



FRENCH INSTITUTE OF RESEARCH FOR SUSTAINABLE  
DEVELOPMENT - NEW CALEDONIA

# Dugong research projects

2017 - 2021



# Watching from above

## SIREN project

dugong Spatial behaviour  
Investigation in coral Reef  
Ecosystems of New  
caledonia



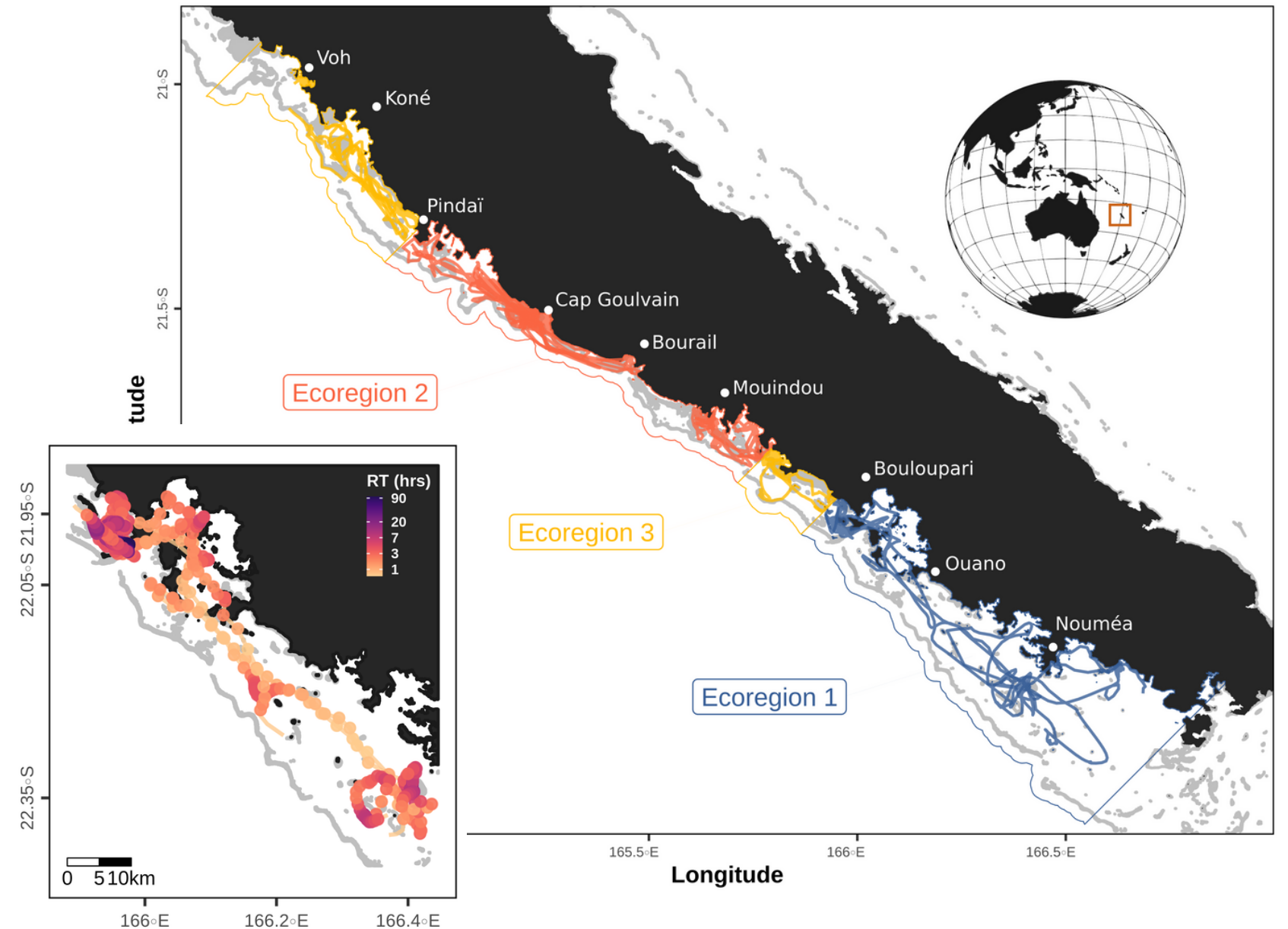
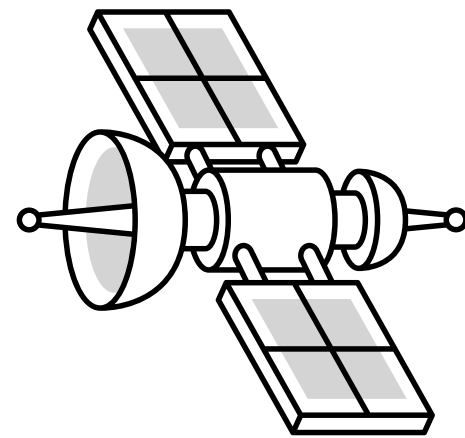
## Using drones to detect dugongs and assess densities

