



# Rangeland monitoring and its application

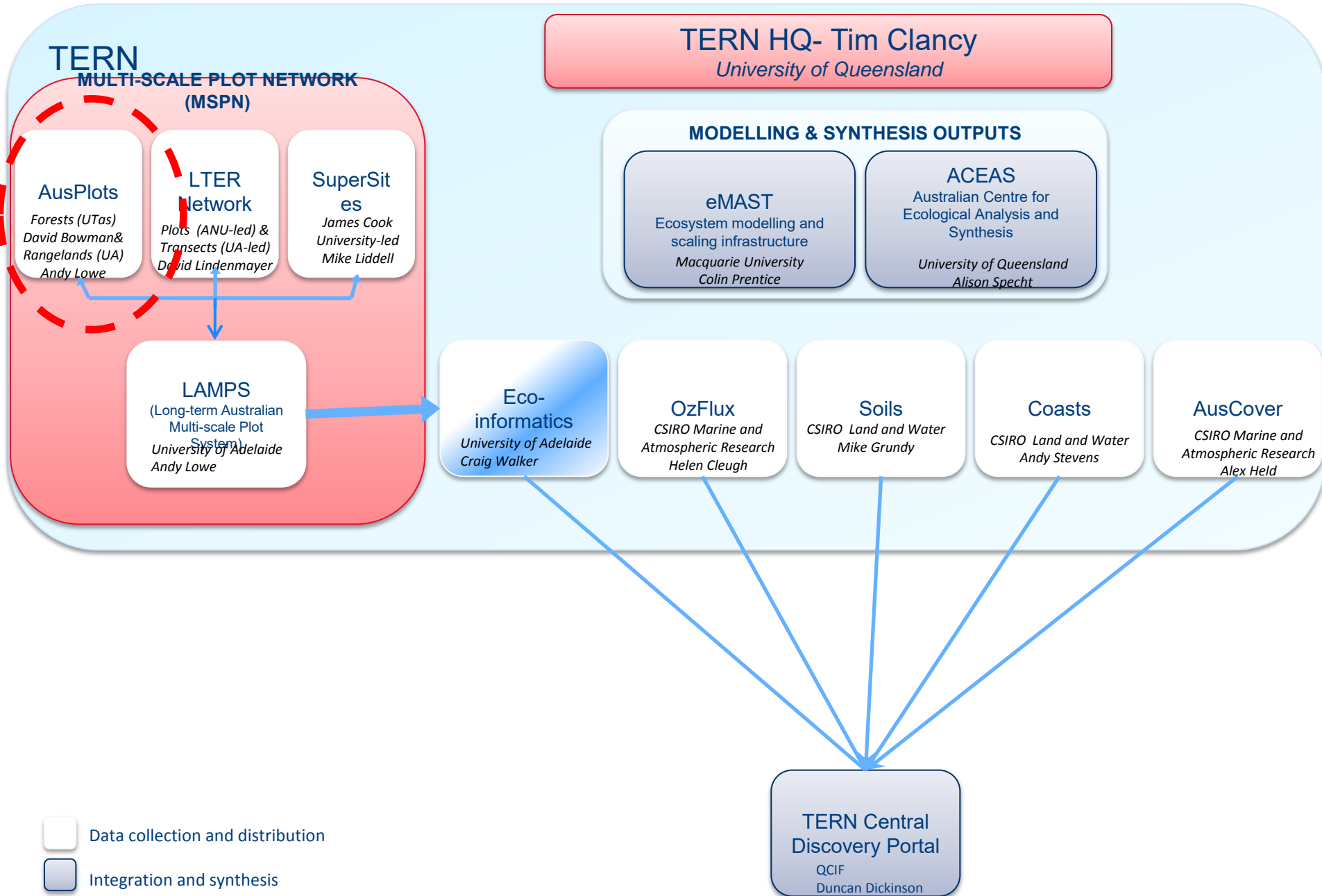
**Cathy Waters**  
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Trangie NSW 2923, Australia**

