

Albany Thicket: Where to from here?

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EXPANDED PUBLIC WORKS PROGRAMME
CONTRIBUTING TO A NATION AT WORK

NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004

“**biological diversity**” or “**biodiversity**” means the variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems;

So What?

Awareness Amongst Local Political Leaders (Wilhelm-Rechman & Cowling 2010)

- Only 11 (30%) of the 37 councilors could spontaneously provide a definition of biodiversity.
- Of these 11, only five (14%) provided a reasonably correct definition, while none offered a textbook definition.
- Five (14%) were unable to provide any definition at all



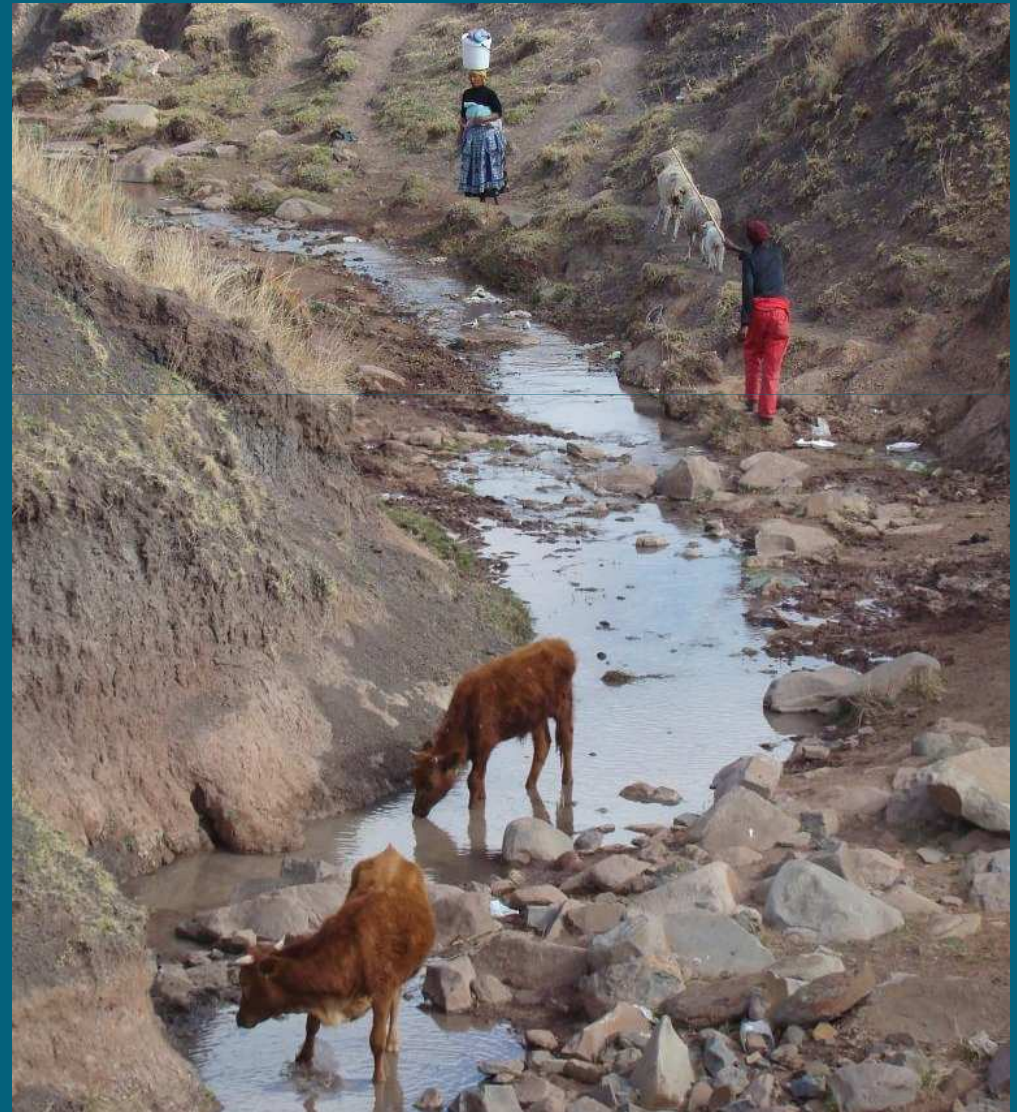
But



- 35 (95%) of the councilors could spontaneously provide a definition of sustainability.
- Nearly half (49%) provided definitions that did not refer in any way to nature or the natural environment.
- Only five (14%) accorded major importance to the protection of nature for achieving sustainability

Socio-Political Priorities in South Africa (and the rest of Africa)