- Flying drones in transects near industrial mining port
- Assessing dugong densities and deriving maps of probable seagrass presence

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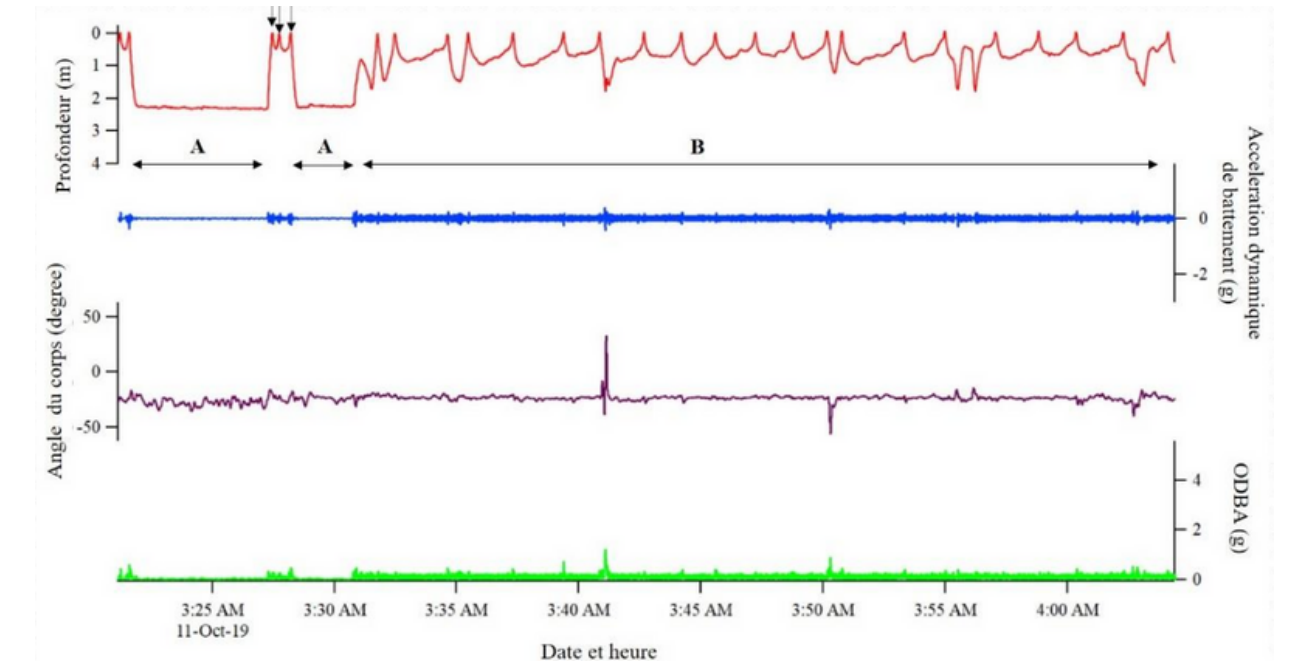
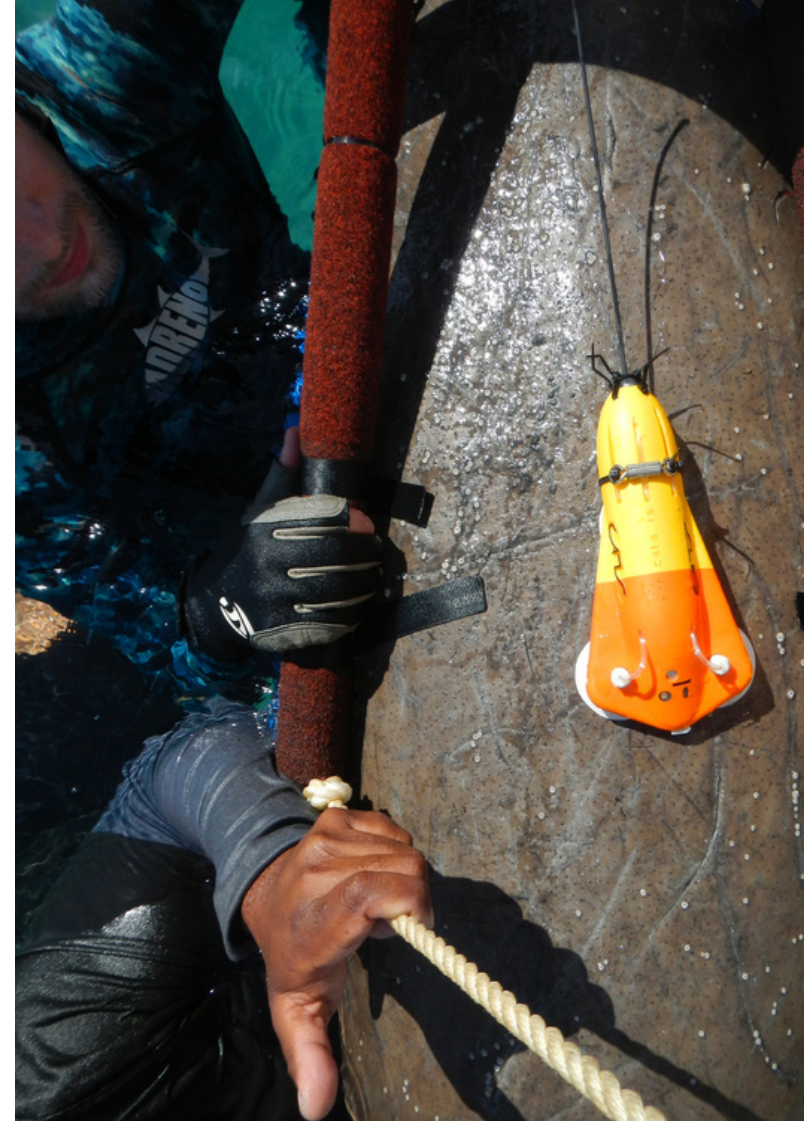
## Using satellite telemetry to study movements and habitat use