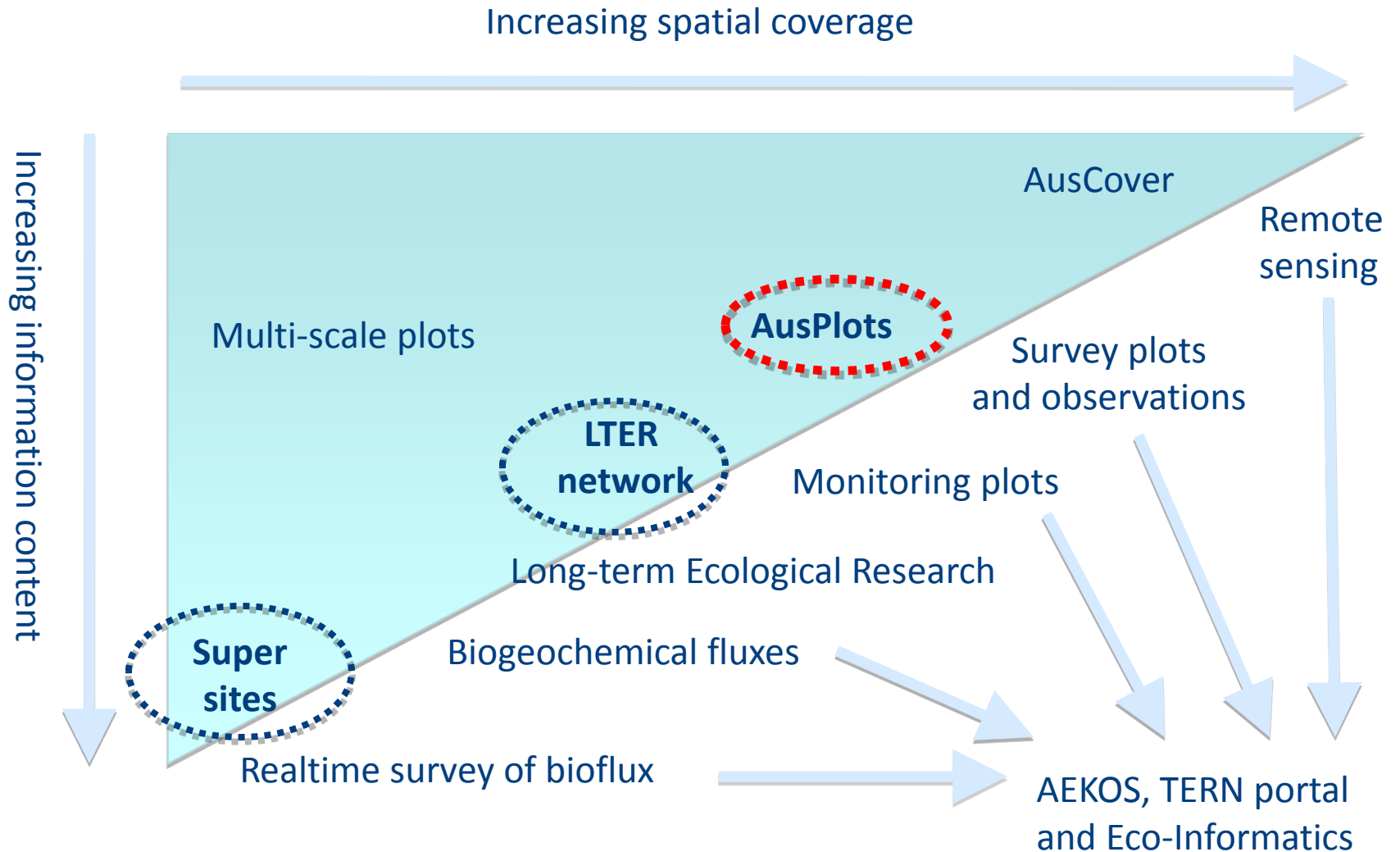
# Overview

- AusPlots-rangelands NSW (TERN)
- Enterprise-based conservation (Ground cover incentive)

# HOW TERN FITS TOGETHER



# Spatial, temporal and information scales



# AusPlots Objectives

- Establish permanent plots (800-1000)
  - NSW (>100 sites)
- Undertake base-line surveys of vegetation and soil
  - Stratification process
  - Methodology
  - Dissemination via Eco-informatics facility



