



Australian Government
Department of Climate Change



Impact of climate change on Indigenous communities in the tropical north of Australia

Antonio Mozqueira



Partners

- NT Government
- WA Government
- Australian Government

A satellite-style image of the Earth from space, showing the Western Hemisphere. The text "Research Team" is overlaid in white on the top half of the image. An orange vertical bar is on the right side.

Research Team

UNSW

Donna Green, Dale Howes, Jason Evans & Claire O'Neill

NAILSMA

Joe Morrison

CSIRO

Mark Stafford Smith, Ben Preston, Sue Jackson, Brett Abbot, Glenn James and Silva Larson

ANU

Jon Altman and Will Steffen

The slide features a dark blue background with a satellite-style image of Earth's clouds and continents. The word "Outline" is centered in white. An orange vertical bar is on the right side.

Outline

1. Purpose

- Identify impacts on Indigenous communities & assess vulnerability & adaptive capacity

2. Output

- Report that identifies future research priorities & on-ground actions

3. Outcome

- Develop knowledge & approaches to assist Indigenous communities to adapt to CC

4. Risks

- Other issues in Indigenous communities more immediate



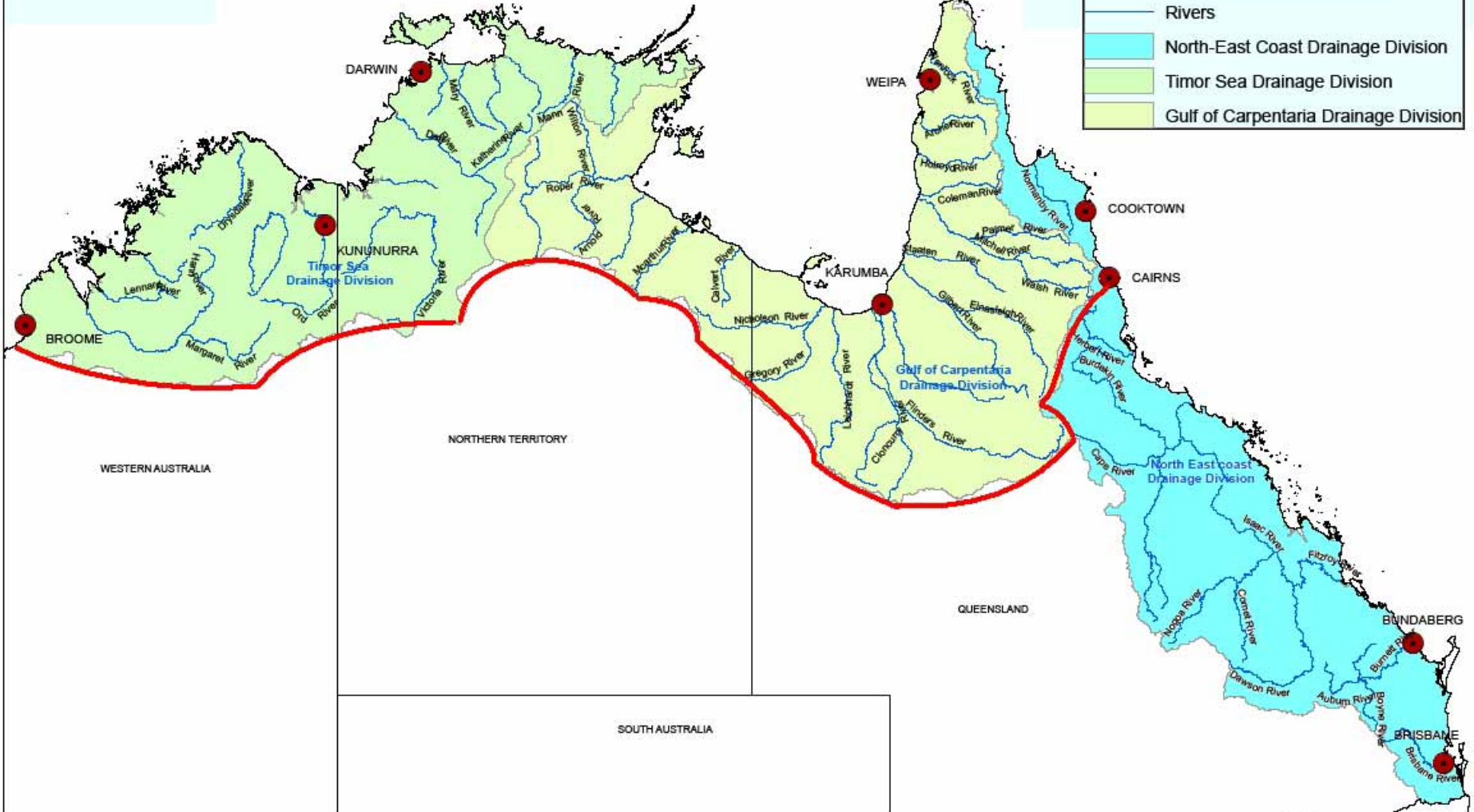
Methodology

1. Review of literature in Australia & overseas
2. Spatial analysis using data from various sources including ABS
3. 8 case studies in total in WA, NT and Qld
4. Interview with key stakeholders
5. Opinion from experts on specific topics



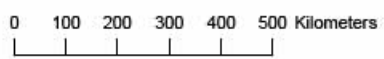
Legend

- Major Towns
- Tropical North Line
