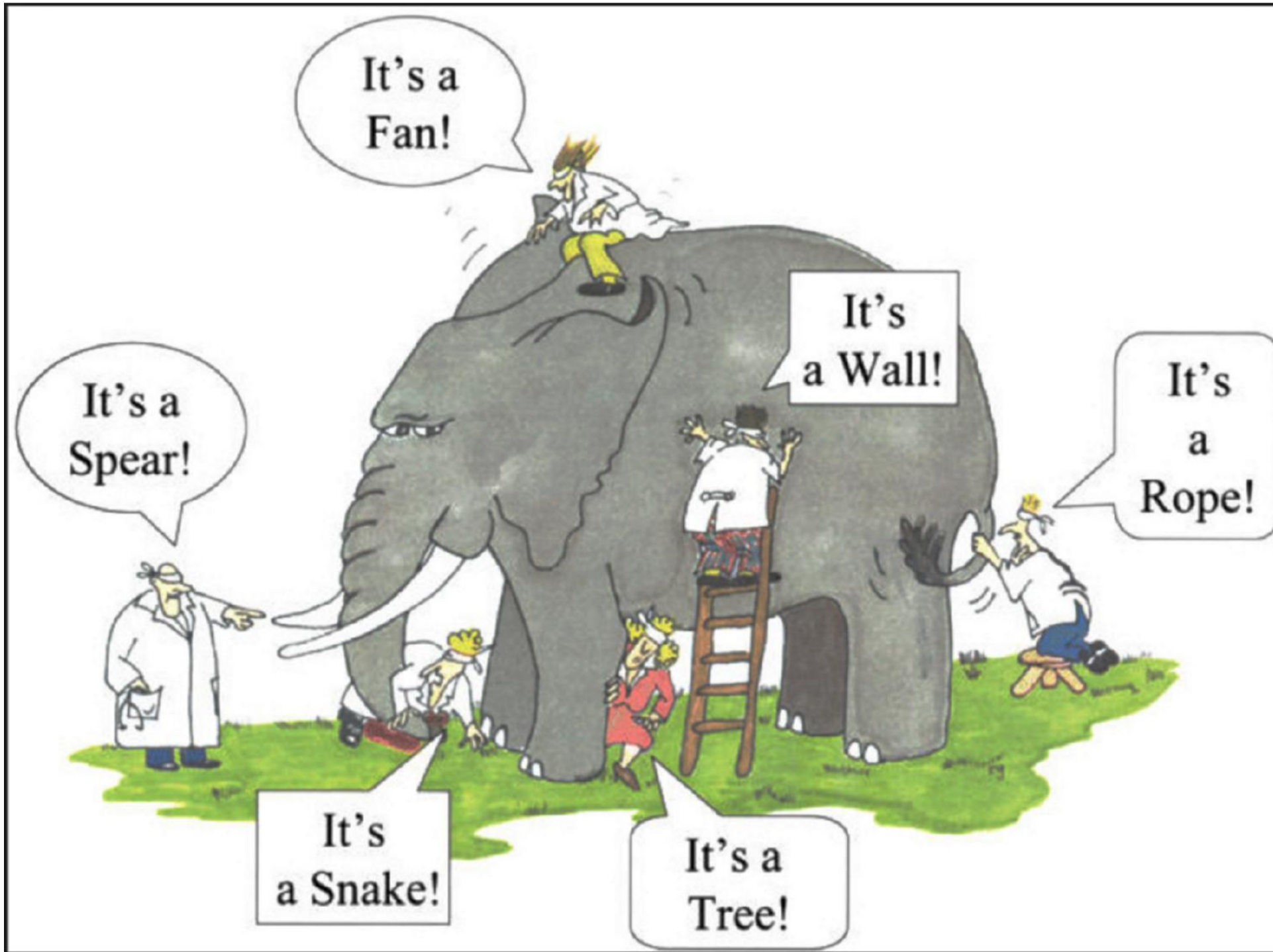


The CWMS and braided river restoration programs

Successes and opportunities
- one perspective



It's a Fan!

It's a Wall!

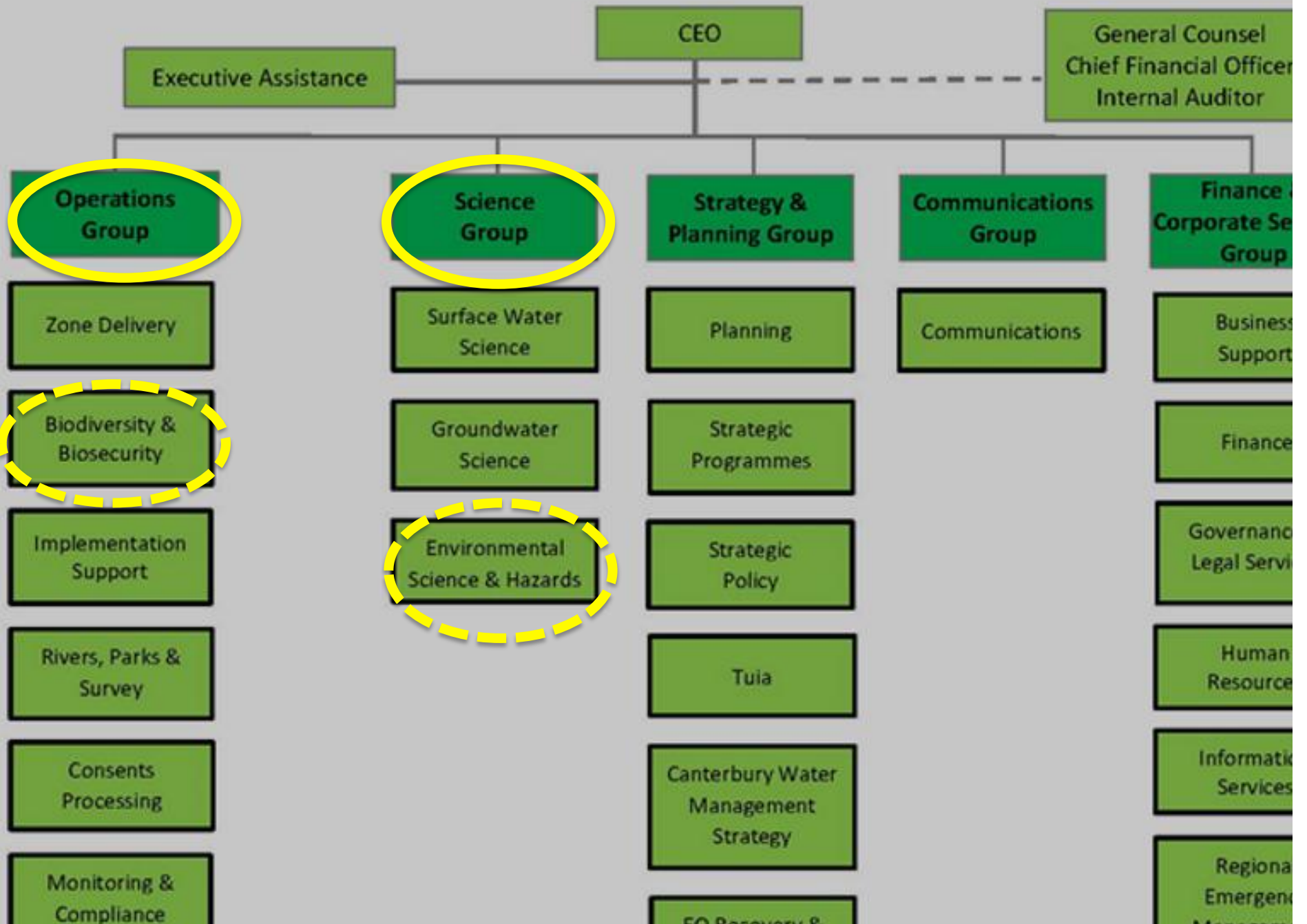
It's a Rope!

It's a Spear!

