

# Threatened species in conservation planning



Nelson Mandela  
Metropolitan  
University

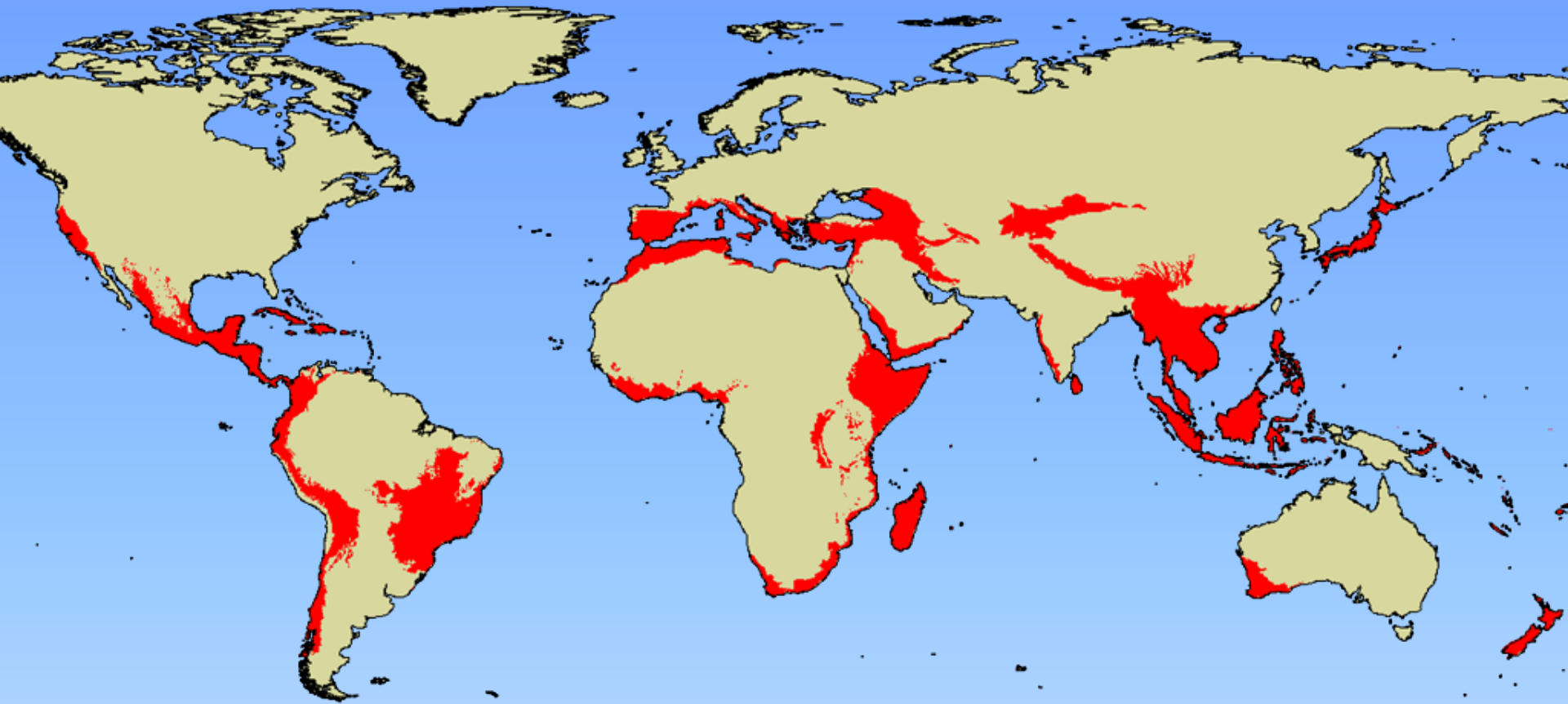


National  
Research  
Foundation



## The case of the Baakens Valley, Port Elizabeth

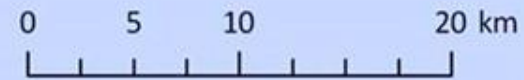




Based on **plant species endemism** (>1 500 spp.) and degree of **threats** to biodiversity (>70% habitat lost)

### Biodiversity hotspots

-  Cape Floristic Region
-  Maputaland-Pondoland-Albany



*“By the year 2014, a representative proportion of all biodiversity within Nelson Mandela Bay is effectively conserved, in a manner that is embraced by local communities, endorsed by government and recognised internationally”*

