Marine and Coastal

National Environmental Science Program

Developing an integrated pest management framework for feral pigs in northern Australia.

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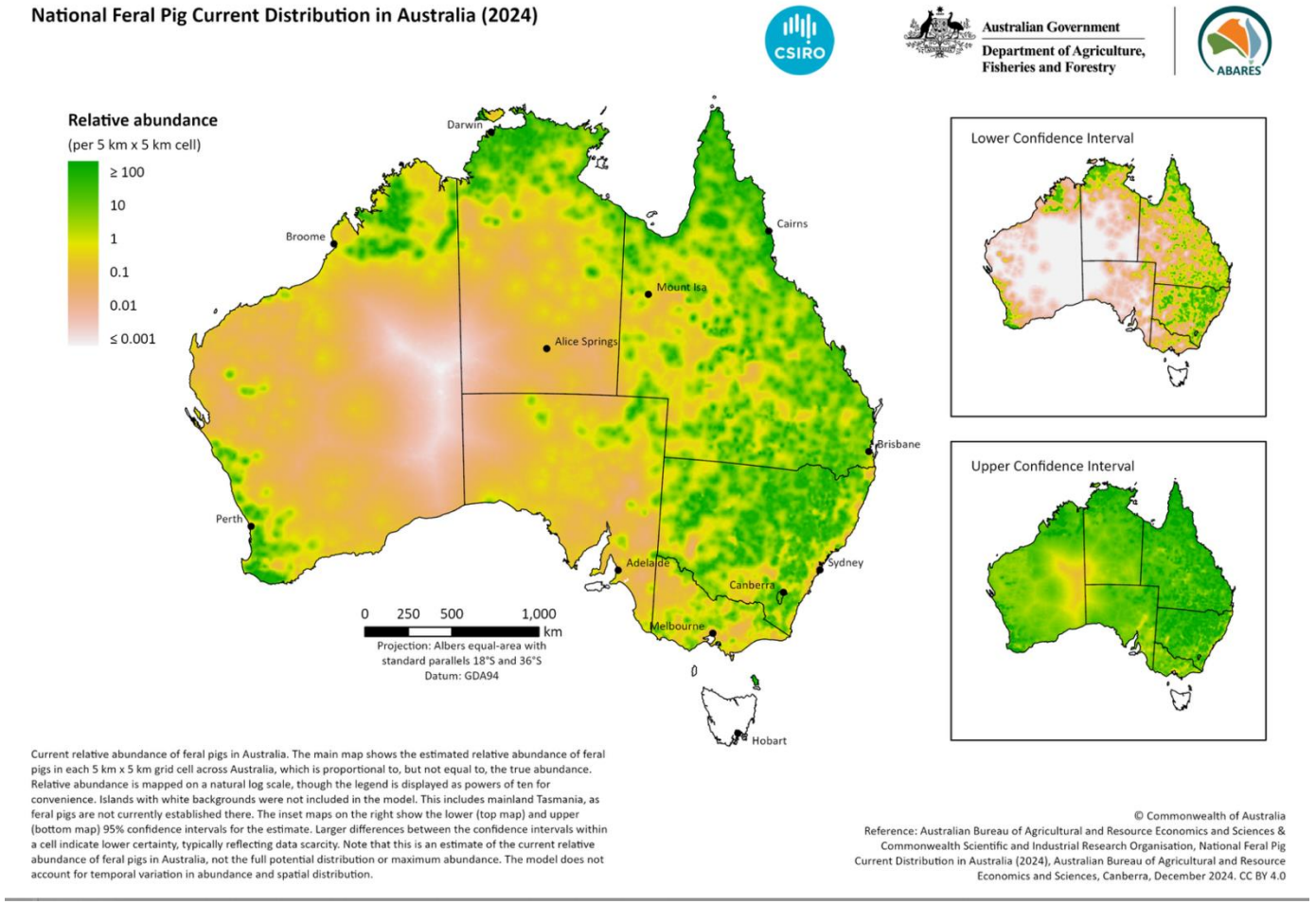
Northern Australian Indigenous Land and Sea Management Alliance

Feral pigs: Australia's most successful (and damaging) vertebrate pest

- First introduced to Aus with the first fleet
  - Now spread across the nation

- Despite significant investment in control, we have seen virtually no sustained success in their control