# **Stratification & Site Selection**

**Consists of 4 steps**

**Stage 1: Bioregional Stratification**

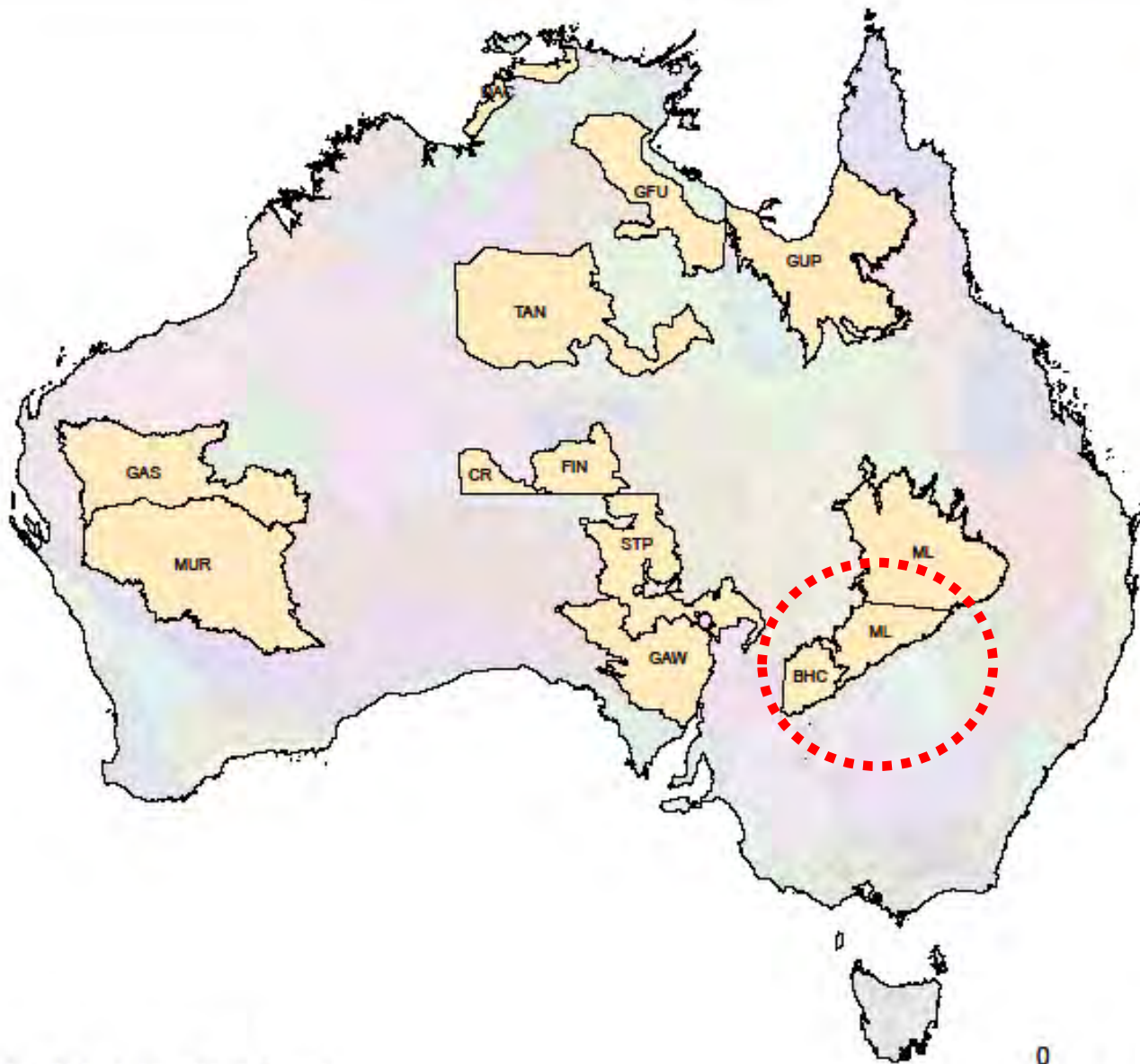
**Stage 2: Selecting sampling bioregions**