- Follow-up to 2012-2015 studies over a wider spatial range
- Predictive models of dugong habitat use reveal local adaptations
- Use of shallow and nearshore waters preferentially at night and low tide

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## First deployments of a multi-sensor high resolution CATS tag

- Diving patterns in relation to the dial cycle
- Better understanding of fine-scale activity budgets

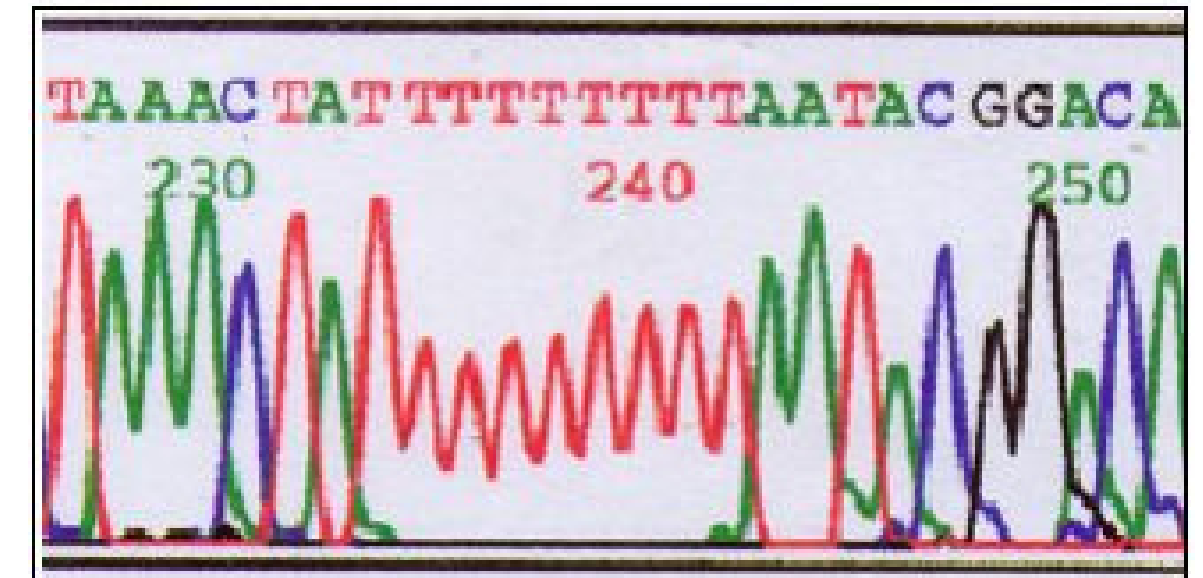
# Watching from inside

## GRASS project

Genetics and trophic  
 Analysis of dugongs in New  
 Caledonia



MURDOCH UNIVERSITY

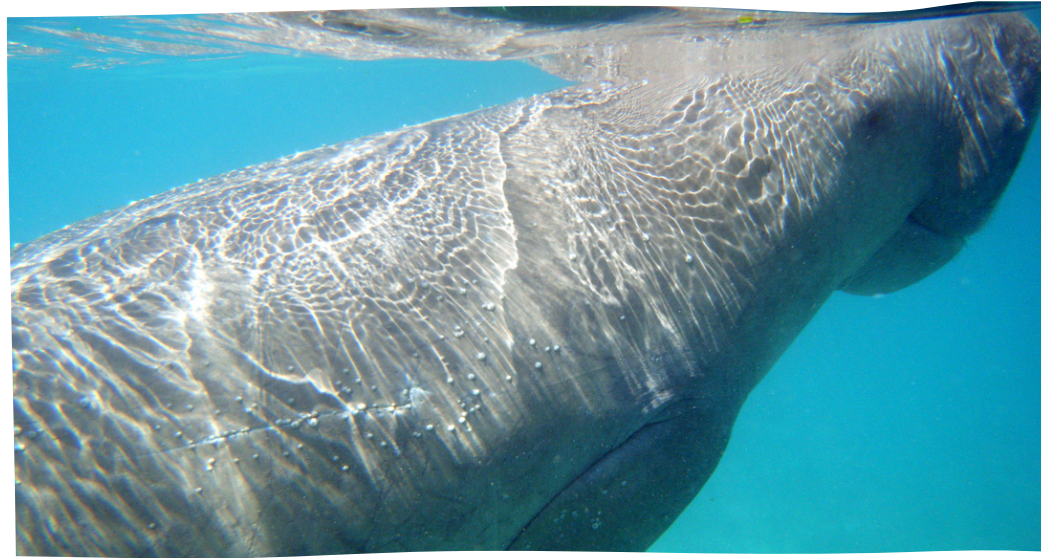


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individual# 2	. . . . .	<span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span>	= HAP 'A'
individual# 3	. C . . G . . . .		= HAP 'B'