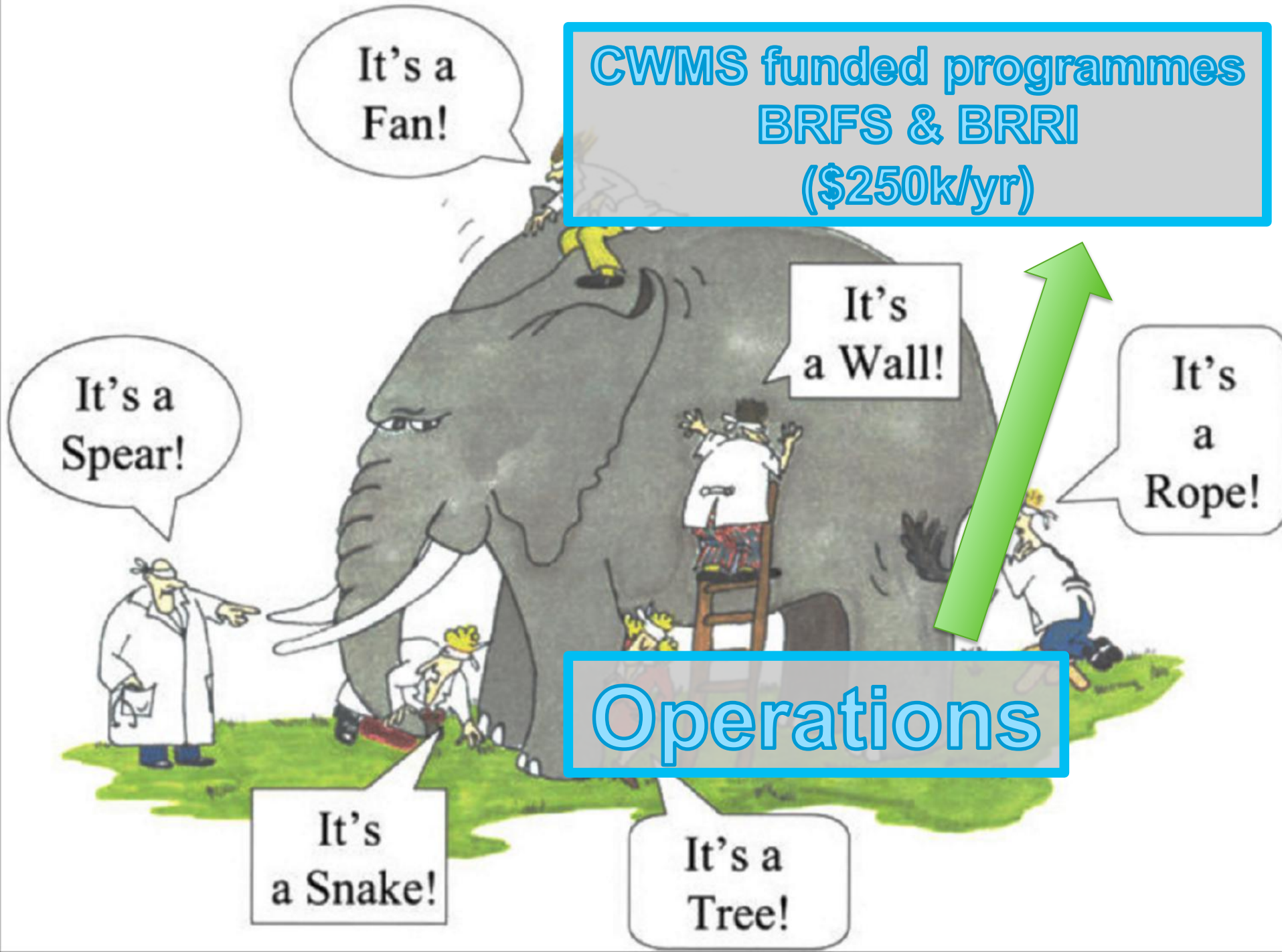
It's a Snake!

It's a Tree!

Our new organisational design is illustrated below.



CWMS funded programmes
BRFS & BRRI
(\$250k/yr)



It's a Fan!

It's a Spear!

It's a Wall!

It's a Rope!

Operations

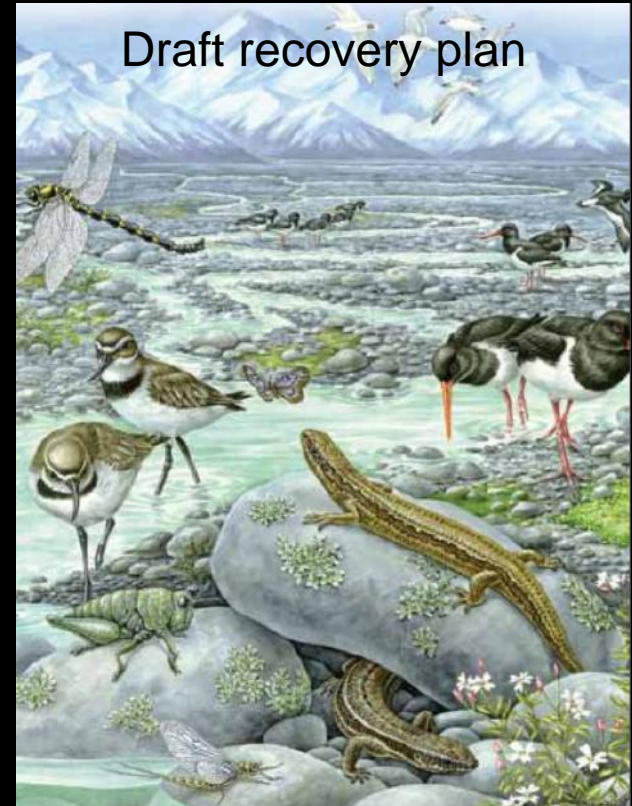
It's a Snake!

It's a Tree!

CI oystercatcher conservation research



Black-stilt field work



Draft recovery plan

BPCT coordinator
(community led
conservation organisation)

Context => complex!