**Stage 3: Best on offer**

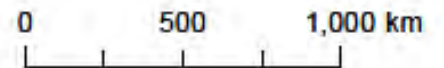
**Stage 4: Field location of plots**



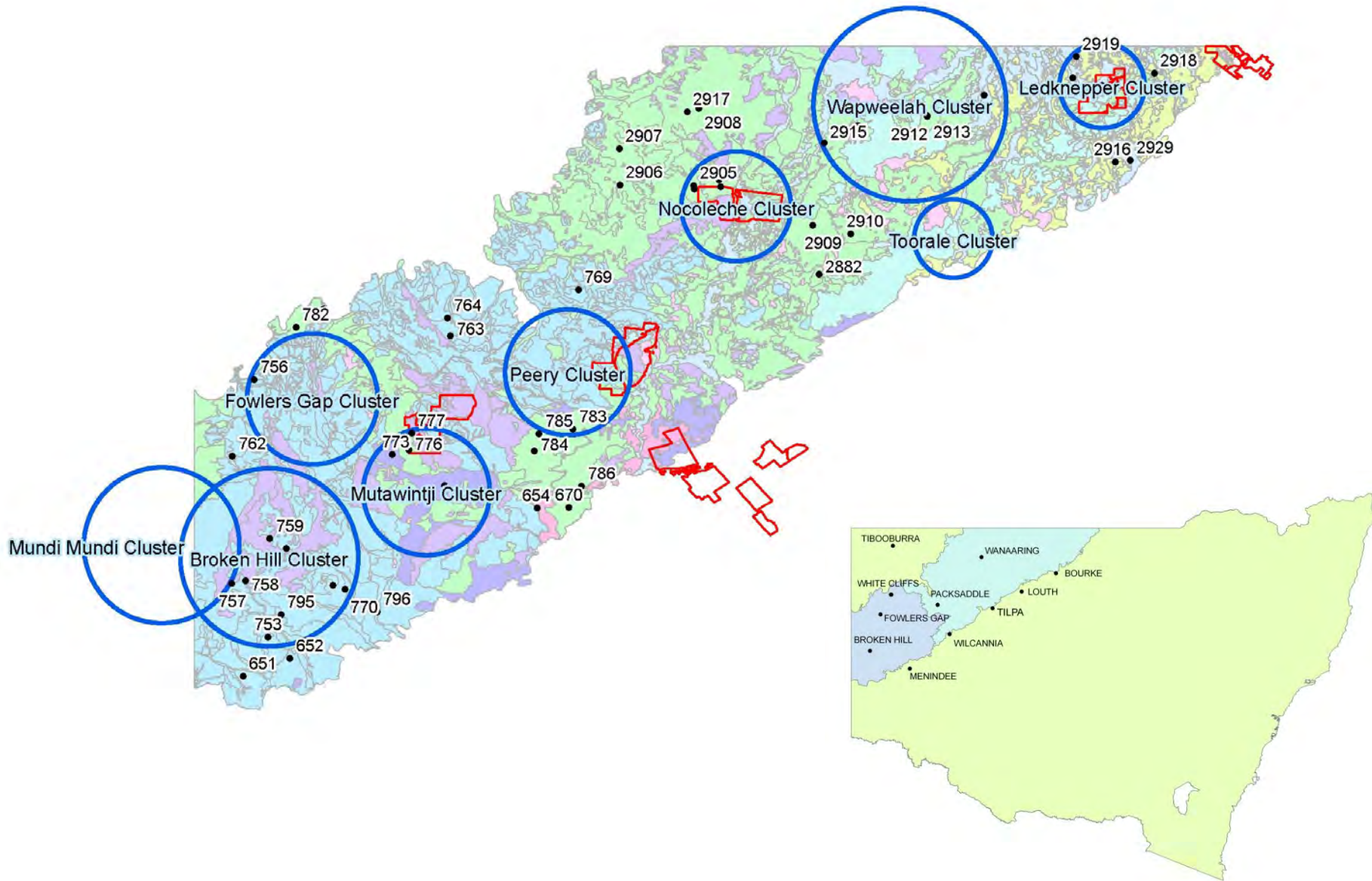
ausplots



Bioregions for initial sampling focus





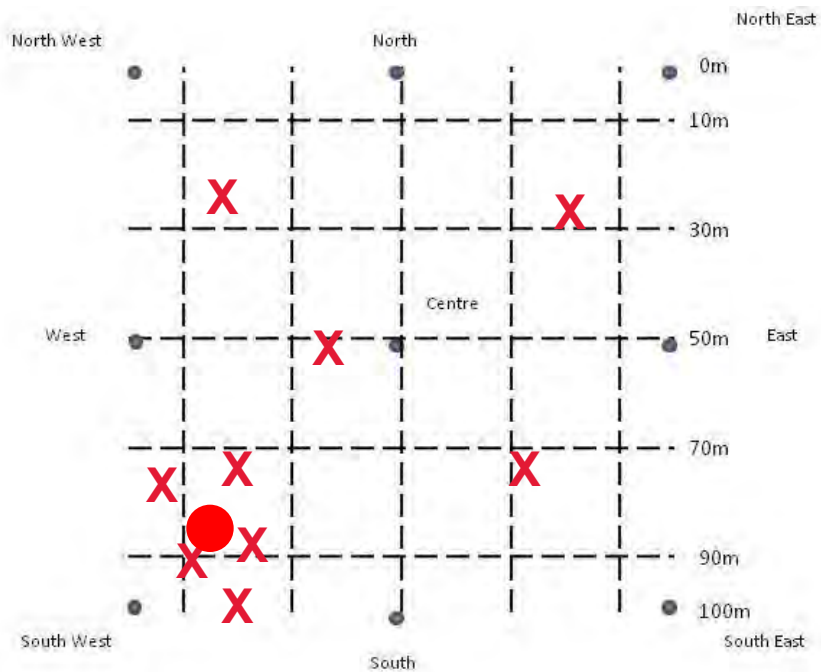




