

***‘Landscape analysis’ of Stakeholder research & initiatives  
that contribute to achievement of  
Australia’s Sustainable & Resilient  
Food & Fibre production & Land-use systems by 2050***

***Internship:***

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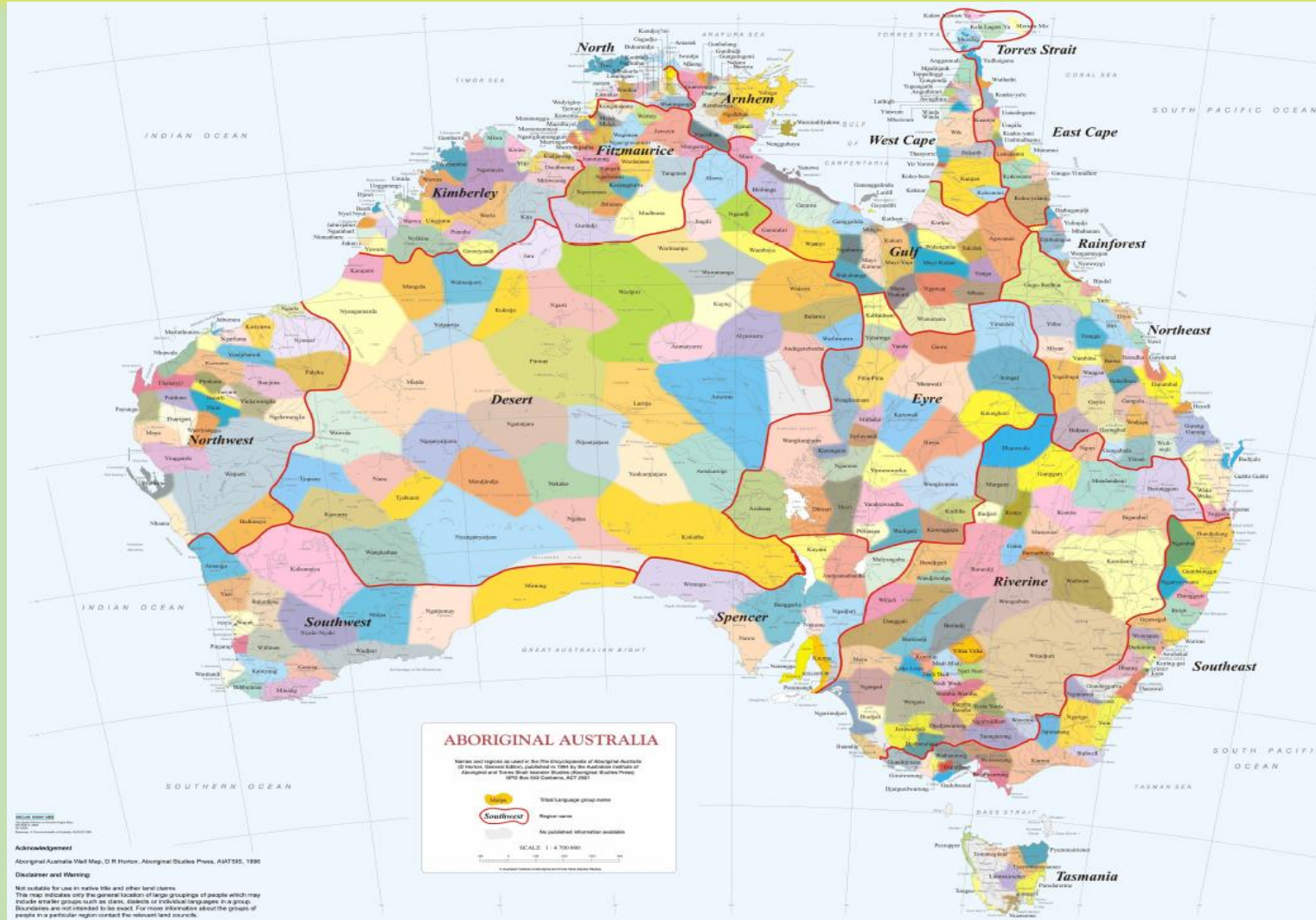
***EIANZ Conference 2 Nov 2018***



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## Acknowledgement of Country

I acknowledge the Traditional Owners of country on which we meet today, the Gadigal people of the Eora nation, and recognise their continuing connection to land, waters and culture. I pay my respect to their Elders past, present and emerging, and to any first nations people here today.