- Rivers
- North-East Coast Drainage Division
- Timor Sea Drainage Division
- Gulf of Carpentaria Drainage Division



Data Sources: Drainage, Drainage Division, States, Roads, Waterbodies, Localities
 (c) Commonwealth of Australia (Geoscience Australia)

Map produced by:
 Environmental Resources Information Network (ERIN)
 Australian Government, Department of the Environment and Water Resources
 11 July 2007



Australian Government
 Department of the Environment and Water Resources



Work sequence

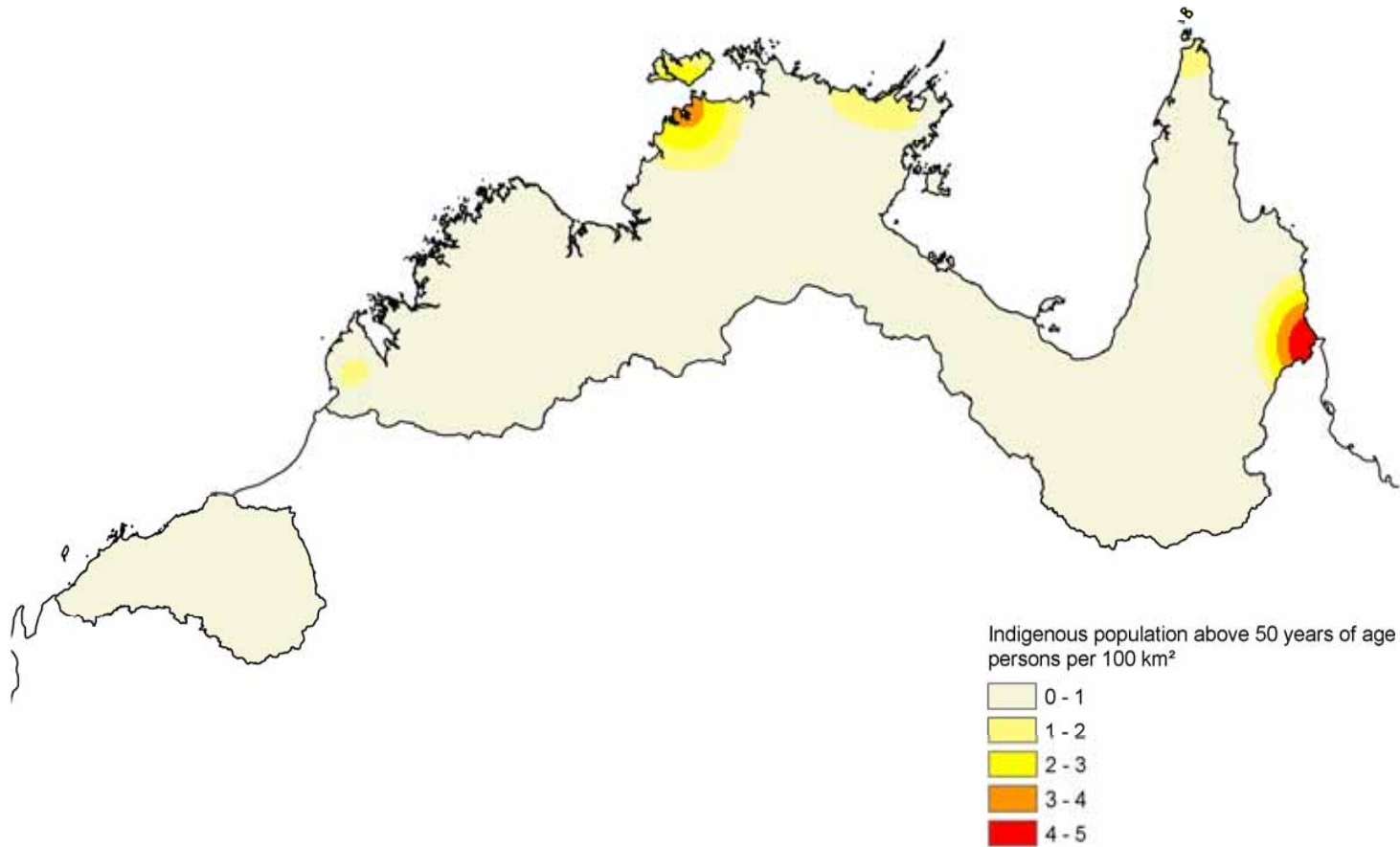
1. Summarise projected CC in the north
2. Identify direct/indirect impacts of CC on Indigenous communities
3. Identify vulnerable regions and sectors
4. Assess factors that affect the vulnerability & resilience of these communities



