

**WHAT IS SPECIAL  
ABOUT THE  
THABO MOFUTSANYANE REGION  
REGION ?**

**Maitland Seaman**

What do we have in the Region?

and

Why might it be special?

and

What about a nice biodiversity  
(ecotourism?)  
focus at Qwa Qwa?







Kimberley

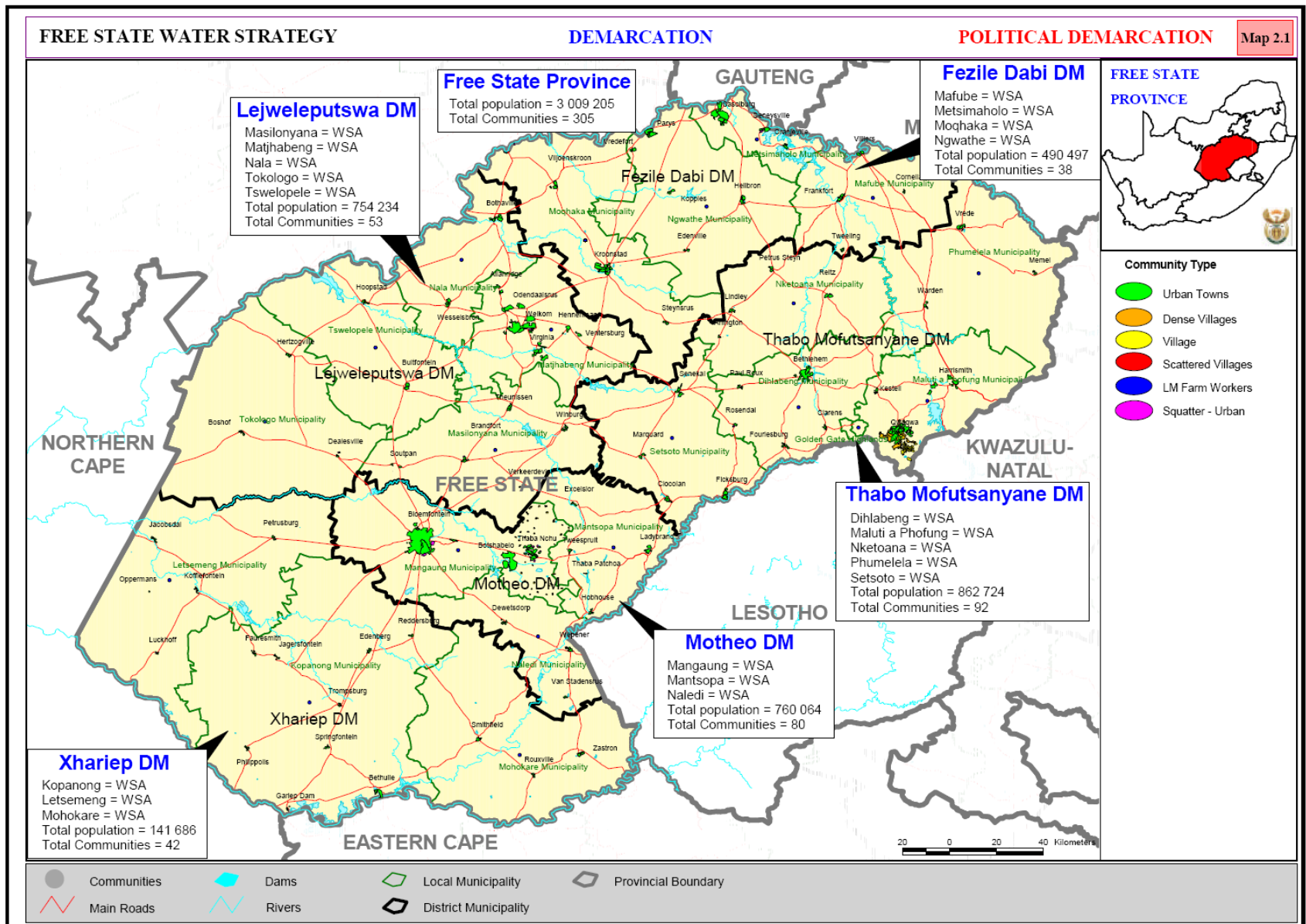
Bloemfontein

Maseru

Lesotho



# Political Demarcation

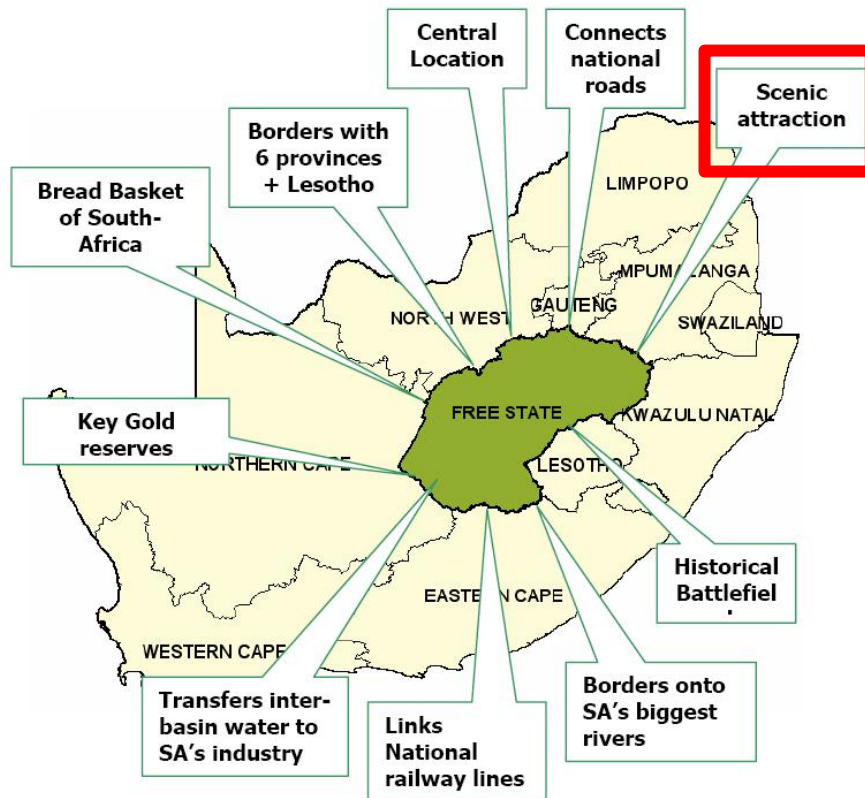


# Key Major Economic Areas

**1A**

## Free State in Perspective

- strategically located central in South Africa
- links roads, railways & inter-basin water transfers
- divers socio-political character & development need



## Key Driving Forces

- socio-political integration of people & settlements
- economic pressures & high levels of unemployment
- institutional restructuring
- urbanization of farm workers
- exodus of skills from small towns
- active migration to mines and economic centers
- immigration from Lesotho
- expectation for higher levels of services
- uneven spread of water resources
- costly regional distribution of water
- huge backlog in basic sanitation services
- environmental risks (e.g. pollution)

**[ These would equally  
apply to just the Thabo  
Mofutsanyane District ]**



# Key Major Economic Areas

## Main Characteristics

### Topography

- ◆ flat in west, south & north
- ◆ **dulating in central and east**
- ◆ **escarpment at eastern border (Drakensberg / Maluti)**

### Environment

- ◆ unique grassland diversity
- ◆ transformed to cultivation
- ◆ **scenic & unique geology (Golden Gate / Vredefortkoepel)**

### Climate

- ◆ semi-arid, occasional hail, frost & snow
- ◆ variable rain (thunder storms) & flooding
- ◆ high evaporation & elevated temperature

