

# The Science of *New Economy*

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**Darwin Centre for Bushfire Research**  
Research Institute for Environment and Livelihoods

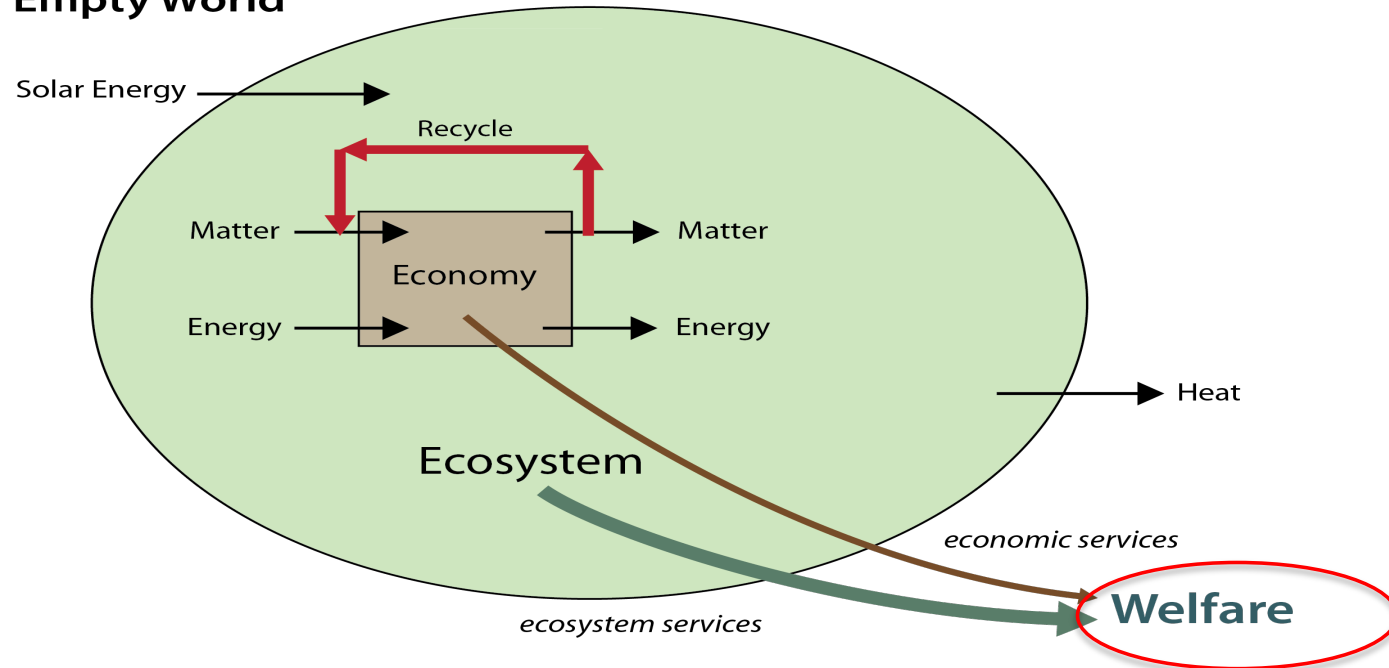
Research Institute  
for the Environment  
and Livelihoods



