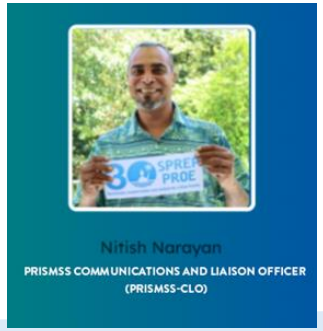
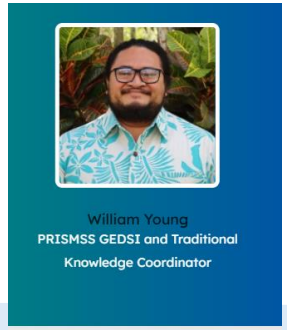
PRISMSS/ Site Restoration and Prioritisation

WHATS INVOLVED ?

CBD IAS Workshop

Samoa, July 2025





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Secretariat of the Pacific Regional Environment Programme

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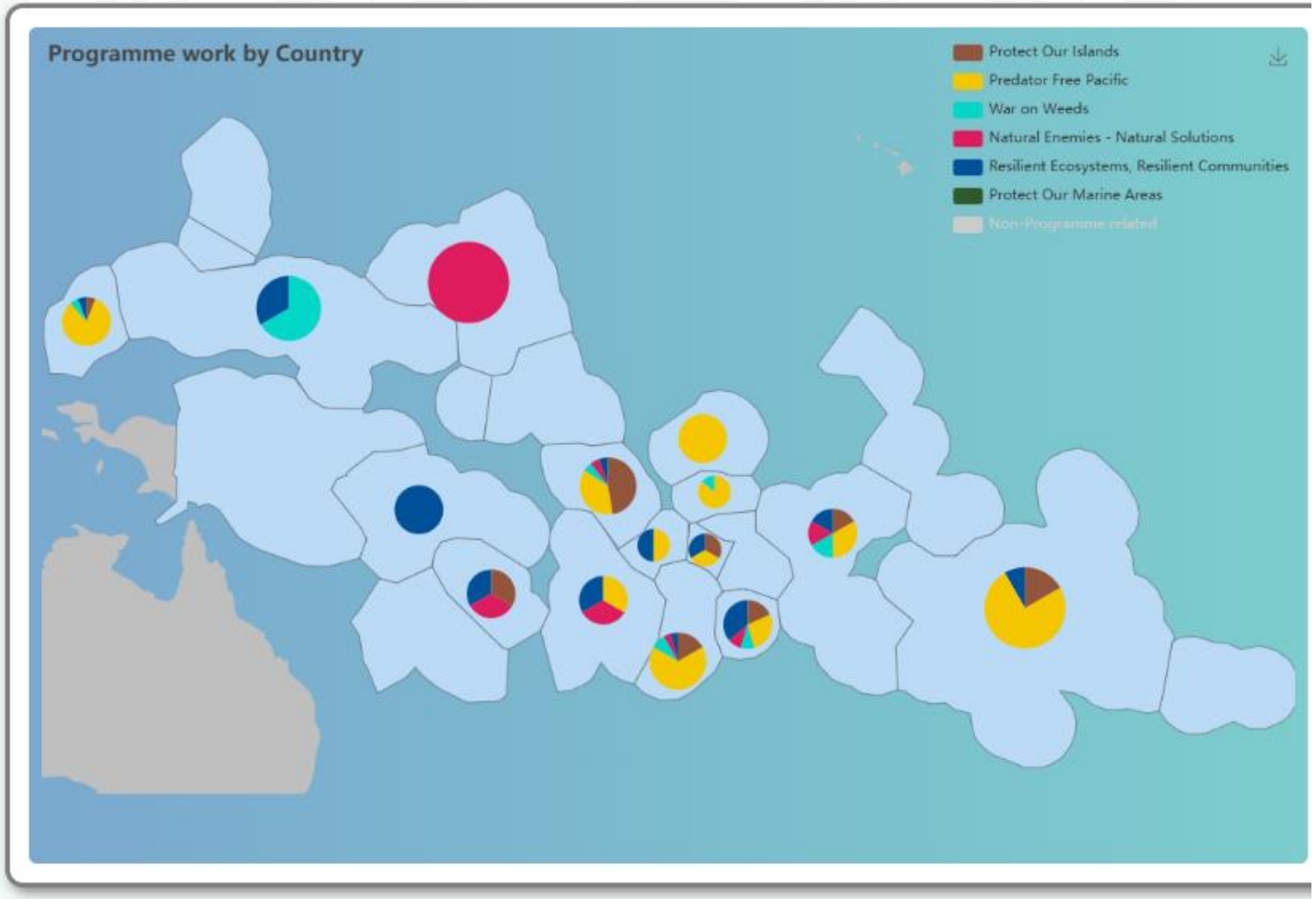
Resilient Ecosystems - Resilient Communities
"Priority area ecological restoration"



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PRISMSS REGIONAL PROGRAMMES

Protect Our Islands
"National and inter-island biosecurity and EDRR"

Predator Free Pacific
"Removal of invasive mammalian predators from Islands"

War On Weeds
"Management of high priority weeds"

Natural Enemies - Natural Solutions
"Biological control of widespread weeds"

Resilient Ecosystems - Resilient Communities
"Priority area ecological restoration"

Protect Our Marine Areas
“Preventing marine invasive species from spreading to priority marine areas”

Activity Outcome by Country

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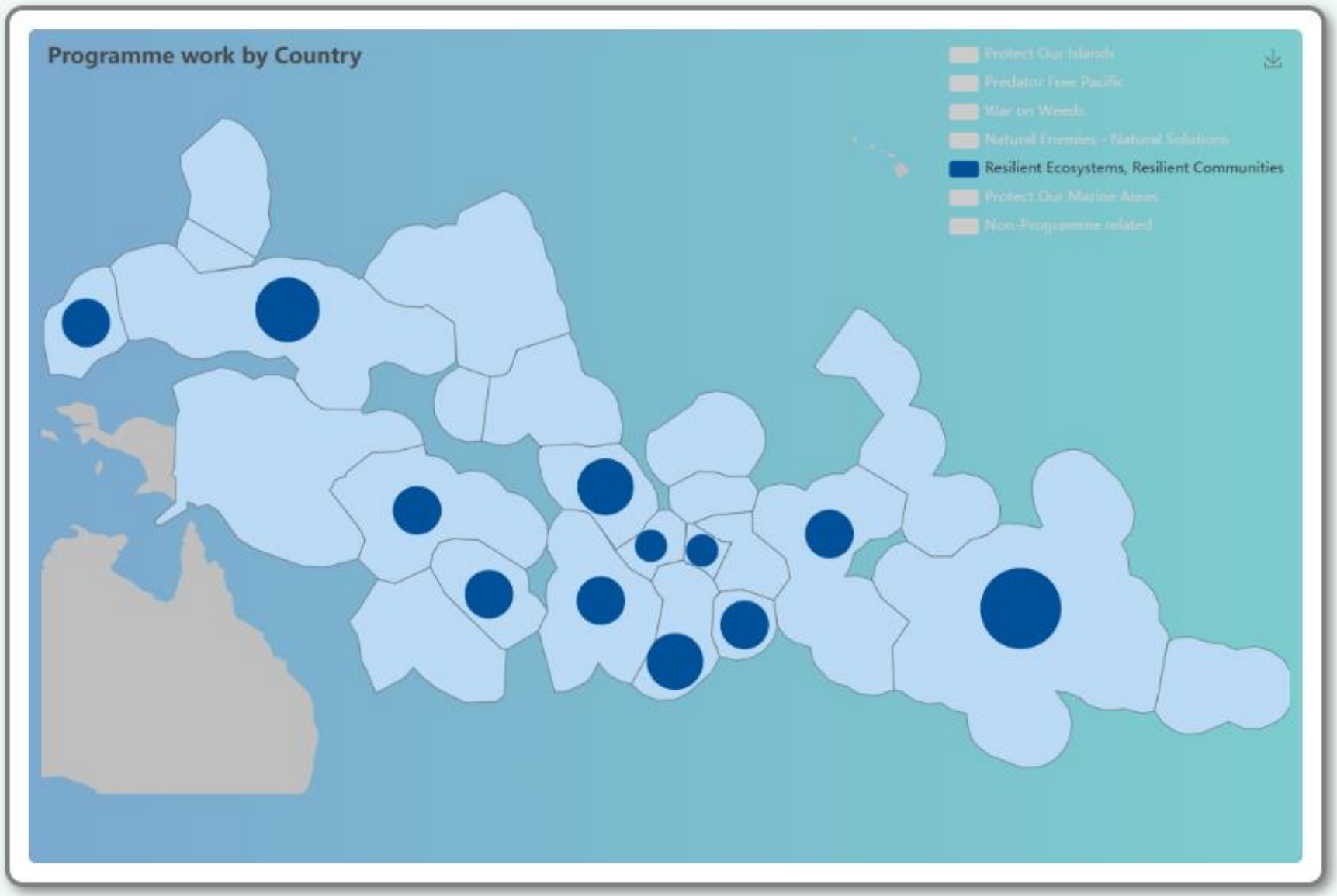
"Priority area ecological restoration"