### Water resources

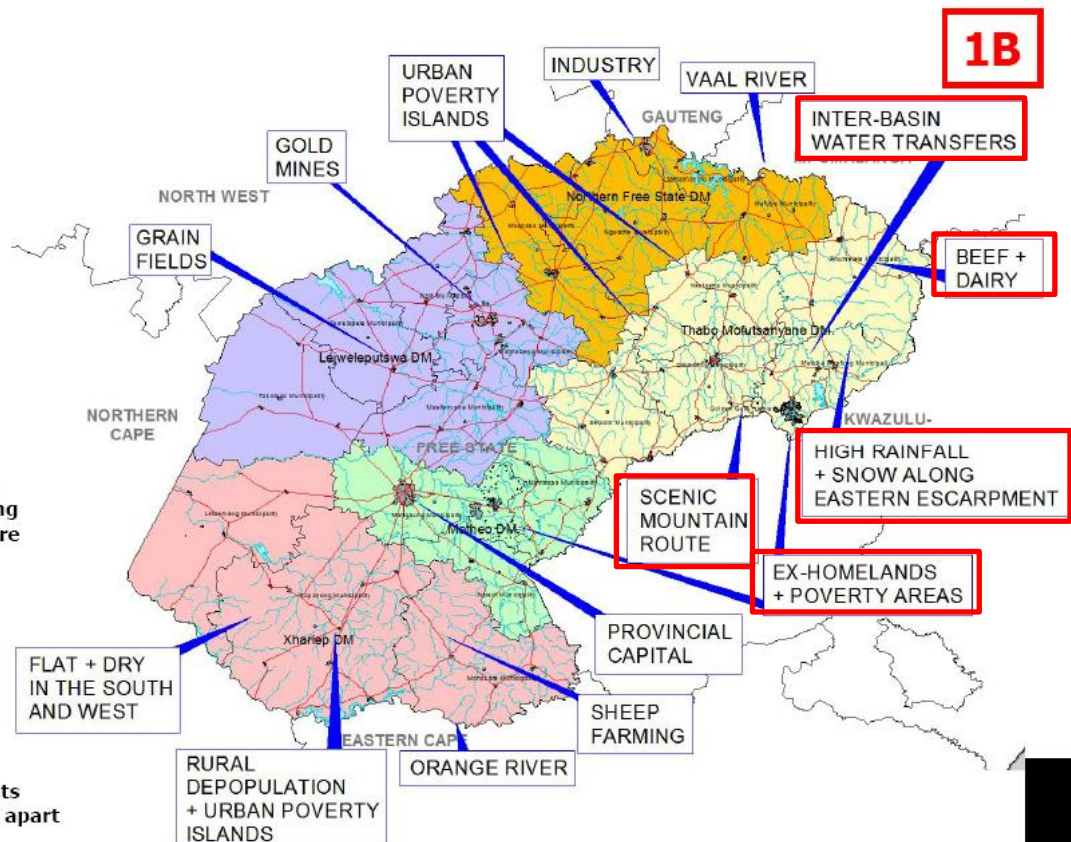
- ◆ limited & vulnerable groundwater
- ◆ large rivers on border (Orange, Vaal)
- ◆ low yielding seasonal rivers in interior

### Settlement types

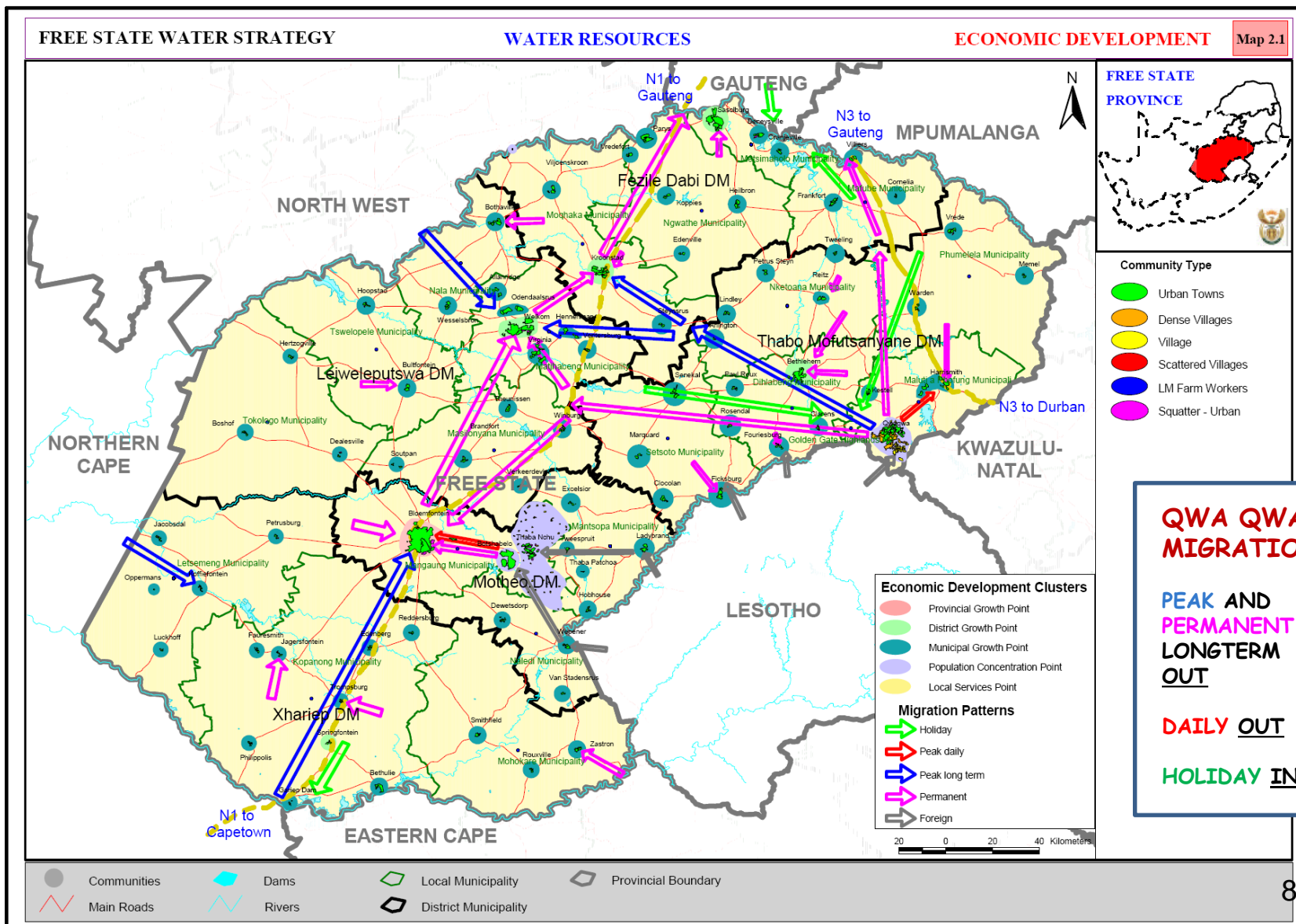
- ◆ urban clusters comprising of towns, former townships & informal settlements
- ◆ **urban clusters are located relatively far apart**
- ◆ **dense rural settlements in Qwaqwa**
- ◆ scattered rural in Thaba Nchu; small farm worker settlements throughout interior

### Land use & economic sectors

- ◆ strong agricultural base, with extensive sheep farming in the south, dryland cultivation in the west, dairy & beef in the central and east and **fruit farming at Ficksburg, Bethlehem & Jacobsdal**
- ◆ gold mining in the "Goldfields" area of Lejweleputswa and coal mining with related petro-chemical industry around Sasol
- ◆ provincial capital and main services centre in Bloemfontein, Mangaung
- ◆ **prominent transport sector with national road and railway routes; tourism, recreation and accommodation potential**