- Health
- Education
- Crime
- Employment
- Rural Development

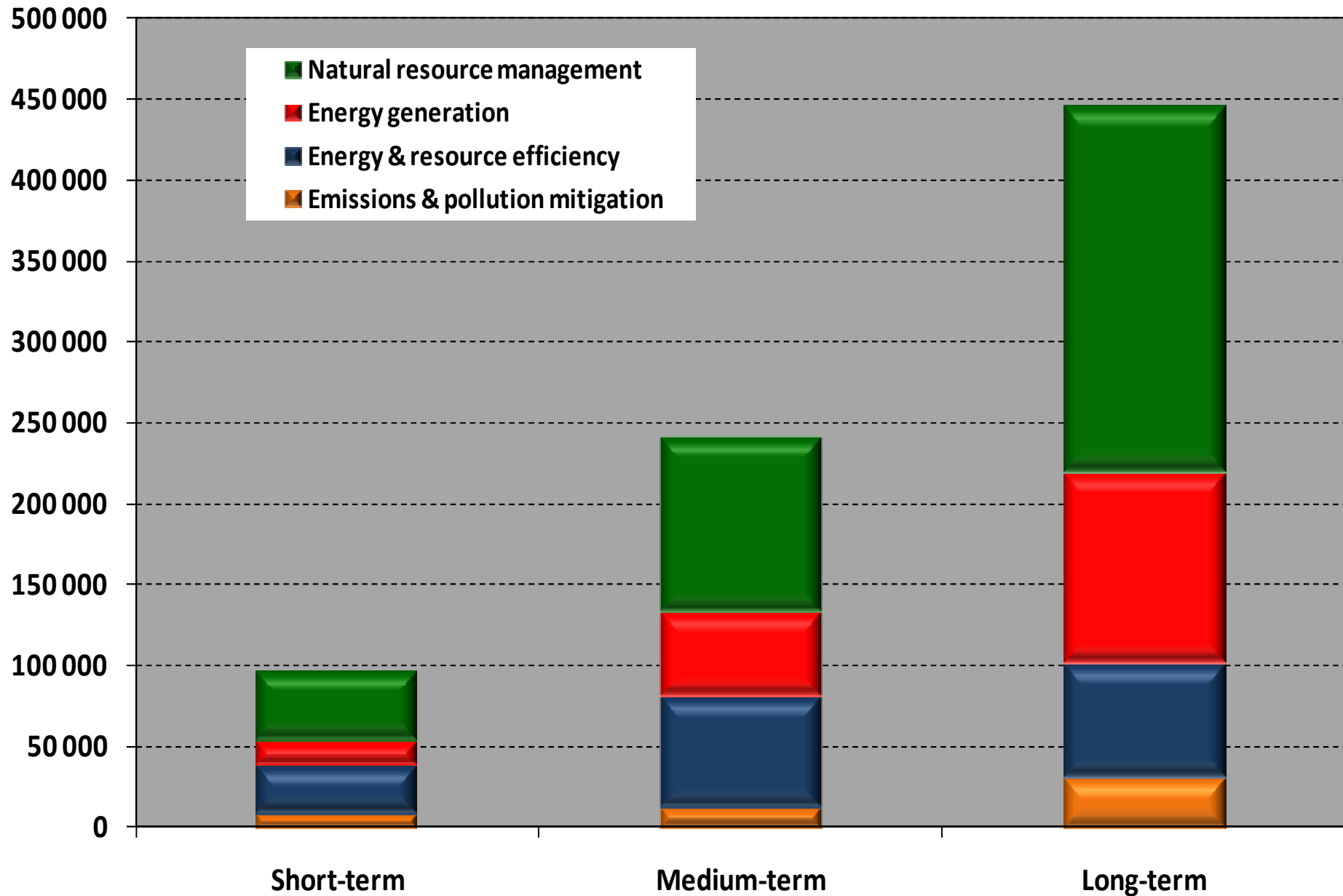


Investment into
Ecosystem, Services – How
competitive is the Thicket?

An Estimate of the Potential Size of the Market for Ecosystem Services

- Current
 - **23,915** full time equivalent employment opportunities needing an annual turnover of **R1.882 billion (\$260 million)**.
- Future demand
 - **230,824** full time equivalent employment opportunities needing an annual turnover of **R57,271 billion (\$7.5 billion)**.

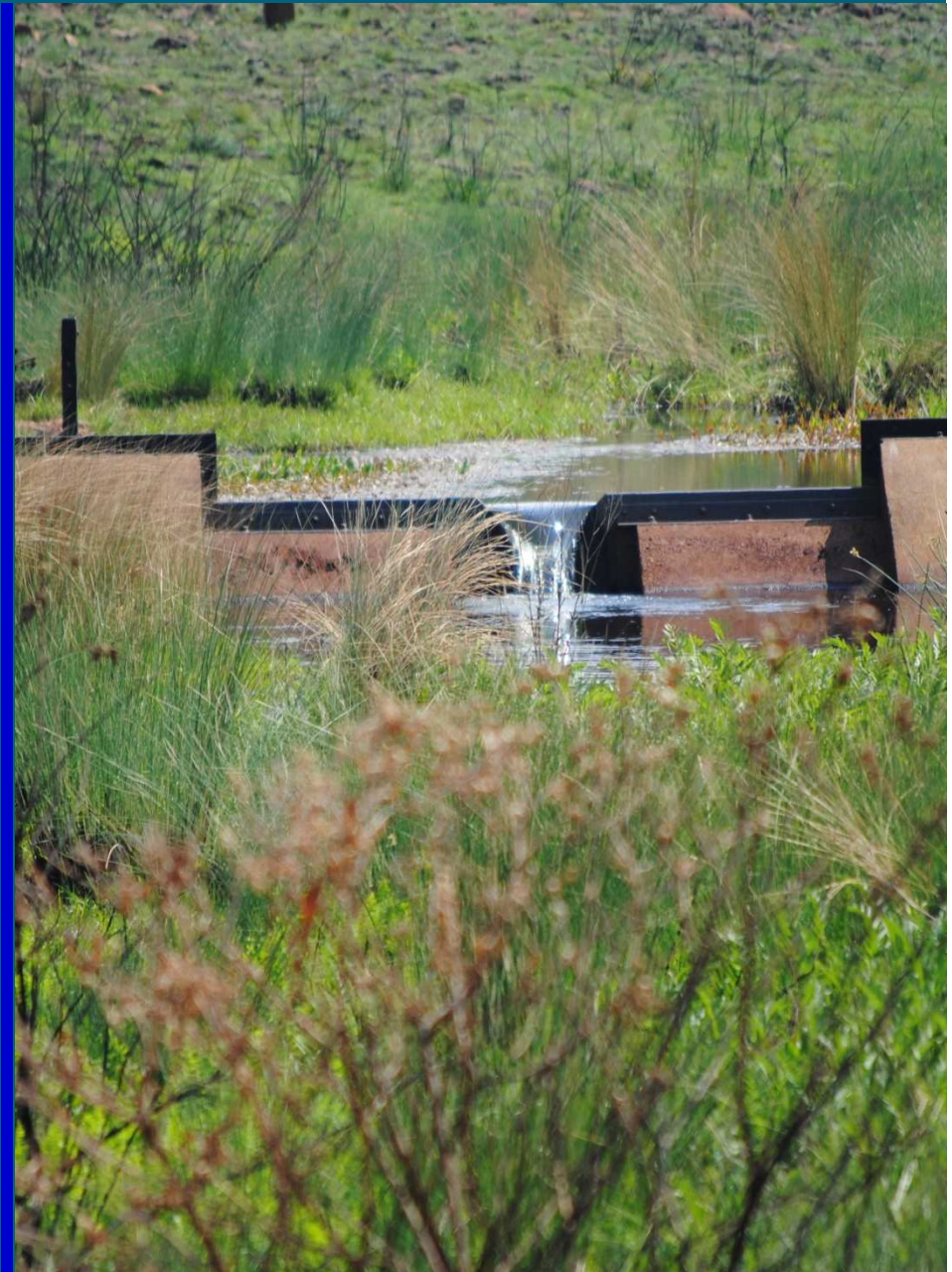
Total: green job creation potential



Source: IDC, DBSA, TIPS

The Upper End of the Water Value Chain: Watershed Services

- Flows
 - Flood/high flows
 - Low Flows
 - Yield from water infrastructure
 - Ecological Reserve
- Sediments
 - Siltation of dams
- Water quality
 - Purification costs
 - Waterweed management costs
 - Health risks



Climate change mitigation and adaptation

- Offsetting carbon emissions.
- Voluntary Carbon Standards
- Reduced Emissions from Deforestation and Desertification (REDD)
- Fires
 - *To enhance the sustainability and protection of life, livelihoods, ecosystem services and natural processes through integrated fire management in order to contribute to economic resilience, social equity and accelerated service delivery.*



It's going to be difficult to monetize all Ecosystem Services.