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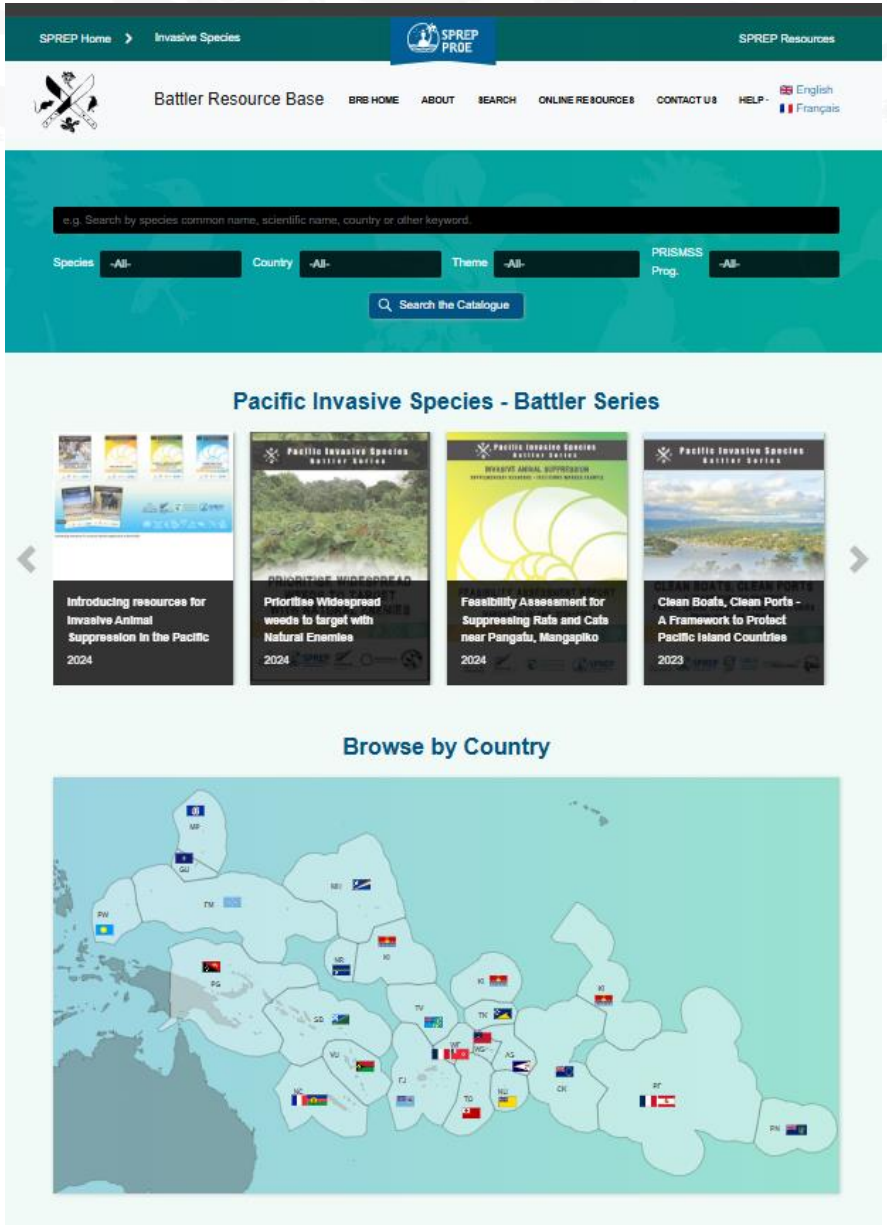
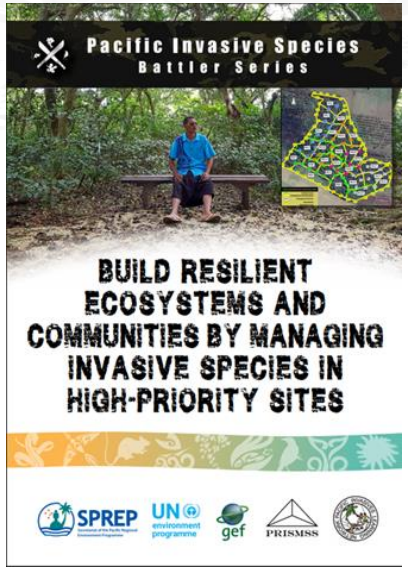
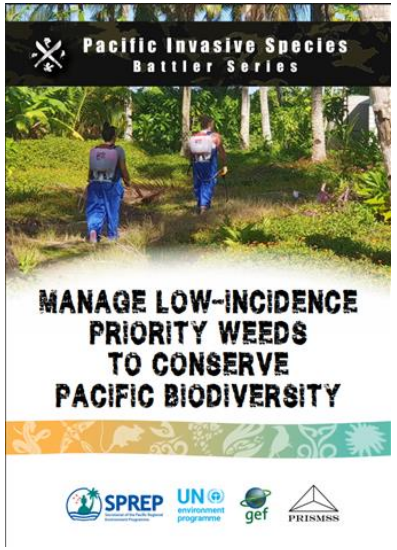
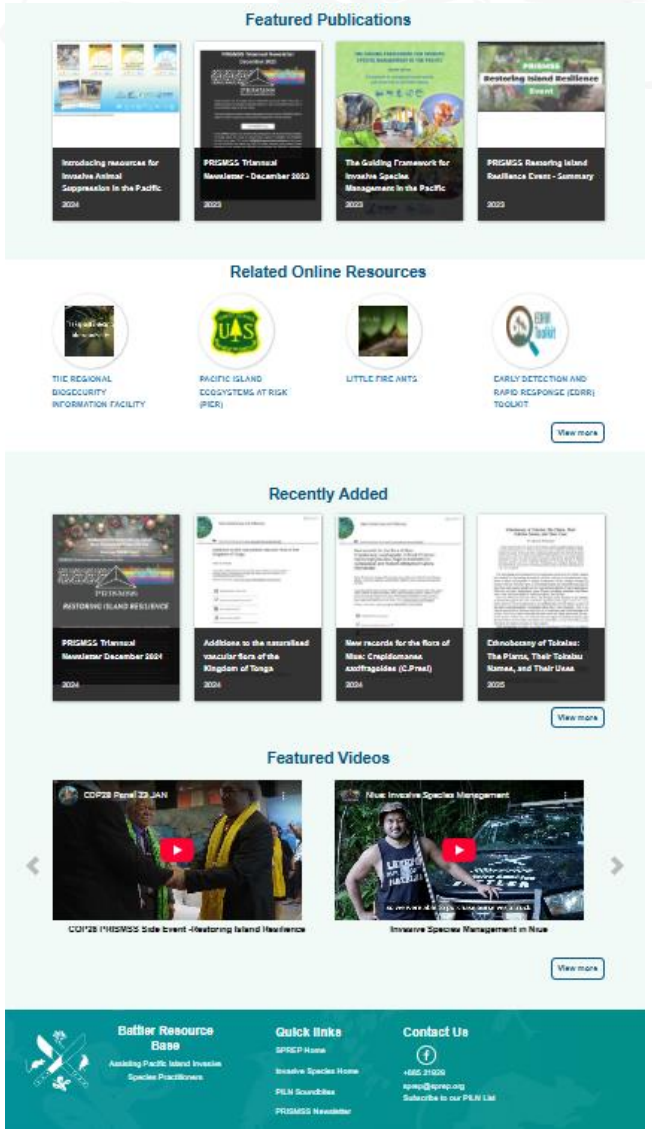
"Priority area ecological restoration"









NENS OPTIONS FOR PACIFIC WEEDS

PACIFIC INVASIVE ANT TOOLKIT (PIAT)

PACIFIC BIODIVERSITY INFORMATION FACILITY (PBIF)

INVASIVE SPECIES SPECIALIST GROUP (ISSG) DATABASE

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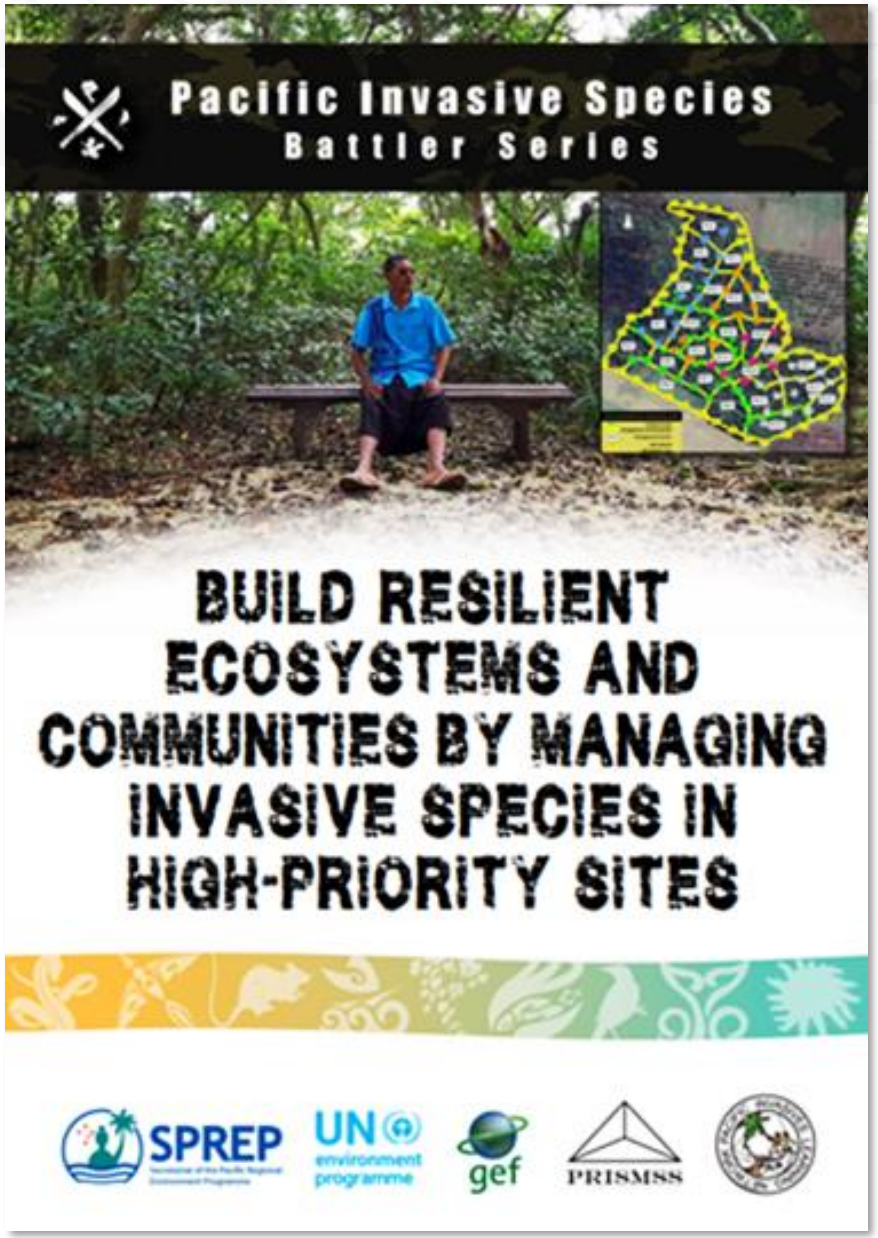

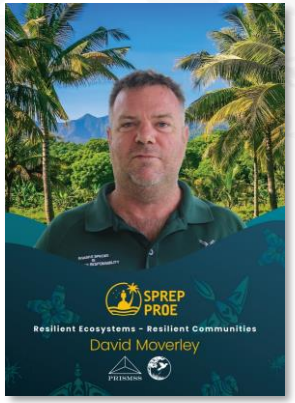

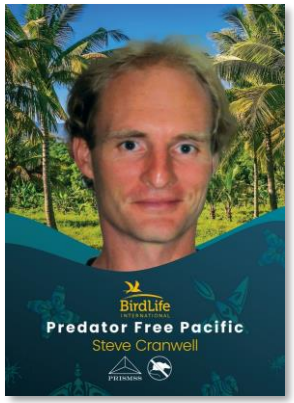

Protect Our Islands

"National and inter-island biosecurity and EDRR"

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Managing Invasive Weeds within your site

USING THE FOREST RESTORATION FRAMEWORK

What invasive plants are impacting on your priority site/s?