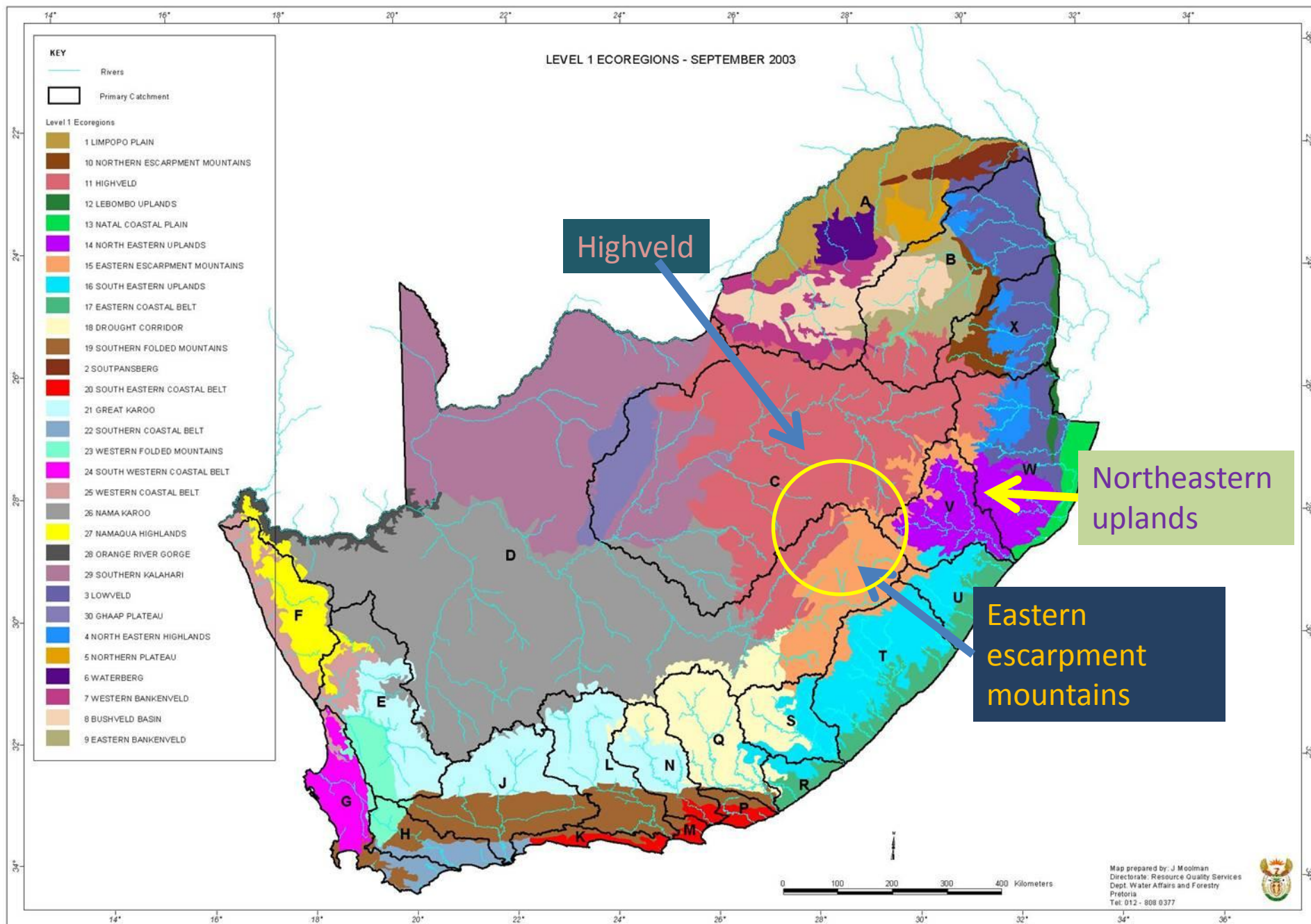


# Growing Areas in Free State

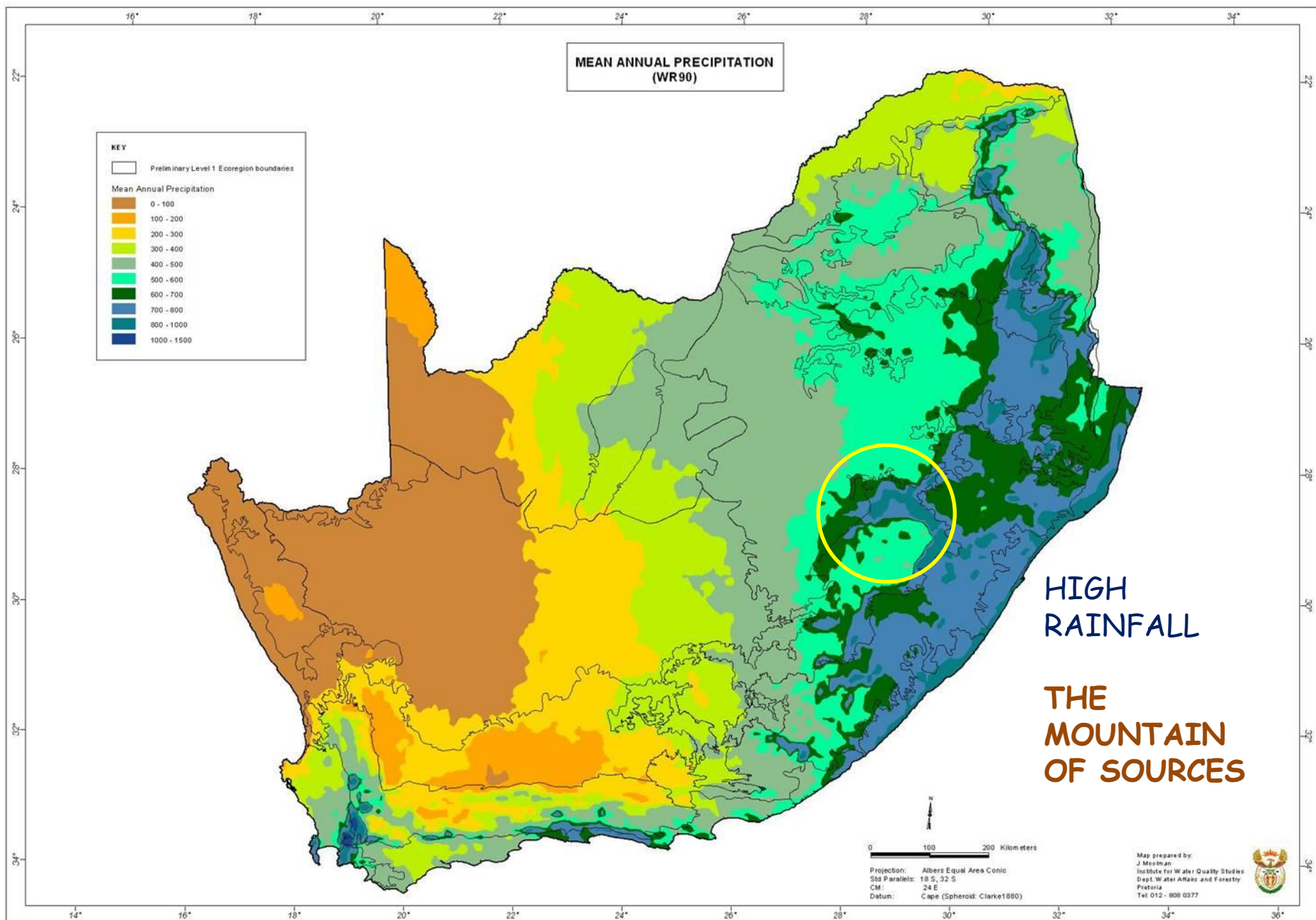


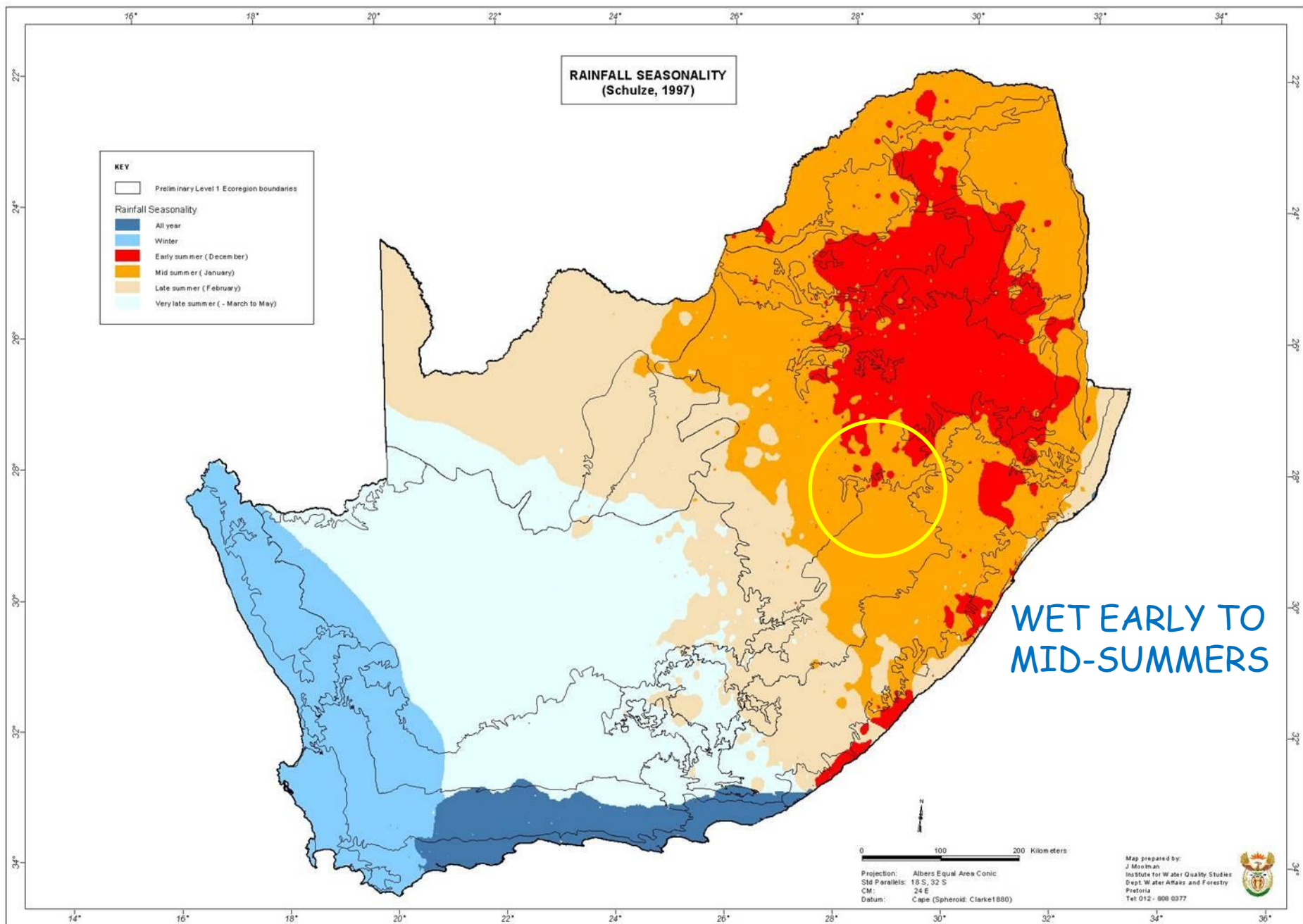


**Biodiversity?**

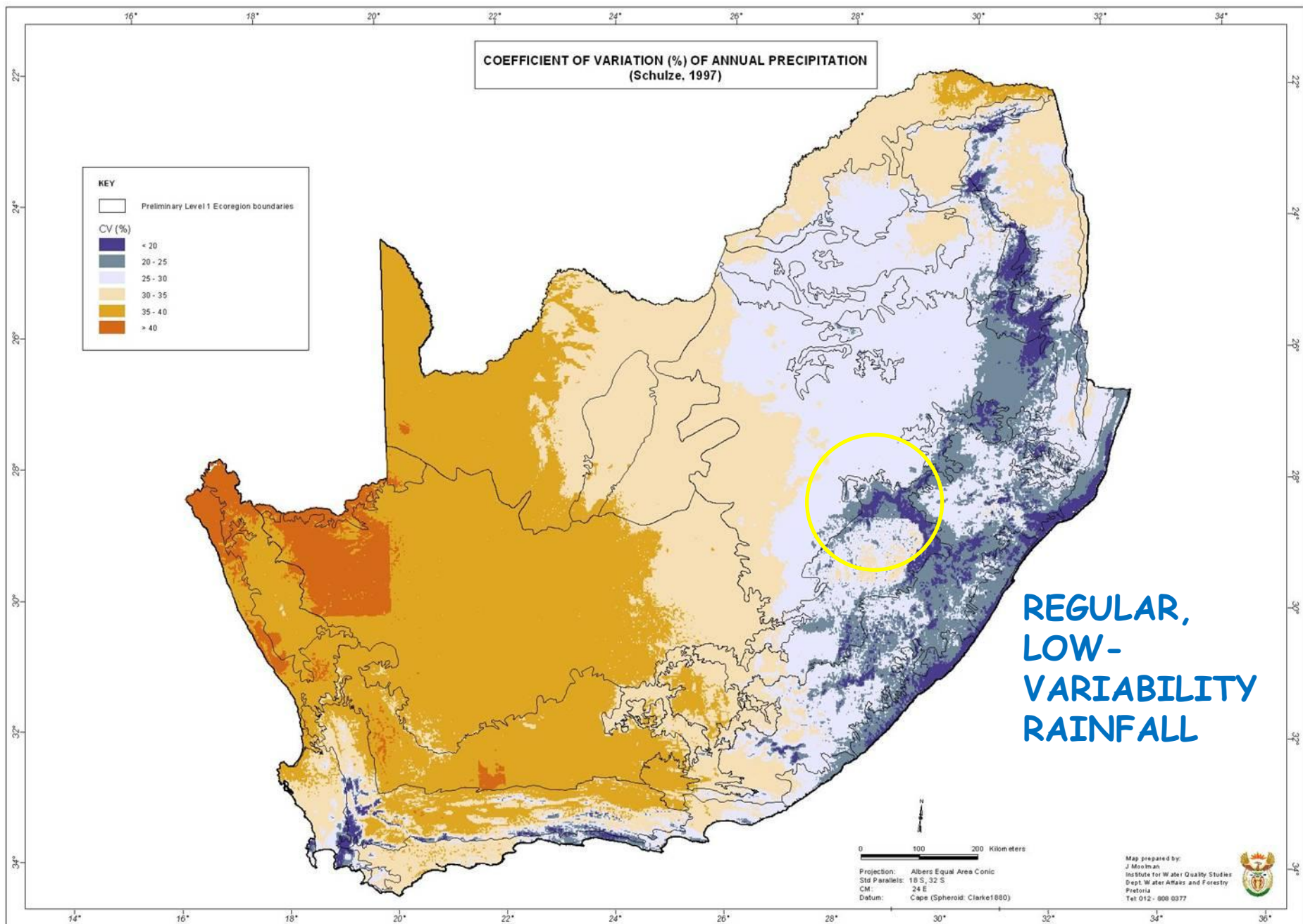








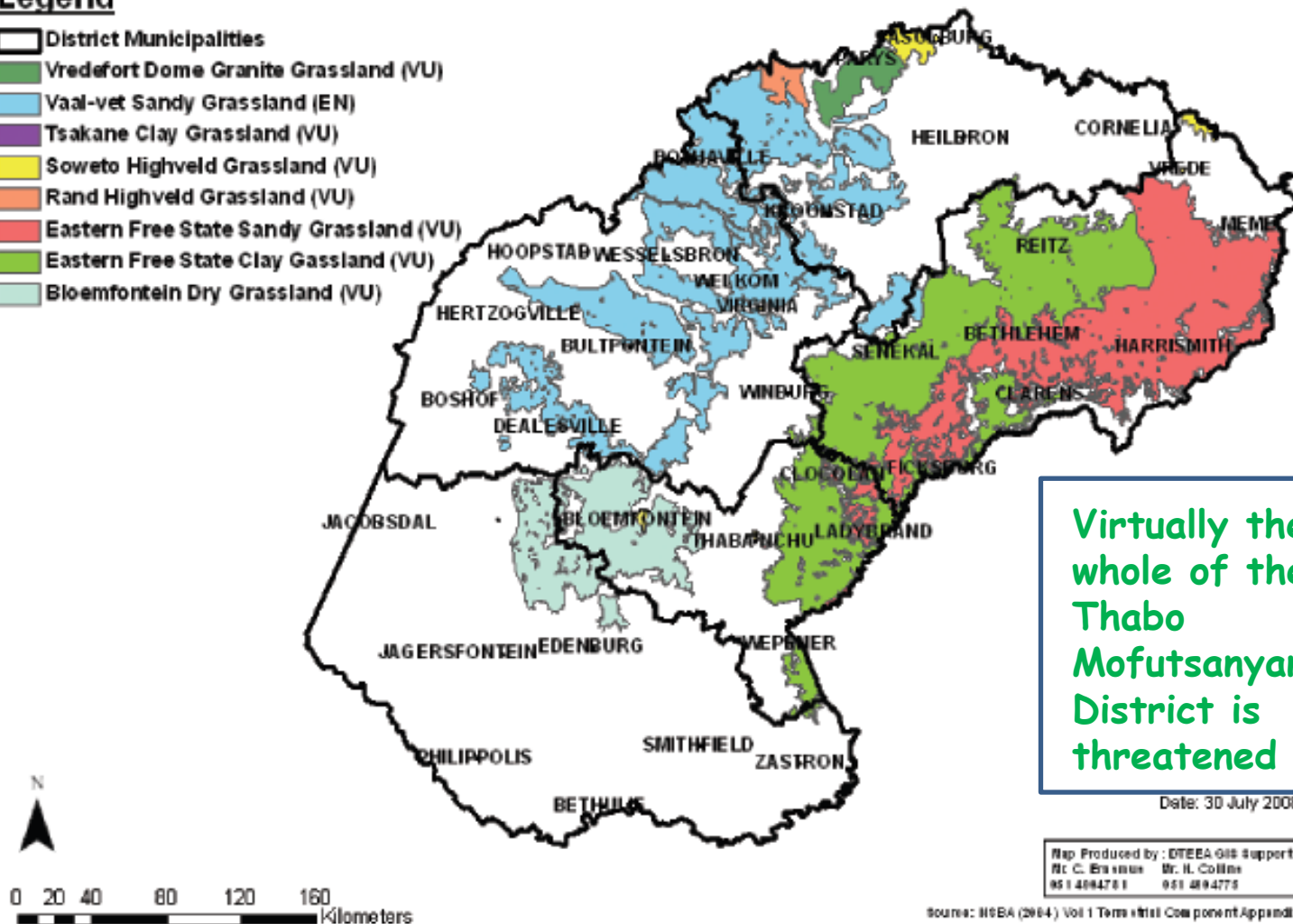




## FREE STATE PROVINCE: THREATENED VELD TYPES

### Legend

-  District Municipalities
-  Vredefort Dome Granite Grassland (VU)
-  Vaal-vet Sandy Grassland (EN)
-  Tsakane Clay Grassland (VU)
-  Soweto Highveld Grassland (VU)
-  Rand Highveld Grassland (VU)
-  Eastern Free State Sandy Grassland (VU)
-  Eastern Free State Clay Grassland (VU)
-  Bloemfontein Dry Grassland (VU)



Date: 30 July 2008

Map Produced by: DTEBA GIS Support  
Mr. C. Erasmus Mr. H. Collins  
951 4894781 951 4894775

Source: NEMA (2004) Vol 1 Terms of Reference Appendix A