individual# 4	. C . . G . . G . .		= HAP 'C'
individual# 5	C . G . . T . . . .		= HAP 'D'

## Genetic and isotopic analyses

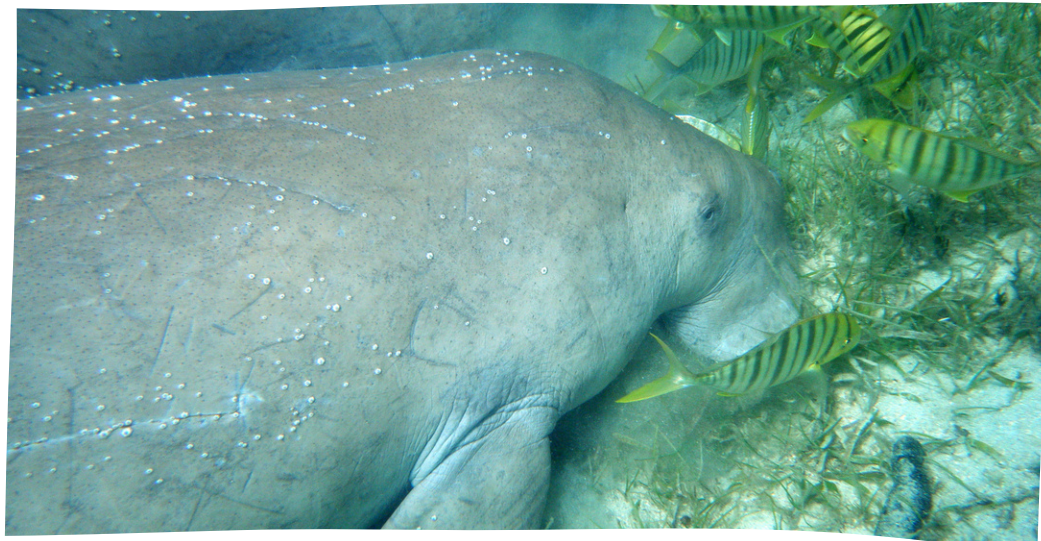
- Samples acquired through stranding network and tagging programs
- Genetic diversity and isolation of the New Caledonia dugong population
- Variations in dugong diet at population and individual level through isotopic analyses

*Cogrel 2017 Etude de l'écologie trophique des dugongs en Nouvelle-Calédonie. Master 2 Gestion de l'environnement et Ecologie Littorale, Université de La Rochelle  
 Genetic isolation of dugongs' population from New Caledonia (in prep.)*



PERSPECTIVES

# Seagrass mapping



The missing piece of the puzzle!



Compile historical data and develop citizen science to improve knowledge of seagrass distribution patterns

