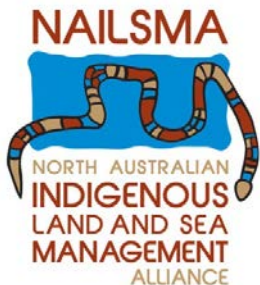


# Monitoring turtles and dugongs on Wunambal Gaambera country: a collaborative research approach

Neil Waina, Jason Adams, Robert Warren

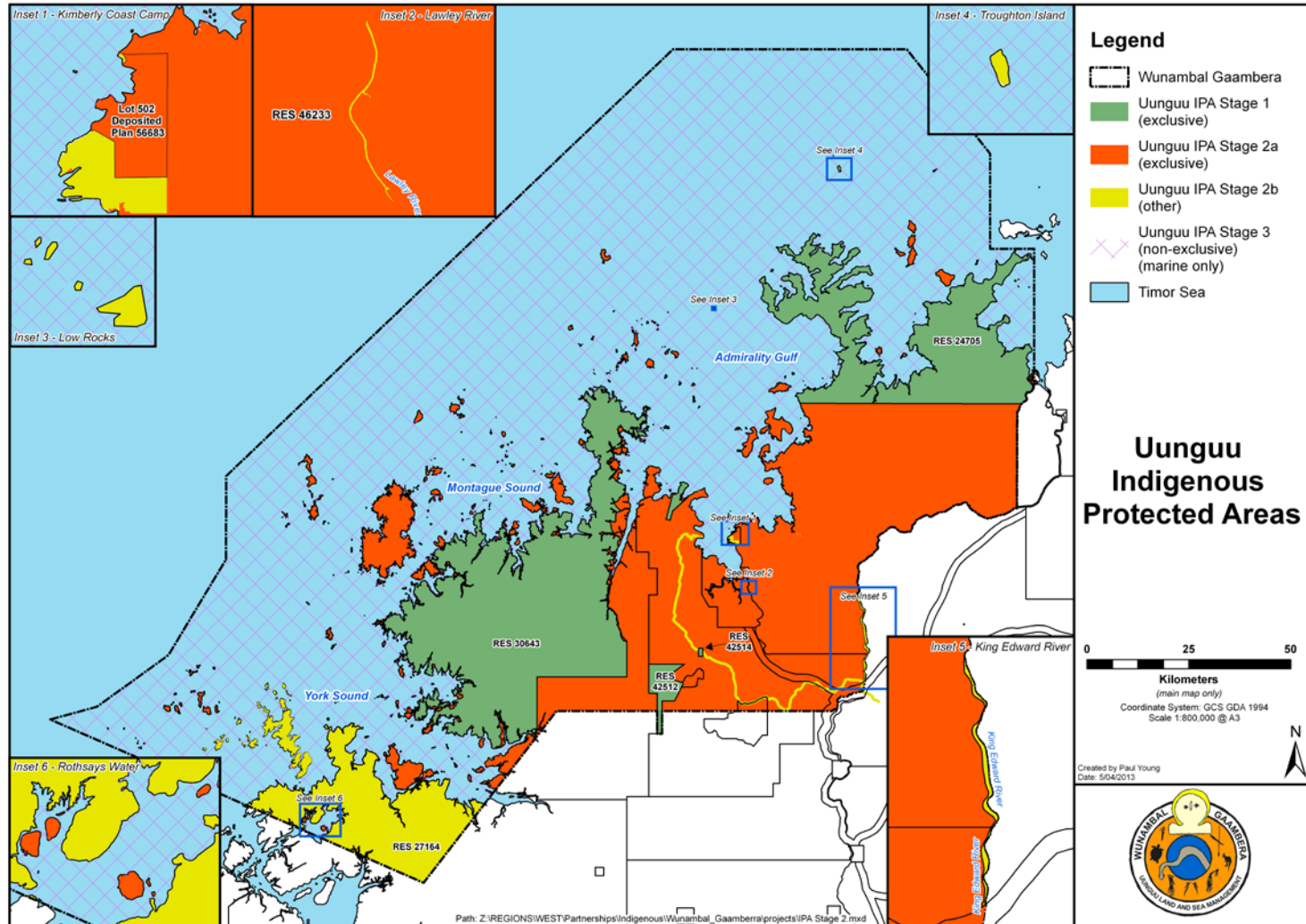
Jackson, M.<sup>1</sup>, Bayliss, P.<sup>2</sup>, Kennett, R.<sup>1</sup>, Karadada, N.<sup>3</sup>, Warren, R.<sup>3</sup>, Waina, N.<sup>3</sup>, Adams, J.<sup>3</sup>, Cheinmora, R.<sup>3</sup> and Vigilante, T.<sup>3</sup>