Invasive transformers

Change the character, condition, form or nature of ecosystems over a substantial area.

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Management options

- Manual control
- Herbicide foliar spray
- Herbicide cut stump
- Manage the environment
- Introduce natural enemies

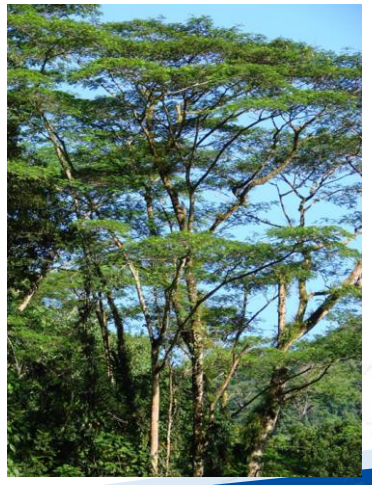
Tamaligi
Falcataria moluccana

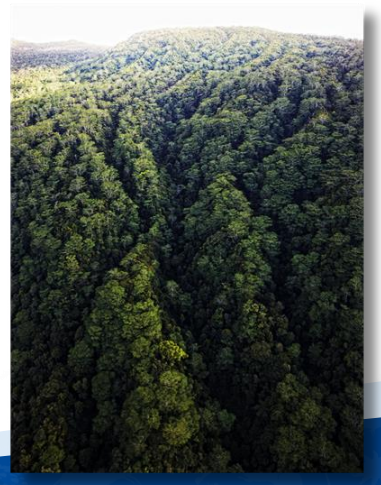
Manual control
- Time consuming

Manage environment
- Requires sunlight

Chemical control/ Cut stump
- Glyphosate
- Triclopyr based herbicides has been effective

Natural enemies
- Under development





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Merremia vine
Decalobanthus peltata

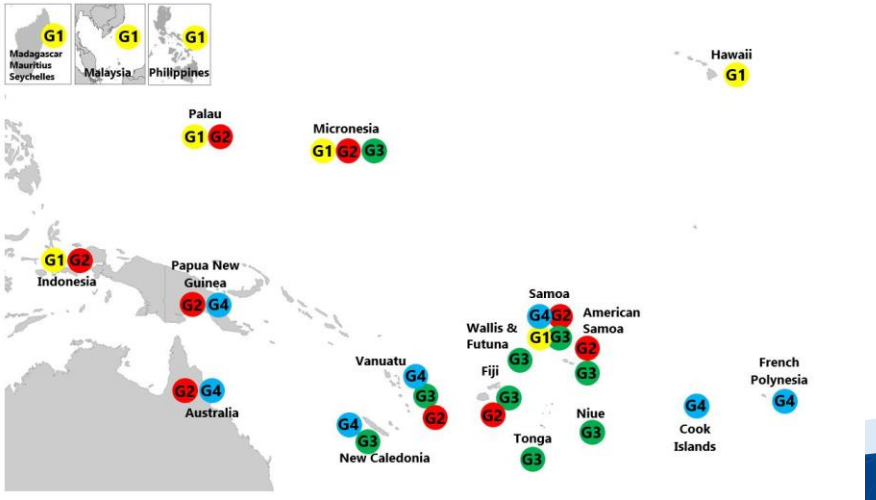
Manual control
Time consuming

Manage environment
Requires sunlight

Herbicide control/ Cut stump
Glyphosate

Herbicide control/ Foliar spray
Glyphosate

Natural enemies
Under development



African tulip *Spathodea campanulata*

Chemical control/ Cut stump

Glyphosate – not effective

Triclopyr based herbicides has been effective

Natural enemies

Mite(*Colomerus spathodeae*)

Flea beetle (*Paradibolia coerulea)*

Panama Rubber
Castilla elastica

Manage environment

Requires sunlight

Chemical control/ Cut stump

Glyphosate (small saplings only)

Triclopyr based herbicides are more effective/Trichloram

Natural enemies

NA

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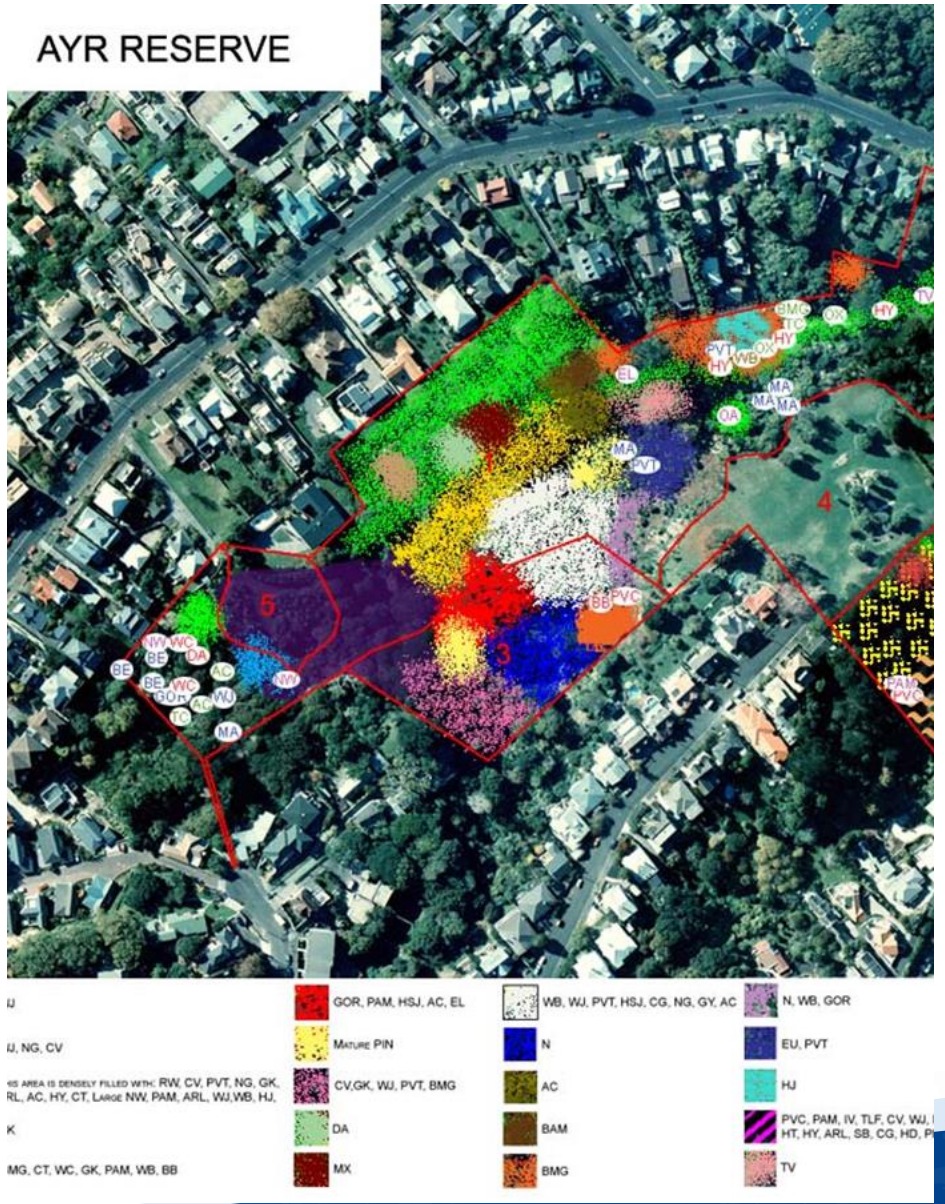
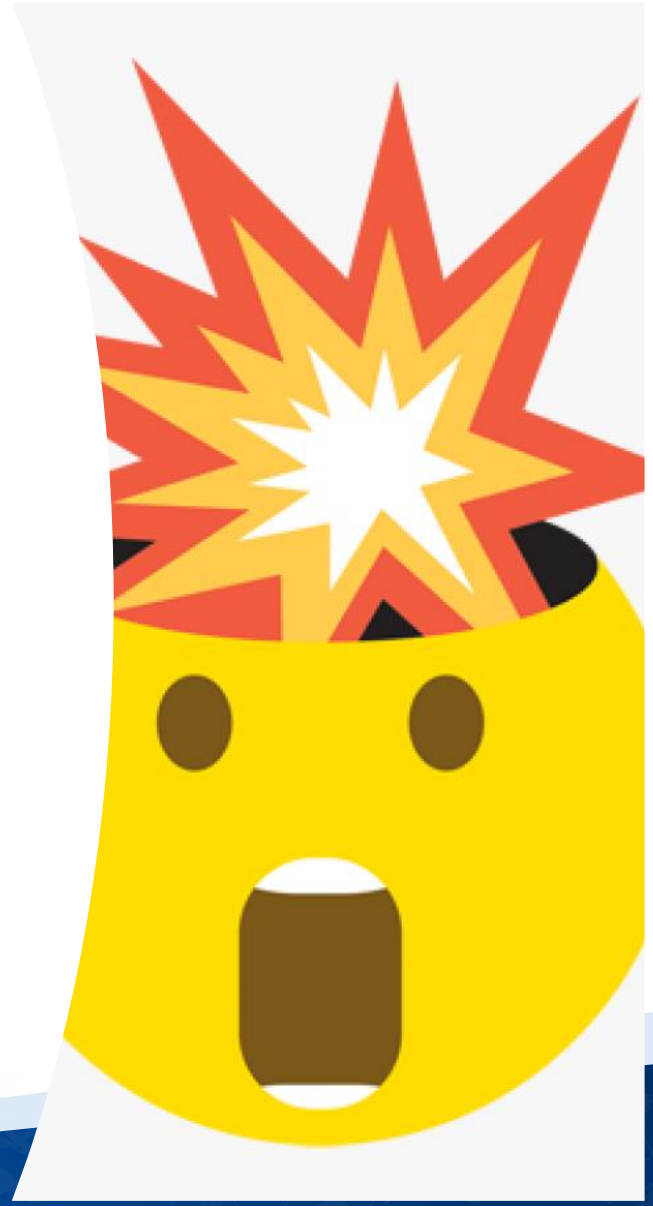
So many locations.....so many species.....so many control methods...so many maturity dates....