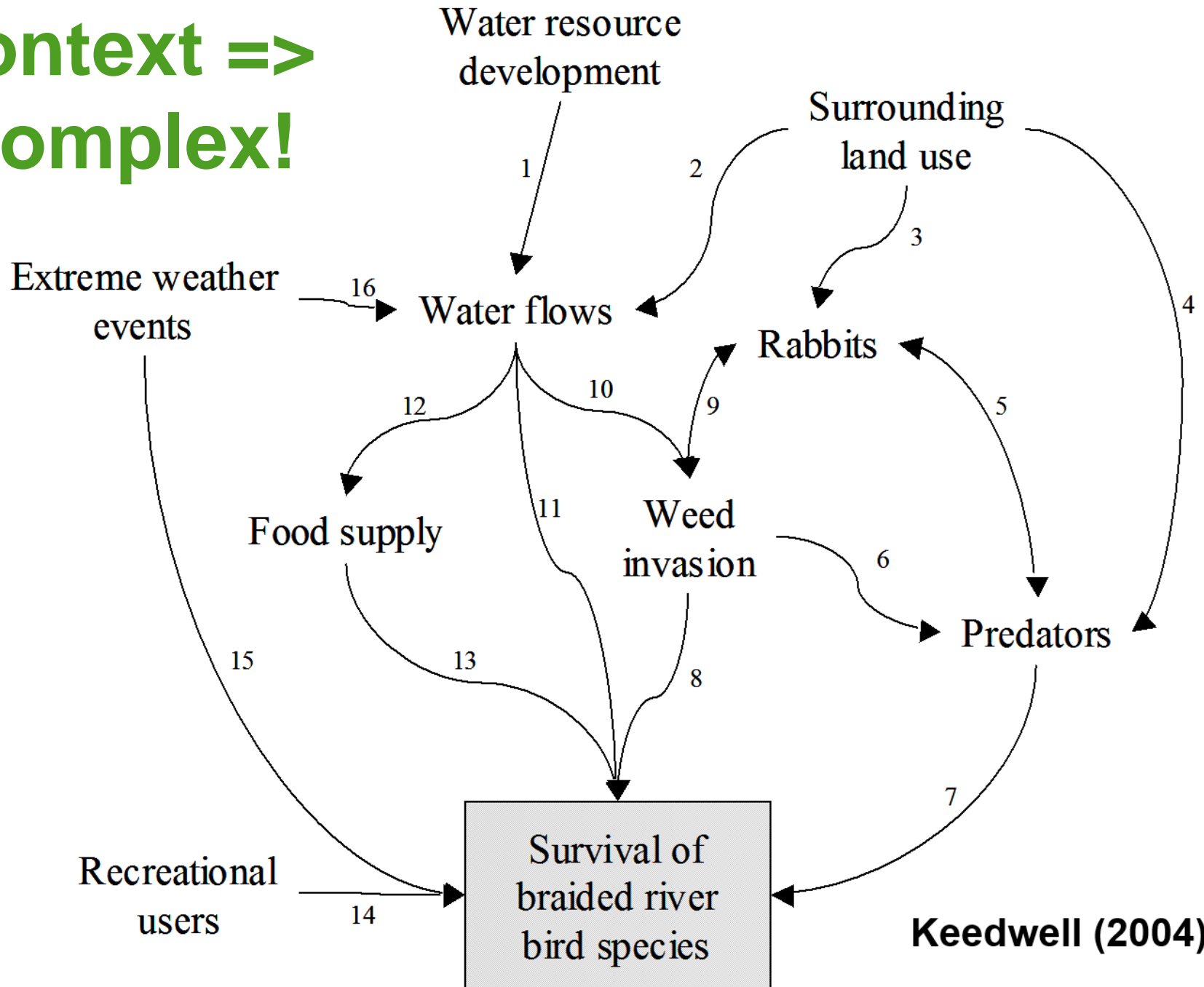




Photo by Kirk Hargreaves

Complicated landownership
Multiple agencies with various responsibilities

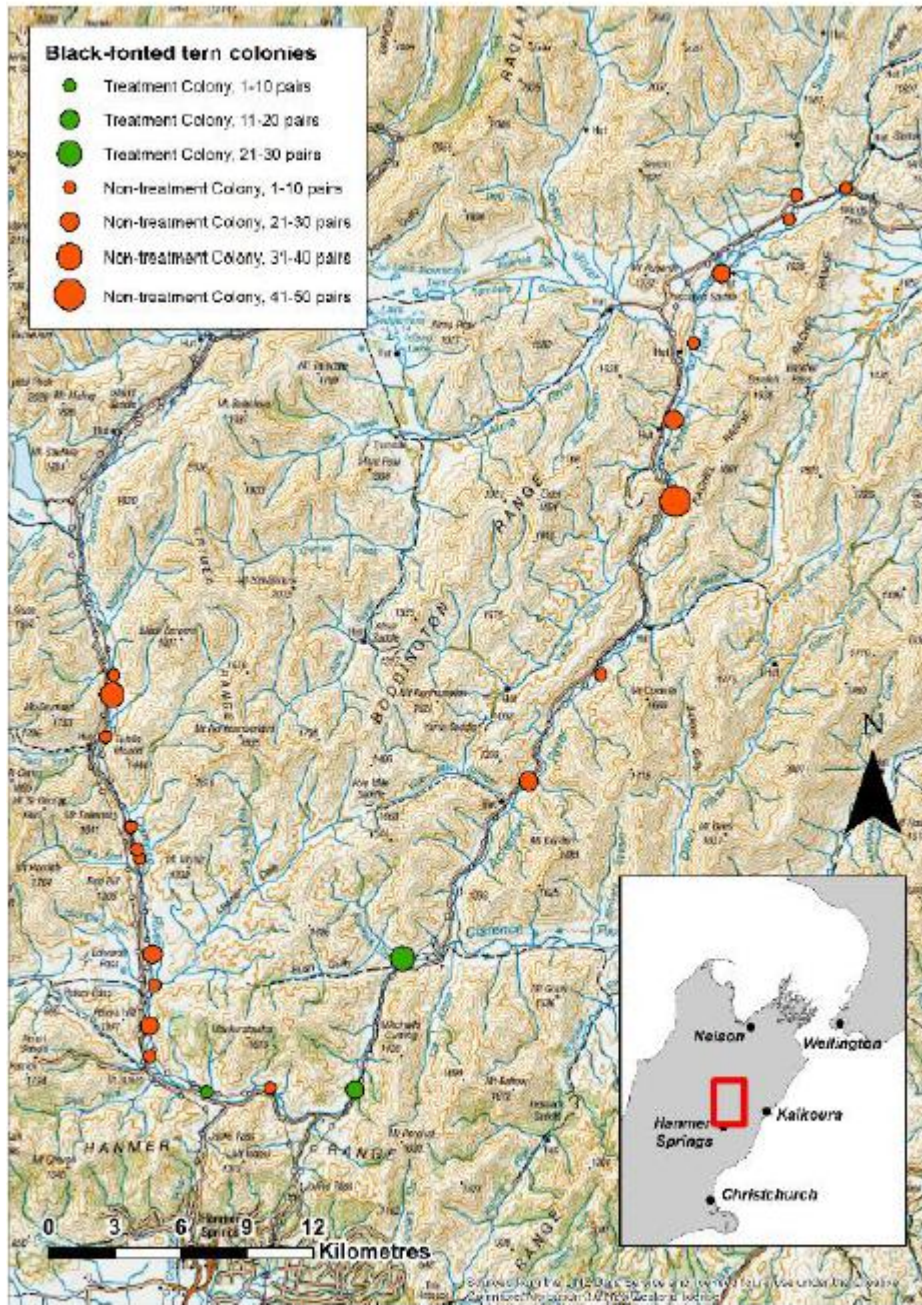
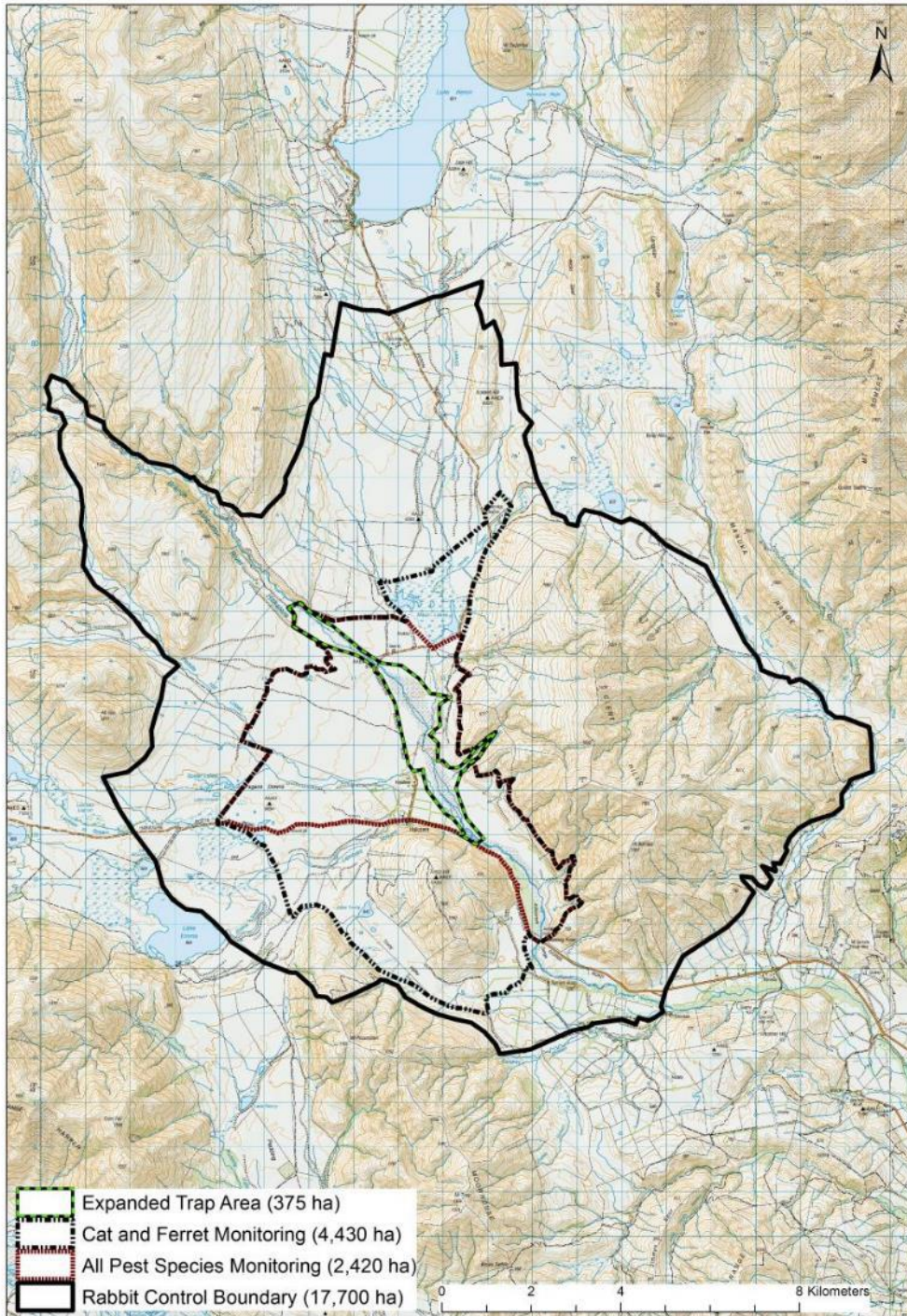