## Method Development

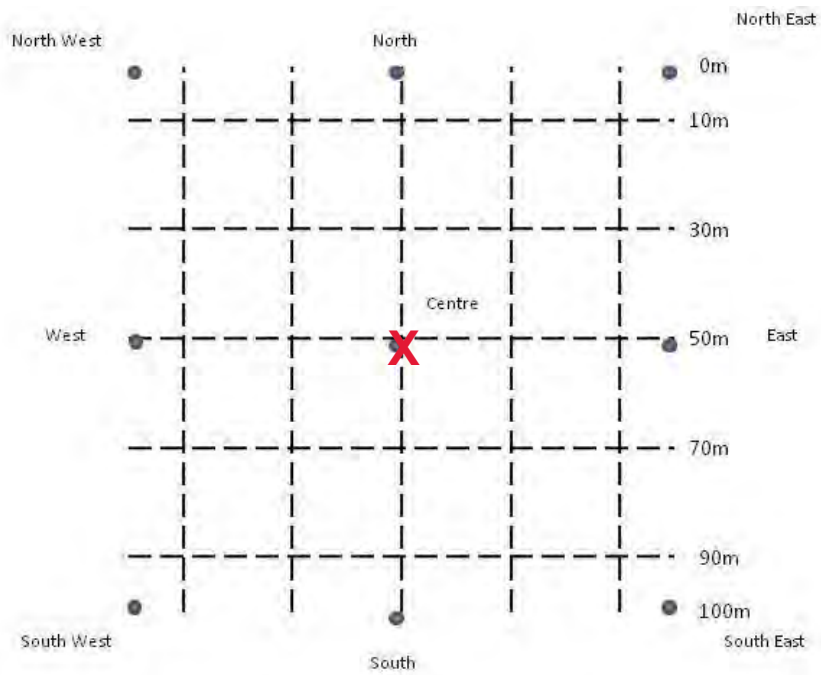
- Point Intercept transects for vegetation
- Soil sampling down profile and across site
- Plant vouchers for herbaria
- Samples for DNA barcoding, isotope analysis & metagenomics
- Photopoint panoramas