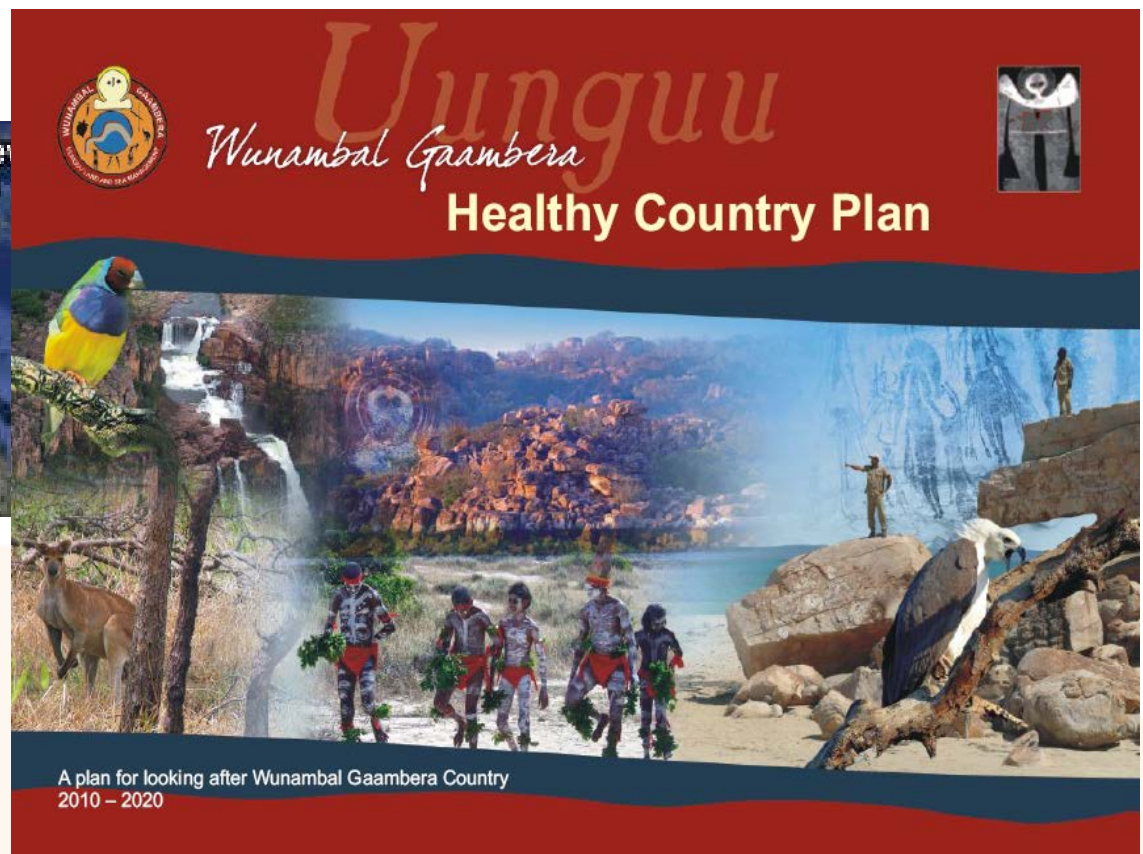
<sup>1</sup>North Australian Indigenous Land & Sea Management Alliance; <sup>2</sup>CSIRO; <sup>3</sup>Wunambal Gaambera Aboriginal Corporation



National Environmental  
Research Program

# Wunambal Gaambera Country





## Target 10: **Mangguru (marine turtle) and balguja (dugong)**

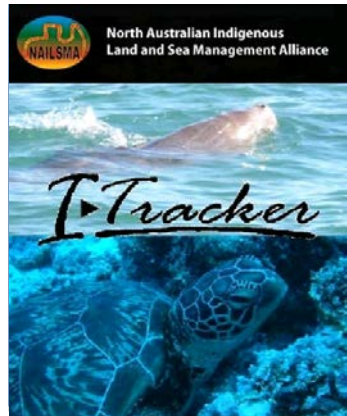
“We need to know more about where they travel, their habitats in our country and how to look after them. Working together...using our traditional knowledge, doing surveys...will help us keep these animals healthy in our country as well as keeping our saltwater traditions strong.”