# *What's my connection to farming?*

- Sugar cane farming
- Early days of sustainability



Property Observer

*Global – United Nations “Food & Land Use Project”*



*Australia – ClimateWorks “Land Use Futures Project”*



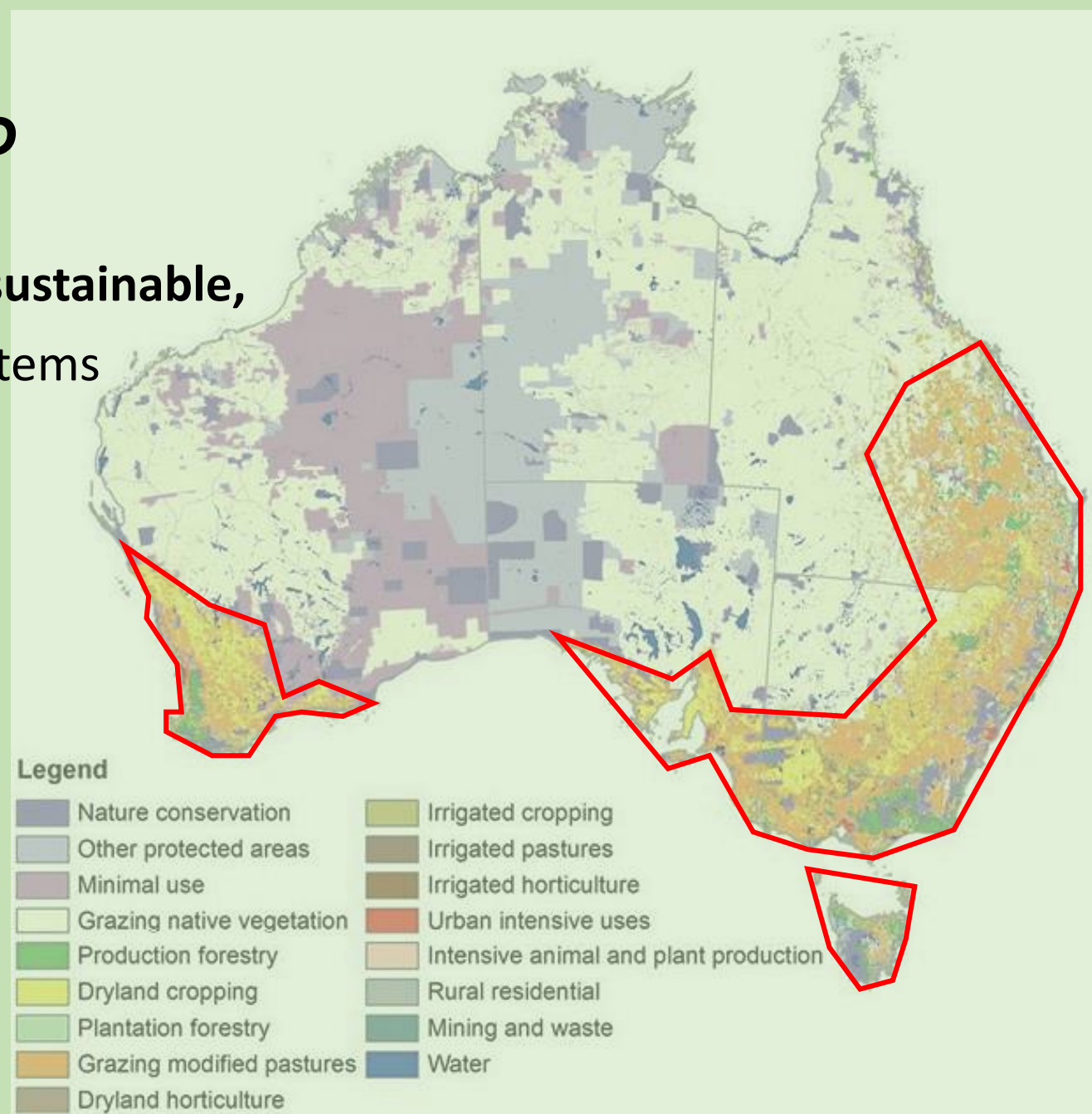
*“Stakeholder Analysis” of initiatives*



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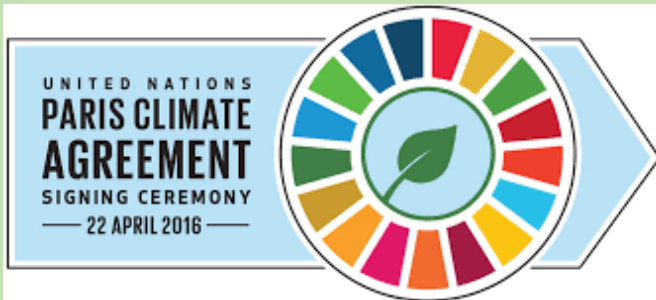
# Why research is needed?