Figure 5.3: Location of threatened veld types in the Free State



# FREE STATE PROVINCE: LOCATION OF PROTECTED AREAS

## Legend

Ingula

DTEEA Reserves

Golden Gate

Conservancies

## Vredefort Dome

5km Buffer area

Core area

## District Municipalities

Lejweleputswa

Motheo

Northern Free State

Thabo Mofutsanyane

Xhariep



Date: 30 July 2008

Map Produced by: DTEEA GIS Support  
Mr. C. Erasmus Mr. N. Collins  
051 4004781 051 4004775

Source: DWAF (June 2008): Reference Framework Data, Planning and Information.  
DTEEA GIS Support

Figure 5.4: Location of Protected Areas in the Free State

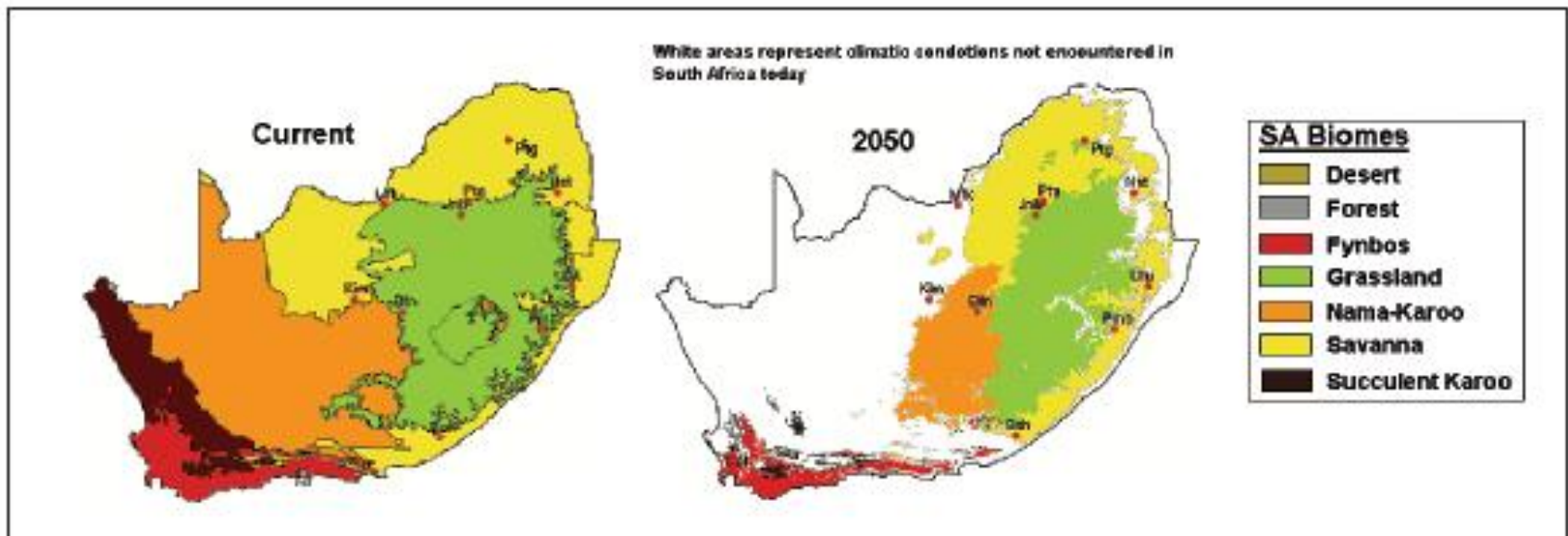
## SOME VEGETATION UNITS OF PARTICULAR INTEREST IN THE TM AREA

Biome	Vegetation Unit	Status	% Conserved	% Transformed	Conservation Status	Free State Nature Reserve in which it occurs
Gm5	Basotho Montane Shrubland	V	2		Hardly Protected	Qwaqwa National Park Golden Gate National Park Sterkfontein Dam Nature Reserve
Gm4	Eastern Free State Sandy Grassland	E	2	50	Hardly Protected	Qwaqwa National Park Golden Gate National Park Sterkfontein Dam Nature Reserve
Gd5	Northern Drakensberg Highland Grassland	LT	38	7	Well Protected	Sterkfontein Dam Nature Reserve Golden Gate National Park Qwaqwa National Park
Gd6	Drakensberg-Amathole Afromontane Fynbos	LT	>50	-	Well Protected	Golden Gate National Park Qwaqwa National Park
Gd8	Lesotho Highland Basalt Grassland	LT	1	10	Hardly Protected	Golden Gate National Park
Gs3	Low Escarpment Moist Grassland	LT	2	6	Hardly Protected	Sterkfontein Dam Nature Reserve

Source: Mucina & Rutherford, 2006



## What will climate change do to biomes?



Source: <http://sanbi.org/climrep/6.htm>

And what do the rivers look like? Not so good either!