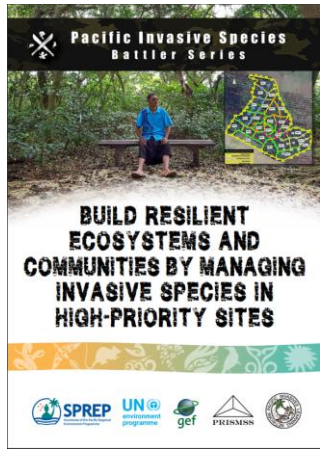
AND SOOOO MUCH DATA

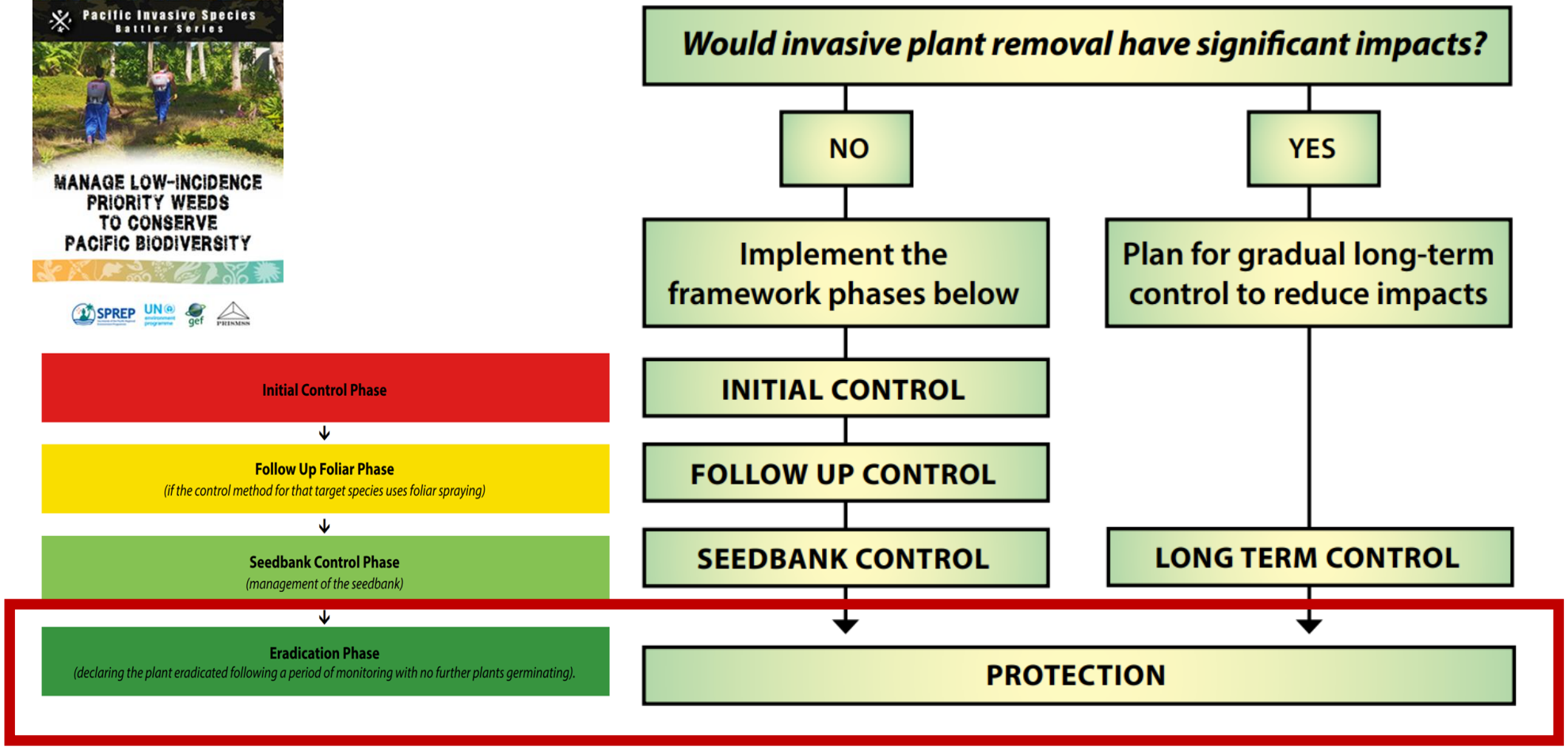
Brain numbing stuff.....eventually.....





Weed-led management versus site-led management





Managing many species as one operation

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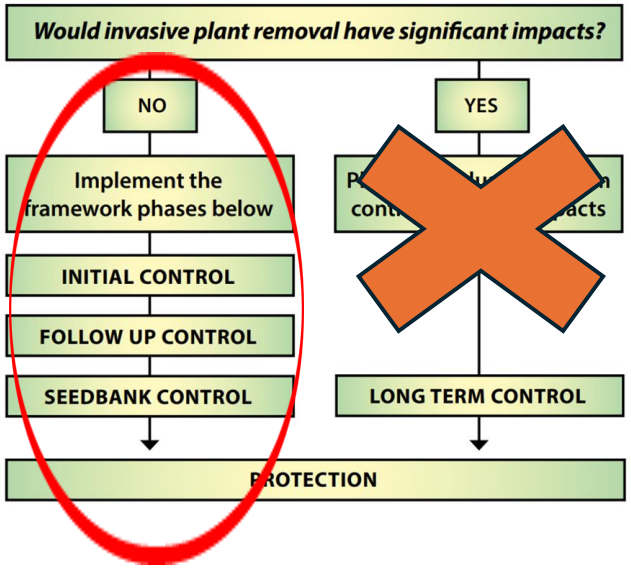
Forest Restoration Framework

What does it look like ?