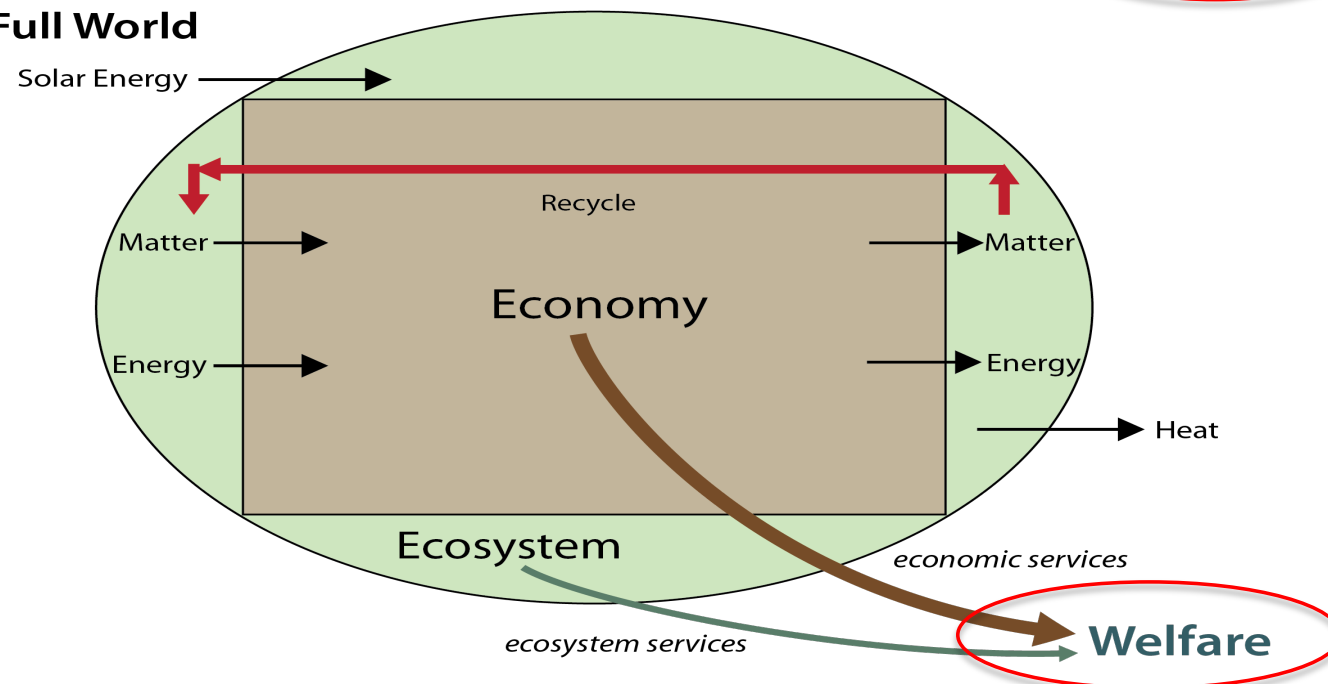
## Acknowledgements



## Empty World



## Full World



Daly (2015), "Economics for a Full World," *Great Transition Initiative* (June 2015),



# Re-thinking Our Economy

- Nature – understanding the role of nature in our economies
- Economies focusing on well-being of people
- Embedding ethics in economics