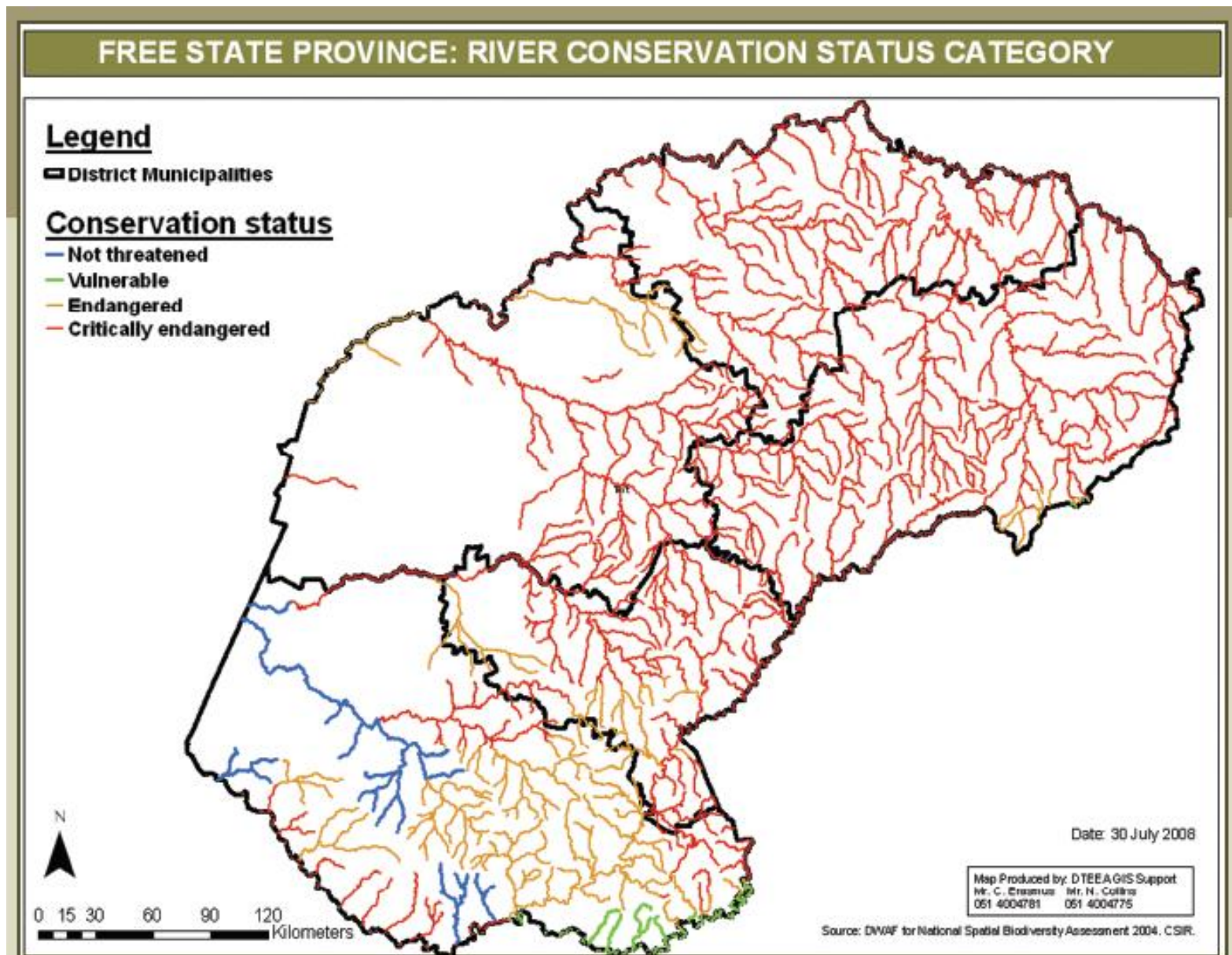
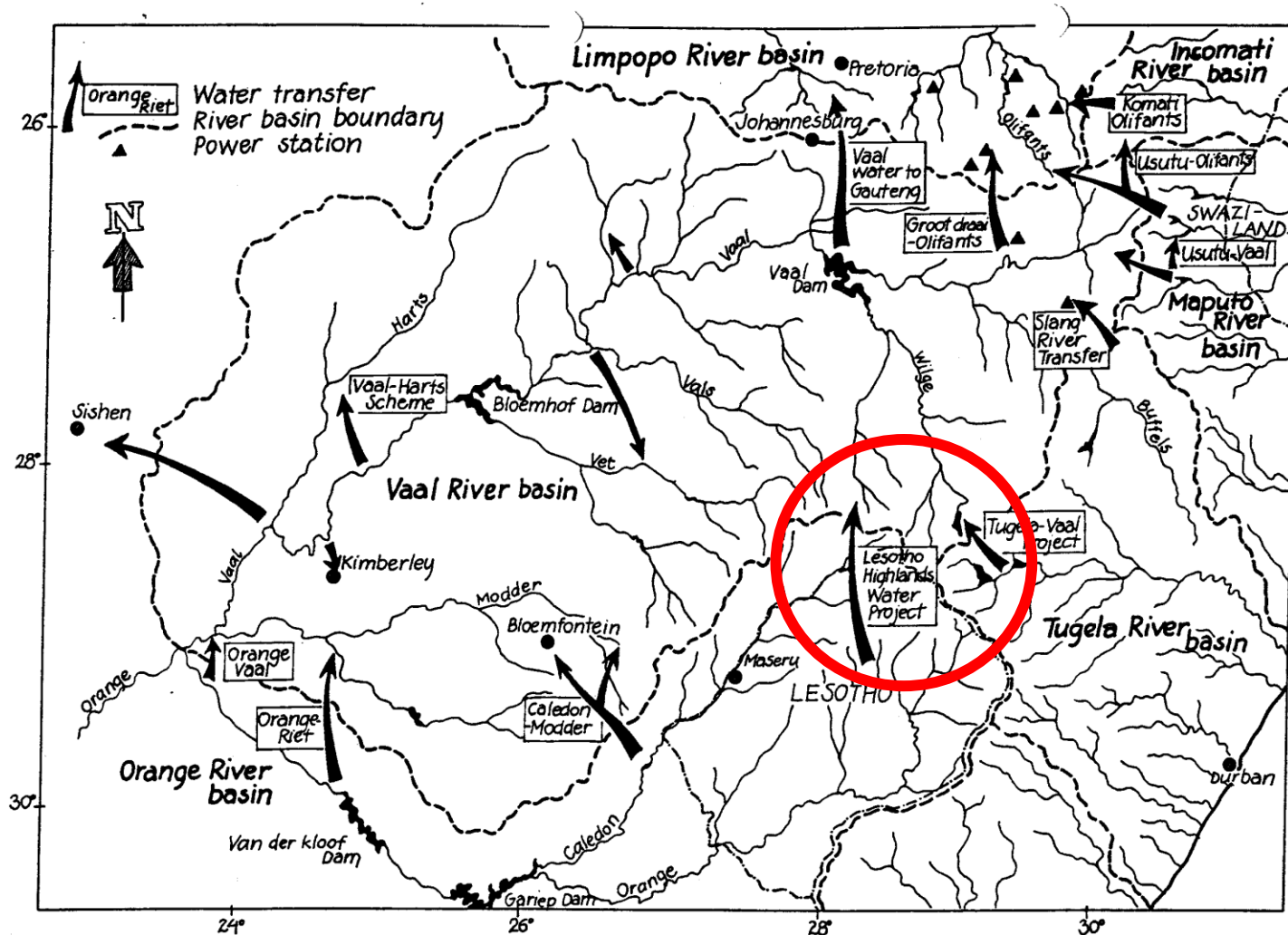