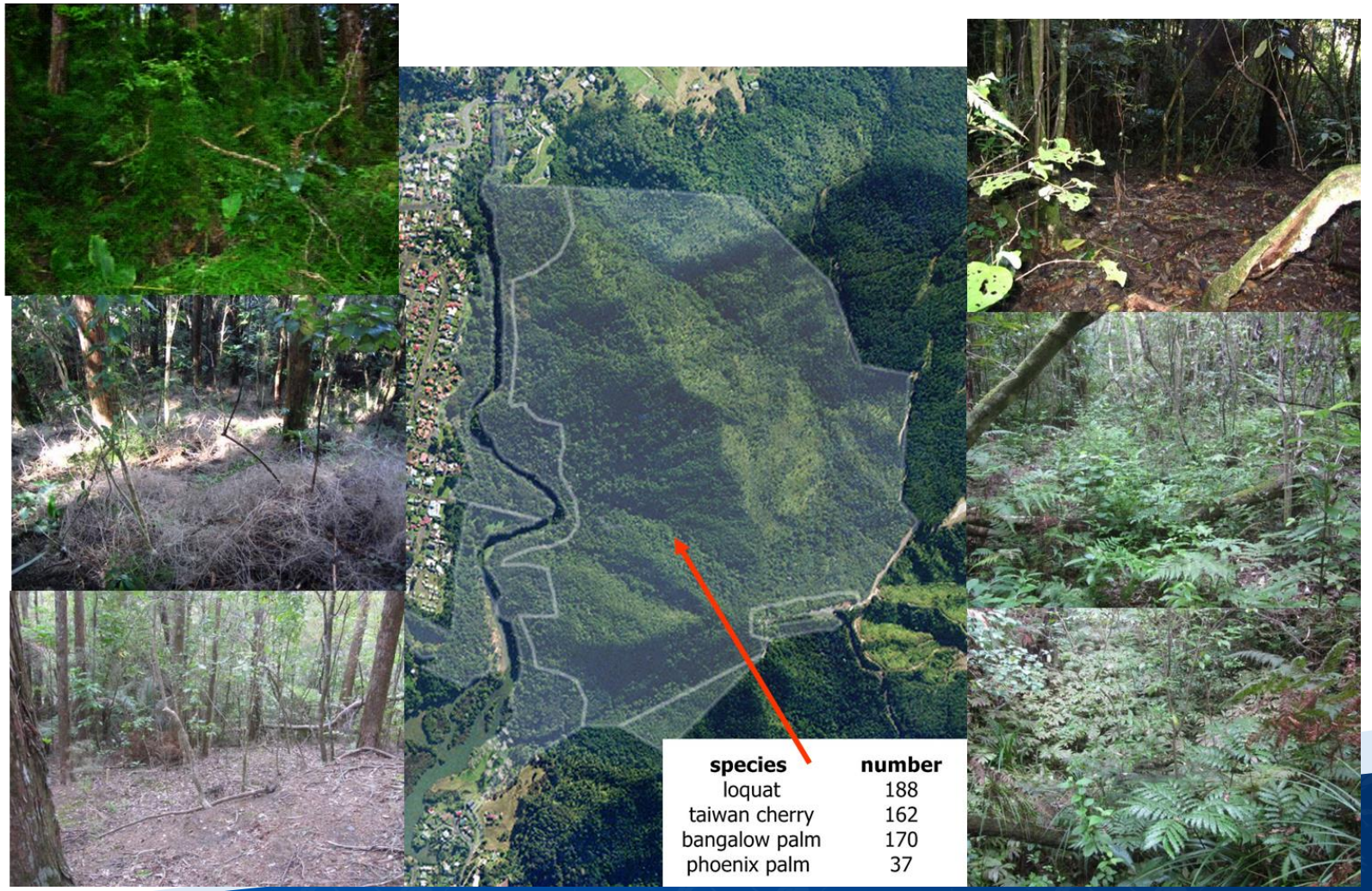


INITIAL CONTROL

FOLLOW UP CONTROL

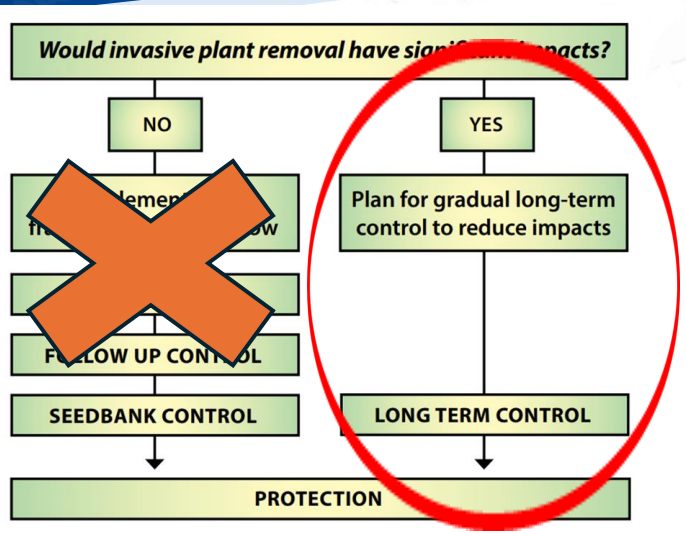
SEED BANK CONTROL

FOREST PROTECTION



species	number
loquat	188
taiwan cherry	162
bangalow palm	170
phoenix palm	37

Long Term Control



Invasive plants are removed gradually over time to avoid adverse impacts on the ecosystem.

The invasive plants are slowly replaced with regenerating native plants to:

- maintain slope stability (erosion control)
- maintain structural habitat for birds and other fauna (canopy management)

Good native regeneration should exist below the canopy before large structural trees are removed.

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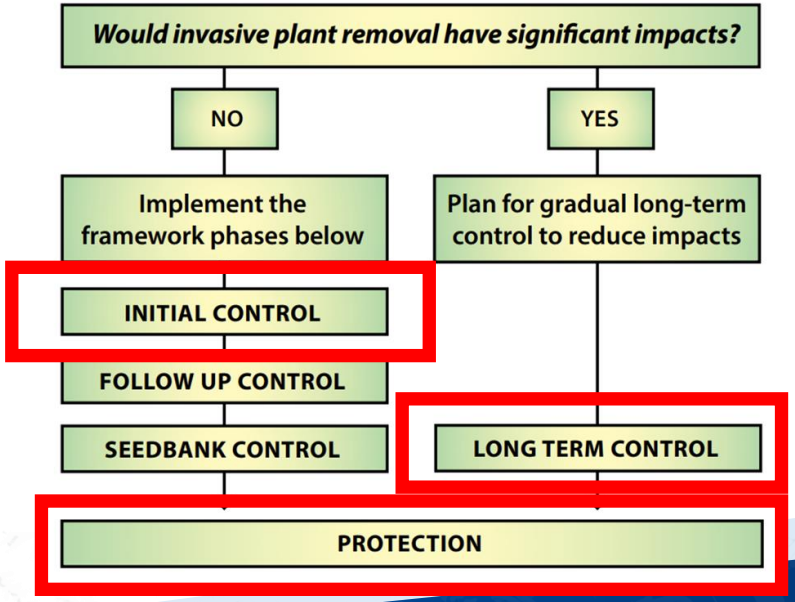
STEP 1 and 2:
Site Investigation and Classification

Classification of the whole site (every inch!) into restoration phases

INITIAL CONTROL
Which areas contain communities of mature plants?
What are they?

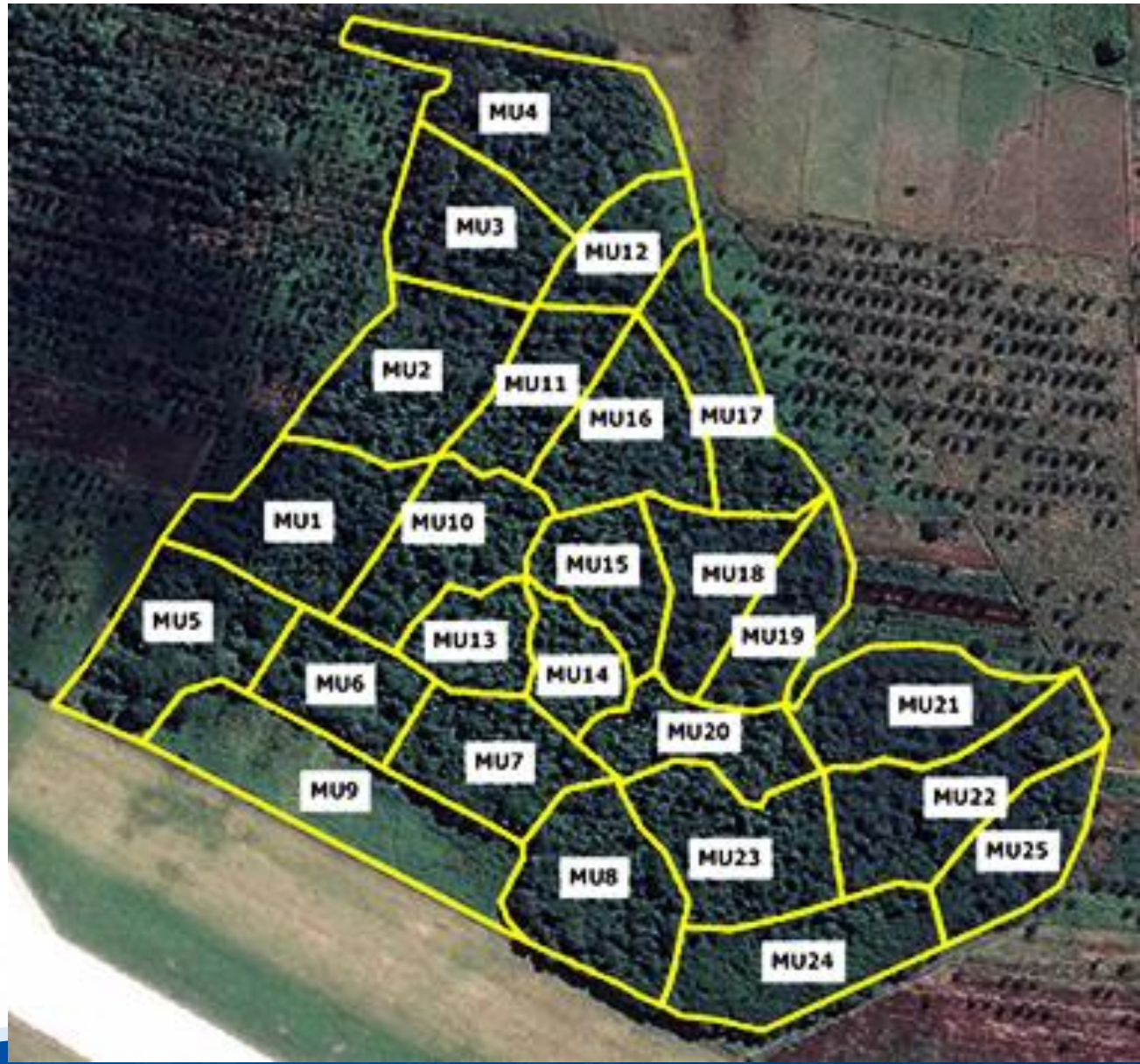
FOREST PROTECTION
Which areas contain no communities of mature plants?

LONG TERM CONTROL
Which areas would be significantly impacted following invasiv plant removal?



STEP 3: Division into management units

- Break up the initial control areas into management units
- about one hectare is a good size for areas with many weeds
- use any forest edges, tracks, natural features such as streams, ridges and changes in vegetation as boundaries where possible
- these will become you work units