- We need to identify those marketable services that are going to interest business
and
- Those the ones that governments would want to invest in
- or both



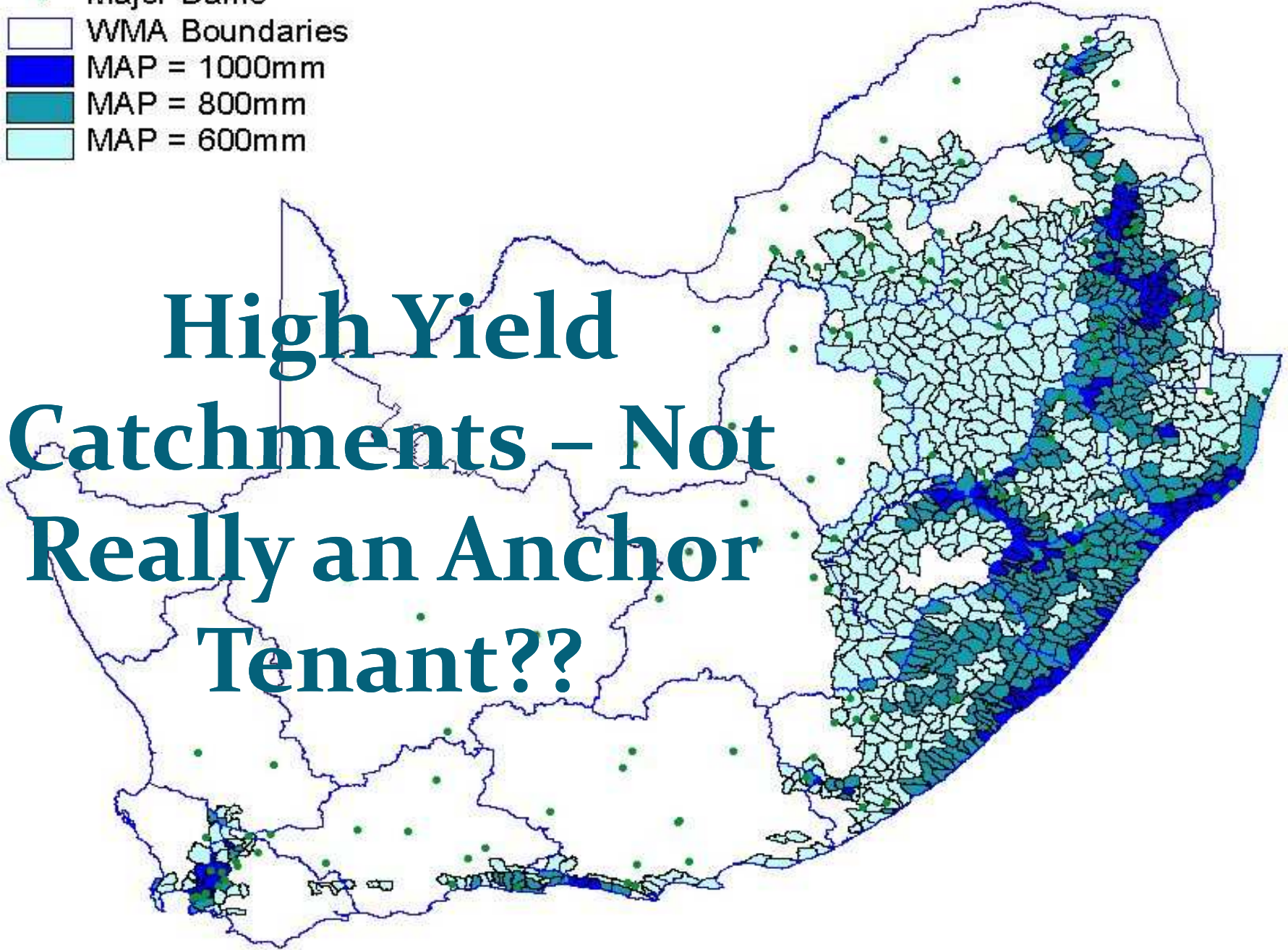
Some perceptions about the willingness of business to invest

- Business is interested in minimizing their risk and
- A competitive edge over their competitors
- It is therefore necessary to focus on how the restoration and maintenance of ecosystem services can reduce their risk and improve competitiveness

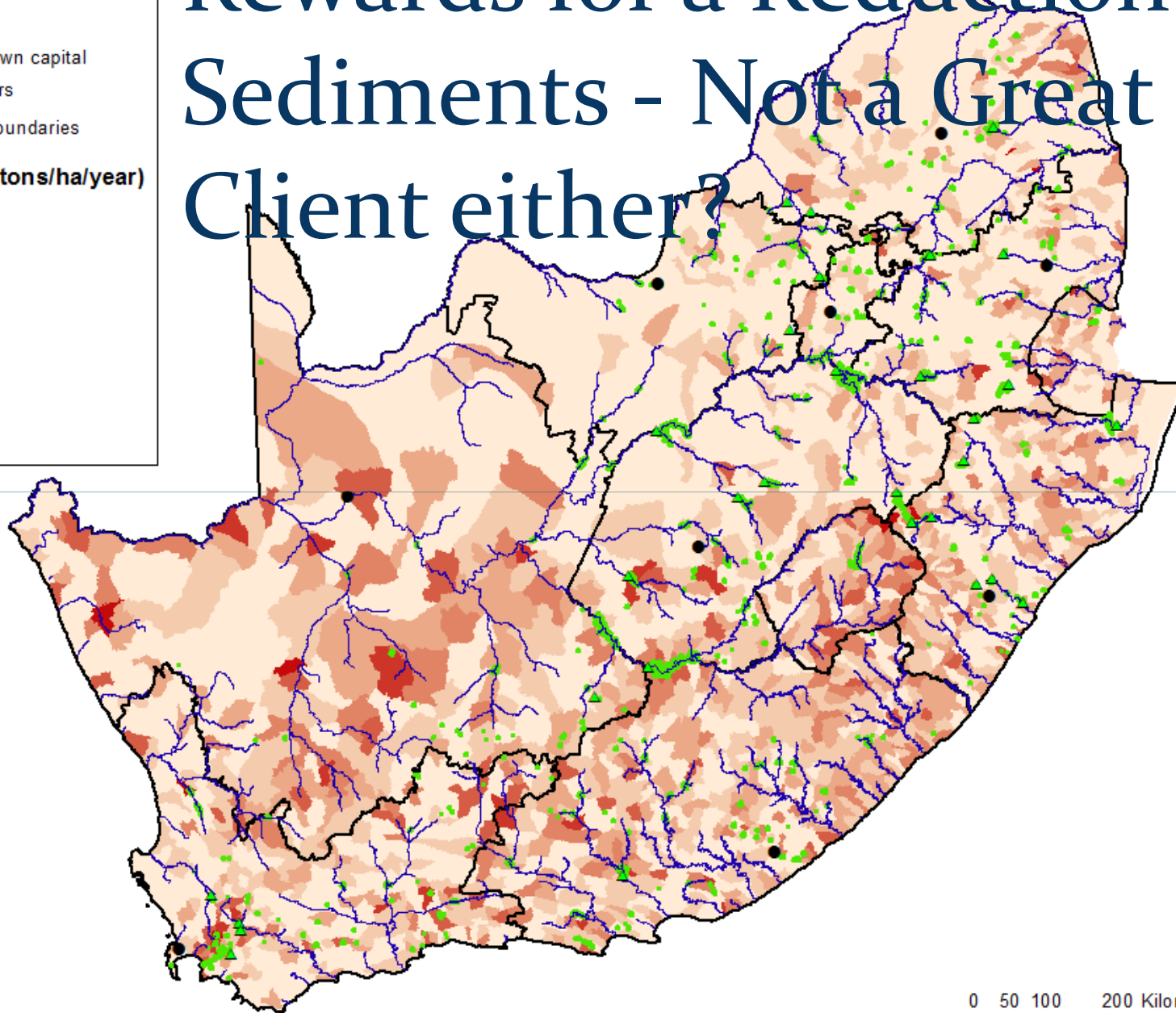
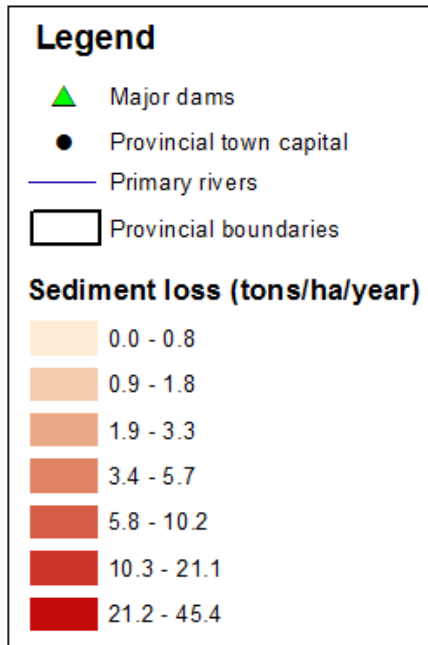