Figure 5.6: River conservation status

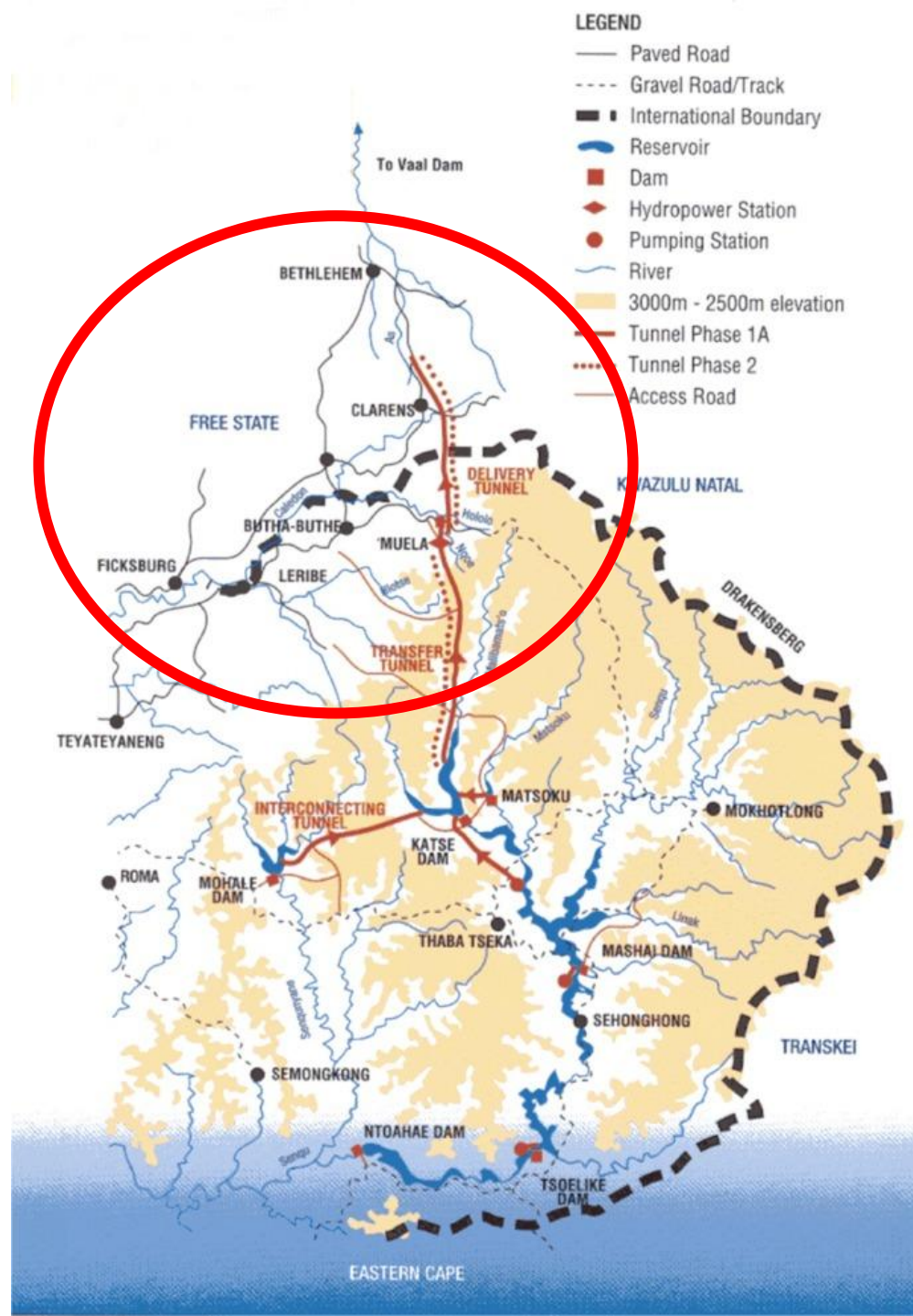
Inter-basin transfer (IBT) is a major means of alleviating water stress.

There is a lot of IBT going on, without us realising it. With ecological consequences!



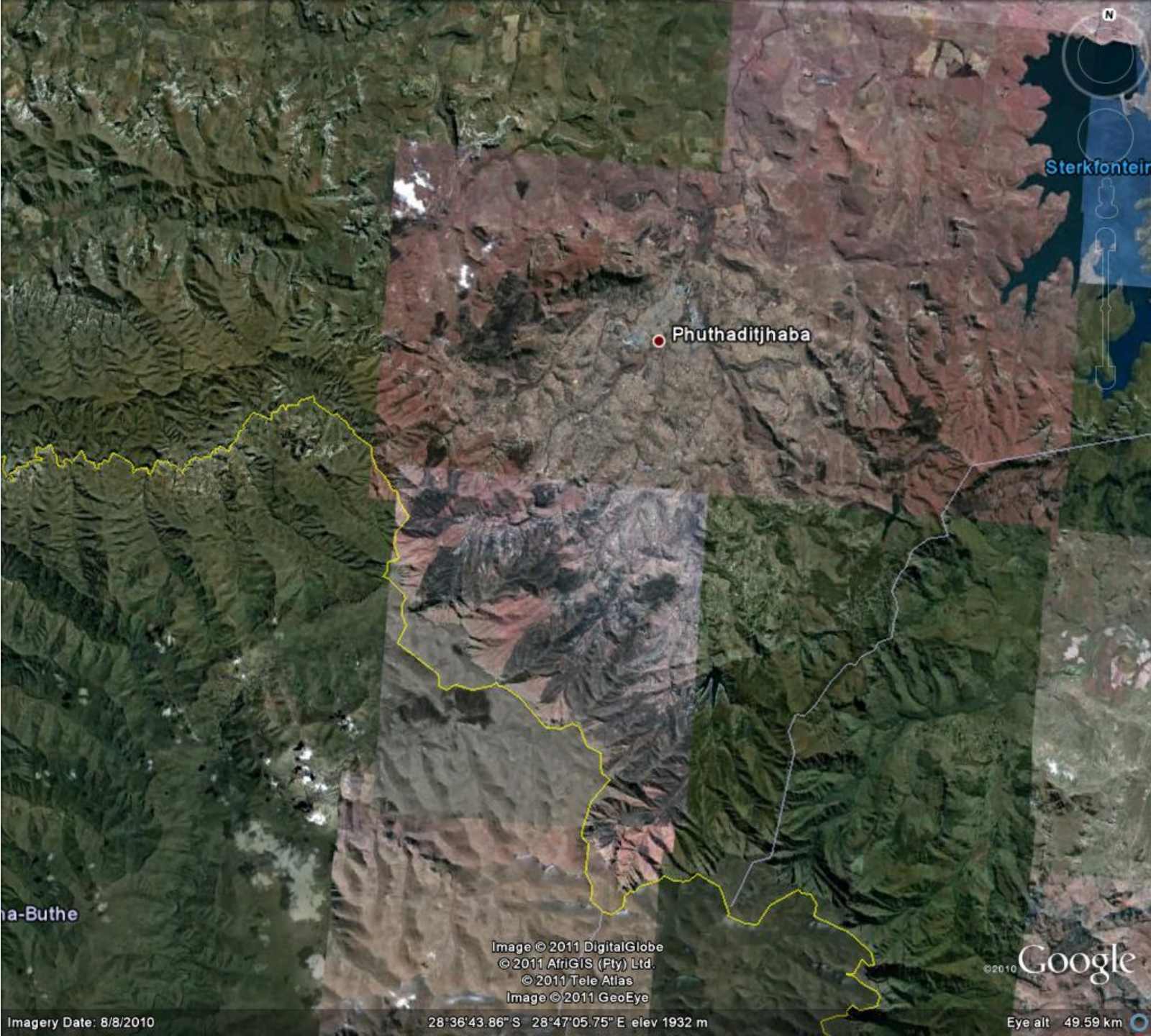
59. Water transfers into and out of the Vaal River basin in South Africa. Transfers from the eastward-flowing rivers are mostly concerned with supplying water to the coal-fired power stations that generate electricity for the industrial heart of the country, while those in the western parts of the basin are more for domestic and agricultural purposes.