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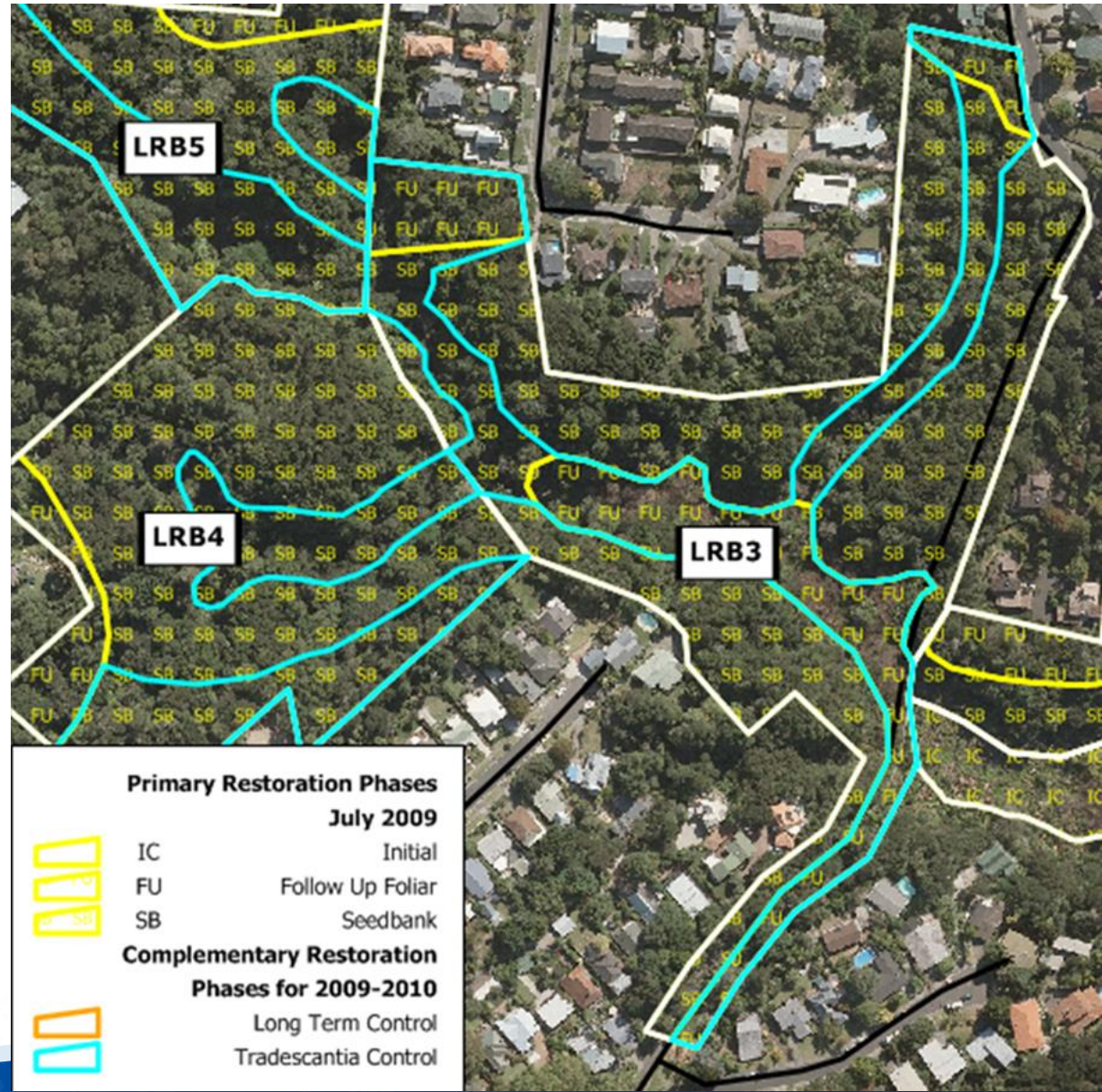
The Framework in action

- By overlaying the mapped phases and the management units, your worksite will:
  - Be identified into units with a workplan
  - Measurable (ha.)
  - Be capable of aligning related data such as species controlled, herbicides used and quantity, labour hours etc.



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INITIAL CONTROL

Systematic manual removal or cut stump herbicide application of all woody species present in the area.

Systematic Cutting of all vines and releasing them from desirable plants (Isolate, Minimise, Place).

FOLLOW UP CONTROL

Systematic foliar spraying of cut vines and herbaceous invasive plants. This operation is conducted twice.

SEED BANK CONTROL

Systematic foliar spot spraying or hand pulling of all plants that have germinated from the seedbank.

Best implemented in the dry season to reduce damage to the ecosystem.

This action needs to be repeated following germination and prior to reaching maturity.

FOREST PROTECTION

Sites prone to invasion (edges, streams, tracks, disturbance sites, and beneath fruiting or perch trees) are checked.

Cut stump, foliar spray, or hand pull recently arrived plants.

his should be completed every 3-6 years depending on the type of plant it is and the time that they take to reach maturity.

General Lessons To Remember

- **Determine an effective method**
- **Operationalise it systematically and thoroughly**
- **Most likely you will need herbicides to achieve this**

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Herbicides based on common weed control methodologies

CUT STUMP APPLICATIONS

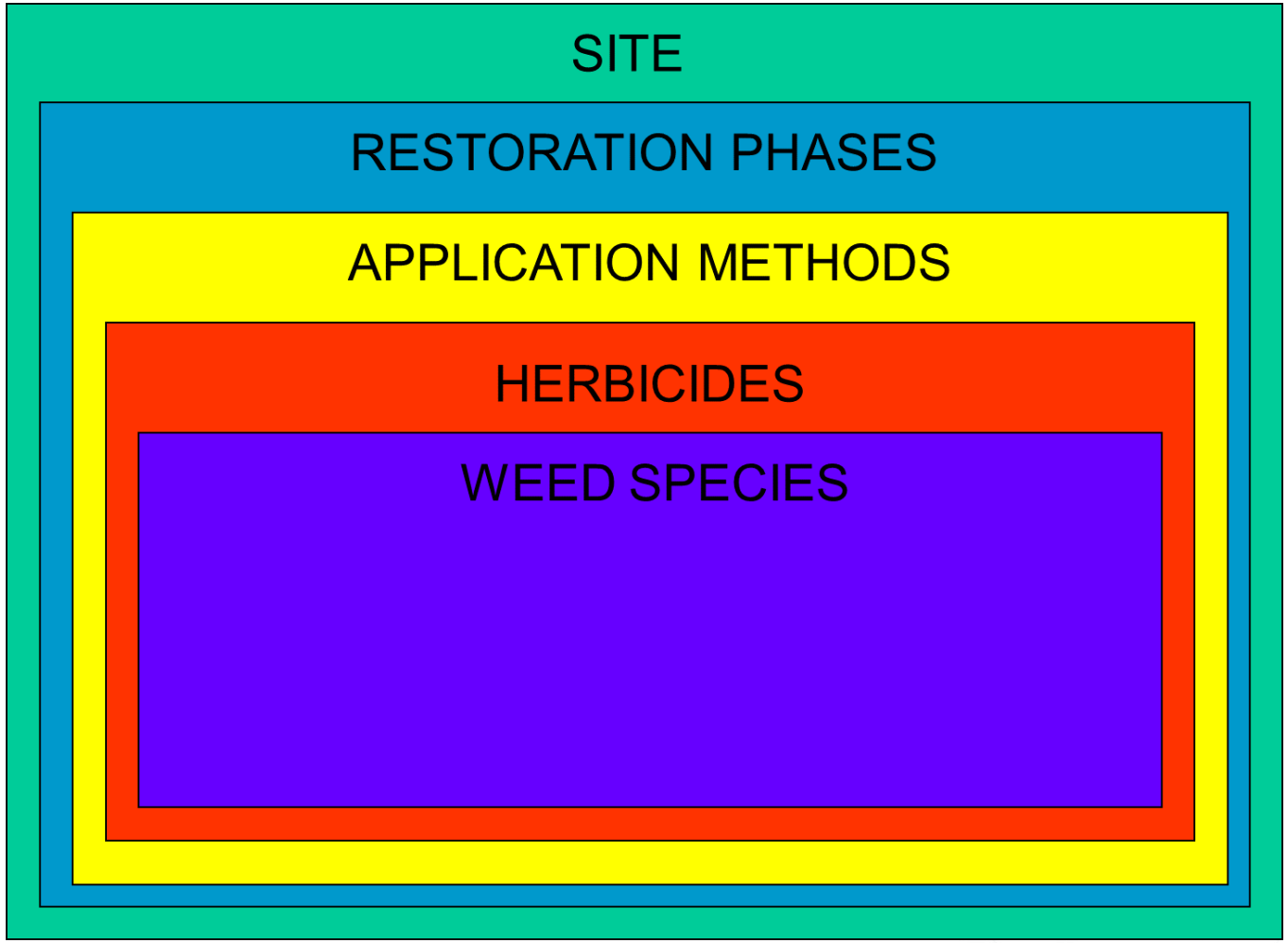
Metsulfuron Only 2.5g/litre			+ Glyphosate 25% 250ml/litre
•Arum Lily •Banana Passionfruit •Bangalow Palm •Bartlettina •Blackwood •Blue Morning Glory •Boneseed •Brush Cherry •Brush Wattle •Buddleia •Canna Lily •Cape Honeysuckle •Cathedral Bells •Chinese Privet •Chinese Windmill Palm •Cotoneaster •Eleagnus •Elephant's Ear •Fig •Fruit Salad Plant •Ginger •Gorse	•Guava •Hakea (Prickly) •Hakea (Willow-leaved) •Hawthorn •Himalayan Honeysuckle •Hydrangea •Japanese Honesuckle •Japanese Spindleberry •Jasmine •Lantana •Loquat •Madeira Vine •Mickey Mouse Plant •Monkey Apple •Montpellier Broom •Moth Plant •Phoenix Palm •Privet •Queen of the Night •Queensland poplar •Rhamnus •Shrub Balsam	•Silver Wattle •Spanish Broom •Spanish Heath •Sweet Pea Shrub •Sydney Golden Wattle •Taiwan Cherry •Tree Lupin •Tree Privet •Velvet Groundsel	•Bamboo •Crack Willow •Datura •Elephant's Ear

FOLIAR SPRAY APPLICATIONS

Metsulfuron Only 0.5g/litre	Glyphosate/Metsulfuron		Glyphosate Only 1-2% 10-20ml/litre	
•Artillery Plant •Banana Passionfruit •Blackberry •Cape Ivy •English Ivy •German Ivy •Gorse •Ivy •Japanese Honeysuckle •Jasmine •Madeira Vine •Montbretia •Moth Plant •Periwinkle •Tuber Sword (Ladder) Fern •Watsonia	•Aristea •Artillery Plant •Arum Lily •Banana Passionfruit •Blackberry •Blue Morning Glory •Blue Spur Flower •Cape Honeysuckle •Cape Ivy •Cathedral Bells •English Ivy •German Ivy •Giant Reed •Gorse •Himilayan Honeysuckle	•Ivy •Japanese Honeysuckle •Jasmine •Madeira Vine •Maurandya Vine •Mexican Daisy •Mile-a-Minute •Mist Flower •Moth Plant •Plectranthus •Smilax •Tuber Sword (Ladder) Fern •Woolly Nightshade	•African Club Moss •Bamboo (Small Plants) •Bartlettina (Small Plants) •Bindweed •Blue Morning Glory •Blue Spur Flower •Climbing Asparagus •Climbing Dock •Convolvulus •Crack Willow (Small Plants) •Datura •Giant Reed •Gorse •Grey Willow (Small Plants)	•Jerusalem Cherry •Kikuyu Grass •Mile-a-Minute •Nasturtium •Nutgrass •Pampas Grass •Pitted Crassula •Plectranthus •Shrub Balsam •Stinking Iris •Wandering Jew (Small Plants) •Woolly Nightshade (Small)