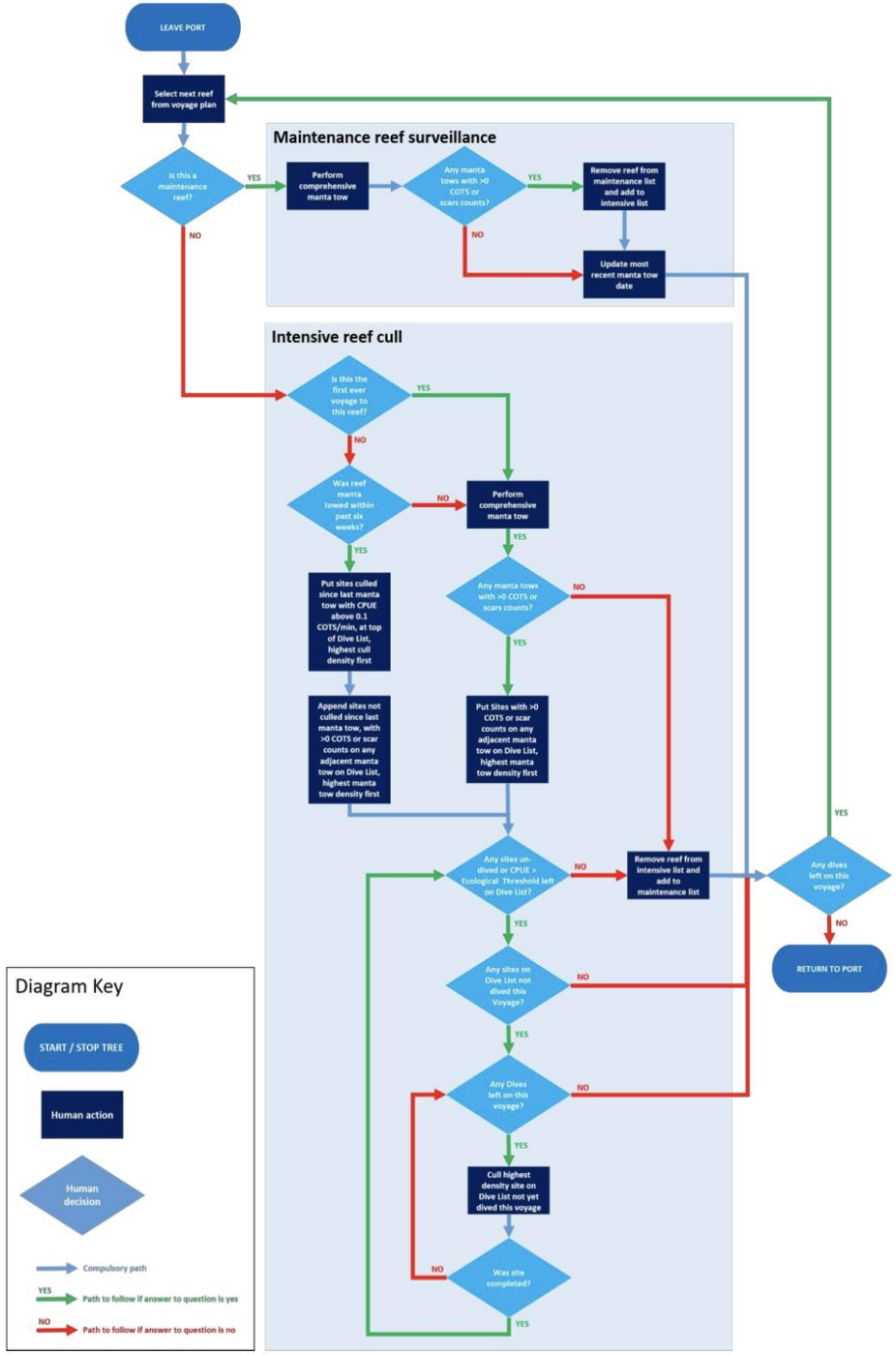


29.36inHg K15 16 DEC
29.34inHg K16 15 DEC

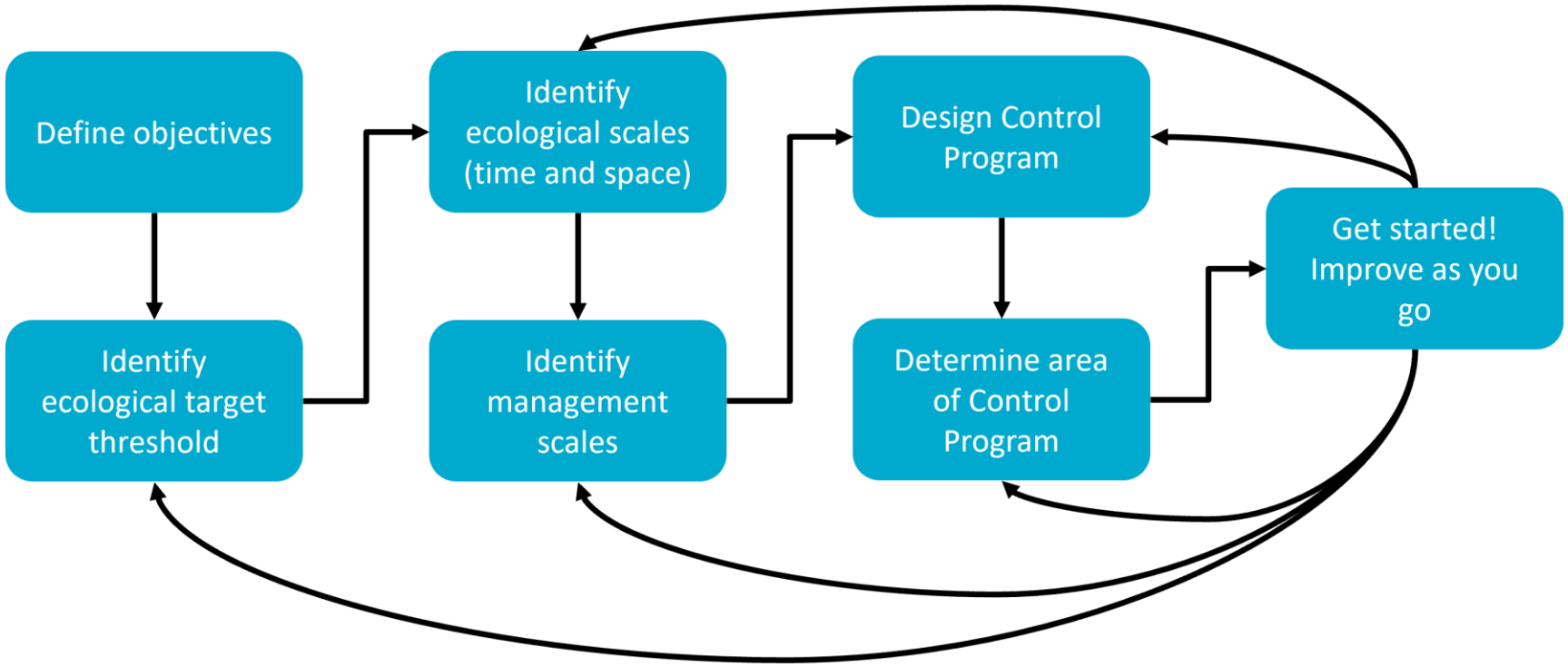
A story of success: The Crown of Thorns management program

