

SANBI

Biodiversity for Life

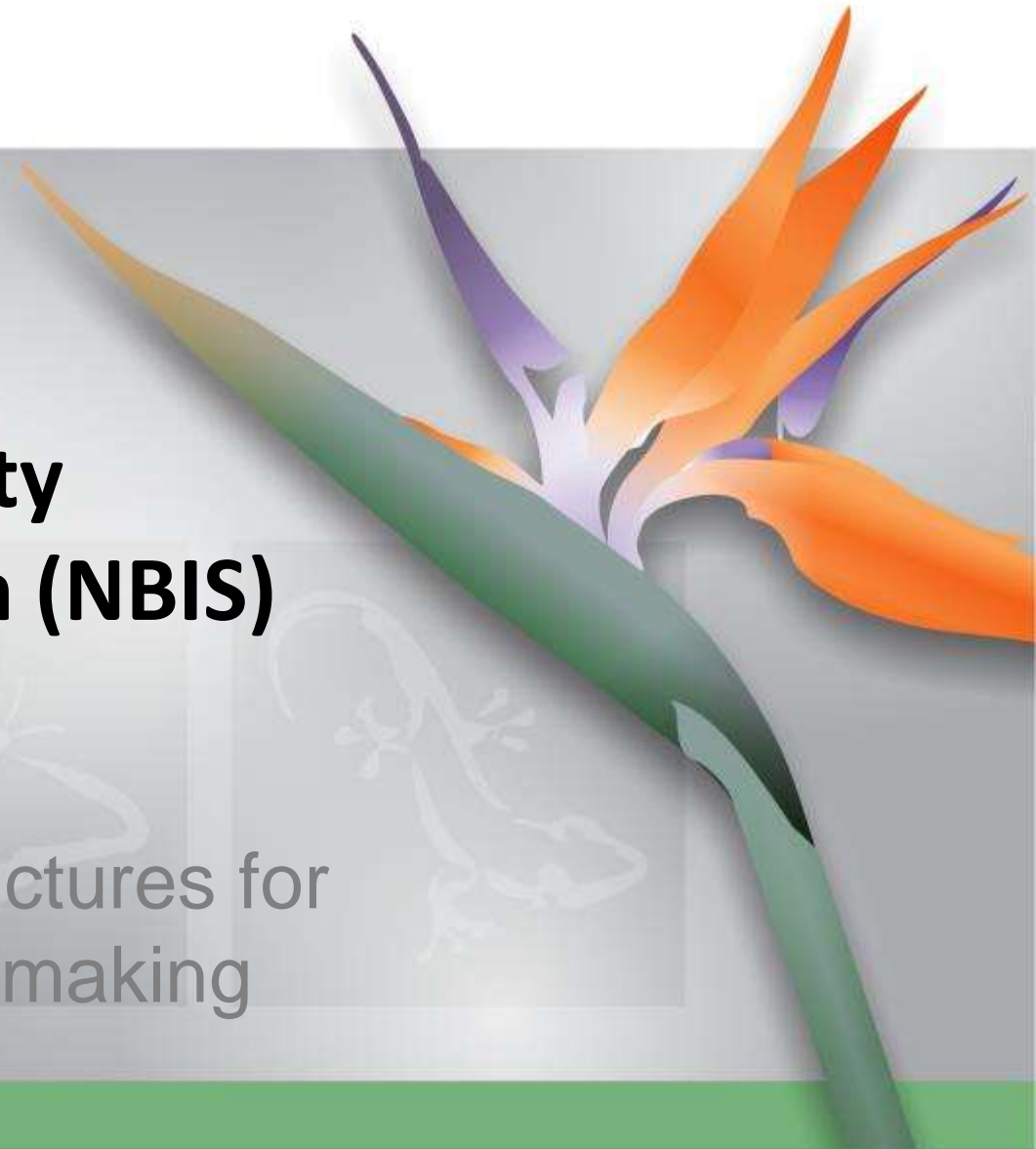
South African National Biodiversity Institute



National Biodiversity Information System (NBIS)

Building data infrastructures for
science and decision-making

Brenda Daly – 23 June 2015



Presentation Outline

1. Background

- Lice to data infrastructures!