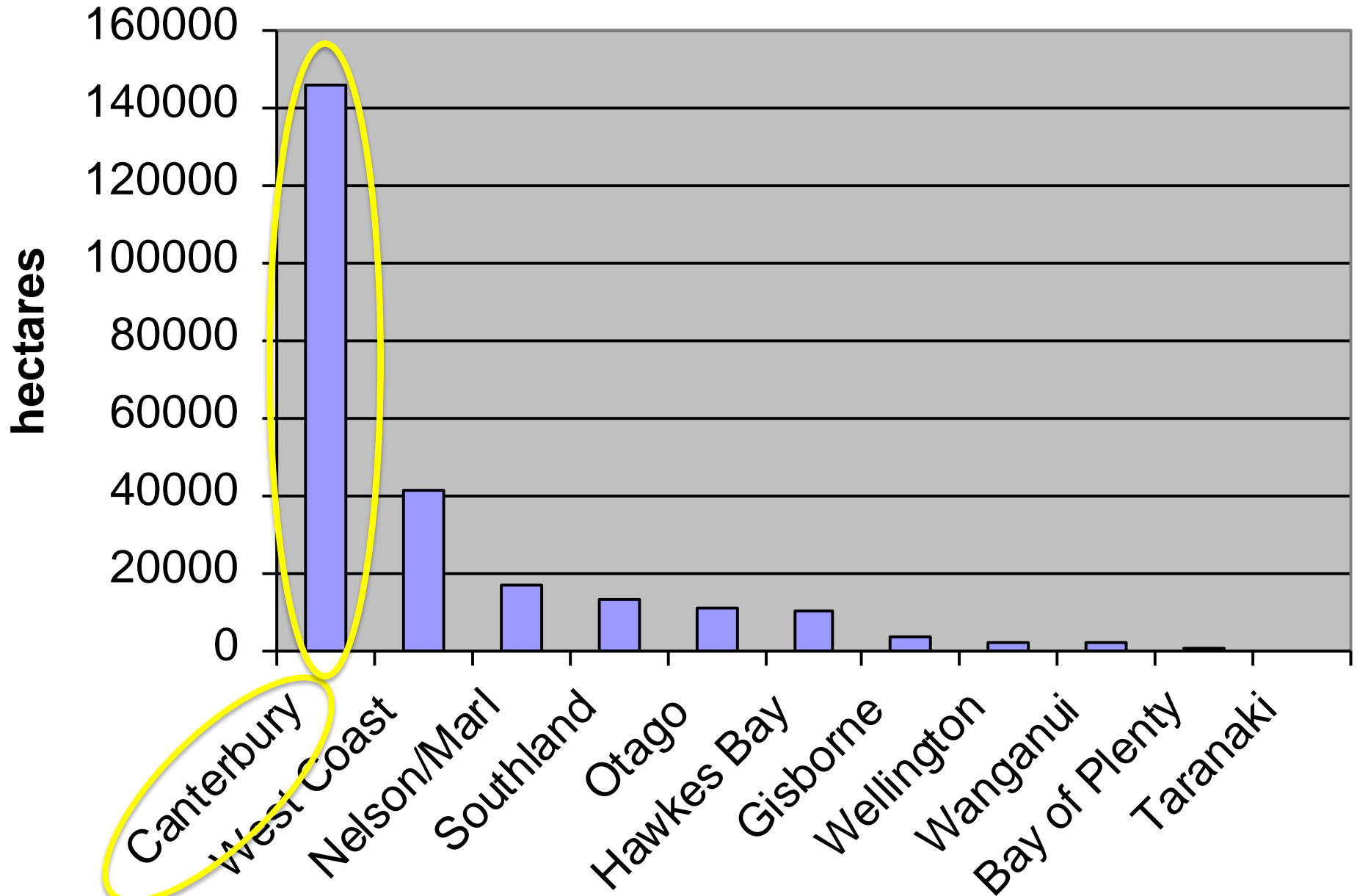
Figure 3.1: Locations and relative size of black-fronted tern colonies monitored on the upper Clarence and Acheron Rivers during the 2015/2016 breeding season.



Large scale



Mainly a Canterbury ecosystem



Pre-CWMS

- Often fell between the cracks
 - Species vs. habitat
 - ‘No man’s land’
- ‘Too hard’
- Few resources
- *Notable exceptions however*





Why bother?

Braided rivers: Biodiversity values

> 80 wetland bird species

> 50 threatened species









Fish, reptiles and insects




Threats



Native predators

Introduced predators



Recreation
Disturbance

Loss of water



Channelisation

Weed invasion



Land use

Dams

CWMS – renewed direction

Goals and targets

- Correct decline in freshwater species and ecosystems
- Enhanced and protected breeding indigenous braided river birds
- Correct the decline in useable braided river bird habitat



OWMS - new resources



ADVICE & INFO SERVICES

Home > Get Involved > Canterbury Water

- Have Your Say
- Canterbury Water**
- Telling our story
- Consent Projects
- Water Projects
- Local Projects & Groups
- Schools & Education

Canterbury

Committees

Find out what the zone committees do to improve the quality of streams and rivers.

The zone committees work on environmental, social, cultural and environmental issues.

Canterbury Water Management Strategy

Strategic Framework - November 2009
Targets updated July 2010.



agenda
ula Zone

Context – ECan structure

Structure

- Strategy and planning
- Science
- Communications
- Corporate
- **Operations**



- Budgets
- Strategic direction / 5 year outcomes / work programmes

- Monitoring
- Surveys (braided rivers)
- Investigations
- Reports



Context – ECan structure

Structure

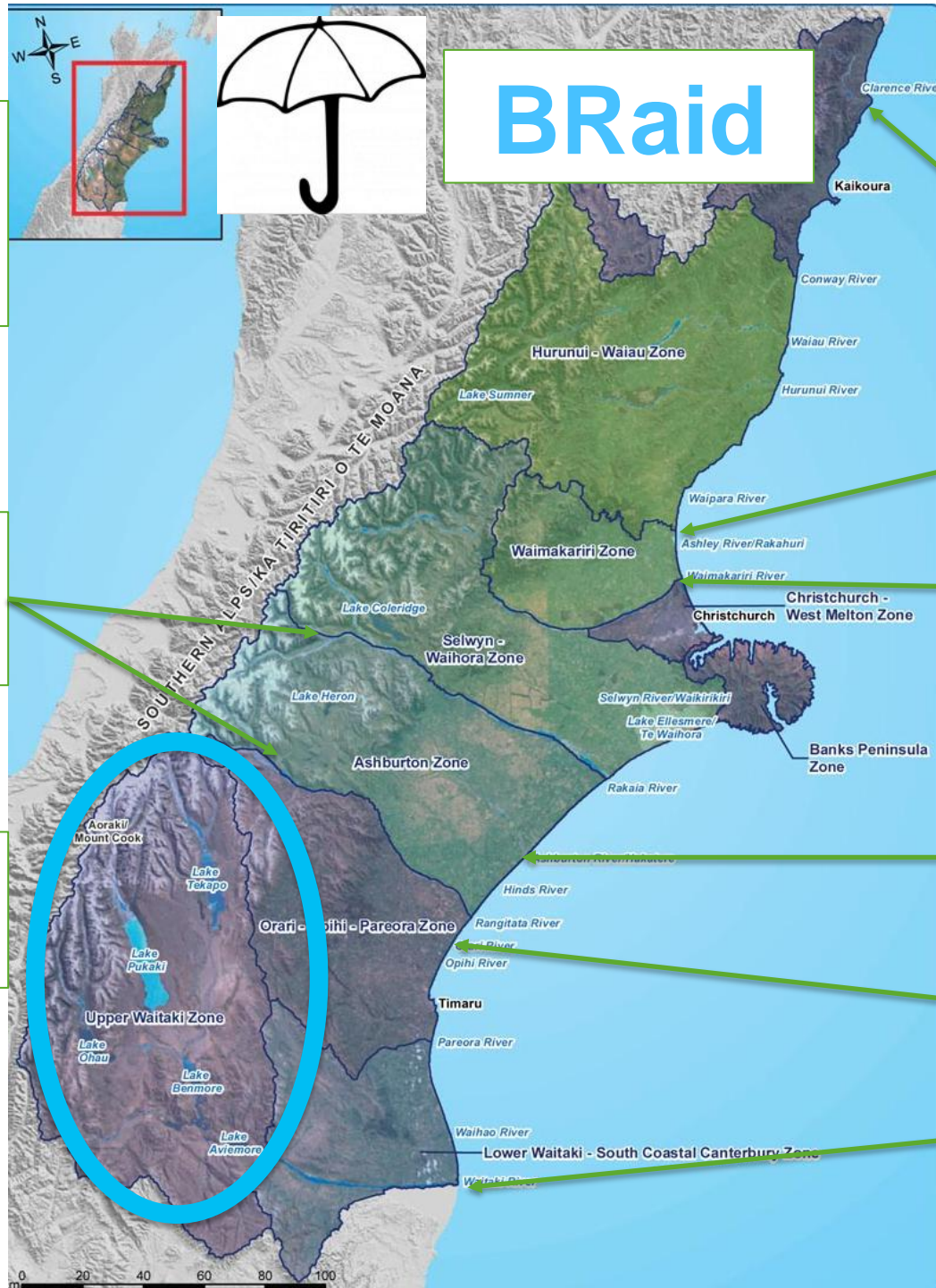
- Strategy and planning
 - Science
 - Communications
 - Corporate
 - **Operations**
- 