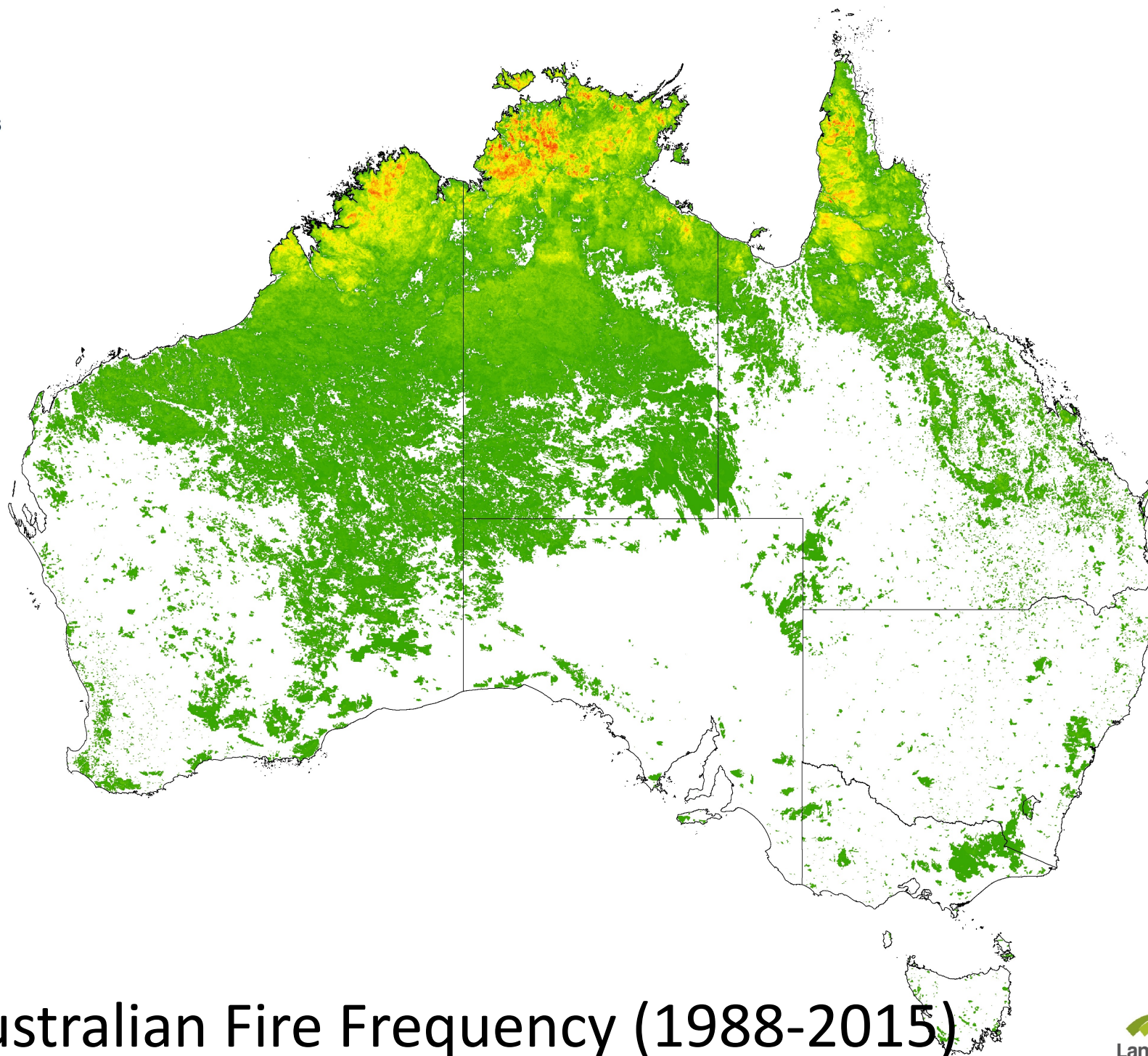
# Nature-based economies

- Economies-in-Society-in-Nature (ESN)
  - **Carbon economy**
  - **Payments for Ecosystem Services**
  - Renewable energy
  - Sustainable farming
  - Sustainable living ...

## Legend

### Fire Frequency from 1988 to 2015

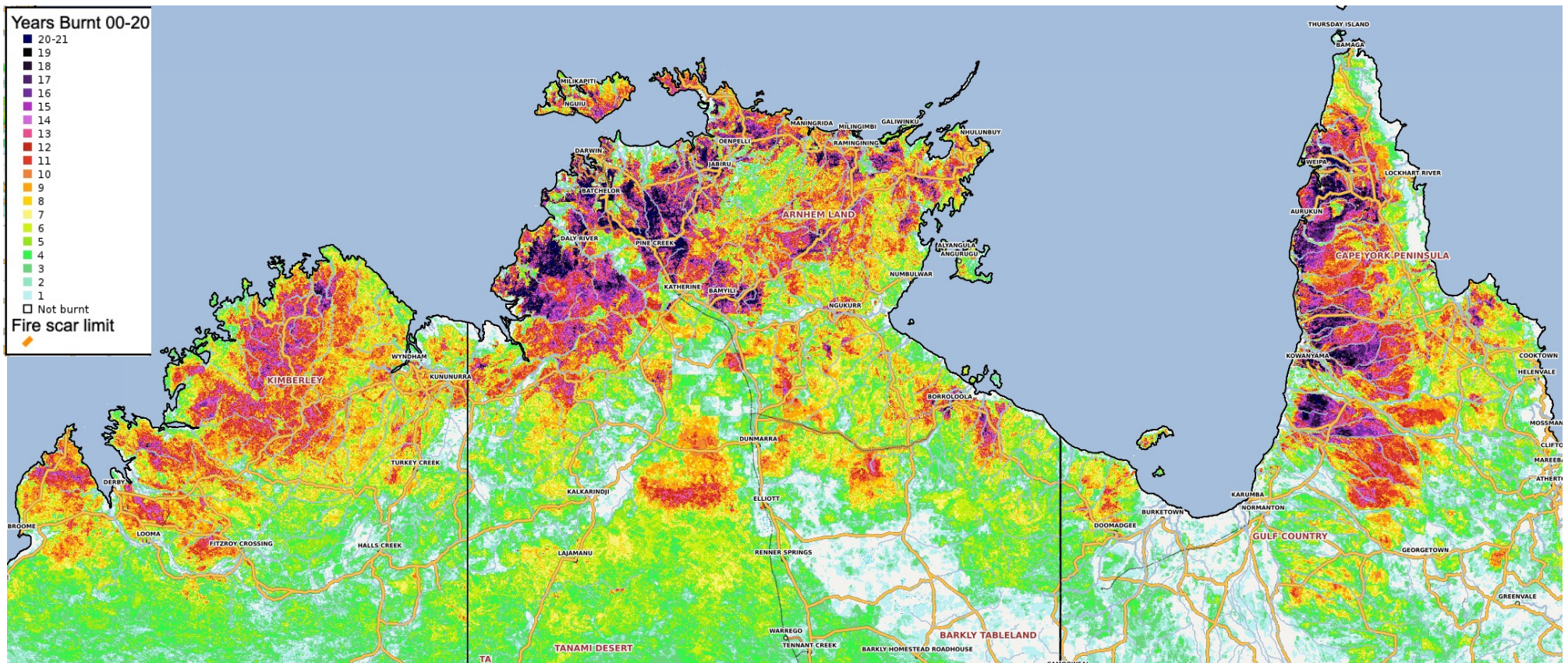
- Area burnt once
- Area burnt twice
- Area burnt three times
- Area burnt four times
- Area burnt five times
- Area burnt six times
- Area burnt seven times
- Area burnt eight times
- Area burnt nine times
- Area burnt ten times
- Area burnt eleven times
- Area burnt twelve times
- Area burnt thirteen times
- Area burnt fourteen times
- Area burnt fifteen times
- Area burnt sixteen times
- Area burnt seventeen times
- Area burnt eighteen times
- Area burnt nineteen times
- Area burnt twenty times
- Area burnt twenty-one times
- Area burnt twenty-two times
- Area burnt twenty-three times
- Area burnt twenty-four times
- Area burnt twenty-five times
- Area burnt twenty-six times
- Area burnt twenty-seven times
- Area burnt twenty-eight times