Triclopyr 0.6% 6ml/litre		Glyphosate 4% 40ml/litre	
	•Agapanthus •Bears Breeches •Blackberry •Eleagnus •Gorse •Wandering Jew		Wandering Jew: (in and around waterways)

Lowest Common Rate



Understand the relationships between these elements

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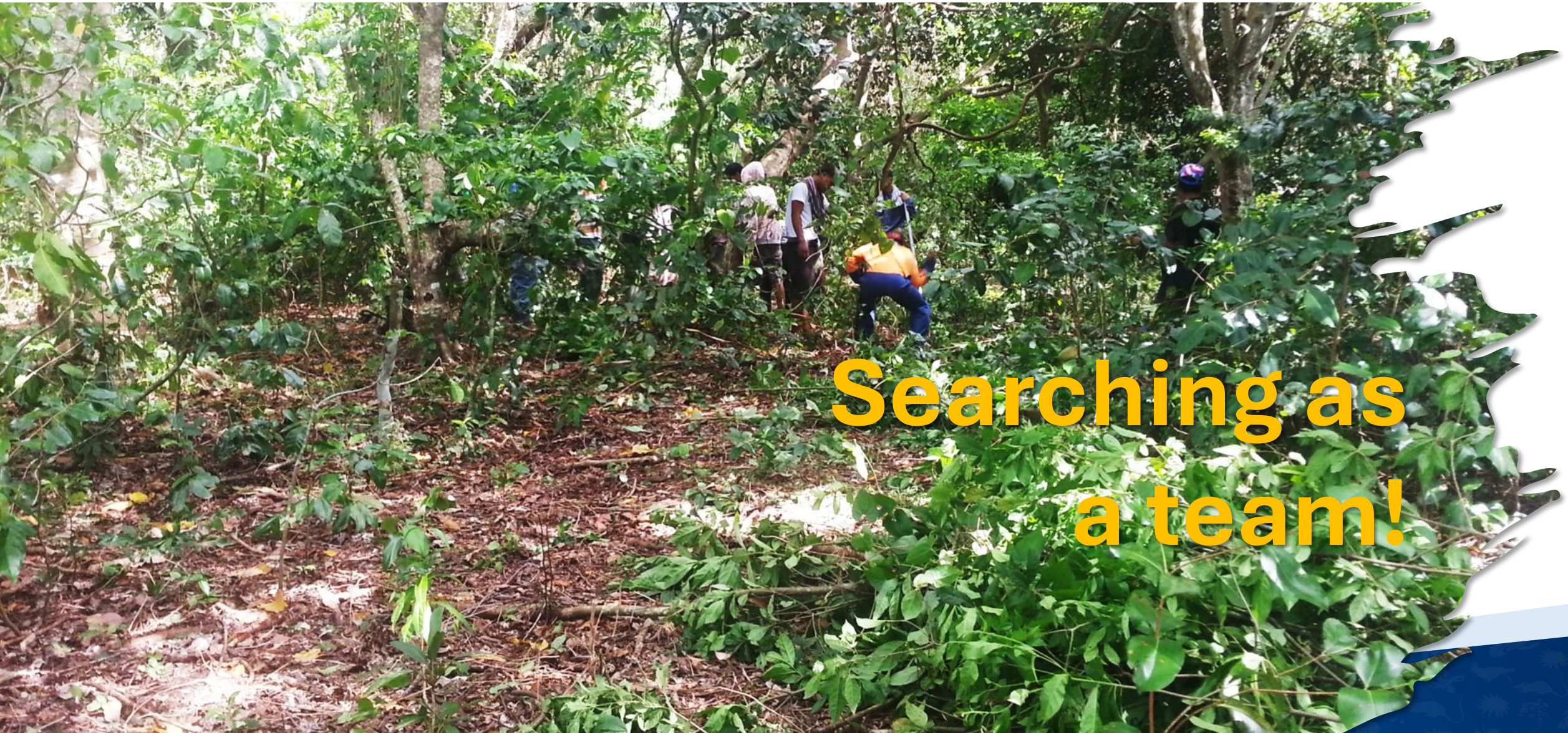
"Priority area ecological restoration"



Searching as a team!

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Managing Invasive Rodents within your site

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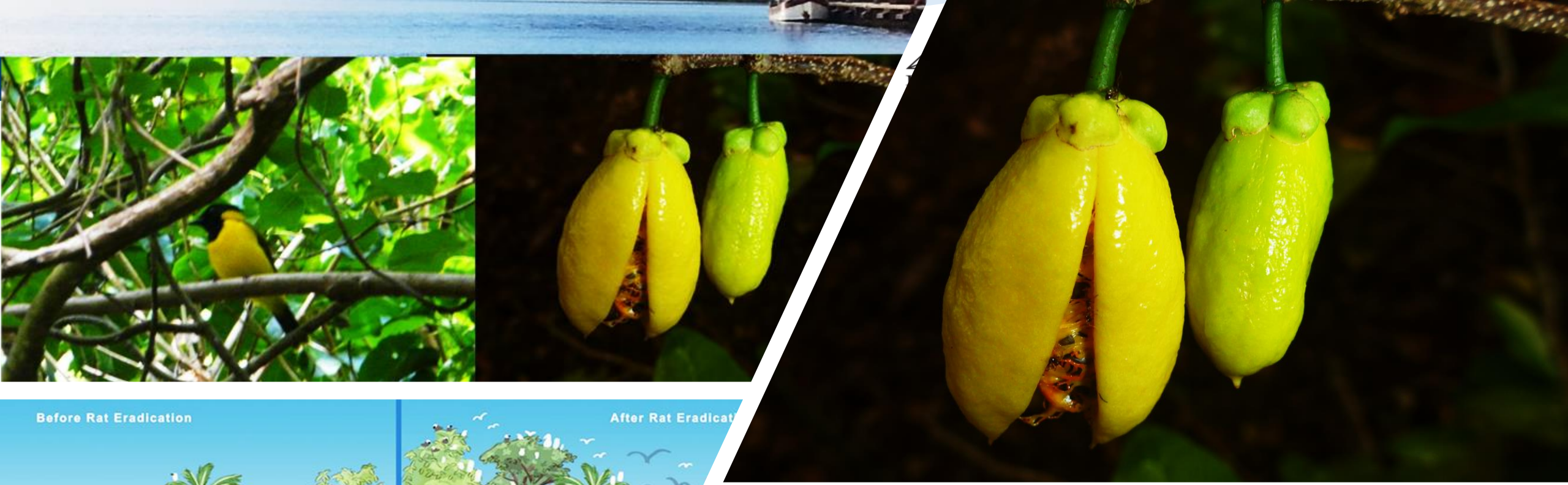
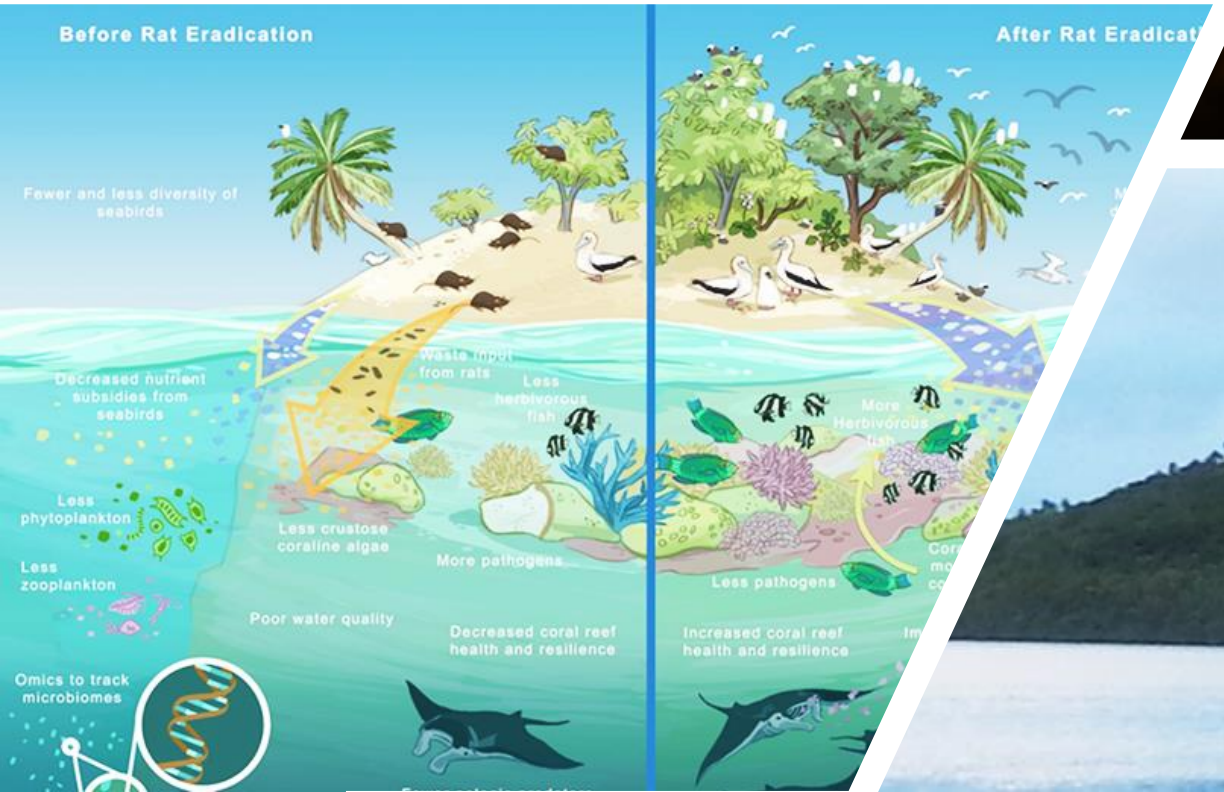
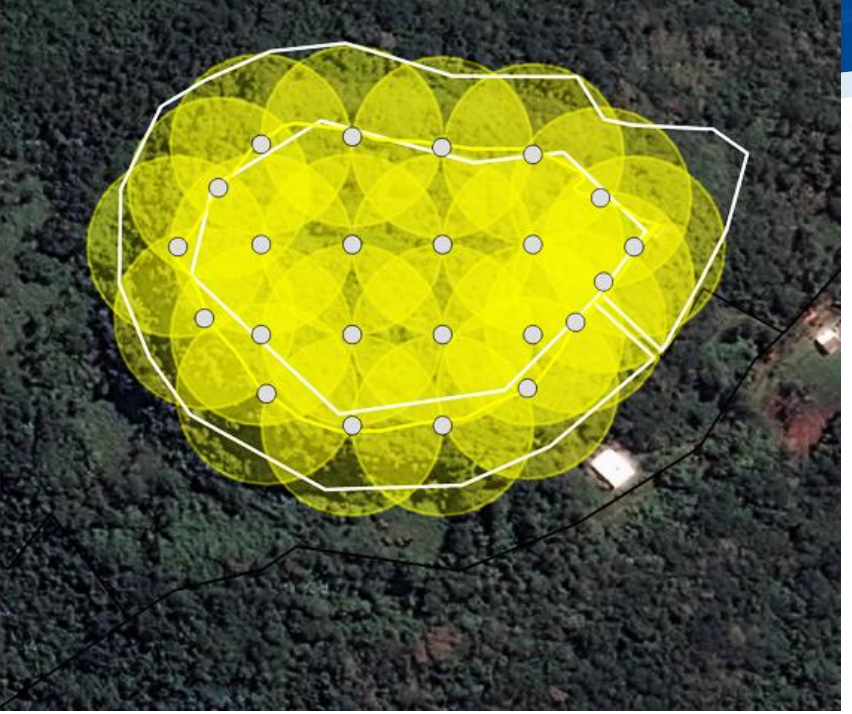
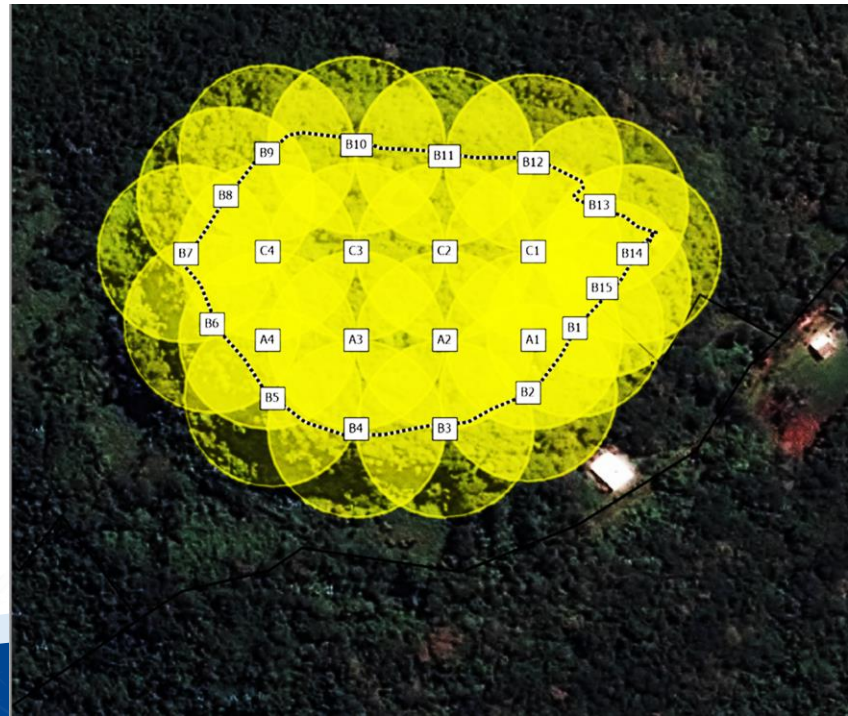