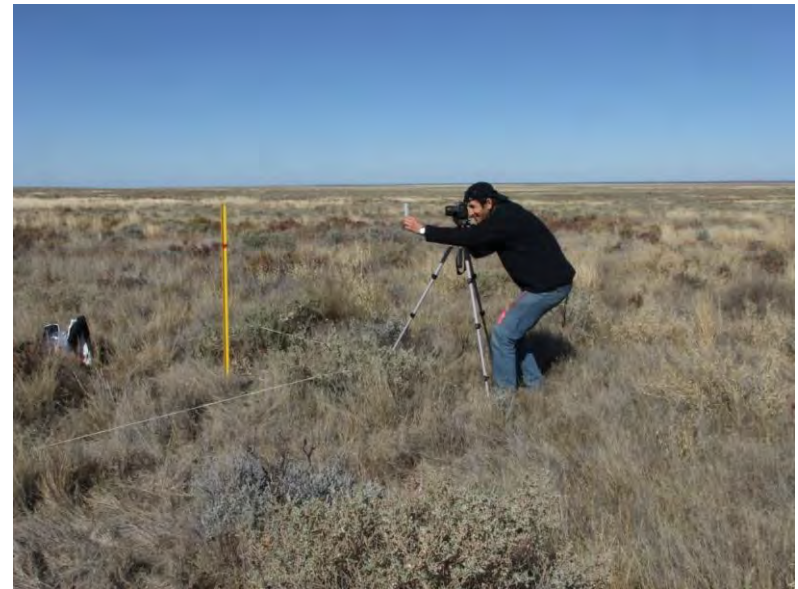


- Point Sampling Location
- Point Intercept Transect





- Point Sampling Location
- Point Intercept Transect





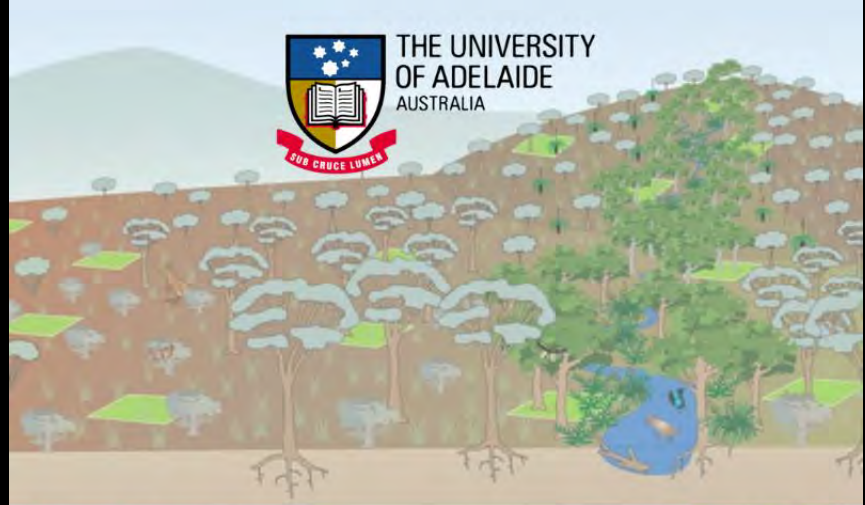
# ausplots

## Rangelands Field App

This software has been developed by the University of Adelaide for TERN AusPlots. It allows users to enter and archive field data collected according to the AusPlots methodology.

TERN is supported by the Australian Government through the National Collaborative Research Infrastructure Strategy and the Super Science Initiative.

Version: Alpha 1.002







# AusPlots Rangelands

Current Plot: test007

Manage Plot

User:

Login

Settings

About

## Land Cover Assessment

Star Point Intercept

## Ausplots Vegetation Modules

Vegetation Vouchering

Genetic Vouchering

Point Intercept

Basal Wedge


Leaf Area Index (LAI)

Photo Panorama

Structural Summary

## Species

Abacopteris presliana Abacopteris triphylla

ICS Senescent **Abacopteris presliana**   
(Height:1.00m, Growth Form:Shrub mallee)



## Substrate

- Bare
- Litter
- Rock
- Outcrop
- Gravel
- C.W.D.
- Other
- Crypto.

Voucher Species Back Next

# Vegetation Vouchering

Select species or enter field name ...