- Rivers, Parks, and Survey
 - Ashley and Waimakariri
- Zone Delivery
 - Zone programmes
 - Biodiversity officers
- **Biosecurity & Biodiversity**
 - **Regional programmes**

- CWMS regional funding
- Other funding or programmes

Upper Rangitata and Rakaia Rivers

Project River Recovery



BRaid

Clarence River

Ashley/ Rakahuri River

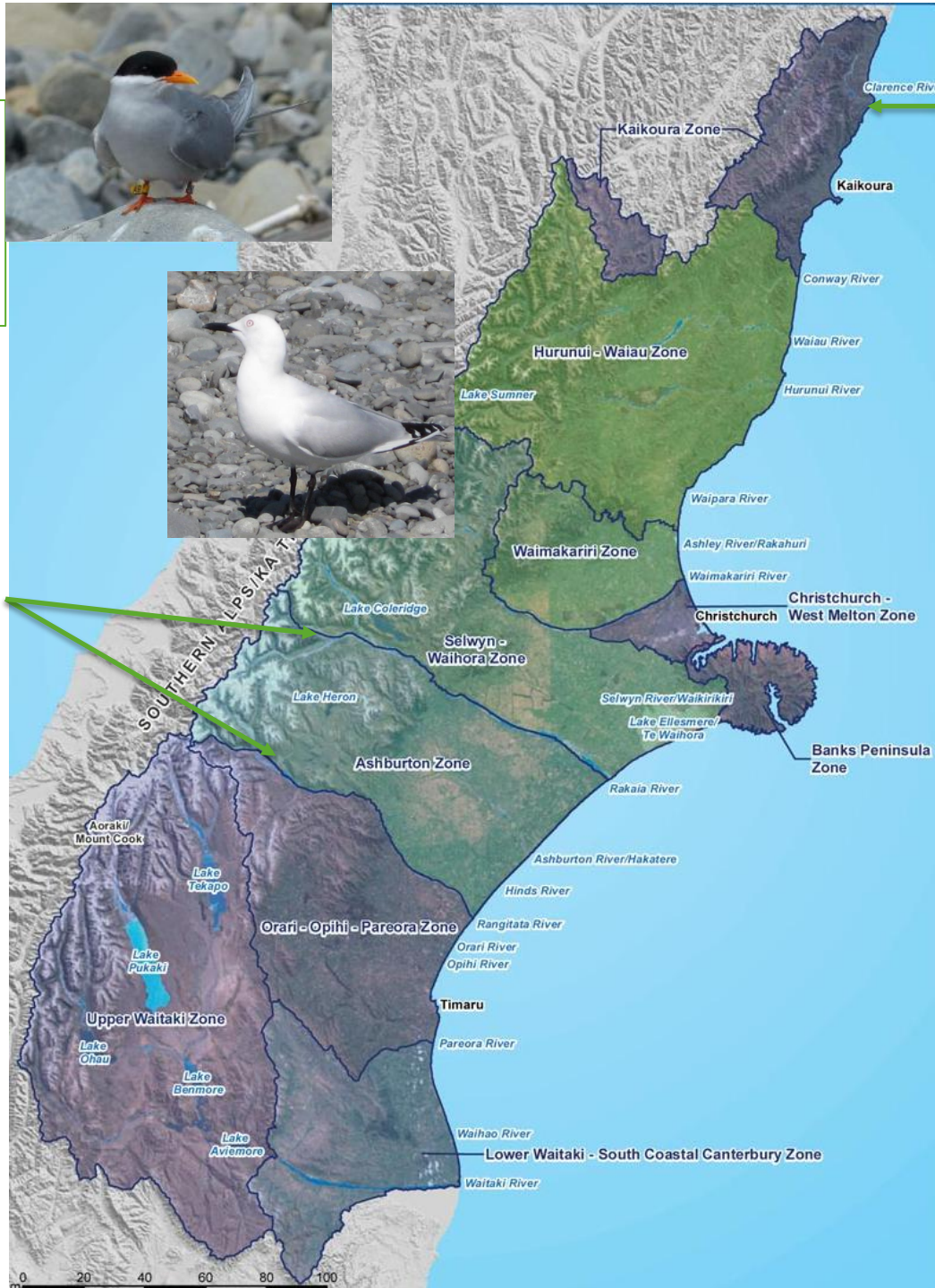
Waimakariri River

Ashburton River

(Orari River)