- CoTS outbreaks reported since the 50s/60s
  - Outbreaks creating significant impacts to corals
- Significant investment in their control, with very limited success
- Integrated Pest Management approach developed for CoTS in 2016 as part of NESP TWQ
  - Was able to show a sustained a meaningful impact on the objective that matters – coral loss.

Can we replicate the success of the CoTS program and win with feral pig management?



Developing an IPM for feral pigs



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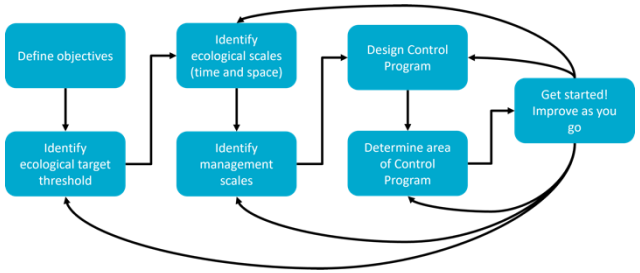
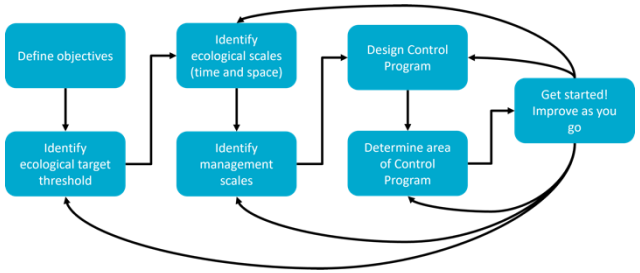


Define objectives

- Pigs are a National challenge but management happens locally
  - Objectives need to meet local goals and contexts to be successful
  - Success is local people managing the threats to the values they care about, guided and supported by a Nationally integrated approach