2. SANBI data infrastructures

- SANBI's data infrastructures history
- Recent core investment in SANBI infrastructure

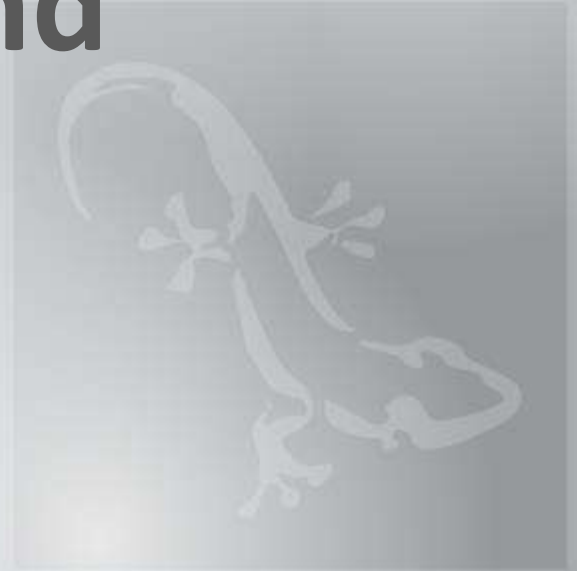
3. SANBI 2-year data infrastructure horizon

- What is the plan?
- Challenges we face

4. Data mobilised

- What has been achieved?
- Application of data

1. Background



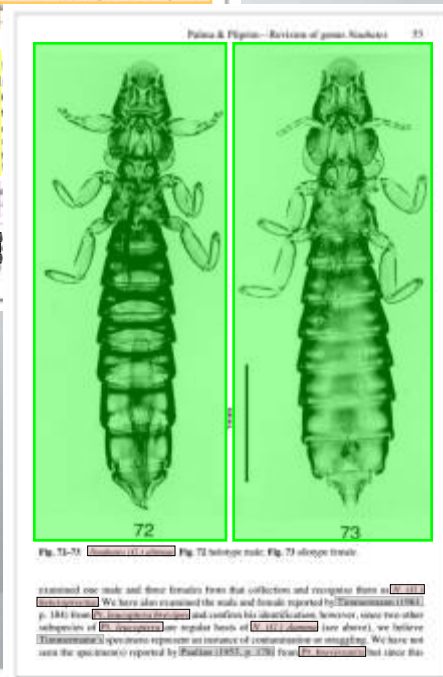
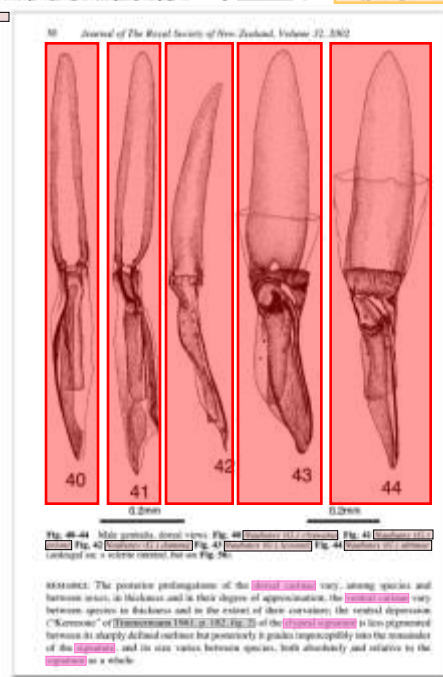
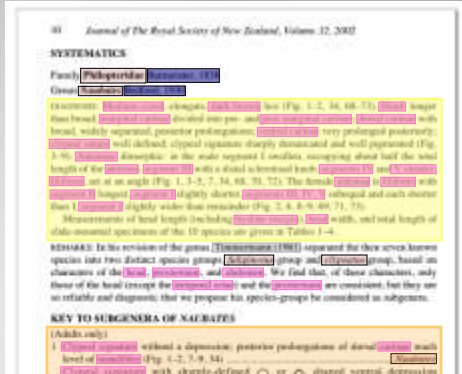
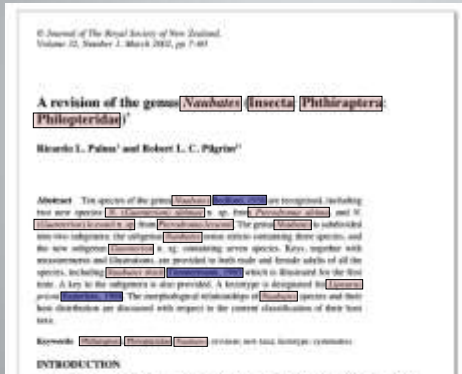
Lice to data infrastructures!