- Major Dams
- WMA Boundaries
- MAP = 1000mm
- MAP = 800mm
- MAP = 600mm

**High Yield
Catchments – Not
Really an Anchor
Tenant??**

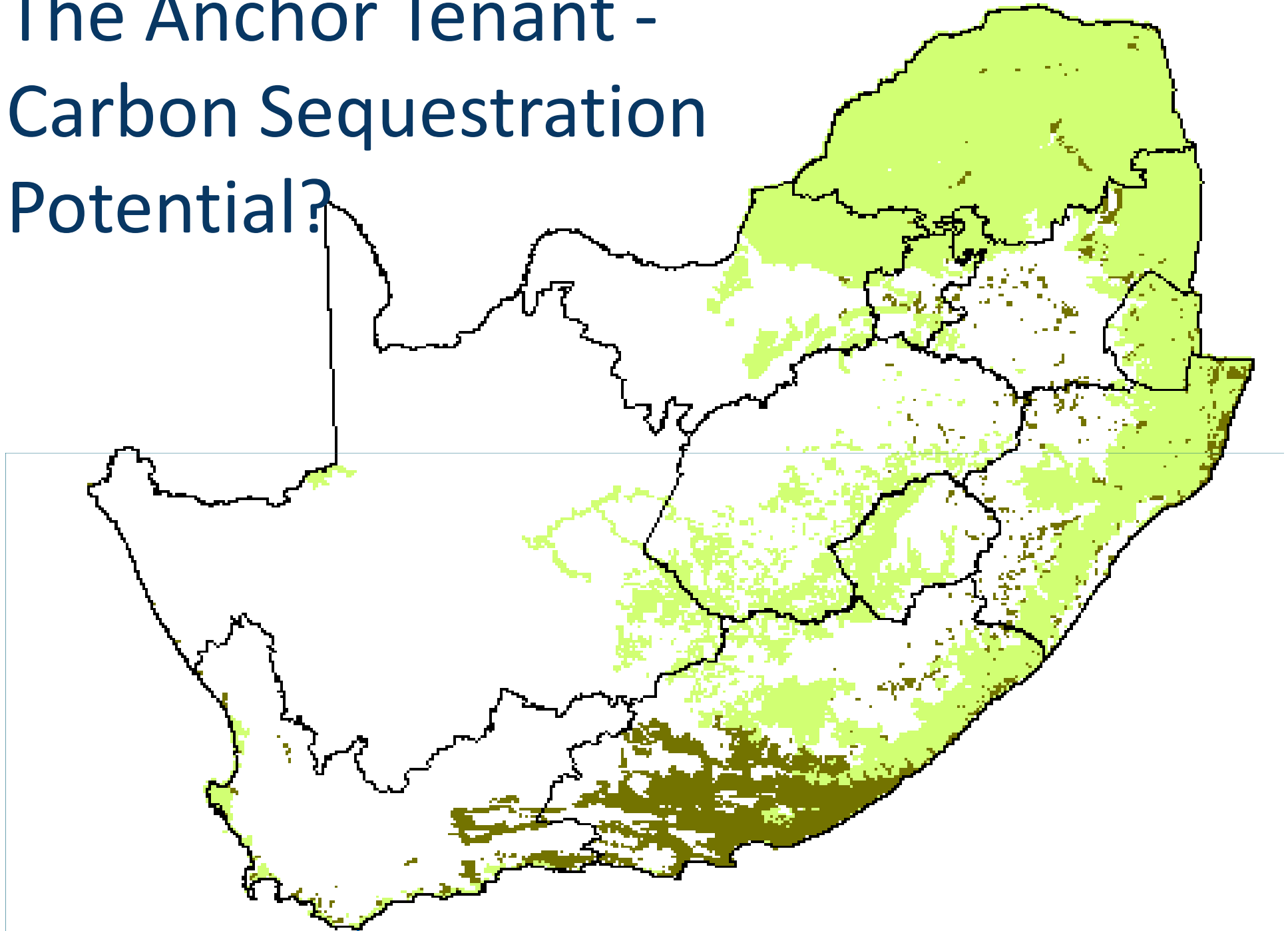


Rewards for a Reduction in Sediments - Not a Great Client either?