Before Rat Eradication
After Rat Eradicat
Fewer and less diversity of seabirds
Decreased nutrient subsidies from seabirds
Waste input from rats
Less herbivorous fish
More Herbivorous fish
Less phytoplankton
Less zooplankton
Less crustose coraline algae
More pathogens
Less pathogens
Poor water quality
Decreased coral reef health and resilience
Increased coral reef health and resilience
Omics to track microbiomes

- Import boundary and infrastructure
- Create grid, align
- Check coverage and assign unique ID





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Bait stations are installed at each point

They are maintained monthly

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Managing other Invasive species within your site

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Managing cats

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Managing pigs

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Invasive ants

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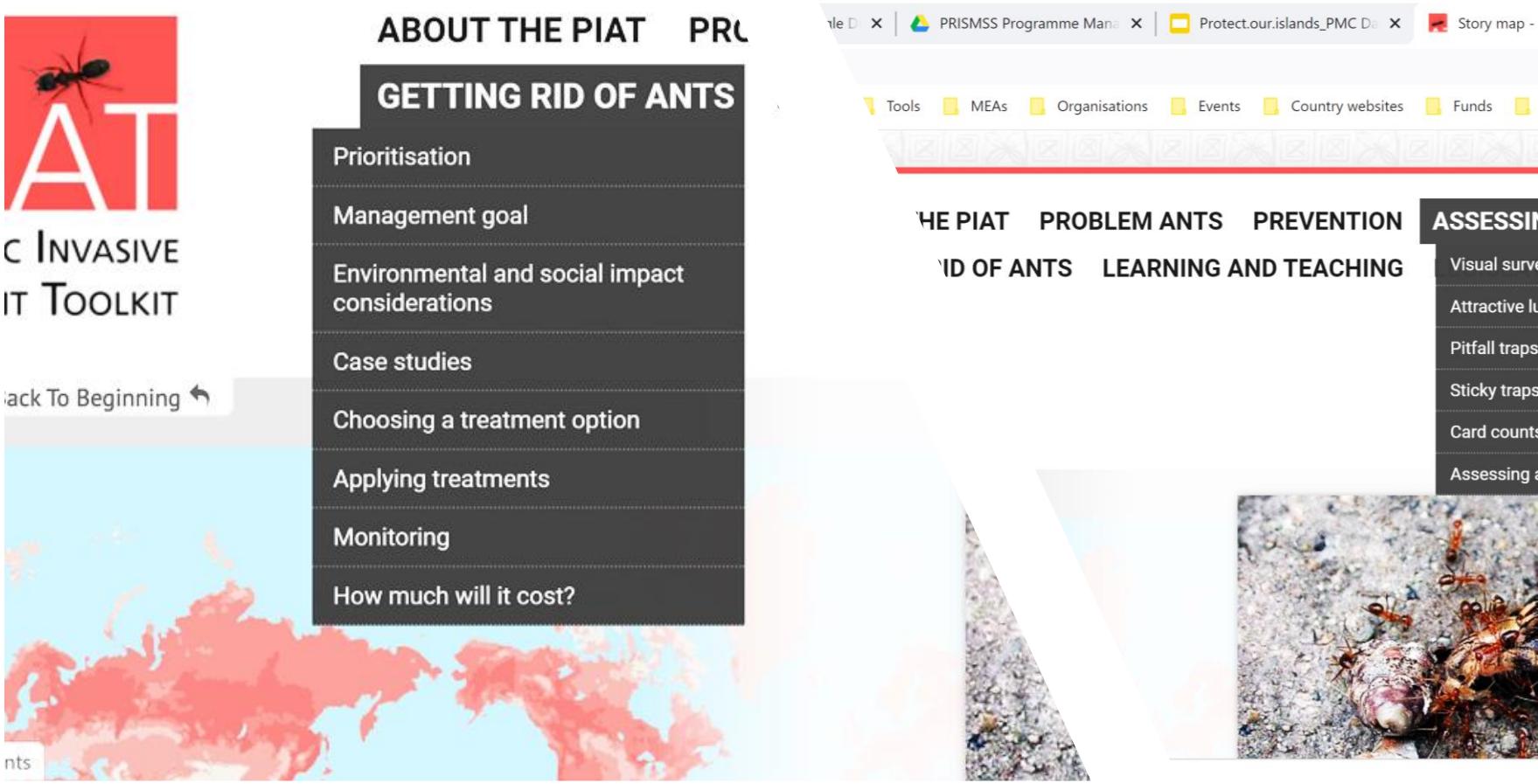
https://piat.org.nz/



Indicator	Response	
1.1. Technical Skills - Identification Skills.	Capable - Able to identify most invasive and native species that are present in country. Can use tools to confirm identifications (e.g., microscope, species keys). Last updated: 2023	
1.2. Technical Skills - Site Searching.	Capable - Can identify areas where invasive plant communities exist. Can determine where the removal of invasive plants would have significant negative impacts and how this may impact the ecosystem. Last updated: 2023	
1.3. Technical Skills - Control Invasive plants.		

PRISMSS
Pacific Regional Invasive Species Management Support Service

RESTORING ISLAND RESILIENCE

SPREP Secretariat of the Pacific Regional Environment Programme

BirdLife INTERNATIONAL

Resilient Ecosystems - Resilient Communities
"Priority area ecological restoration"

1.2. Technical Skills - Site Searching. Edit

Response Type: Data Lookup

Response Options:

0: Unskilled - Has limited knowledge or understanding of the components of site searching and is not able to identify the impacts of restoration.

1: Developing - Needs supervision and guidance on searching appropriate sites. Needs support in classification of sites and in identifying impacts on the ecosystem.

2: Capable - Can identify areas where invasive plant communities exist. Can determine where the removal of invasive plants would have significant negative impacts and how this may impact the ecosystem.

3: Expert - Capable of leading the team to search management units and effectively control targeted invasive species. Understands invasive species dispersal mechanisms and uses this knowledge to increase search efficiency.

National Capability Scorecards