Developing an IPM for feral pigs



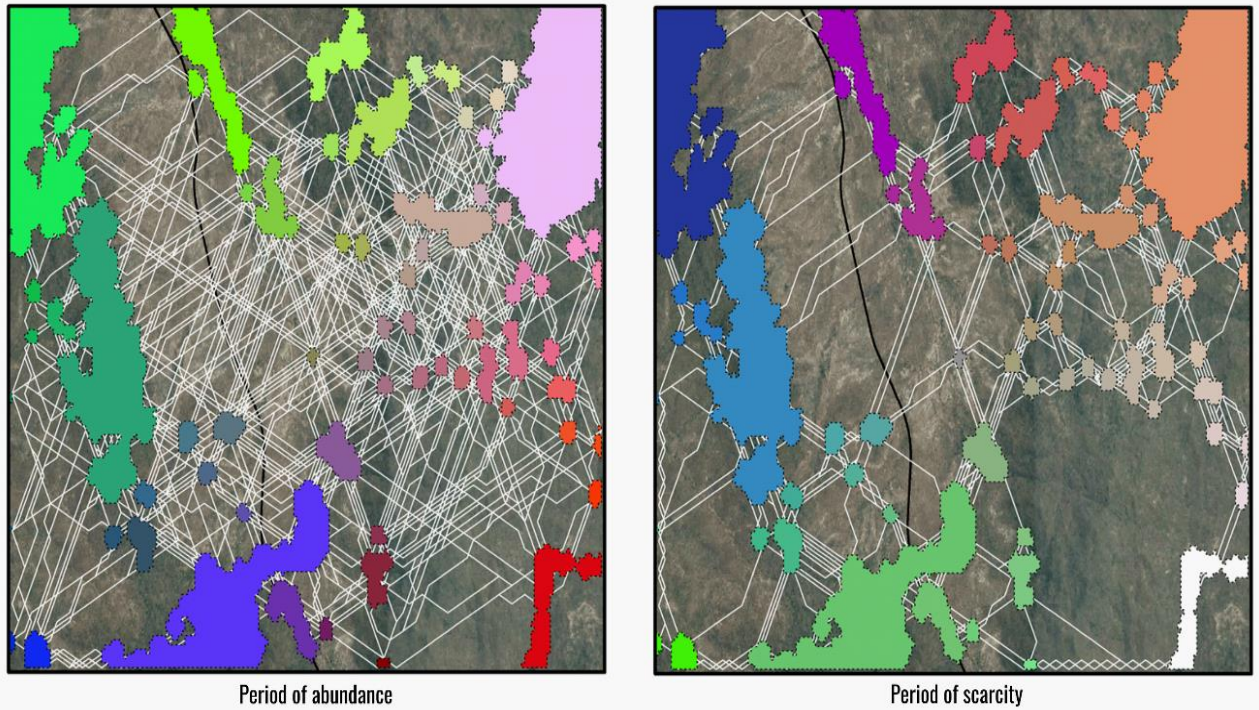
Identify ecological target threshold

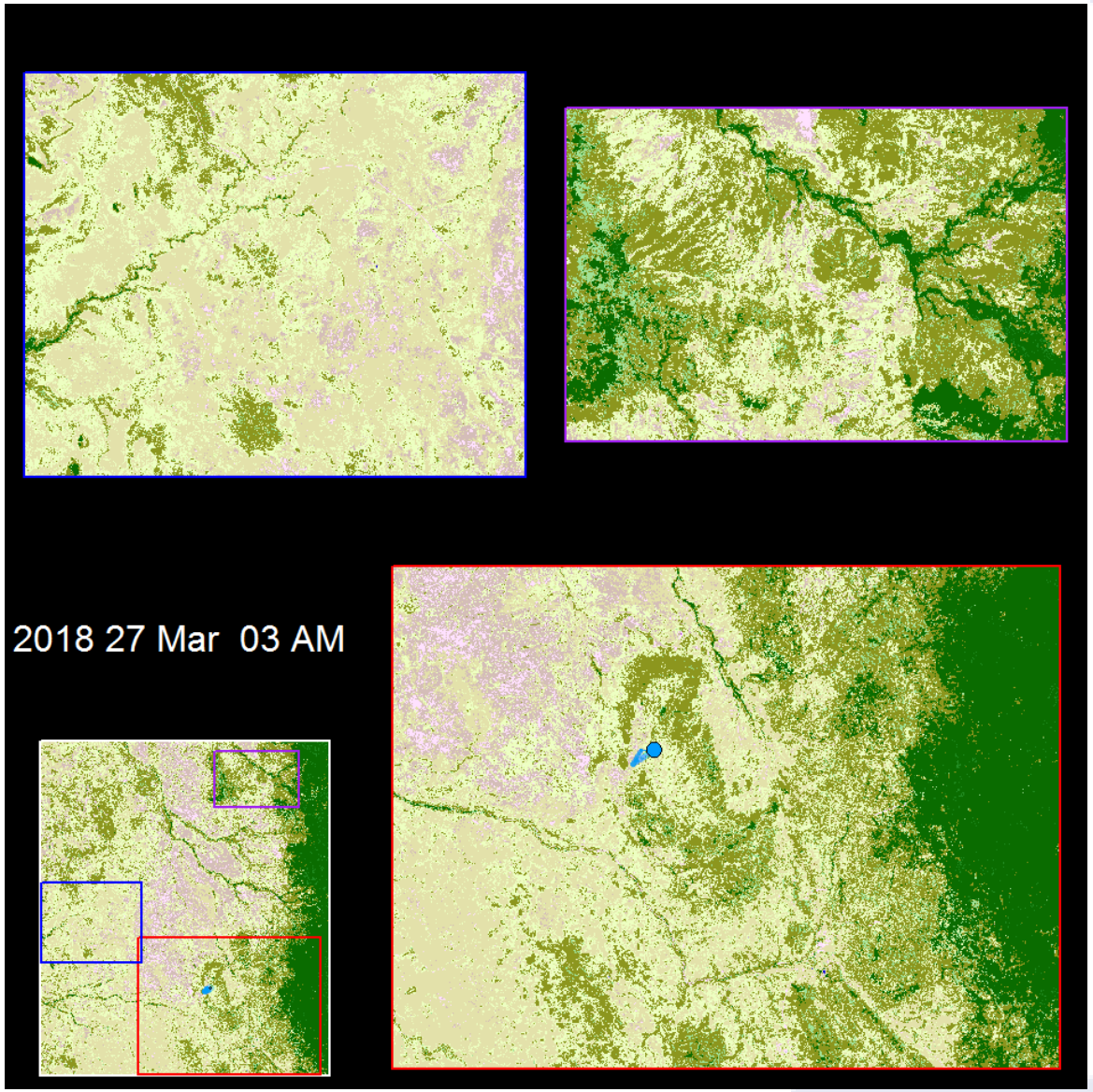
- Ecological thresholds for pigs will have to be practical (what can we measure easily) and relevant (linked to objectives)
  - Need to understand how to infer the overall impact from simple observable measures

Feral pigs detected with AI camera technology

Developing an IPM for feral pigs

Identify ecological scales
(time and space)





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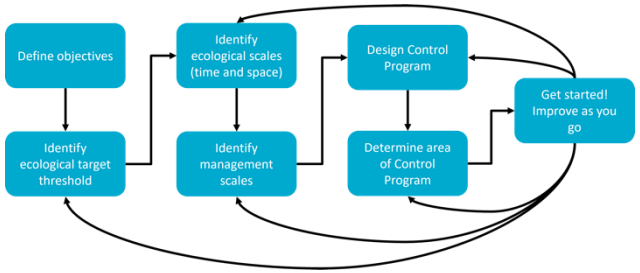