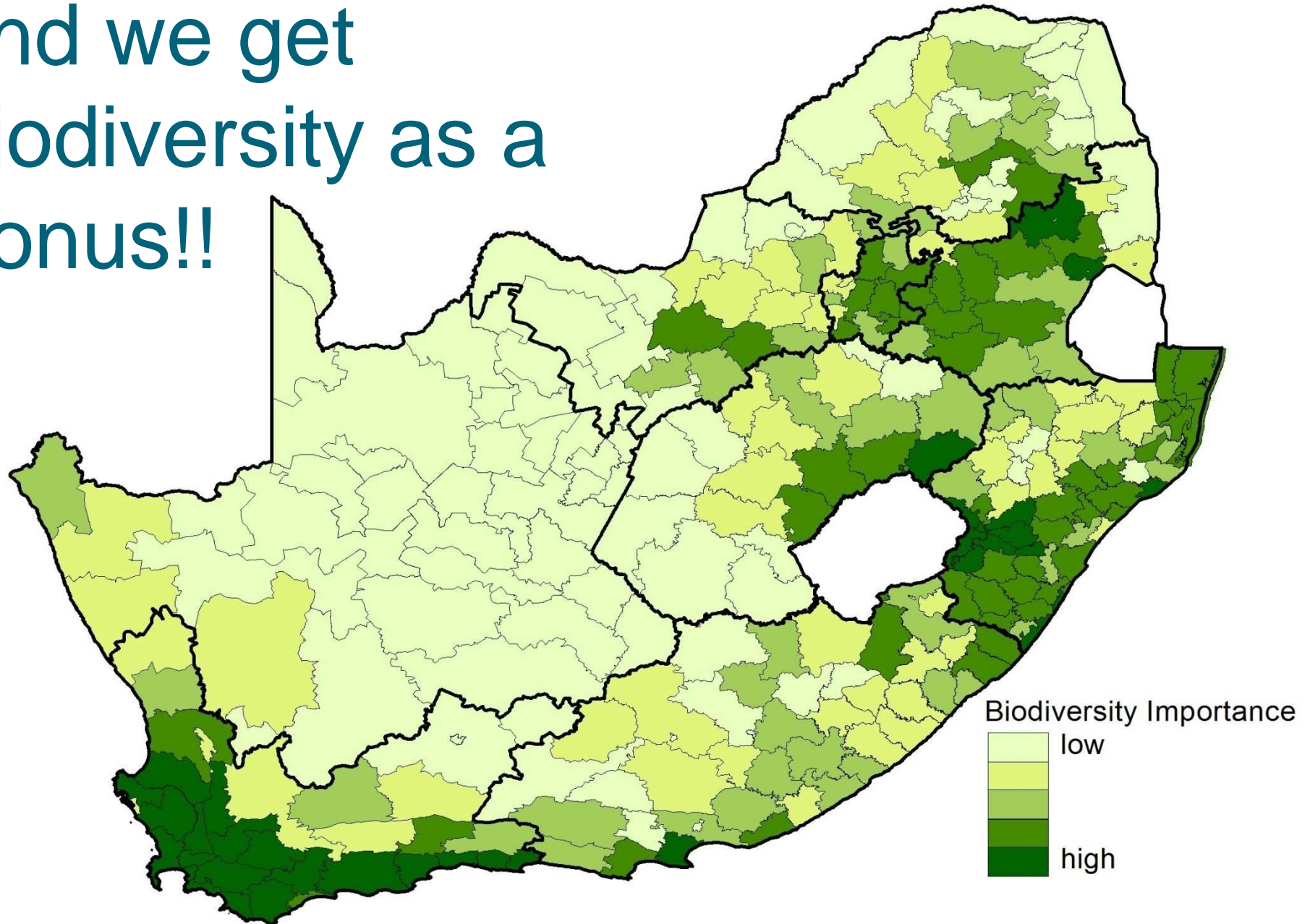


0 50 100 200 Kilometers
|-----|-----|-----|-----|-----|

The Anchor Tenant - Carbon Sequestration Potential?



And we get
Biodiversity as a
Bonus!!

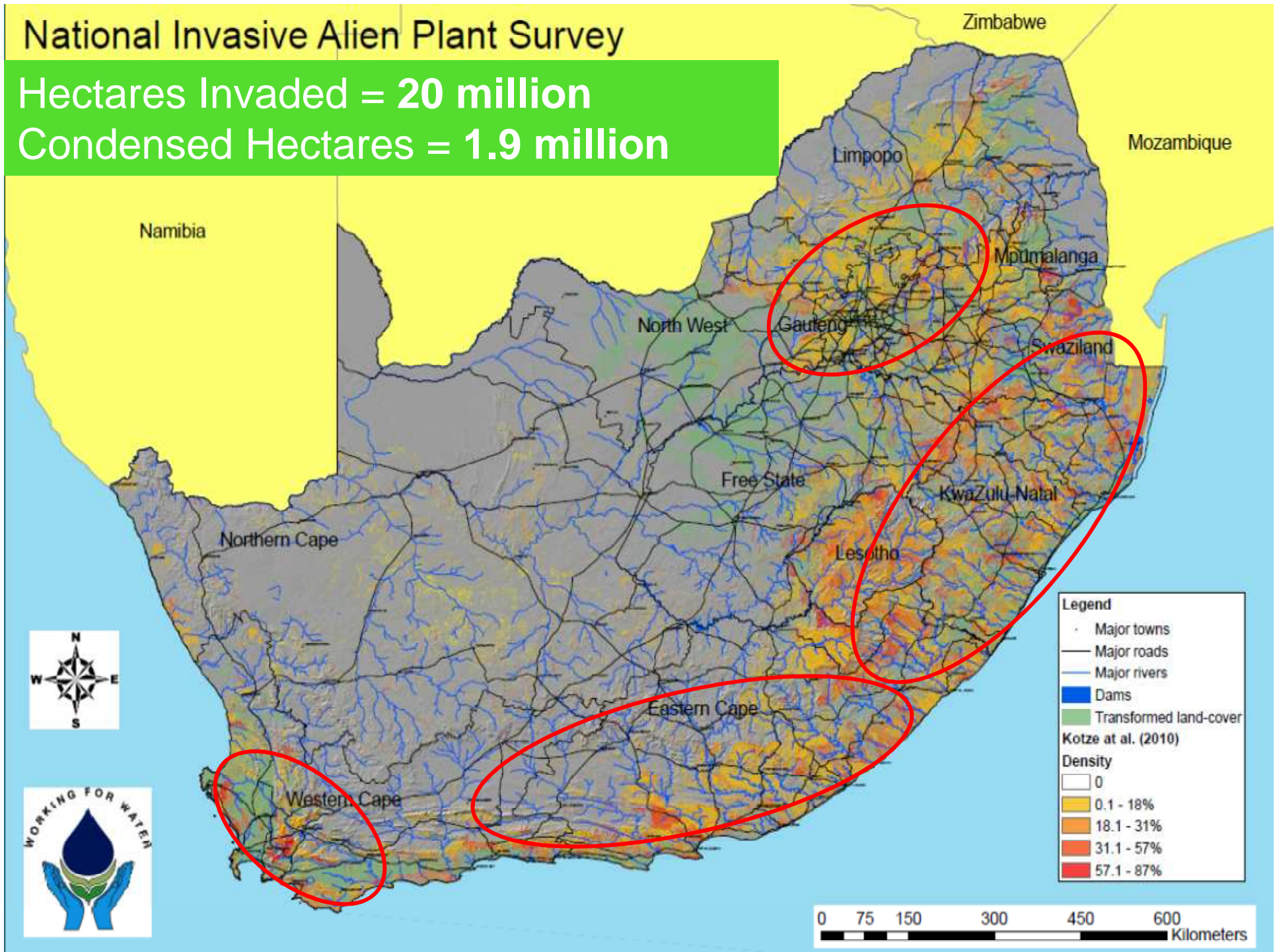


Where are the biggest needs for investment?