**Final Conservation Assessment and Plan for the Nelson Mandela Bay Municipality**

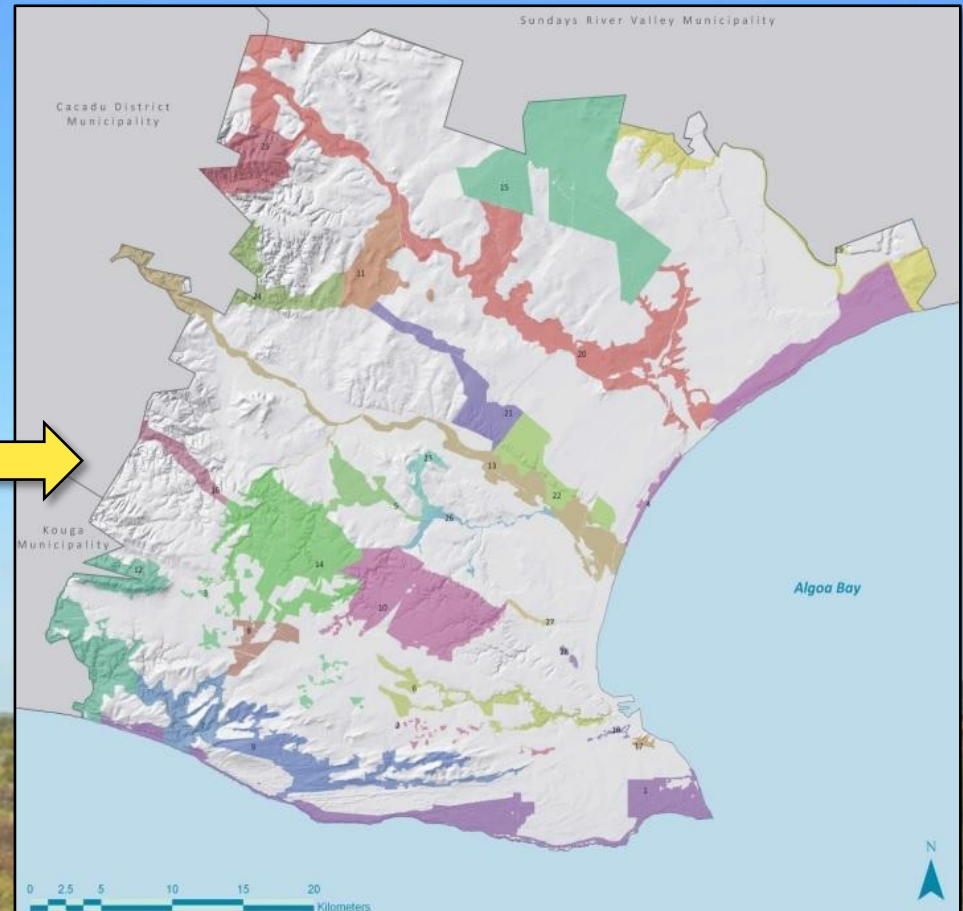
Report Prepared for  
Nelson Mandela Bay Municipality

Report No. 400919/3

December 2010



Stewart (2010)







# Enough detail?

Cowling *et al.* (1999)



**CAPE:**

2 vegetation units

Vlok & Euston-Brown (2002)



**STEP:**

3 vegetation units

Stewart (2010)



**NMB:**

4 vegetation units



# Conservation planning

## 1. Biodiversity pattern:

- Vegetation types
- Taxa of conservation concern

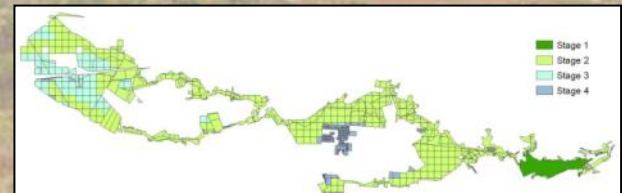
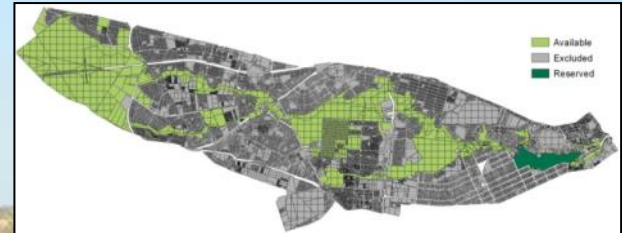
## 2. Biodiversity processes:

- Ecosystem processes
- Evolutionary processes

## 3. Threats to biodiversity

## 4. Conservation targets

## 5. Reserve system design



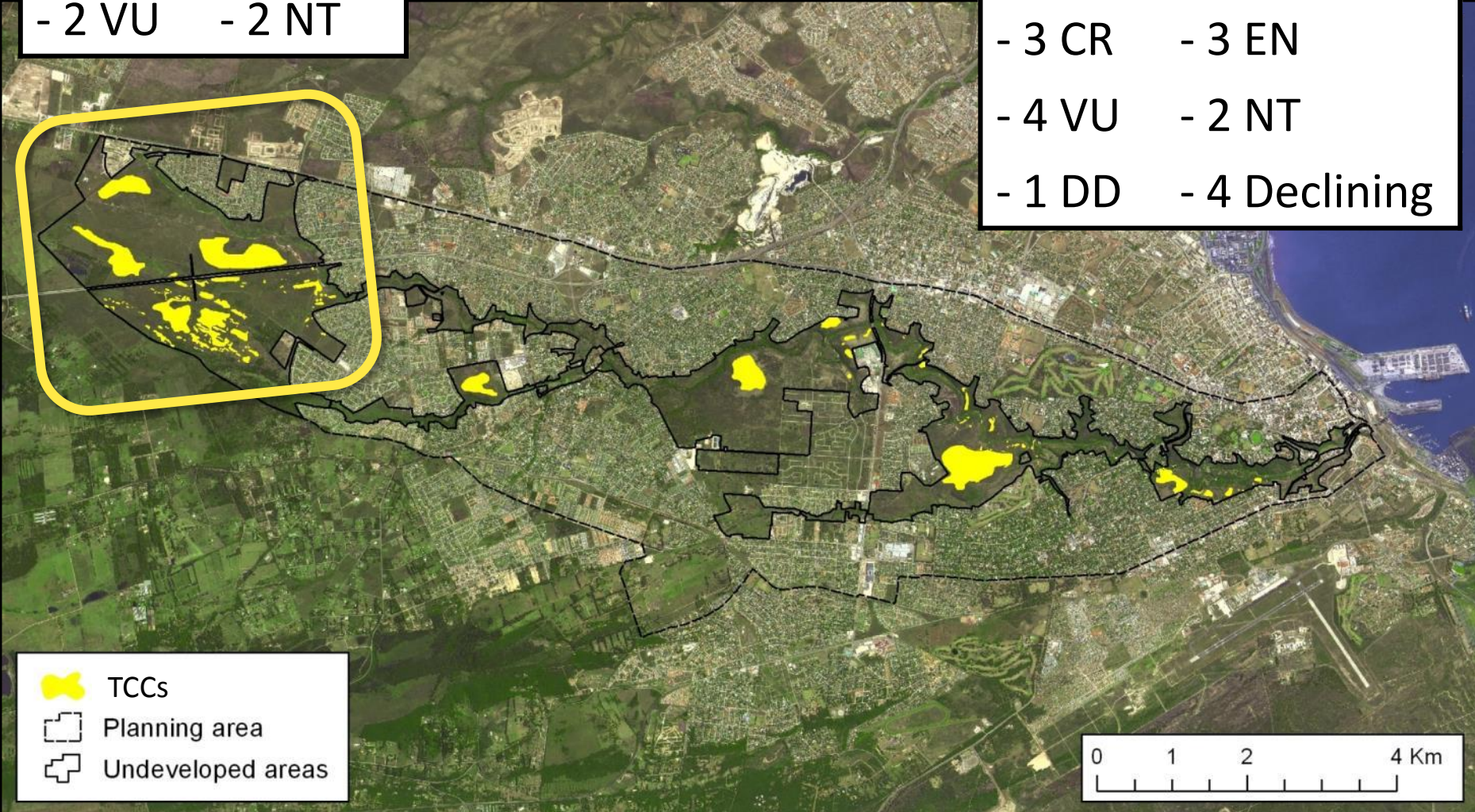
# Taxa of Conservation Concern

## Total of 12 TCCs:

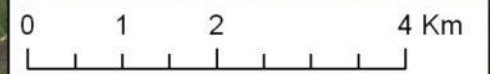
- 3 CR
- 2 EN
- 2 VU
- 2 NT

## Total of 18 TCCs:

- 3 CR
- 3 EN
- 4 VU
- 2 NT
- 1 DD
- 4 Declining



- TCCs
- Planning area
- Undeveloped areas







*Agathosma gonaquensis*  
Gonaqua buchu

RUTACEAE  
Critically Endangered



*Corpuscularia lehmannii*  
Vygie