©Vince Smith

Circa 5,000 spp.
Mammals & birds
12,000 associations
15,000 potential hosts

Data infrastructure (circa 1998)



Palma, R.L., and R.L.C. Pilgrim. 2002. A revision of the genus *Naubates* (Insecta: Phthiraptera: Philopteridae). *J. R. Soc. N.Z.* 32:7-60.

- Taxonomic names
- Authorities (name concepts)
- Citations
- Collection data
- Morphological characters
- Textual descriptions
- Diagnostic keys
- Illustrations
- Photographs

142 pieces of "raw" data in 4 of 54 pages, in 1 of 9110 taxonomic papers on lice

2. SANBI data infrastructures



SANBI science data infrastructure building blocks

1. BRAHMS (plant collections data)

- Integrated herbarium data (speed, complexity, data quality, training, support)
- Living Collection and Seed Bank data
- Problem Plants data, Flowering Plant data (Aromatic), Medicinal Plant data
- Gazetteer data and Relevé data
- Acocks and Protea Atlas
- South African Plant Invader Atlas (SAPIA) and CREW
- Replace POSA

2. SPECIFY (animal collections data)

- Skead Gazetteer

3. BGIS (landscape, seascape and mapping)

- Improve interactive maps

4. SANBI Virtual Library (literature)

- Integrated search & discovery of SANBI resources
- Better integration with internal resources

Science data infrastructure cont...

6. SEIS (multimedia)

- Integrate all available images (specimen and plant species images)
- Support the scanning and indexing process for the remaining un-digitised specimens

7. Species Identification Tool (id of threatened species)

- Update and integrate (Lucid software)

8. SANBI-wide GIS (central secure repository)

- Collate essential GIS data within SANBI
- Linked to BGIS

9. EIA Tool (bird and bat)

- New developments
- Better integration with external resources

10. iSpot (citizen science)

- Integrated data

11. DNA Bank (tissue and plant material)

- Integrated data

Science data infrastructure cont...