Identify management scales

- CoTS
  - 344,400 km^2, 2,900 individual reefs
  - Single management authority with overarching approaches to management
- Pigs
  - Distributed across multiple jurisdictional and tenure boundaries, each with their own requirements and governance
  - Huge area.
    - E.g. IPA's cover 305,600 km^2, 85 separate management plans/objectives

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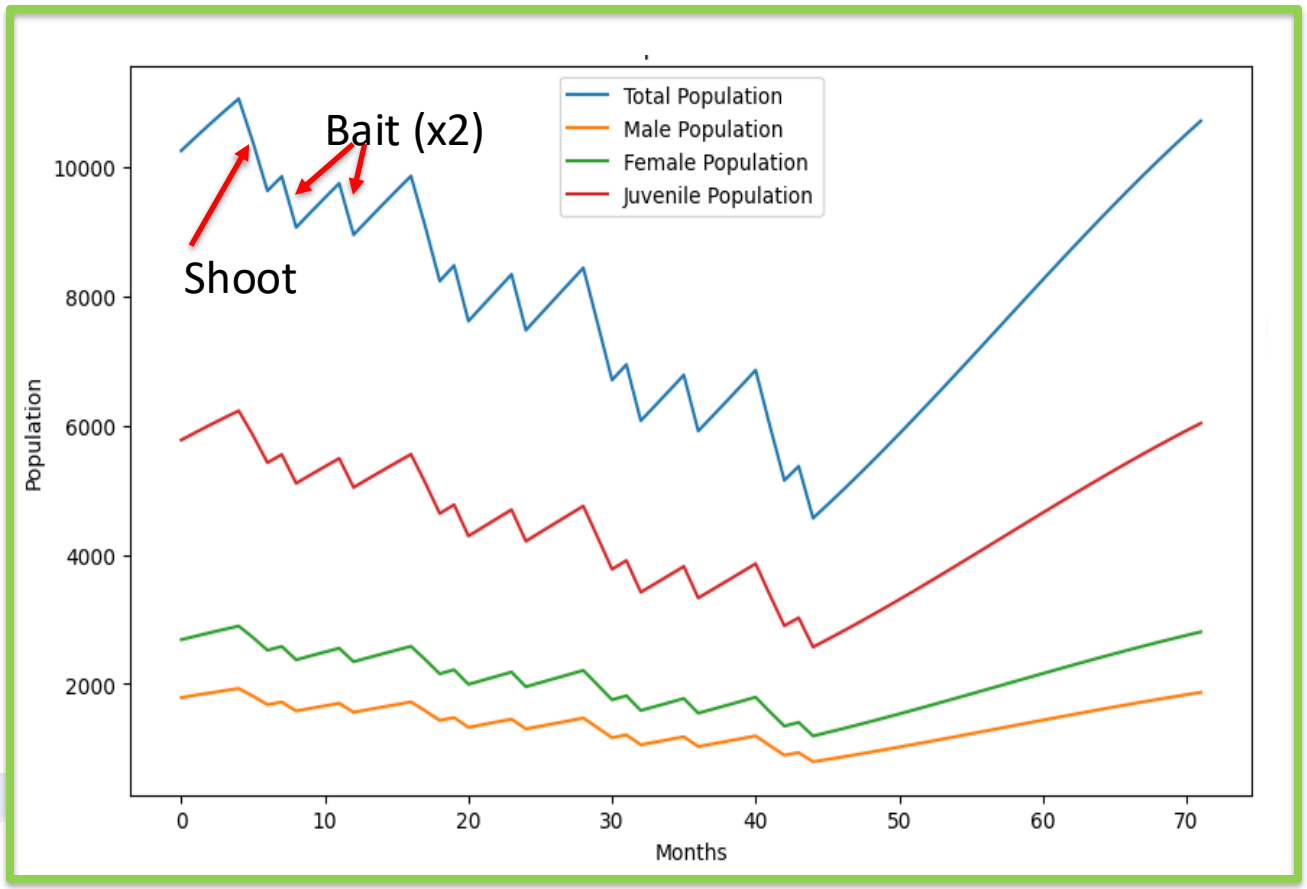
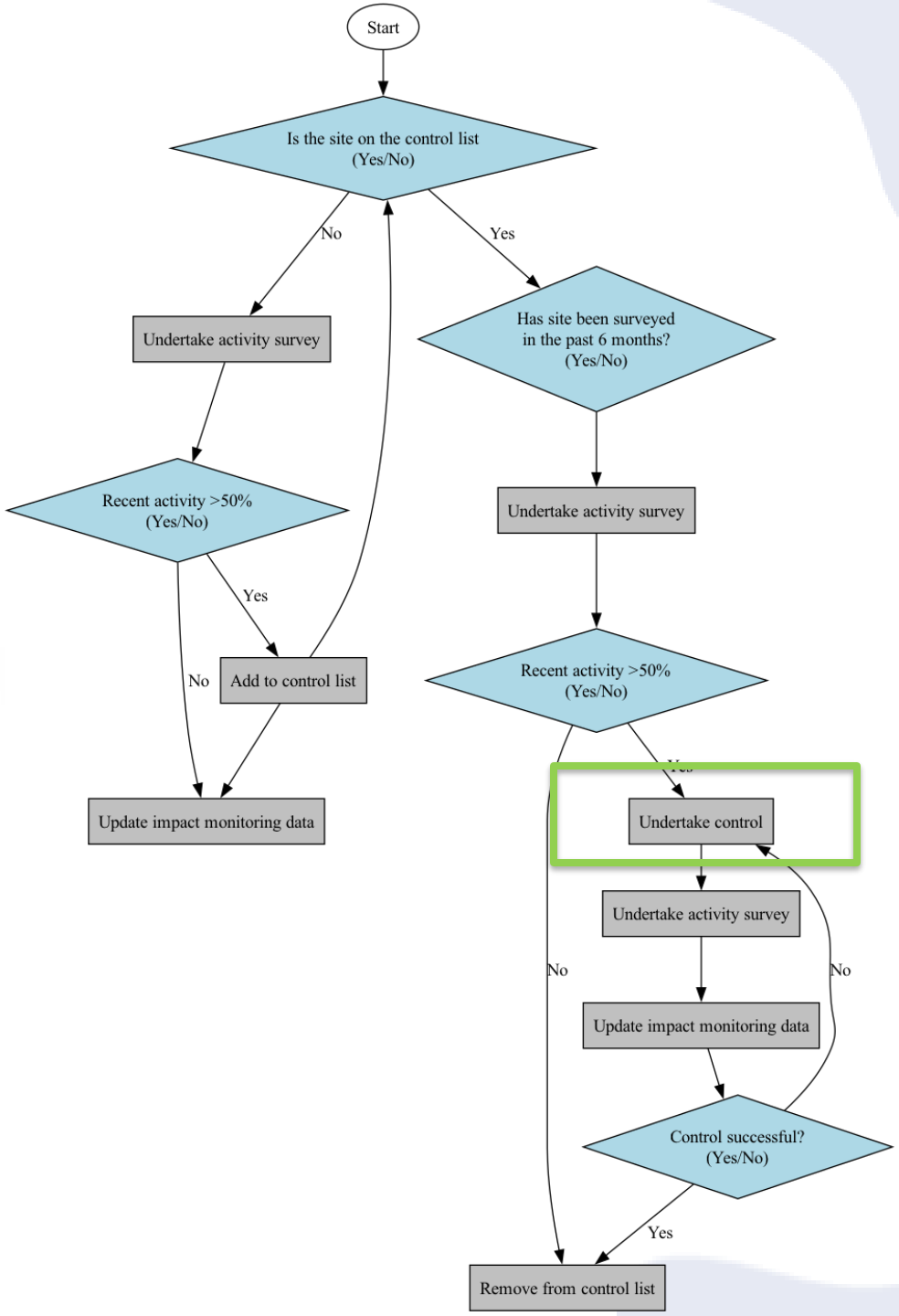
Design control program