- Australia's food & fibre production is **unsustainable**, impacting on natural resources & ecosystems



# *Why research is needed?*

- Need to **restore** food & fibre production & land-use systems
- This will enable Australia to:
  - Feed Australia's increasing population, now 25 million, by 2050 about **42 million** (ABC NEWS, 2018a)
  - Meet **United Nations** Sustainable Development Goals & Paris Climate



# Research Scope



ANU College of Law

## Stakeholders:

- ClimateWorks provided 37 targeted stakeholders from industry, government & universities

## Questions:

- What are the key **findings** of the stakeholder research?
- What **recommendations** did stakeholders provide?
- What major '**barriers**' or '**gaps**' were identified by stakeholders?

# *Research methodology*

## **To answer questions:**

- Desktop website research on stakeholders
- Enter 'Findings' in ClimateWorks shared excel file
- Produce 'Landscape analysis' report based on research



# *Findings 'disclaimer'*

- Opportunities & recommendations 'proposed' by **stakeholders** are '**not verified**' by ClimateWorks
- Recommendations 'proposed' in 'Landscape analysis' by **author** are '**not verified**' by ClimateWorks
- ClimateWorks are currently working on solutions to problems – see 'Land Use Futures project' <https://climateworks.com.au/food-and-land-use>

# *Findings across:*

- **Food** health, security & waste
- **Agricultural** efficiency & resilient production
- **Biodiversity** conservation & restoration
- **Land use** planning for sustainability
- **Economic** sustainable trade



DAFWA



Independent Australia

# Key findings & recommendations

## Food health, food security, food waste:

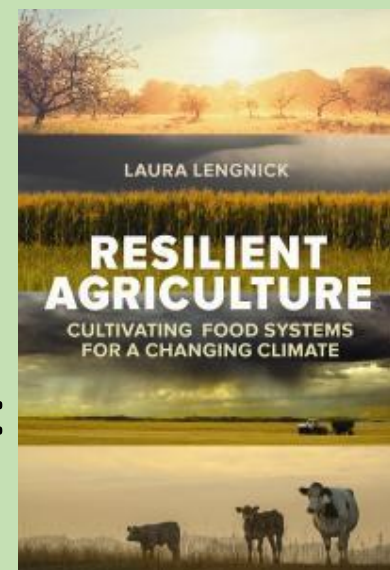
- EAT-Lancet Commission report (International Food Policy Research Institute, 2018)
- 50% reduction in food waste by 2030 (Australian Government, 2017)
- Councils to collect & reuse food waste (author, 2018)
- National Food Plan (author, 2018)



# Key findings & recommendations

## Agriculture efficiency & resilient production to support livelihoods:

- Reduce greenhouse emissions by 30% (FAO, 2018)
- Transition farming to 'regenerative agriculture' (Massy, 2017)
- Enhance resilience & climate adaptation of land (Author, 2018)
- Communicate learnings from sustainable farming & food production research (CSIRO, 2018c), (Monash University, 2018), (Australian National University, 2017 & 2018a)



New Society Publishers



Medium

# *Key findings & recommendations*

## **Biodiversity** conservation & restoration:

- Slow down & reverse habitat loss for pollinators (Australian National University, 2018)
- Retain native vegetation & wetlands, & slow down & reverse biodiversity loss (Author, 2018)



# *Key findings & recommendations*

## Land use planning for sustainability:

- Long-term regional strategic plans to guide land use & natural resource management (Wentworth Group of Concerned Scientists, 2018)
- Best-practice land use planning & neighbour-friendly farm practices (Author, 2018)