SOME THOUGHTS  
ON  
THE UNIVERSITY OF THE FREE  
STATE'S  
QWA QWA BRANCH,  
PARTICULARLY IN THE FIELD  
OF BIOLOGY AND  
BIODIVERSITY





na-Buthe

Phuthaditjhaba

Sterkfontein

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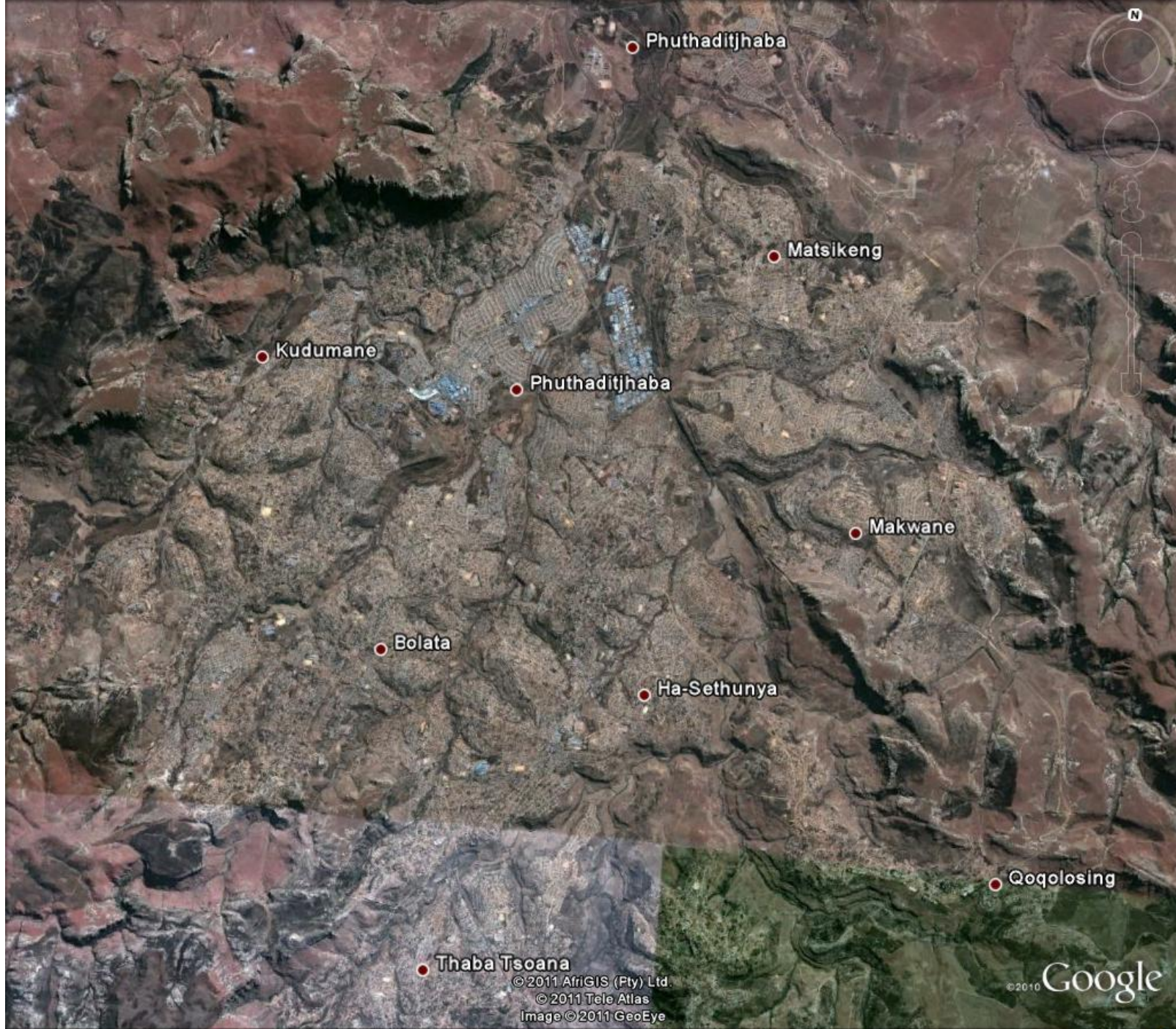
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Imagery Date: 8/8/2010

28°36'43.86" S 28°47'05.75" E elev 1932 m

Eye alt 49.59 km





Phuthaditjhaba

Matsikeng

Kudumane

Phuthaditjhaba

Makwane

Bolata

Ha-Sethunya

Qoqolosing

Thaba Tsoana

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Phuthaditjhaba

UFS CAMPUS  
QWA QWA BRANCH

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Imagery Date: 7/6/2010 2004

28°29'59.58" S 28°49'07.53" E elev 1675 m

Eye alt 7.79 km



**NATURAL  
SCIENCES**



Phuthaditjhaba

**UFS CAMPUS  
QWA QWA  
BRANCH**

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# NATURAL SCIENCES

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**FOLLOWING A STUDY OF THE CONTEXT OF  
BIOLOGY AT THE QWA QWA BRANCH OF THE  
UFS, I HAVE SOME OPINIONS, WHICH I SHARE  
WITH YOU**

(THE OPINIONS ARE MINE ONLY, NOT THOSE OF THE UFS OR OF  
INDIVIDUALS)

THERE IS SOMETHING SPECIAL ABOUT THE QWA  
QWA REGION AND THE PEOPLE AND THE  
OPPORTUNITIES

AND THERE ARE SOME THINGS MISSING ABOUT  
INNOVATION AT THE QWA QWA BRANCH OF  
THE UFS



A university cannot hold staff if it doesn't have a postgraduate programme.

However, programmes and courses cannot be everything to everybody, because then they lack the strength of concentrated effort.

Therefore it is suggested that the biologists focus on one thing (a core field) and do it enviably properly.

**ECOTOURISM IS BECOMING MORE AND MORE IMPORTANT**

**So, why not a programme/course in some aspect(s) of biodiversity?**

After all, the area is very special and very rich in a certain very attractive kind of biodiversity

Indicated core field: the very special  
**Maluti-Drakensberg Biodiversity.**

- You have the natural assets
- You have the people
- You have the need

**So why not?**

# So what should the Biology Departments (and Geography) be doing?

All courses in biology should be geared toward this field. Post-graduates, research fellows and post-docs would enrich the research and teaching.

All new staff in biology should be appointed to work in this field and all existing staff should be encouraged (even by funding such research) to work in this field.

Spinoffs to education or agriculture and economic well-being in the region would come naturally as a result of a growing knowledge of local ecosystems.



# Maluti-Drakensberg Biodiversity

What is needed?

**A real on-campus facility** for postgraduates and visiting scientists is critical to the development of this postgraduate field.

**Critical mass and focused effort** - it is not unreasonable to expect staff to be focusing their efforts on an aspect of that field, as would their teaching at undergraduate and postgraduate levels.

**Strong postgraduate research** - would have a strong trickle-down effect on undergraduate training.

This **core knowledge and expertise** would be shared by all biology graduates, whatever they became later, even teachers who would have a special knowledge of the biodiversity of the area.

# Needs correcting!

The arms-distance approach to the Qwa Qwa branch. Everyone on the academic staff seems to live in Harrismith, 50 km away.

Staff (at least some staff) should be living on or near campus, or it will remain a soulless shell. Staff housing at low rent?

Lack of accommodation for visiting academics. How can you expect visiting scientists to take to the place if they have no living (and associated research) accommodation on or very near to the campus?

# Further correcting!

**Local Relevance.** The institution should be benefiting more substantially by being seen to be presenting courses and doing community work.

**Ownership.** Third stream funding is understandably small and generally seems to go straight to individuals for courses or contracts, not to the University - a further symptom of the lack of “ownership” of the institution by the staff, and by extension also the students.

**Standards.** If you can draw strong applicants (from wider afield even), output standards will rise.

**Organisational shake-up.** Nobody minds a shake-up (rationalisation) if everyone can see the end-benefits



The Qwa Qwa Branch has a good biology programme/business plan that may have good potential, but implementation is not feasible because the context is not sound.

Once the context (governance) is sorted out, the plan can be re-formulated. And I believe this is happening

**What an opportunity for us all !!!**

Thank you