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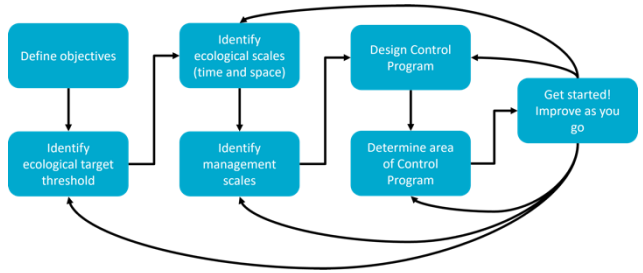


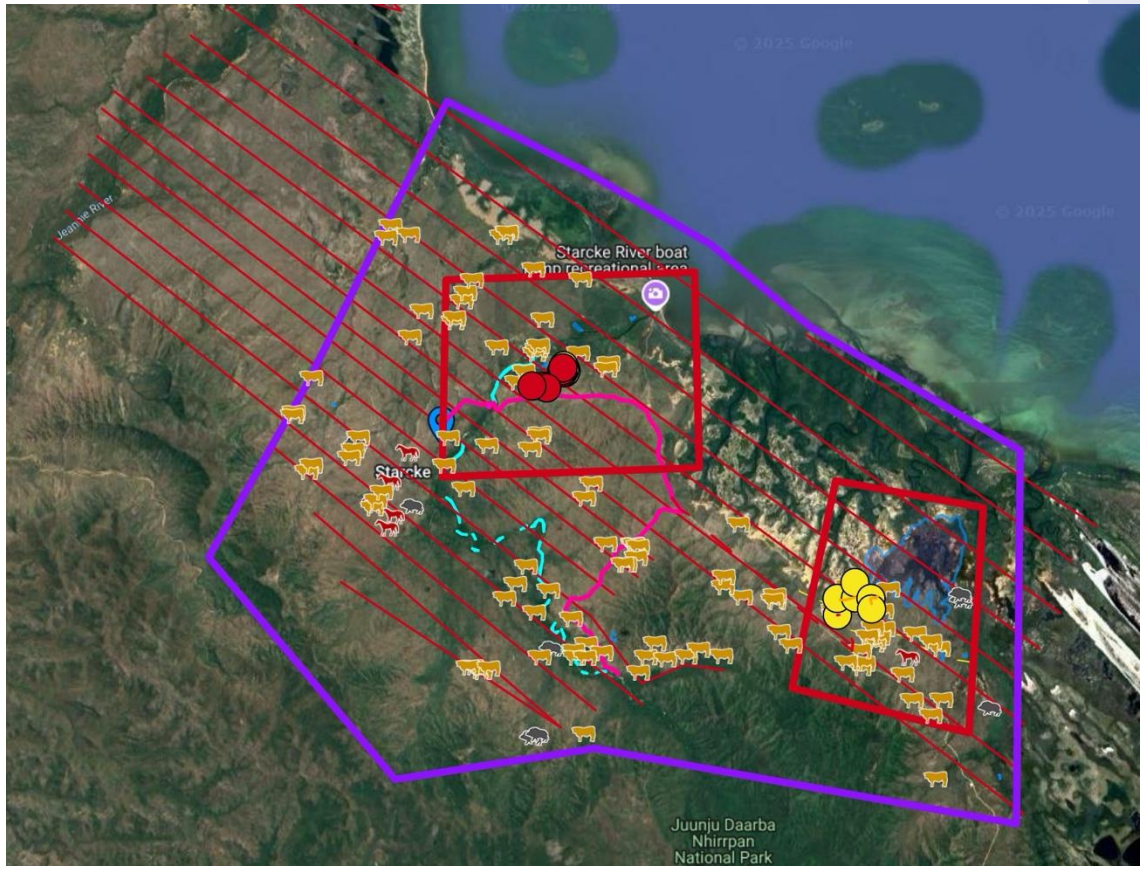
Determine area of control program

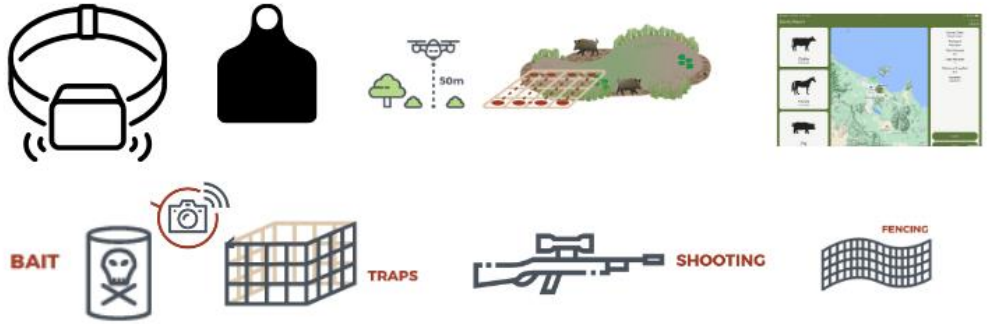
- Local tenure and rights will strongly influence where and how control programs are operated.
  - Indigenous people have rights and interest across 82.15% of Aus conservation estates, particularly in Northern Aus. National success will require leadership of Indigenous land managers
- Pig ecology and behaviour are highly variable, depending on the local context and environment.