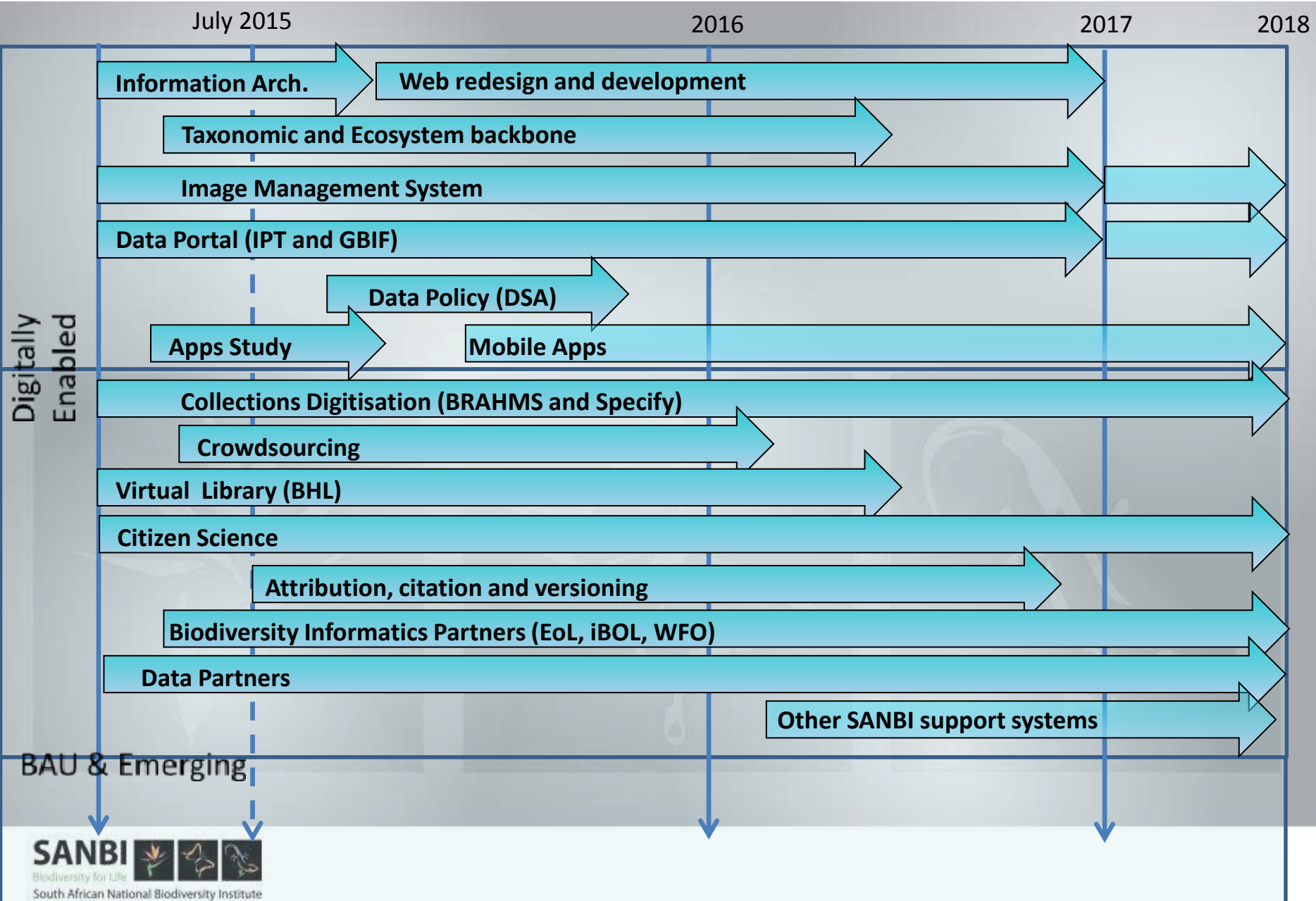
The main purpose is to provide biodiversity data and information management support for:

- Research
- Decision-making
- Policy advice
- Monitoring



3. Our near-term infrastructure horizons

What is the plan?