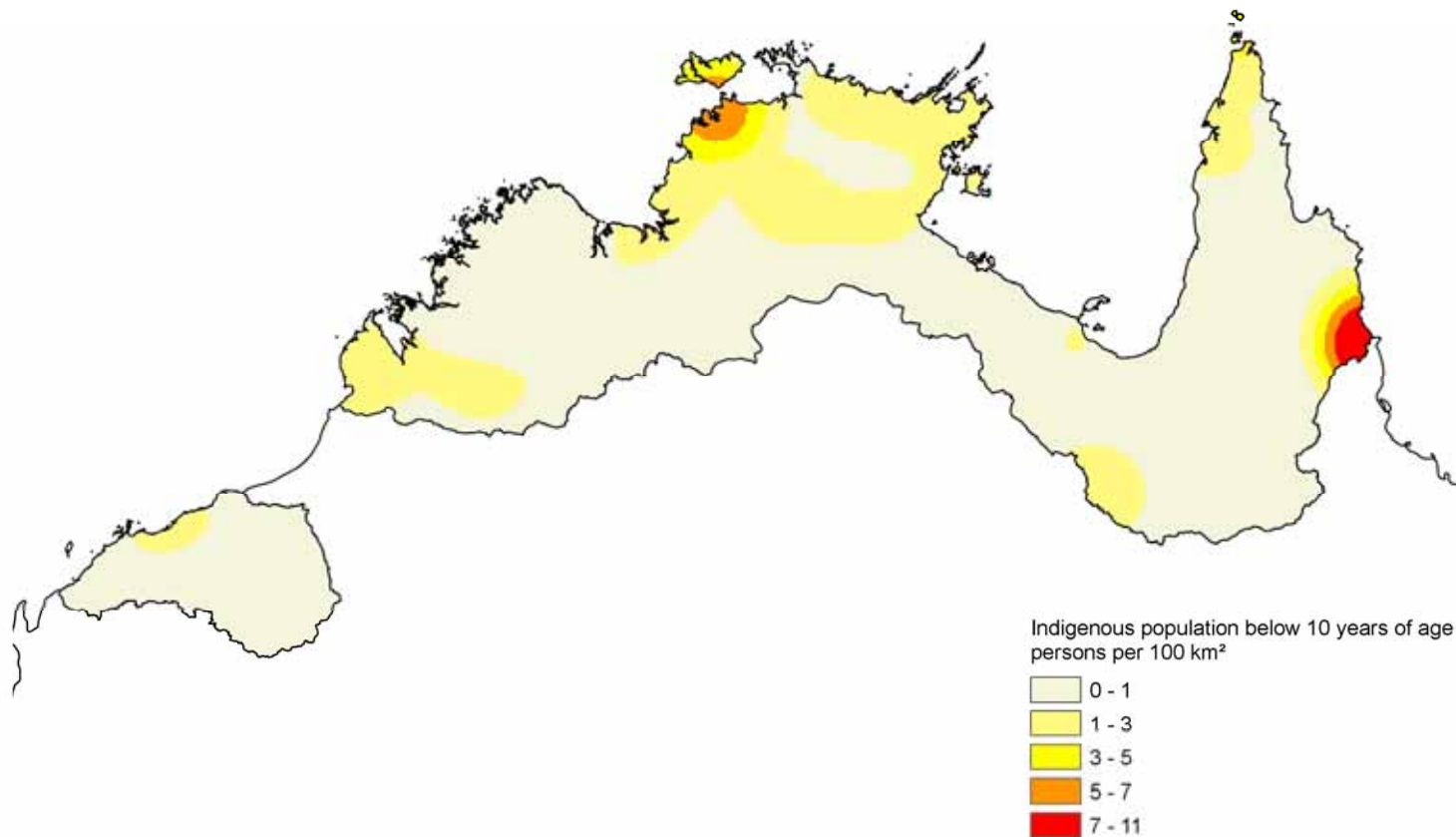
Sequence (cont)