Lower Waitaki River

- CWMS regional funding
- Other funding or programmes



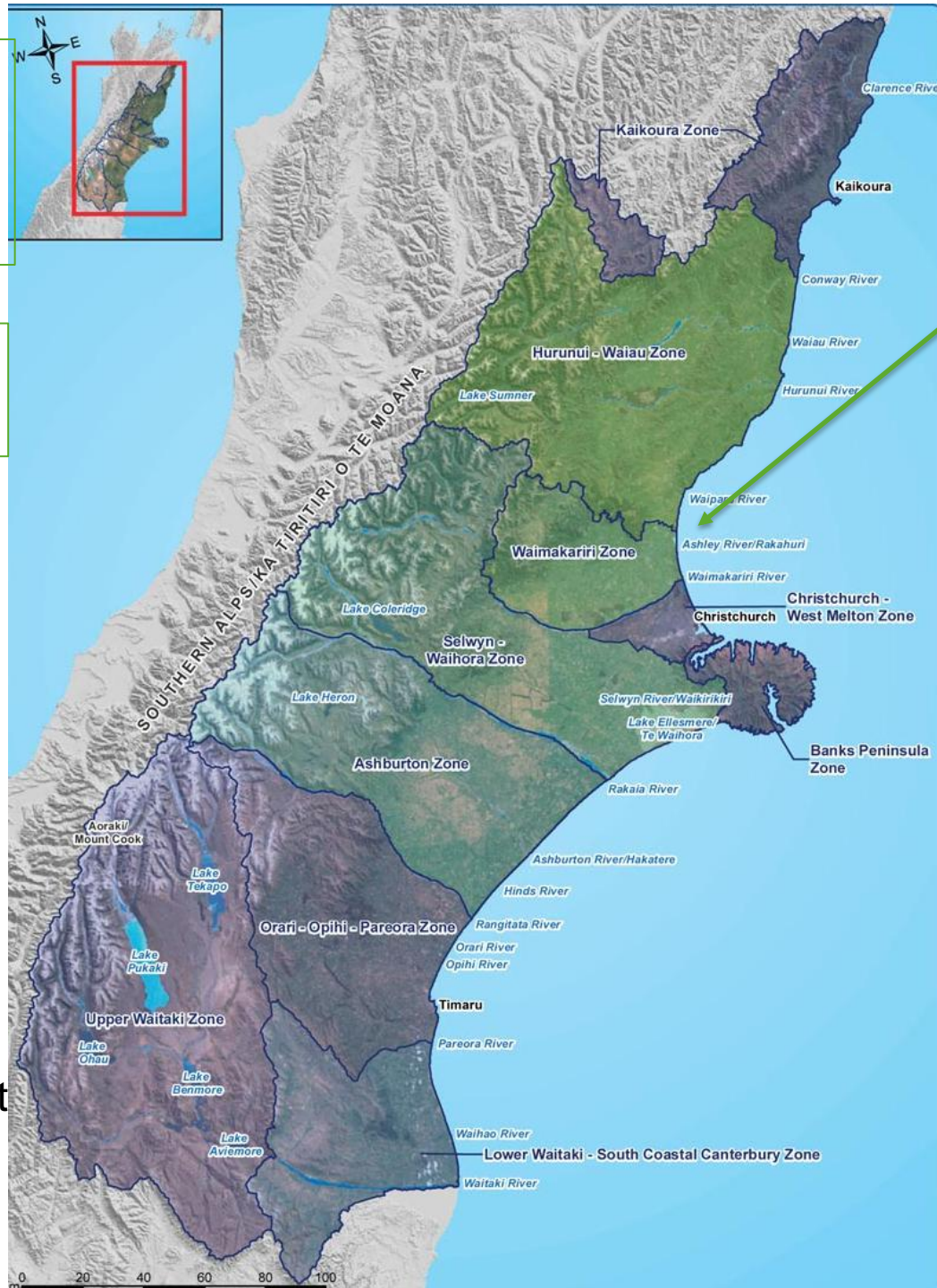
Clarence River

- Weed control
- Island enhancement
- Predator control
- Outcome monitoring for BFT and BBG
- Zone Committee
- DOC
- Wildlife Management International
- BRRI funding

- CWMS regional funding
- Other funding or programmes

BRaid

- Information
 - Website
 - Newsletter
 - Workshops
 - Training
- Coordination
- Support
- Projects
 - River surveys
 - The Flock
 - Involvement

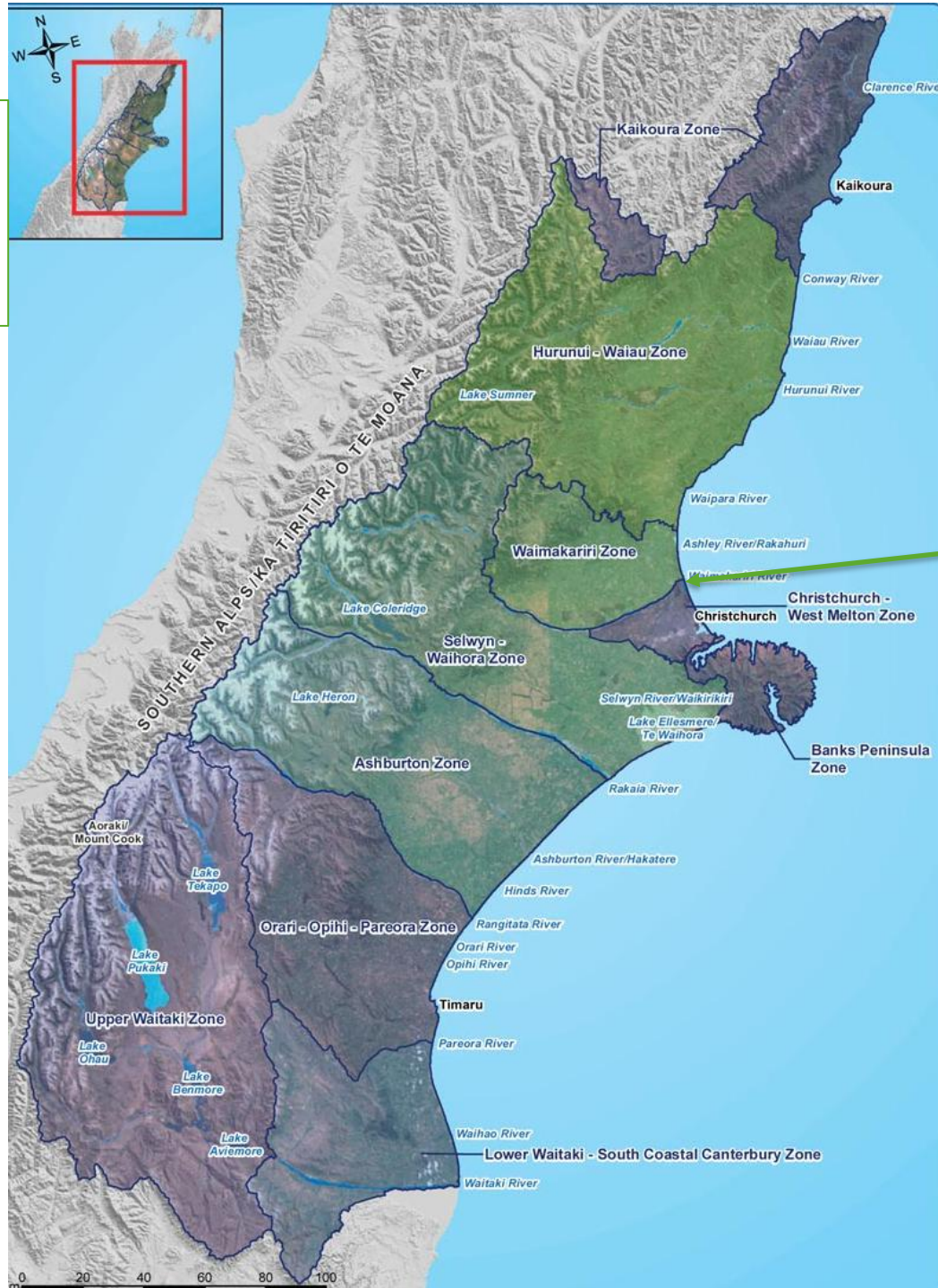


Ashley/ Rakahuri River

- Predator control
- Education and advocacy
- 4WDs/ gravel extractors
- Monitoring
- Surveys
- And more!

- ARRCG
- ECan Parks staff

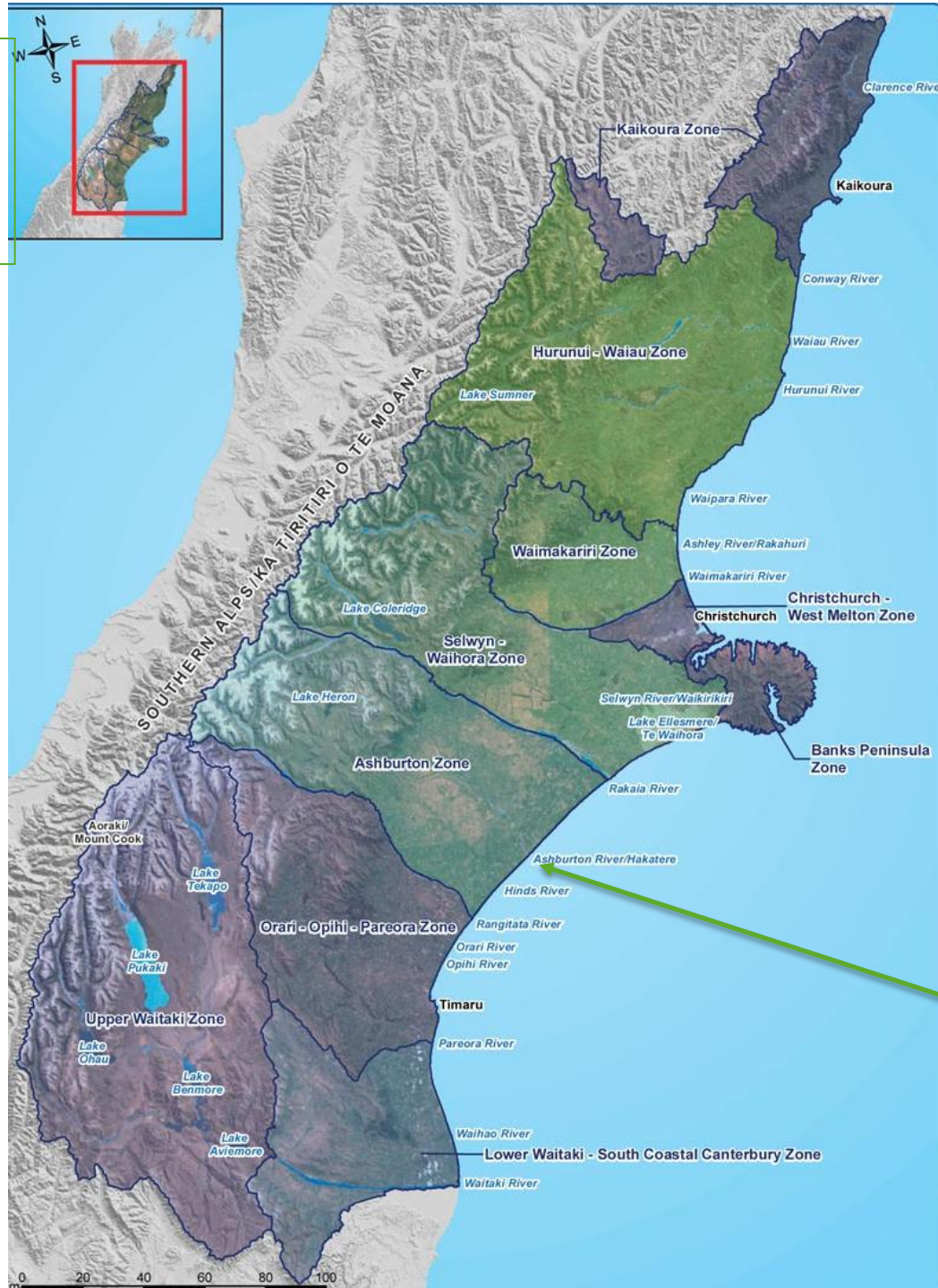
- CWMS regional funding
- Other funding or programmes