4. Data mobilised



SANBI and Data Partners by numbers

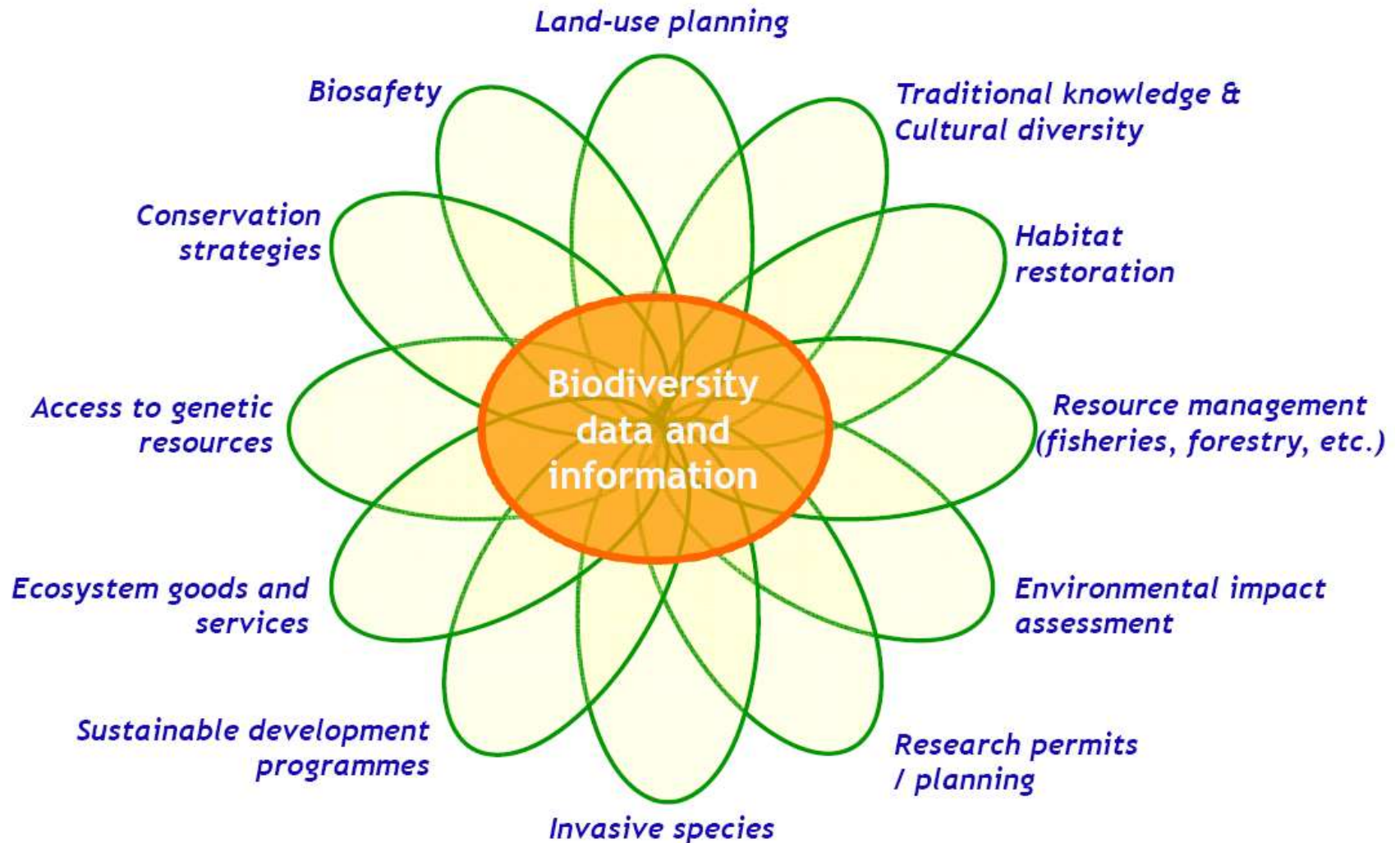
13,908,000
species occurrence records

50
datasets

27
data partners



Application of data

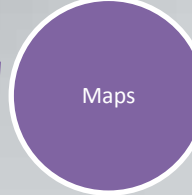
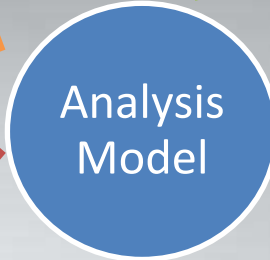
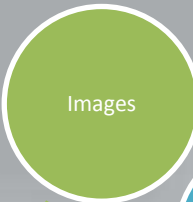
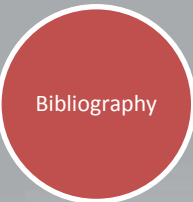




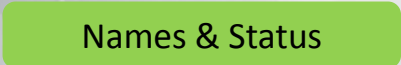
- Layers
 - Agathosma
 - Arachnida
 - Hymenoptera
 - Nematodes
 - Vegetation Map
 - Threatened Ecosystems
 - Eco_status
 - Critically Endangered
 - Endangered
 - Least Threatened
 - Vulnerable
 - Mossel Bay
 - Aerial Photo 1
 - Aerial Photo 2



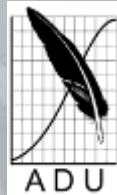
free and open access to biodiversity data
GBIF INTEGRATED PUBLISHING TOOLKIT (IPT)



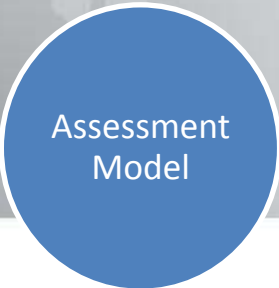
BiodiversityGIS



Taxonomic Expert



Data Partners



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Thank you