5. Identify current gaps in knowledge
6. Identify opportunities that exist for Indigenous peoples brought about by CC
7. Provide recommendations for future research and on-ground priorities

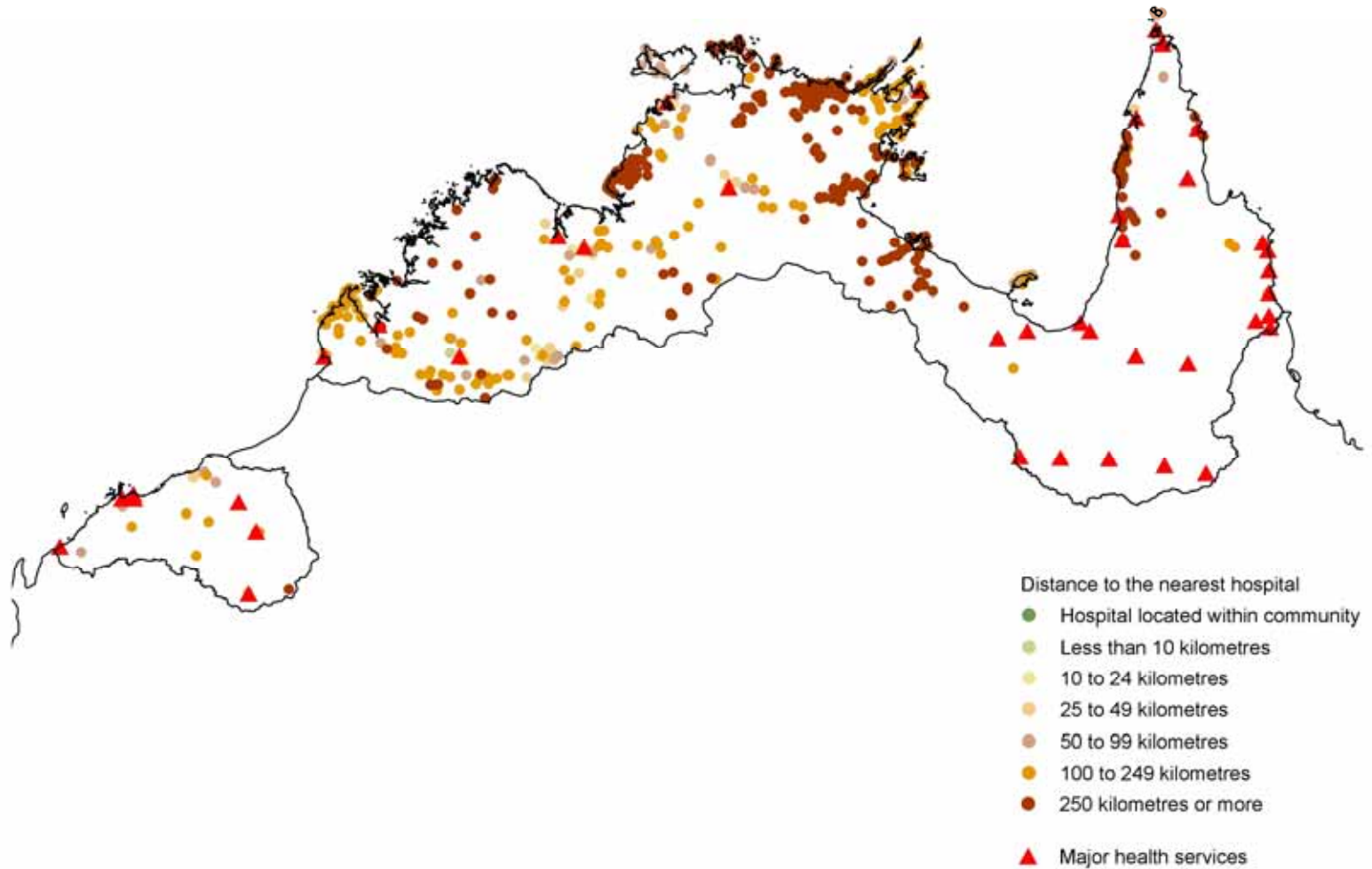
Indigenous population above 50 years of age



Indigenous population under 10 years of age



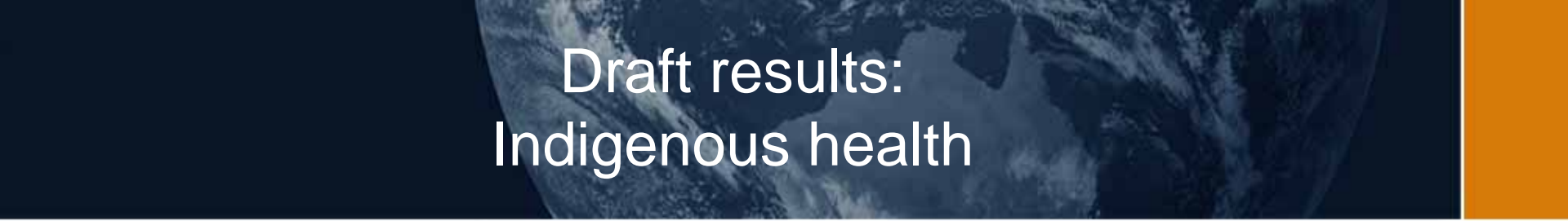
Distance to health centres





Draft results: CC impacts on ecosystems

1. Lack of knowledge on the impacts of CC on ecosystems & even less so on how this impact will affect Indigenous communities
2. Value in understanding impacts on ecosystem interactions rather than on individual species
3. Similarly there may be value in conservation efforts to manage CC rather than trying to prevent its effects
4. There are opportunities for Indigenous peoples in managing the effects of CC on ecosystems



Draft results: Indigenous health

1. CC is likely to exacerbate existing health problems
2. Casual processes, i.e., changes in bush food yields, displacement of population, loss of livelihoods & sacred sites
3. Increase in heat related illness
4. Impact on mental health
5. Impact from extreme weather events