Waimakariri River

- Weed control
 - Corridor project
 - Predator control
 - Education and advocacy
 - Outcome monitoring for BBG
 - Zone committee
 - ECan Parks and staff
- Canterbury Regional Council
 Māori Name: Te Kaitiaki Take Kōwhiri

- CWMS regional funding
- Other funding or programmes



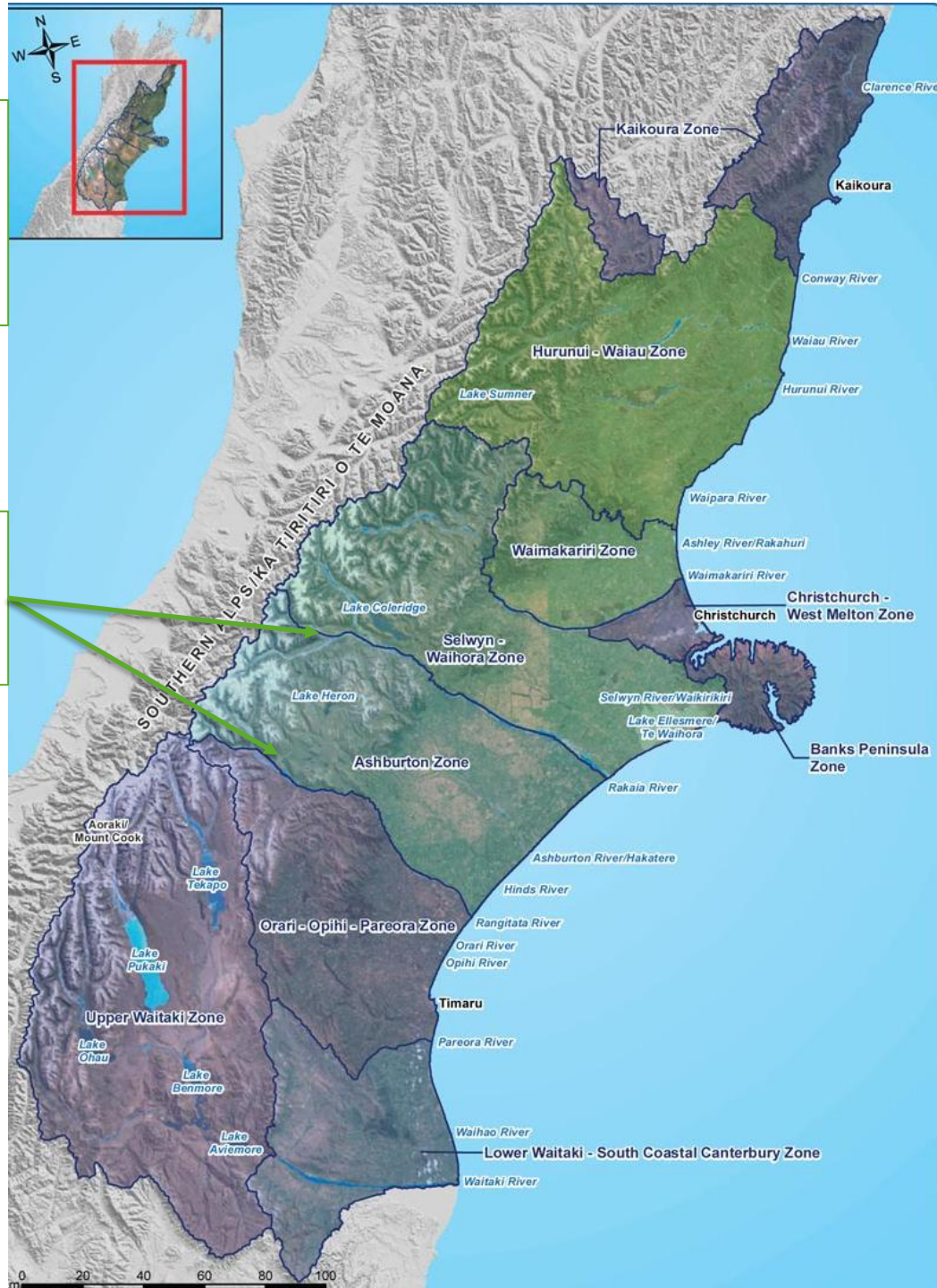
- Management plan development
- Predator control
- Education and advocacy
- 4WDs/ access issues
- Surveys
- Monitoring
- Weed control

- Ashburton F&B
- DOC
- ECan River Engineering
- Zone Committee

**Ashburton/
Hakaterere River**

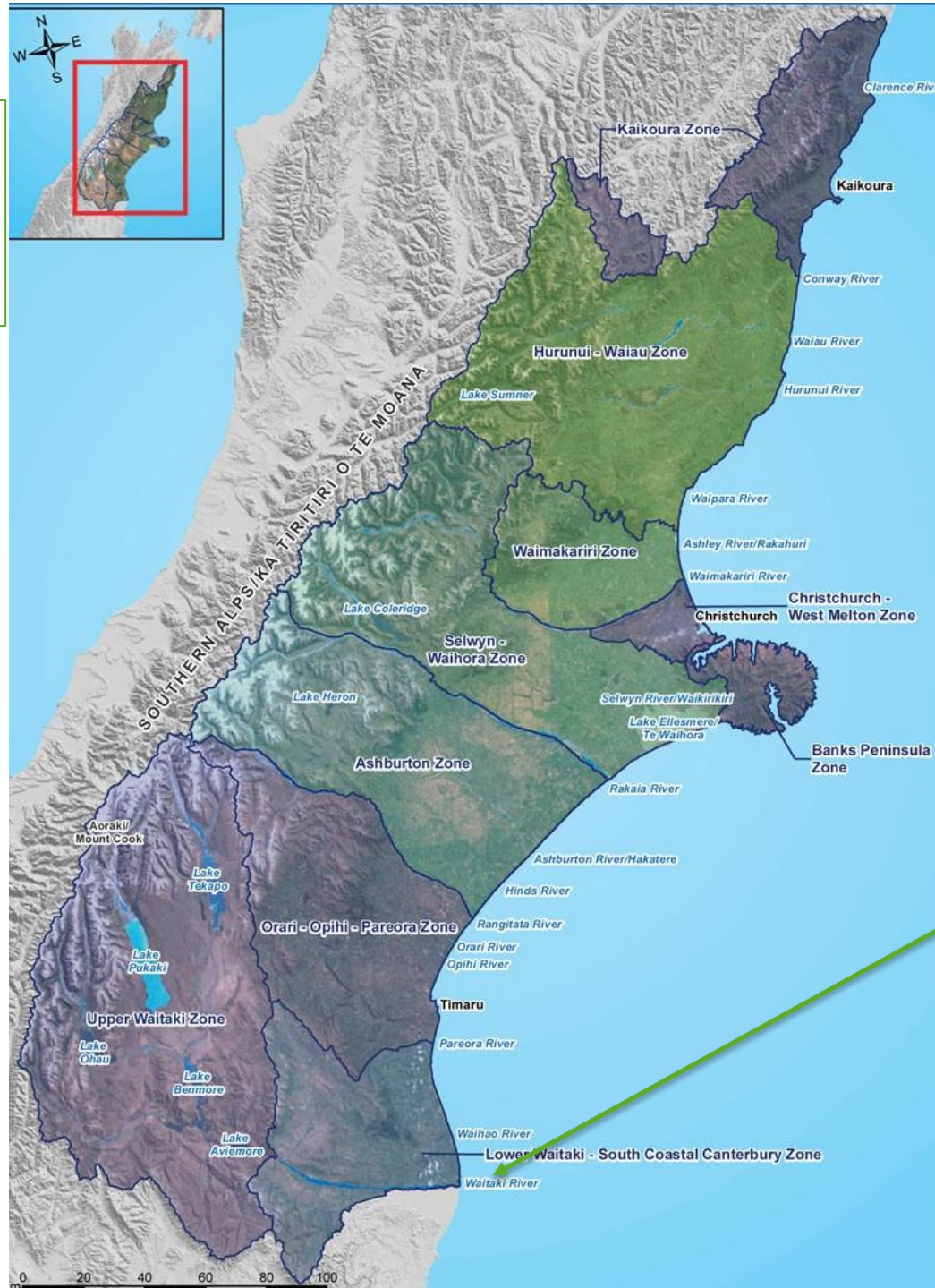
- CWMS regional funding
- Other funding or programmes