  - Successful on ground actions need to be appropriate for the local context in which they are applied
- A pig IPM will not be a one size fits all approach but many locally relevant IPMs, shaped and guided by an overarching framework

Developing an IPM for feral pigs

Get started!
Improve as you go

- 3 pilot sites representative of 3 different management contexts
  - Kakadu NP
  - Junjuwarra Aboriginal Corporation
  - Wet Tropics World Heritage region





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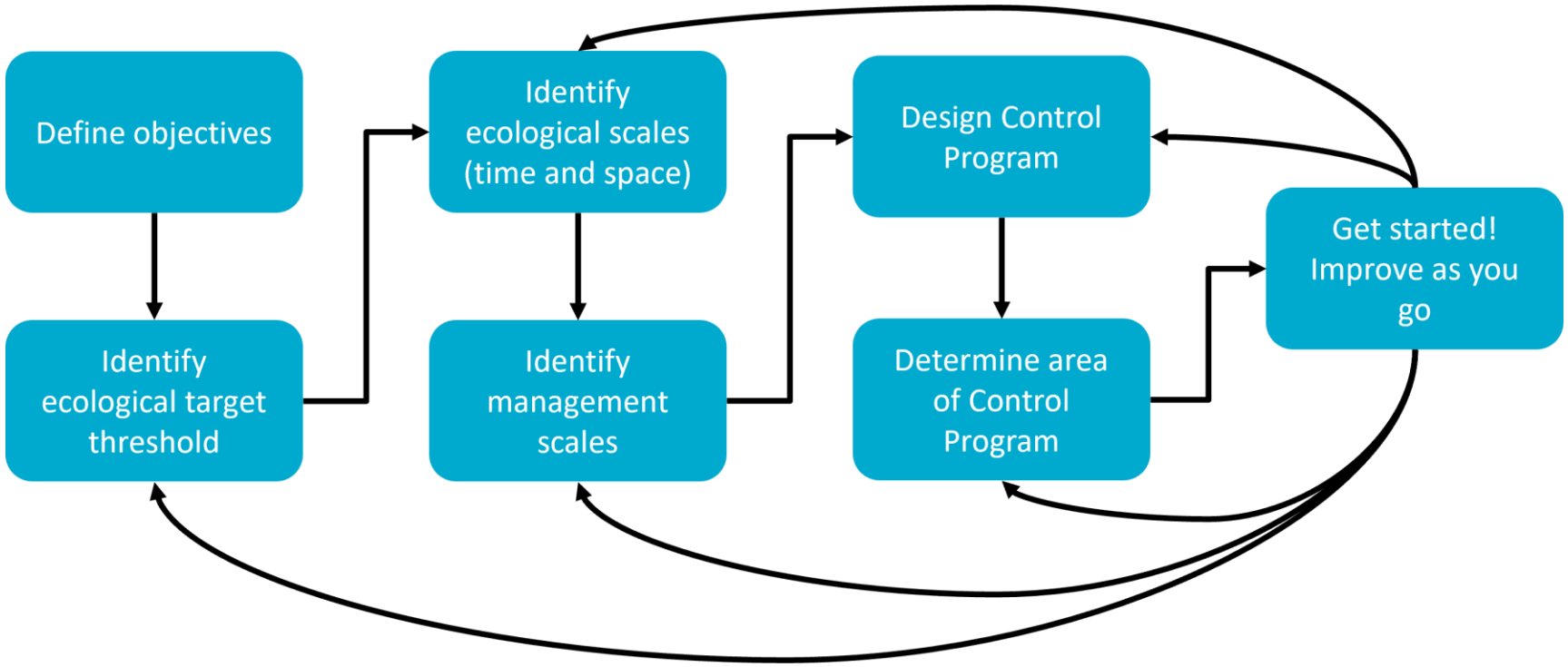