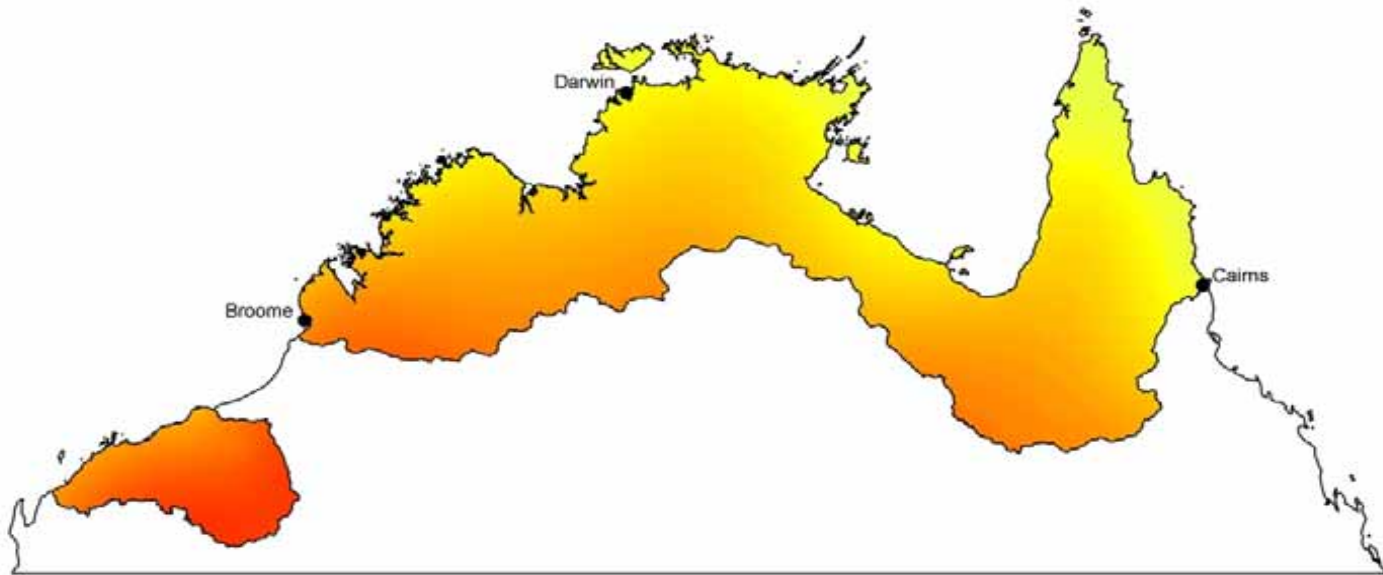


Draft results: Infrastructure

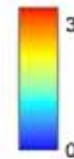
Few studies on how CC will impact on infrastructure in the north. For example:

- Housing & its capacity to maintain acceptable indoor temp - are houses built to standards that can resist more intense cyclones
 - what are the likely impacts on energy/water/sewerage services
 - How can Indigenous peoples become more involved in managing their local essential services

Projected temperature rise to 2070



Mean yearly temperature change -
2070 high emission scenario
°C





Draft results: Opportunities and impacts

1. Climate effects on agriculture
2. Opportunities in the NRM sector
 - Fire abatement, weed/pest control
3. Climate effects on the tourism sector
4. Research also examines CC effects on:
 - education & vocational training &
 - uses of traditional knowledge



Concluding remarks

1. Indigenous peoples will be amongst the first to feel the impacts of CC
2. Adaptation strategies would be enhanced with the direct involvement of Indigenous peoples
3. CC may have equal or greater indirect effects than through impacts such as storms or floods



Concluding remarks (Cont)

4. Increased health risks from mosquito borne diseases, gastro, respiratory illness, and skin infections
5. Bush foods play an important nutritional role, however, the effects of CC on the availability of these foods is unknown
6. The impact of CC on the capacity to hunt and gather food has wider implications for health than simply from a nutritional perspective



THANK YOU