National Invasive Alien Plant Survey





Hectares Invaded = 20 million
Condensed Hectares = 1.9 million










Degraded Areas of the Country

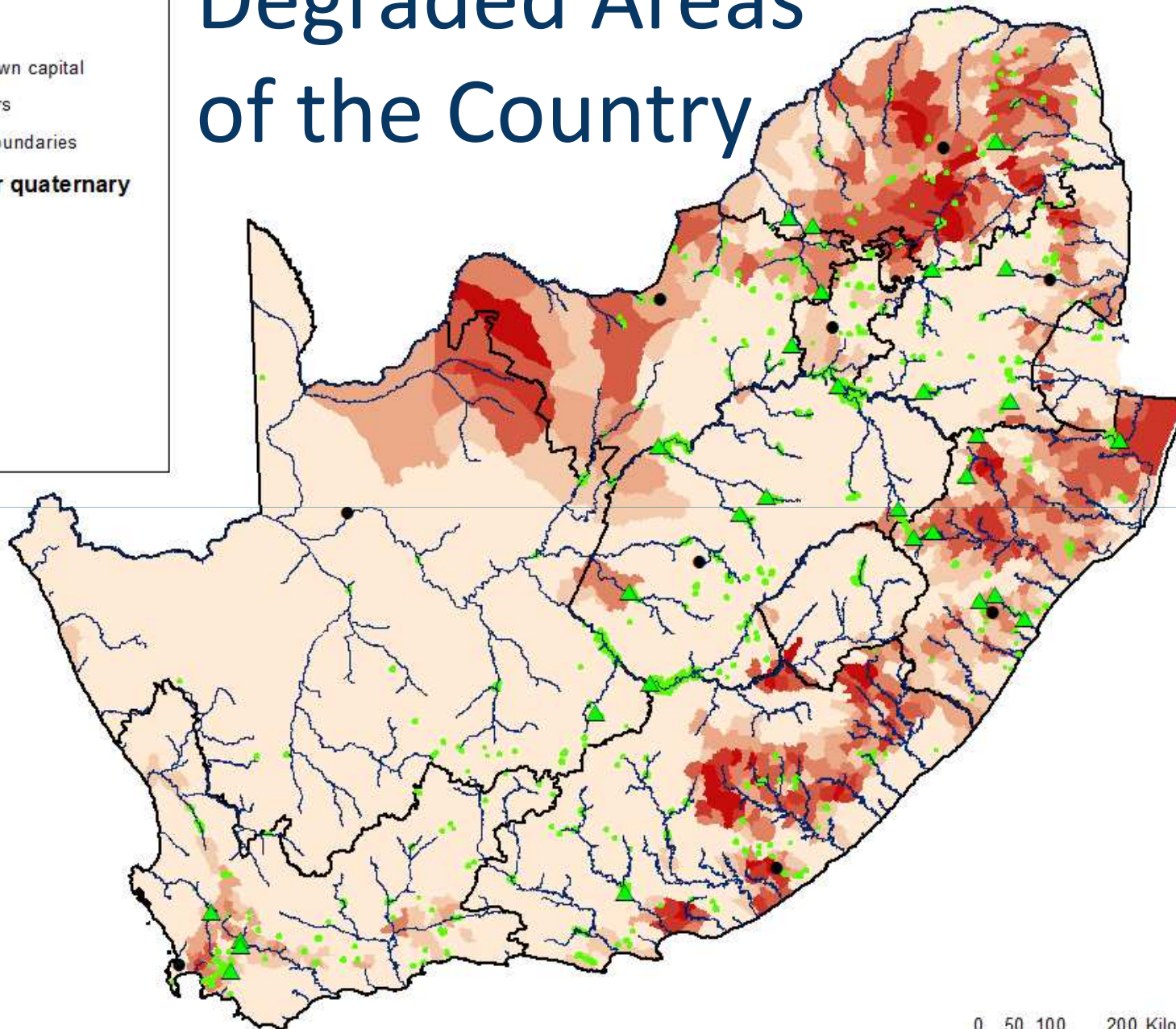


Legend


-  Major dams
-  Provincial town capital
-  Primary rivers
-  Provincial boundaries

% Degraded per quaternary

-  0.0 - 1.0
-  1.1 - 3.3
-  3.4 - 6.2
-  6.3 - 10.3
-  10.4 - 16.8
-  16.9 - 26.3
-  26.4 - 60.7