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Thank you

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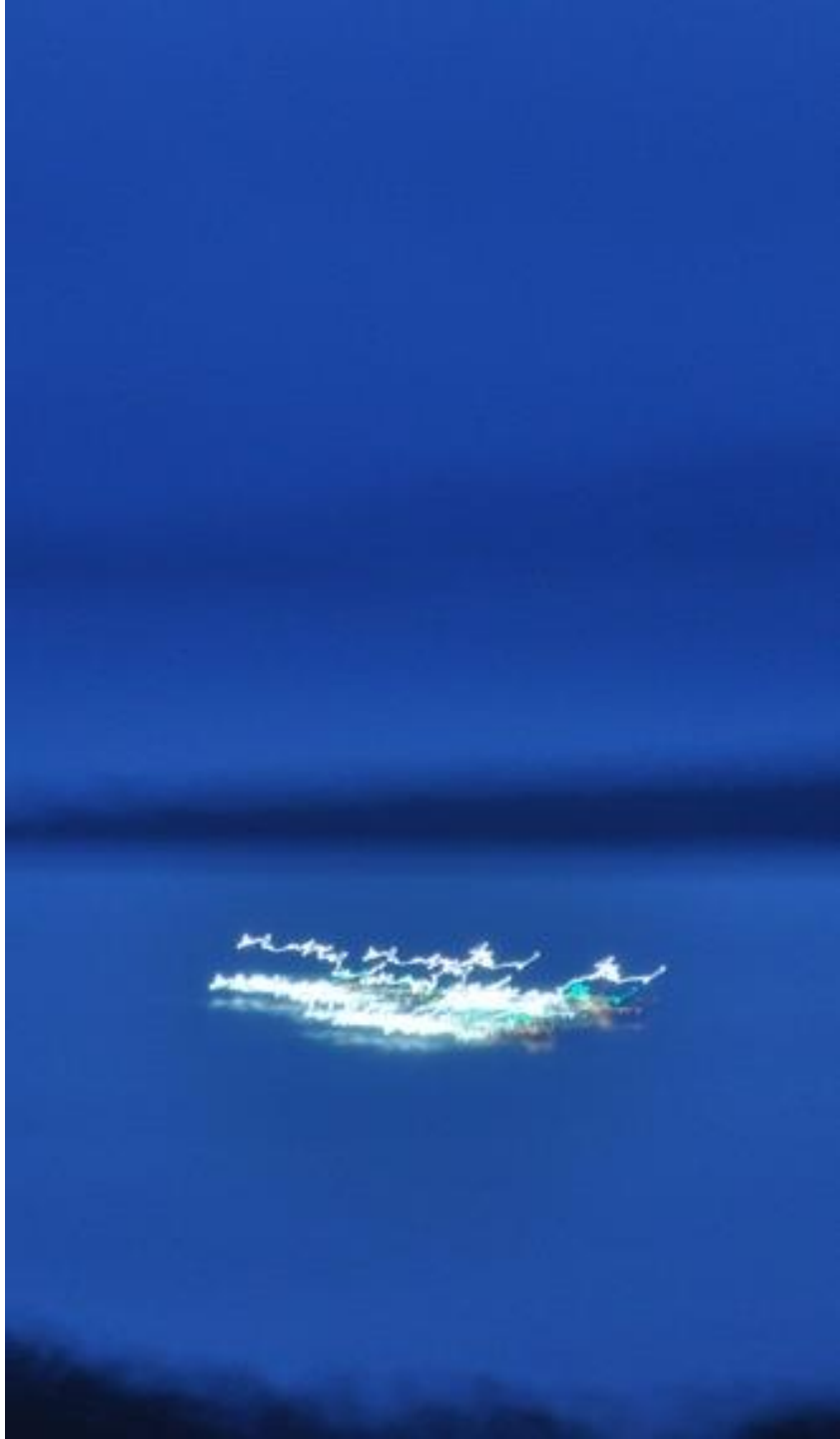
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