Abacopteris presliana

Abacopteris triphylla

Abarema pruinosa

Abaxianthus convexus

Abelia rupestris

Abelia x grandiflora

Scan a voucher

Show Plot's  
Vouchered  
Species:1

**Field name**

Abacopteris triphylla

**Scanned Voucher**

<none>

Go to Genetic Vouchering

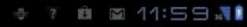


**TERN Method  
Rangelands**



**SAG000408**

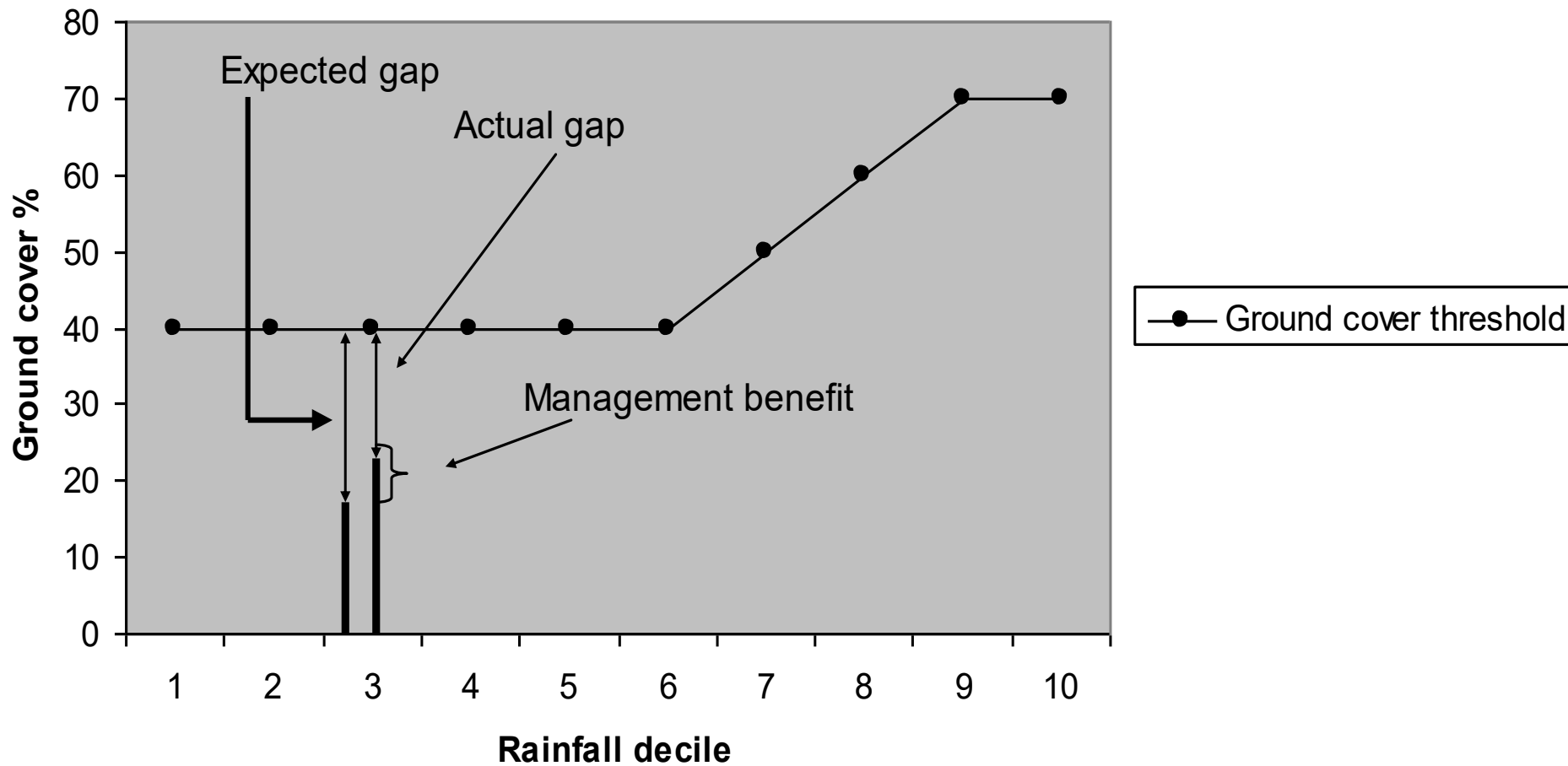
**TERN Method**





# Ground cover incentive (NSW)

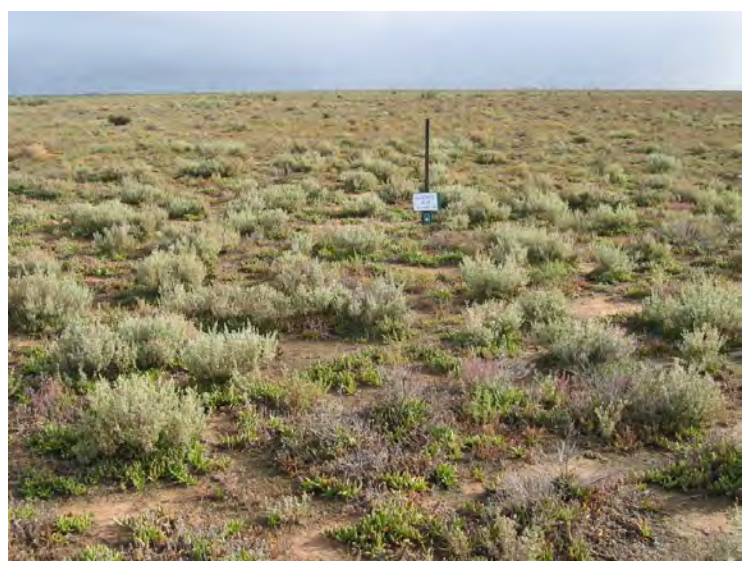
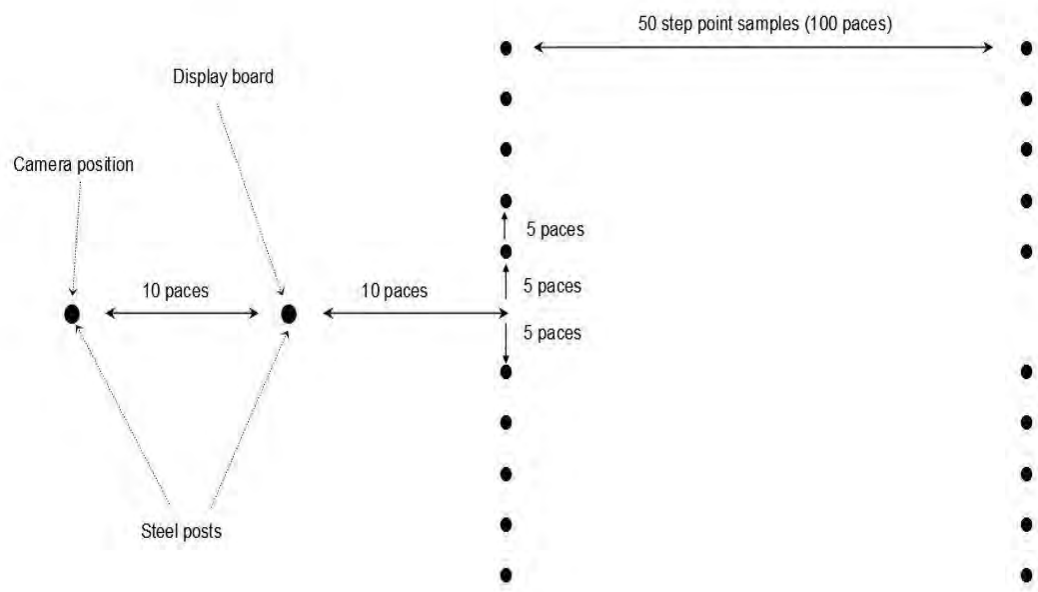
- Pilot program (2008 – present)
- Basic principles
  - \$ for 40% ground cover
  - drought management (early response)
  - recovery management (resource conditioning)



**\$ Incentive = management benefit/expected gap**

**\$ Incentive = 8/24 of potential payment = 33.3%**







# Features

- Linked to preceding 12 months rainfall
- Pro-rata, annual payments
- Costs (\$1.9/ha payments; \$2.25/ha admin)
- Collateral benefits



# Summary

- AusPlots
  - Continental scale (standard methods)
  - Publically available
- Enterprise based conservation (ground cover)
  - Practical application of monitoring
  - Inform policy (recovery management)