MESEMBRYANTHEMACEAE  
Critically Endangered



*Cyclopia pubescens*  
Fluffy honeybush

FABACEAE  
Critically Endangered



*Brunsvigia litoralis*  
Coastal candelabra flower

AMARYLLIDACEAE  
Endangered



*Cyrtanthus spiralis*  
Spiral-leaved fire lily

AMARYLLIDACEAE  
Endangered



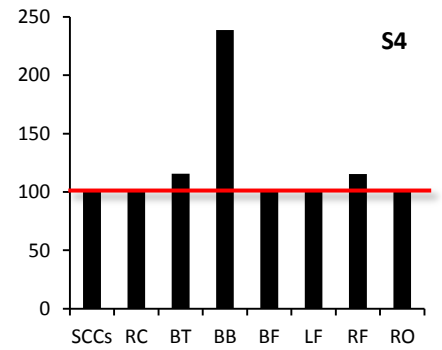
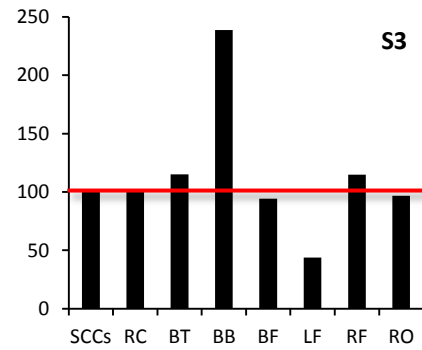
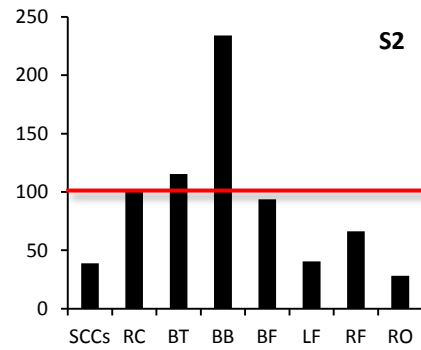
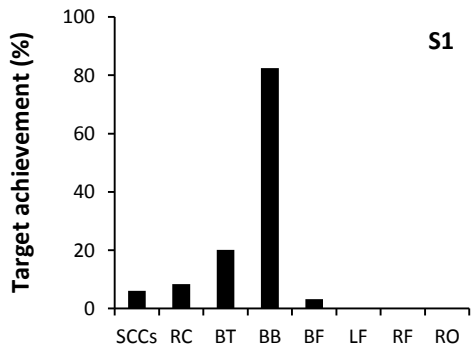
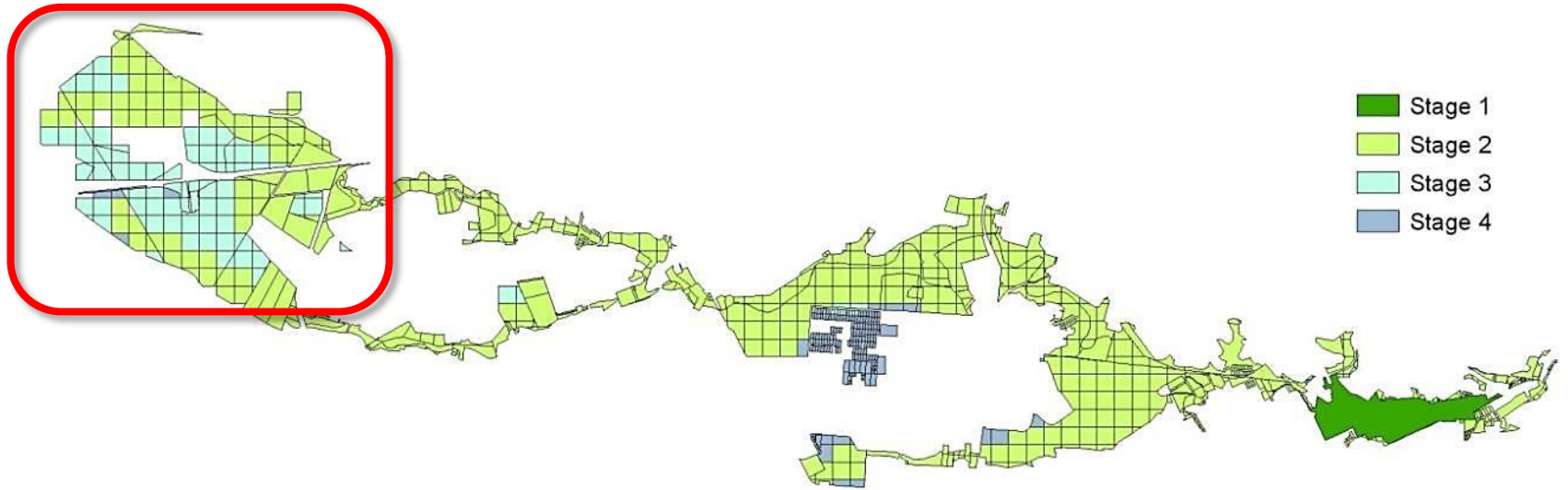
*Disa lugens* var. *lugens*  
Mourning disa