# Marine Turtle & Dugong Monitoring

- Existing commonly used surveys are aerial counts (dugong) and beach surveys (turtles):
  - Expensive
  - Dangerous
  - Limits community participation & ownership
  - Larger regional scale coverage and analysis
- Boat-based survey method:
  - Infrastructure available (boats, rangers, etc.)
  - High community participation and ownership
  - Finer scale information about local population(s)
  - Logistically feasible and can be done at numerous sites



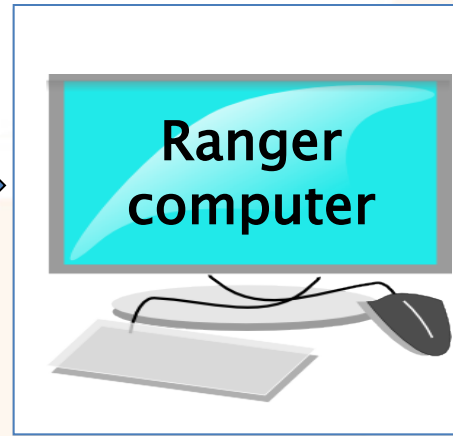
# Using I-Tracker Applications



I-Tracker applications are custom built using CyberTracker software.



Application customised and installed onto the PDA



Rangers collect data using the PDA while on patrol.



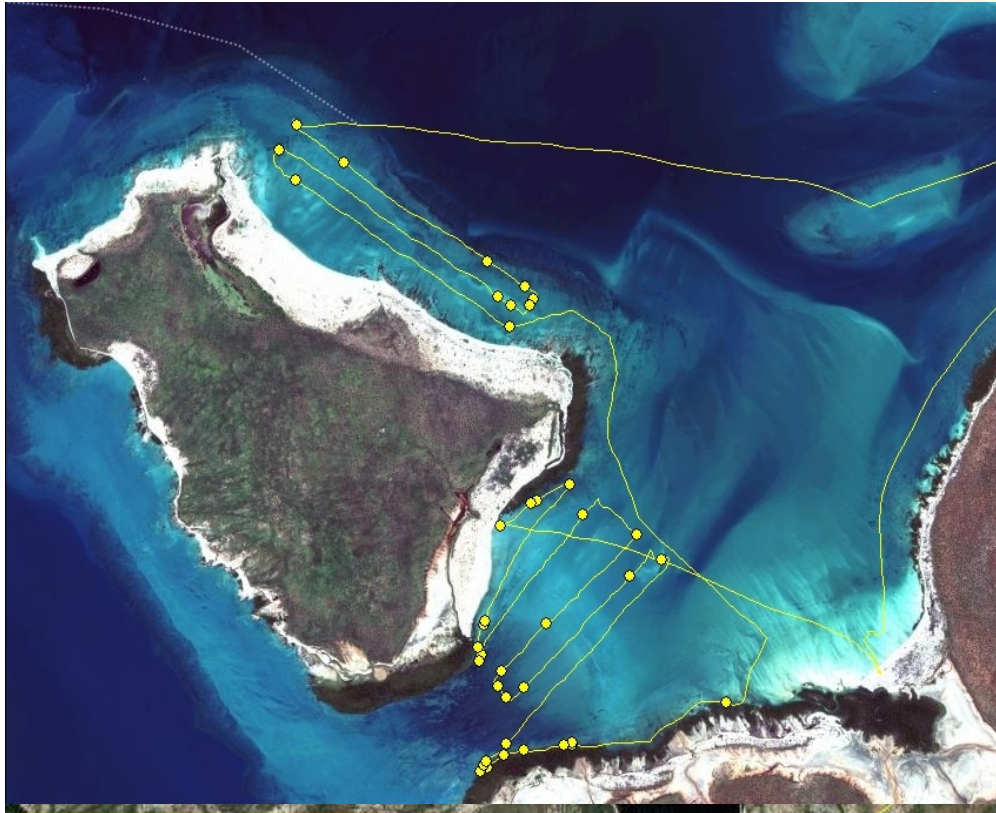
# Marine turtles (Mangguru) and Dugong (Balguja) Monitoring Project 2012-14

- Counts based on line transect methods
- Community-friendly I-Tracker tools to collect data and map data
- Support from CSIRO to analyse results



# On-Ground Workshops and Testing

## May 2012



### **SAMPLE SIGHTING INFORMATION:**

Date: 23/05/2012

Time: 13:02

Latitude: -13.13234598734900

Longitude: 125.2349834759847

Transect Number: 7

Left Observer: Bob

Right Observer: Bill

Recorder: Tom

Sea state: Moderate Chop

Cloud Cover: 10-50%

Wind strength: Light breeze

Glare: Some glare

Water clarity: CLEAR (can see 2-3m down)

Tide: Incoming

Sighting: Turtle

Distance: Left 25m

Species: GREEN

Size: Subadult

Behaviour: Underwater



# RESULTS

May-2012 - present

- Transects finalised
- 6 additional surveys completed
- Ongoing training
- Field Book support tool completed





# FUTURE DIRECTIONS

- 2014 field trip:
  - Additional surveys
  - Complementary seagrass work
  - Trial of aerial camera equipment to validate results
- Additional data analysis
- Publication of results