Upper Rangitata and Rakaiia Rivers



- Weed control
- Predator control
- Outcome monitoring for wrybill & bft
- Landcare groups/runholders
- Zone & Regional CWMS Committees
- DOC
- LINZ
- BRFS and BRRI funding

- CWMS regional funding
- Other funding or programmes

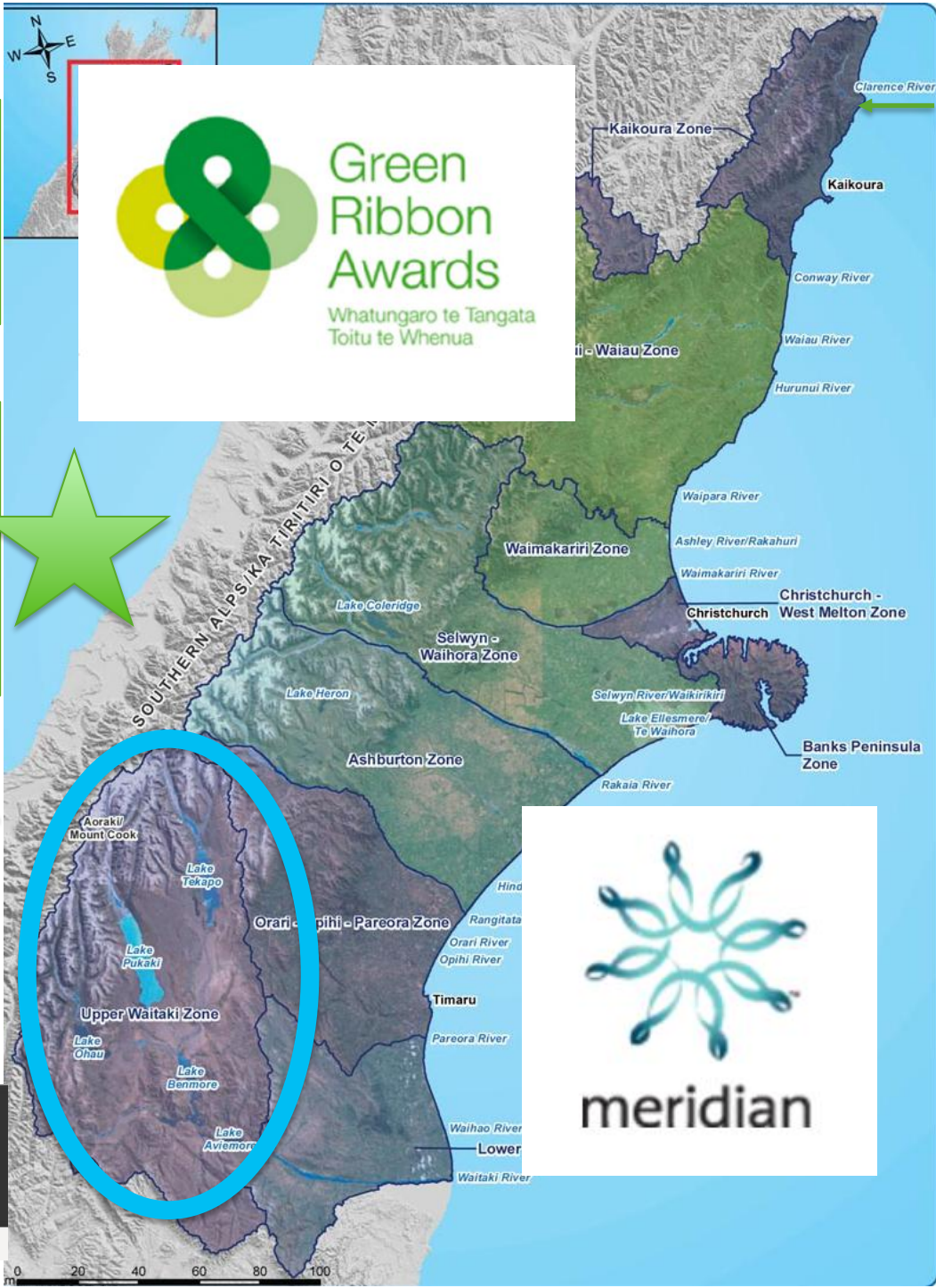


- Island enhancement
- Outcome monitoring for BFT
- Mudfish restoration
- DOC
- LWMS
- University of Otago
- ECan river engineering
- BRRI funding

Lower Waitaki

- CWMS regional funding
- Other funding or programmes

Mackenzie Basin - Project River Recovery



- Whole ecosystem approach
- Capacity
- Partnerships
- Resources
- Science and outreach
- Predator control
- Weed control
- Wetland restoration
- Surveys
- Monitoring
- Education
- Advocacy



Region-wide investigations

- Black-billed gull survey for management
- Braided River habitat enhancement trial (robust grasshoppers)
- Braided river habitat management investigation (black-billed gulls)



Robust grasshopper - Nicholas Baker



Elements of success

- Clarence River example
 - Steve Palmer (ECan) and zone chair – coordination and media front
 - Zone biodiversity officers – months behind the scene working with DOC/ Zones
 - ECan staff/ CWMS/ Strategy – funds, program, ‘infrastructure’, strategy

Elements of success

- Cooperation/ Collaboration
 - DOC (technical knowledge and experience)
 - Landcare groups/ runholders
 - LINZ (Boffa)
 - F&B/ BRaid
 - CWMS (resources/ targets and goals)
- Communications

Opportunities

- Funds/ consents – examples:
 - Rakaia Enhancement Fund (still no funds expended after several years)
 - Coleridge EEF (low spending, informal)
 - Central Plains Water (spending delays)
 - Contact Energy (in and out)
- Risk of duplication, pepper pot, low priority

Project River Recovery model

- Meridian Energy and DOC
- Dedicated capacity
- Leadership
- Research/ monitoring/ partners
- Key resource for region and beyond
- Strategic and long-term
- Advocacy/ education



Upper Rangitata or Rakaia
Photo by Kirk Hargreaves



**Environment
Canterbury**
Regional Council
Kaunihera Taiao ki Waitaha

What ECan is doing

- Science
 - Monitoring and reporting
 - River surveys
 - Habitat mapping/ classifications

What ECan is doing

- Strategy and planning
 - 5 year outcomes
 - Budgets
 - Planning/ rules
 - CWMS

Biosec/Biodiv and Zone Teams

- Funding
- Cooperation external and internal
- Advocacy and communications (media)