Disaster risk management and climate change