# Key findings & recommendations

## Economic sustainable trade:

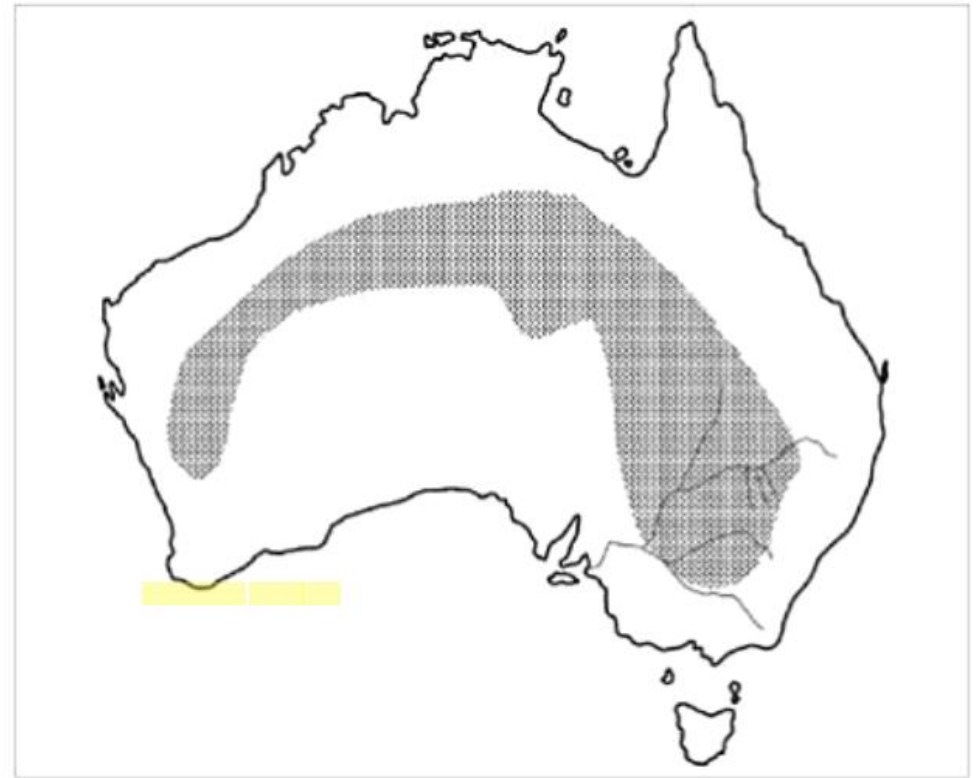
- Transition to a renewable energy-based economy (Australian Alliance for Energy Productivity, 2016), (Ag Institute Australia, 2018 & 2018a)
- Establish new markets & policy settings to enable carbon farming (CSIRO, 2015)
- Set institutional settings & economic signals to stop & repair environmental damage (Wentworth Group of Concerned Scientists, 2018), (IPBES, 2018 & 2018a)
- Communicate effectiveness of Victorian government \$1.2 Billion Food & Fibre Sector Strategy (Victoria Government, 2017)



NAB

# *Indigenous knowledge*

- **Collaboration** of Indigenous and non-Indigenous **knowledge** can improve farming sustainability
- **Food** production
  - Grain belt & broad range of native plants across country.  
Indigenous farming 'Dark Emu' by Bruce Pascoe
- **Biodiversity** - 65,000 years of knowledge
- **Land use** - custodians & caretakers
- **Economic** - system of trade across the continent



**Figure 3.4 The Aboriginal grain belt**

Source: Mulvaney and Kamminga 1999: 86, after Tindale 1974.



# Strive to achieve - UN Sustainable Development Goals



United Nations

# Key barriers, gaps & challenges

- Potential impacts of **climate change** & extreme events on farms, sectors, regions, ecological system are not fully understood
- **Uncertainty** surrounds how, where & when climate change impacts, resource constraints or ecological system breakdowns will affect food production
- Climate, agriculture & NRM policies are **interrelated**, & can have foreseen & unexpected impacts on each other, e.g. climate policy to reduce agricultural emissions can constrain agricultural productivity
- **Foreign investment** in Australia is affected by barriers to imports in foreign markets

## ***Project Assumptions***

- 37 targeted stakeholders (industry, government & academics) selected by ClimateWorks would generally **represent** Australia's food & fibre production industry
- Data from stakeholder websites would provide sufficient information

## ***Challenges***

- Large data set of 'Stakeholder findings' to distill into a 'Landscape analysis' report



*Thank you*

*Questions*

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*Master of Environmental Management - in progress*



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