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# **Factors affecting adoption of land management practices that have water quality benefits in the GBR Catchments: Evaluation scenarios for Cane Farming**

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# Issues to be addressed

- **Social, economic and cultural dynamics** in land management practices (**LMPs**) in cane farming in the Great Barrier Reef (GBR) catchments area
- **Key factors affecting adoption** of LMPs that have water quality benefits
- **Nature of adoption** and performance of each factor
- **Human interference** in water quality management in the GBR region

# Project objectives

- to explore the **characteristics** of LMPs within cane farming that have water quality benefits in the GBR catchments;
- to identify key **factors** affecting adoption of LMPs;
- to develop a **decision support tool** to identify key indicators that can describe the nature of adoption and performance of each factor; and
- to provide some **results-based strategic directions** to improve LMPs in cane farming that have water quality benefits in the GBR catchments.

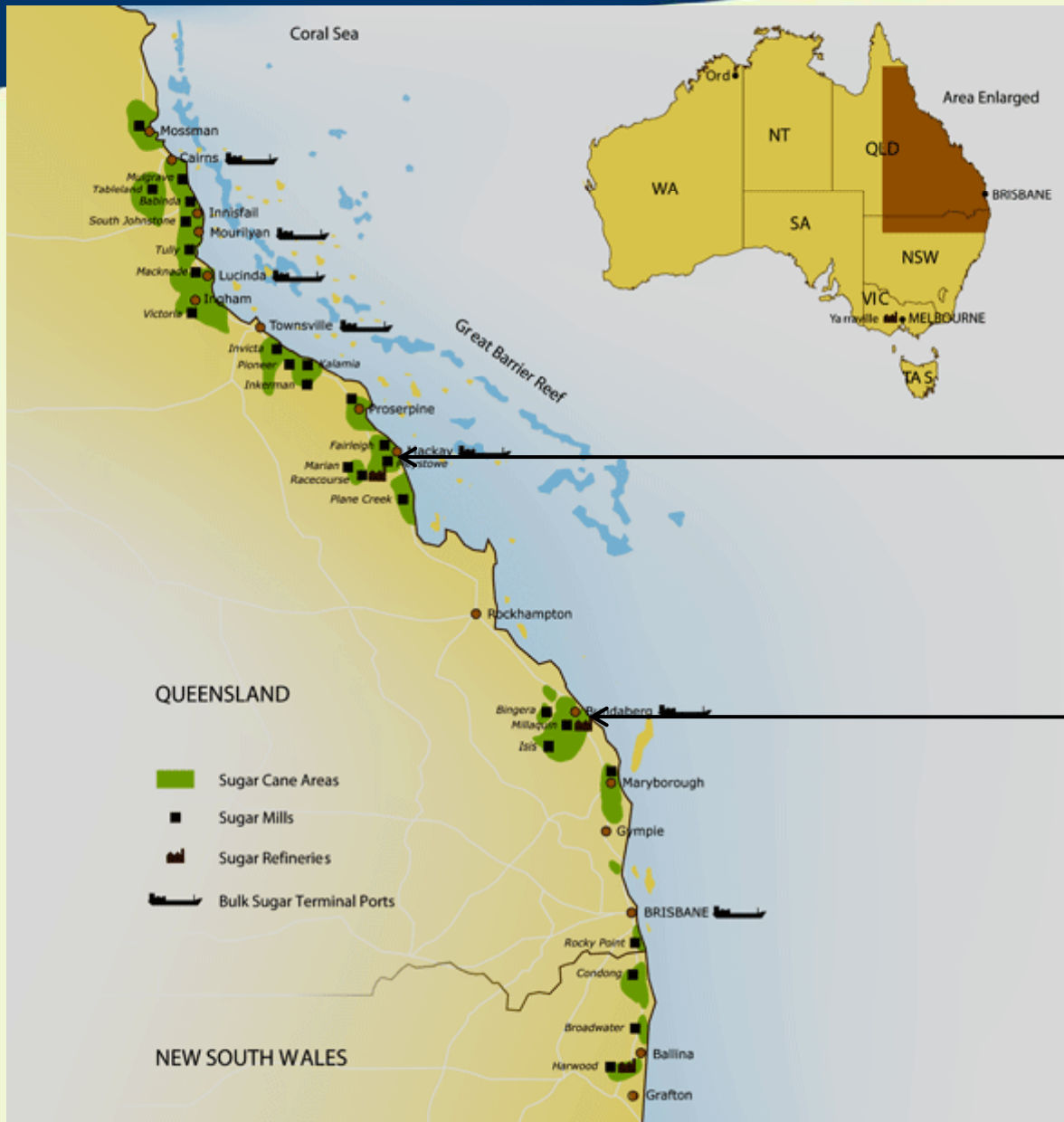
# Approach & methods

- This study chooses a '**case study**' approach
- **Stakeholder interviews**
- Conducting **interviews with cane farmers**
- Using **OWA operators** to identify the importance of the factors affecting adoption of LMPs under different scenarios (i.e., pessimistic, optimistic and trade-off) of maintaining water quality in the GBR
- Preparing **results based strategic directions** to improve adoption of LMPs in the cane farming that have water quality benefits in the GBR catchments.

# Research team

- Dr. Delwar Akbar (Senior Research Officer)  
Professor John Rolfe  
Mr. Lindsay Greer (Senior Research Officer)  
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**CQUniversity, QLD 4702**
  
- Dr Nadine Marshall  
Rangelands/Social Scientist  
**CSIRO Ecosystem Sciences,**  
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# Geographic scope



Mackay

Bundaberg

# Expected output

- A report on **categorising and characterising LMPs** in cane farming that have WQB;
- **A tool** capturing cane farmer's opinions on factors and performance of LMP(s) adoption;
- **Two journal papers** containing categorisation, factors and indicators of LMP adoption in cane farming that have water quality benefit;
- A stand alone report on **DSS** & its method; &
- A full research report containing findings and **strategic guidelines** to improve LMP adoption in cane farming that have WQB in the GBR.

# Possible synergies

- Potential research component(s) with RRRD039 project:
  - currently exploring sharing some information about BMP in cane farming, economic indicator data, sub-regional diversity information, social and attitudinal information about cane farming and cane farmers;
  - to conduct joint workshop; &
  - exploring an option to collect social and attitudinal information about the LMP adoption in grazing;

# Management implications

- The output from the projects will provide **end users** with a multi-criteria decision support tool to identify key indicators that can describe the nature of adoption and performance of each factor
- It will help **individual NRM group** to consolidate the information about the adoption factors of LMPs in cane farming that have water quality
- The project will help the government agencies including **AGLC** identify strategic mechanisms in adopting LMPs in cane farming that have water quality benefits.
- It may facilitate **to increase the number of farmers** who will have adopt LMPs that will improve the quality of water reaching the Reef lagoon

**Thank you ~~~ Q & A**