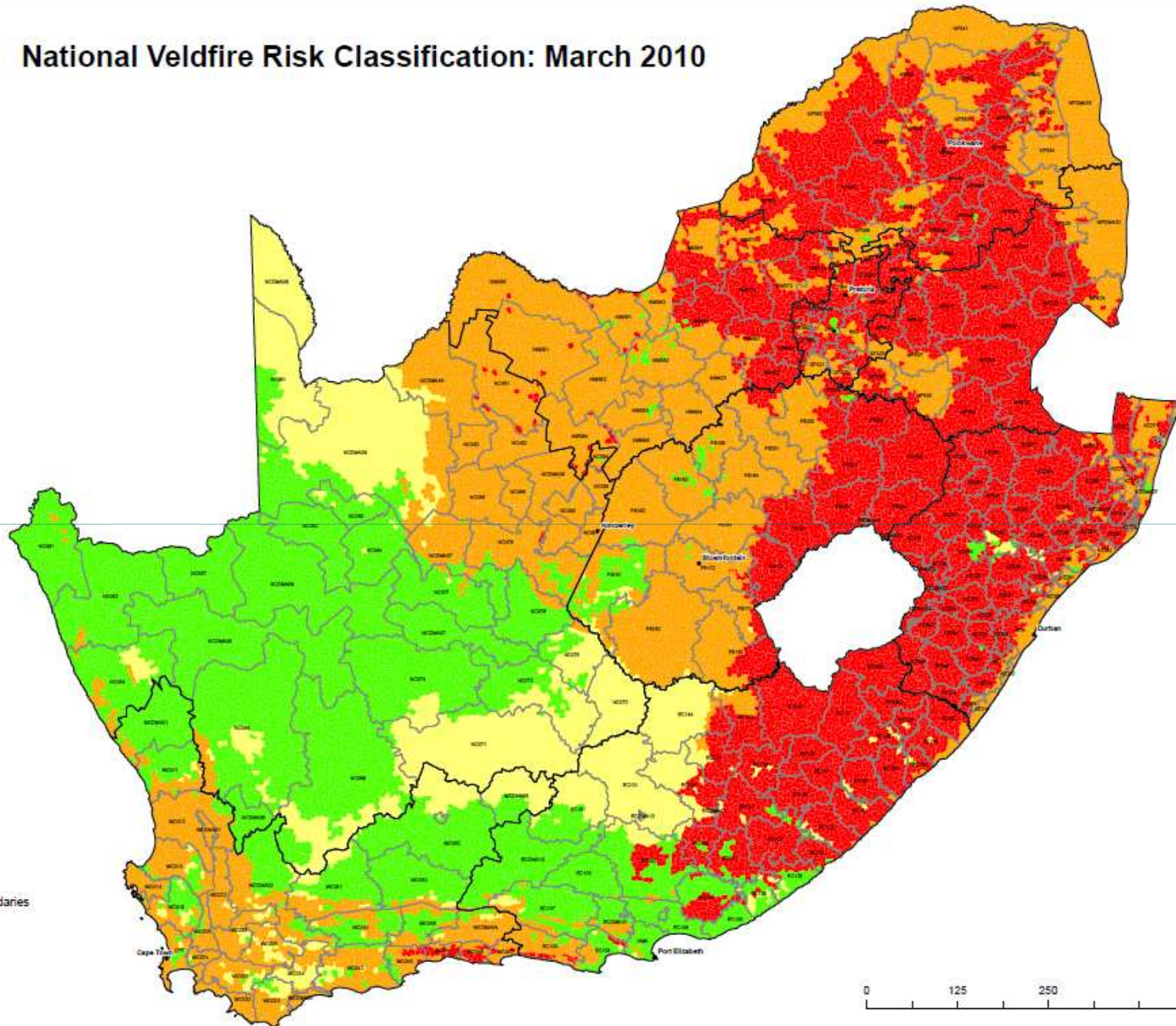
0 50 100 200 Kilometers



National Veldfire Risk Classification: March 2010

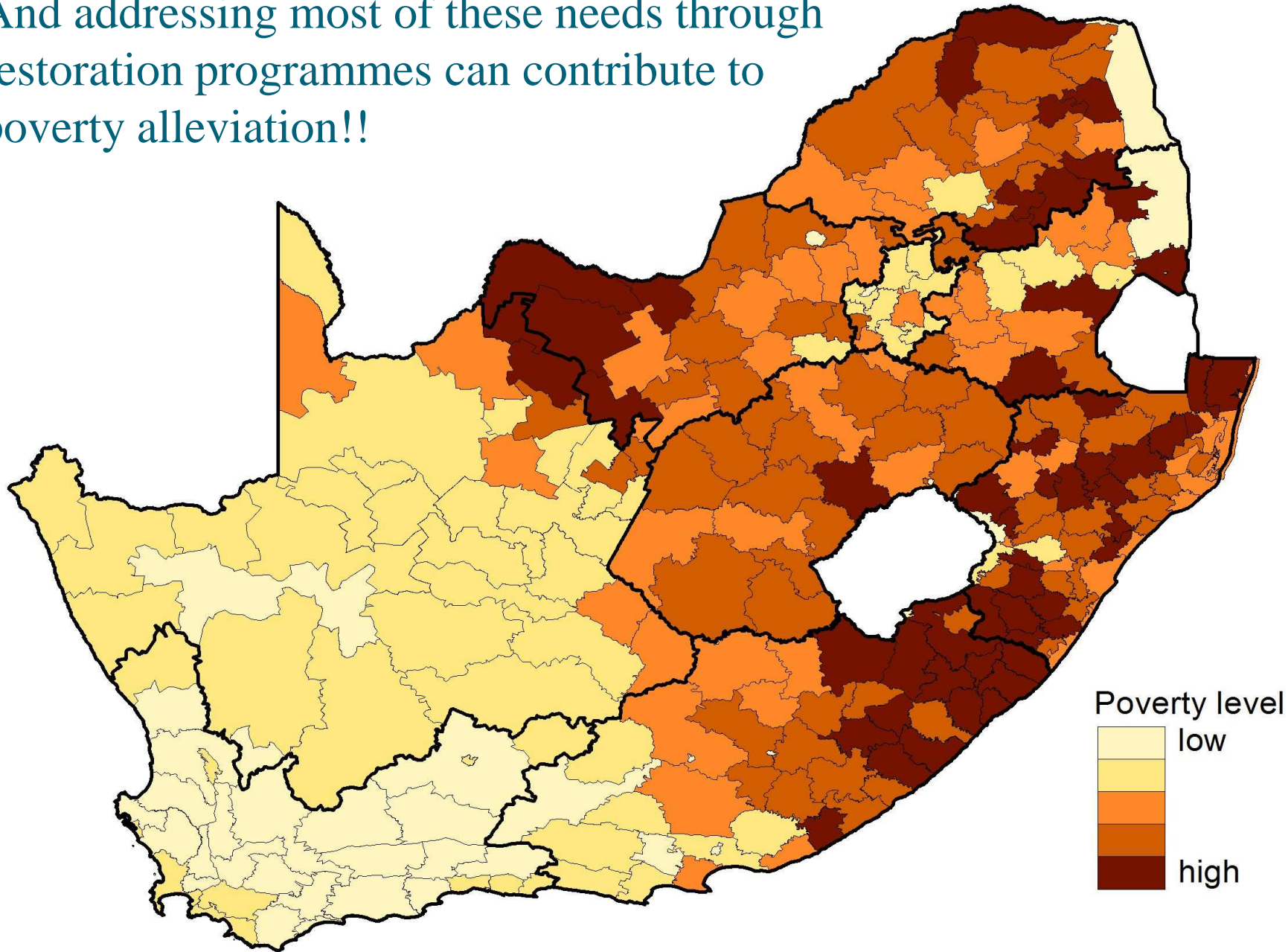
Overall Risk Class

- Extreme
- High
- Medium
- Low
- Municipal Boundaries
- Provinces



0 125 250 500 Kilometers

And addressing most of these needs through restoration programmes can contribute to poverty alleviation!!



This does not mean that non marketable services are less important though

- Ecosystem agreements should be structured that the whole suite of services are considered