ORCHIDACEAE  
Endangered (Vulnerable)



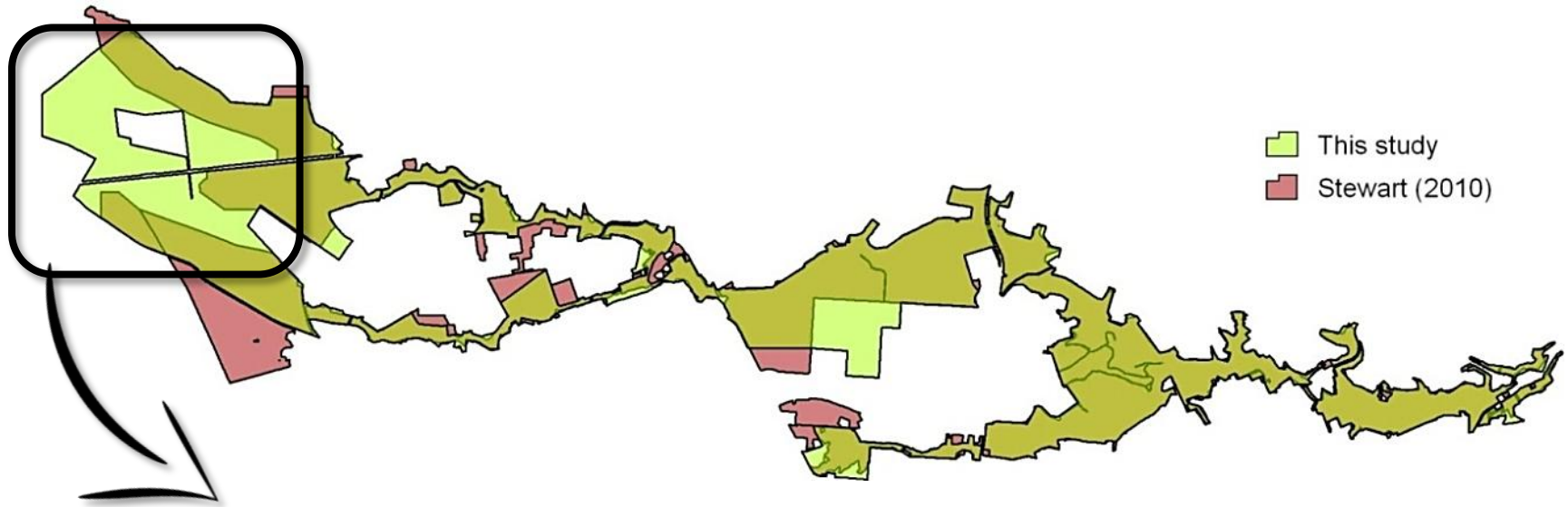
*Senecio scaposus* subsp. *addoensis*  
Addo ragwort

ASTERACEAE  
Endangered



**Biodiversity entity**





Current **gaps** for **biodiversity pattern** —  
threatened plant species and vegetation types







# Conclusions

- **Fine scale data can improve conservation planning**
  - Taxa of conservation concern
  - Vegetation types
- **Incorporate data at strategic planning phase**
  - EIA phase might be too late
  - Resource intensive, but ...
- **Use CREW**
  - It's free(ish)!
  - Citizen science platforms (e.g. iSpot)

**Thank you!**