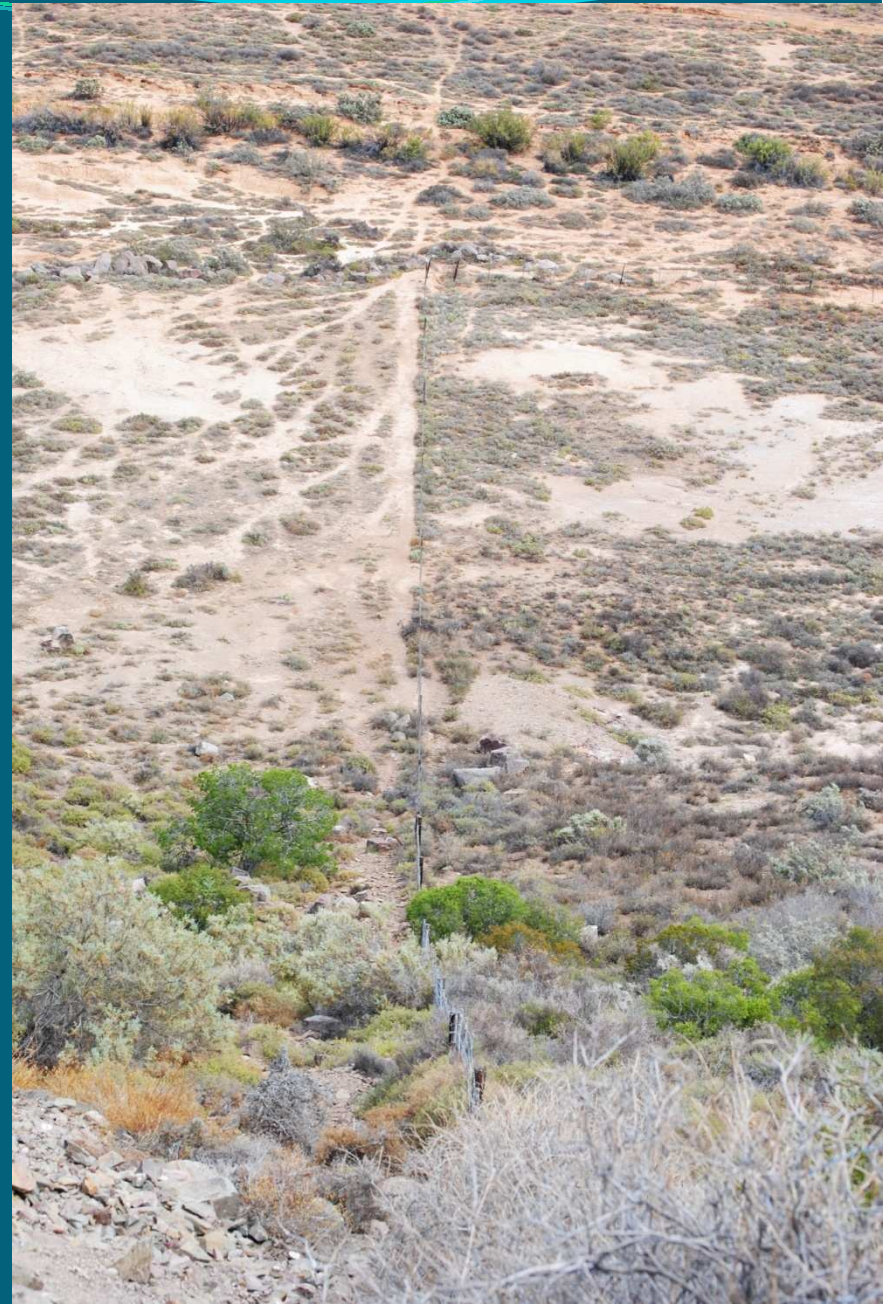
What should be the approach?

- Private Land Users need to take ownership of the state of natural resources on their land and be prepared to invest some of their own resources to restore and protect it.
- There is potential for mainstreaming of natural resource management into government priorities through wage incentives.



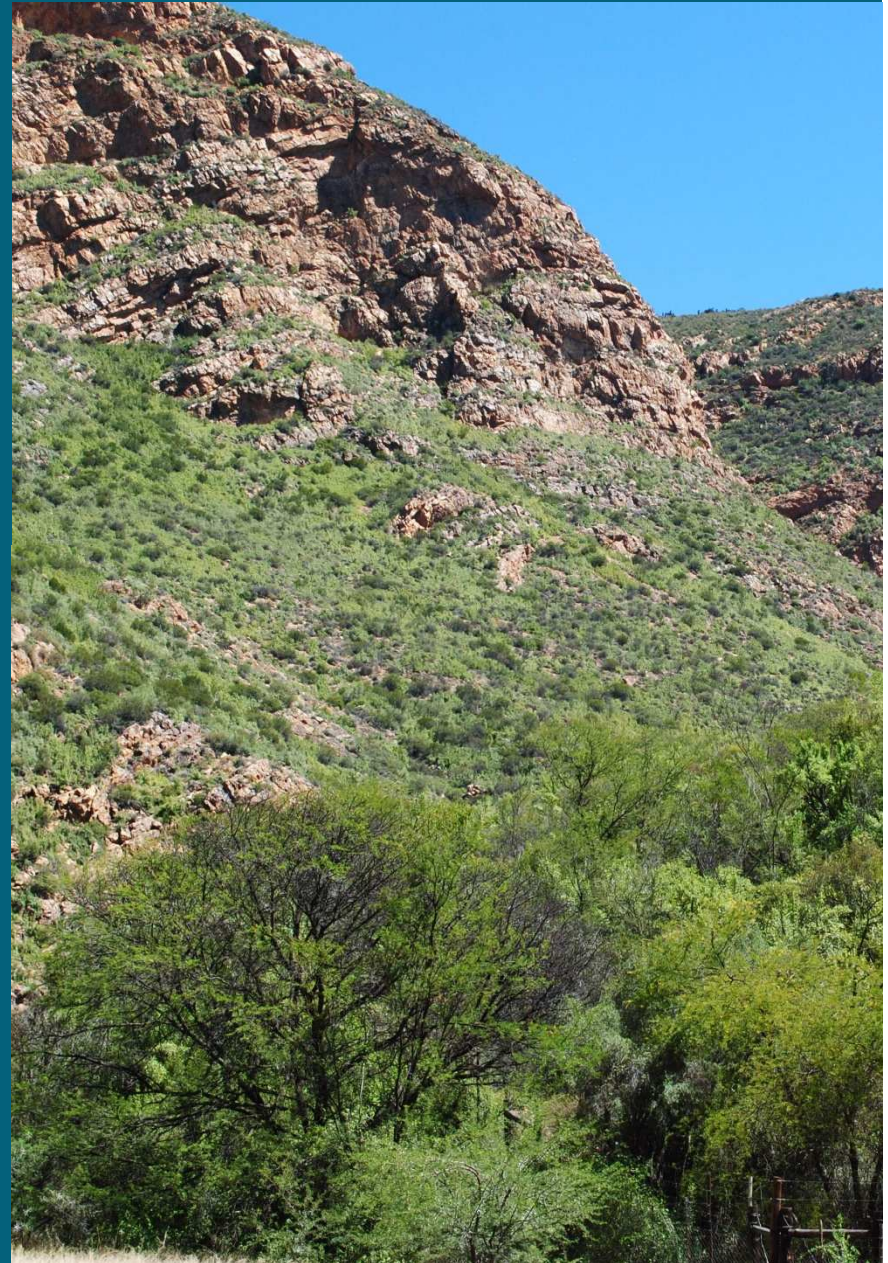
What should be the approach and what are the pitfalls ? Cont.

- The carbon market is not suddenly going to make land users millionaires!!
- Transaction costs are extremely high.
- The conditions to enter the carbon market are very strict.



What should be the approach and what are the pitfalls? Cont.

- The carbon market is not suddenly going to make land users millionaires!!
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What do we need to do to unlock investment?

- Improve primary ecological science assumptions
- Translate ecological assumptions into economic consequences of changes in the delivery of ecosystem services
- Improve Institutional Arrangements & Governance
 - The need to regulate land use practices for the protection of the quality and quantity of “in situ” and “ex situ” ecosystem services?
 - Regulating the market for ecosystem services itself?
 - The development of legal tools/mechanisms for buyers and sellers of ecosystem services to engage with the market?
 - Land users will have to cooperate if they want to be competitive. What are the legal options?
- Awareness amongst both buyers and sellers of ecosystem services.

Thank You!!