# Australian Fire Frequency (1988-2015)

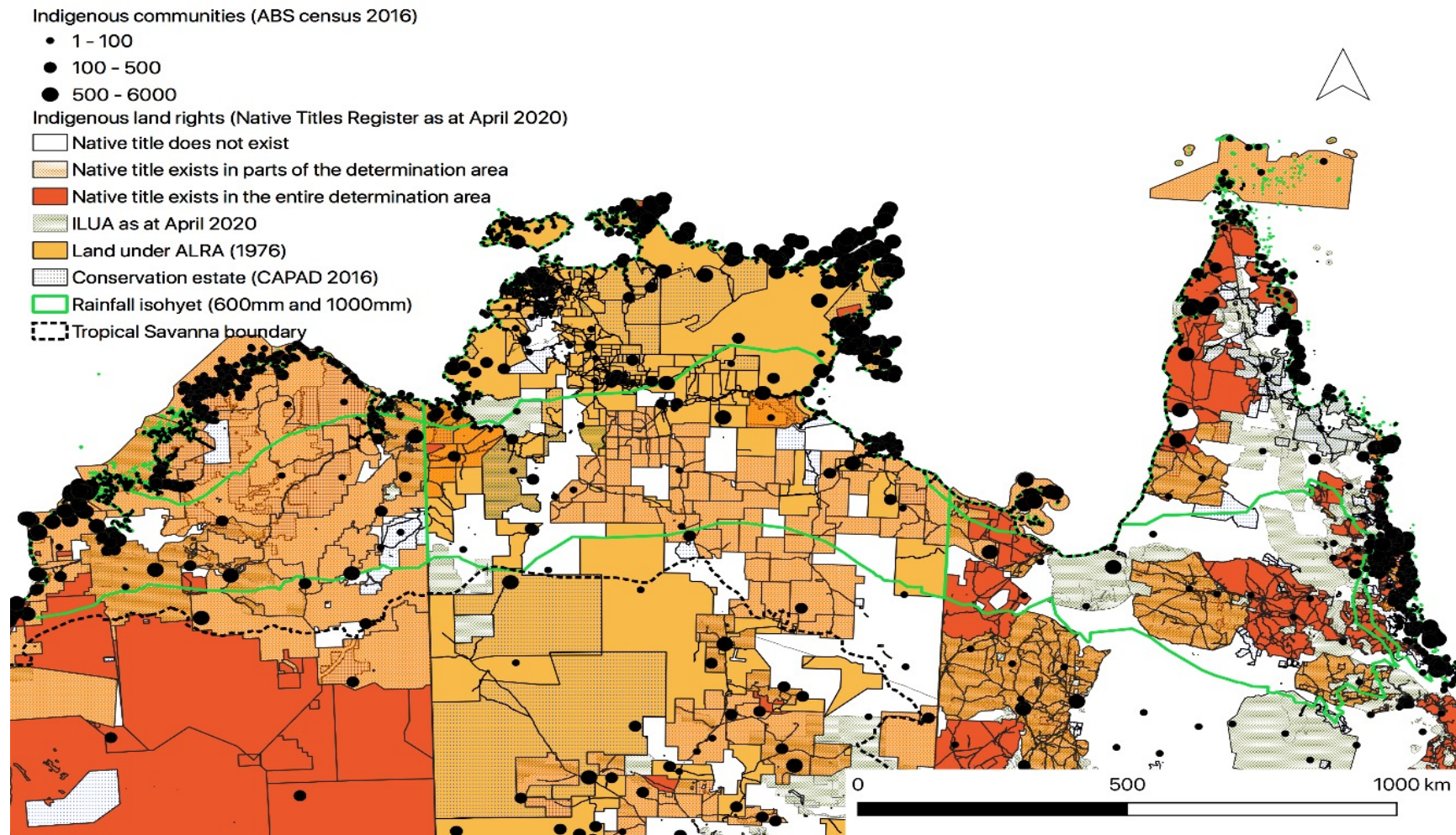


# GHG emissions and Climate change





# Indigenous land rights and Distribution of Indigenous communities across Northern Australia



## Savanna Burning Projects:

76 projects covering 29 million ha, abating 7m tonnes of GHG in total since 2012

27 projects on Indigenous land (18m ha), abating 5m tonnes of GHG

### Legend

States

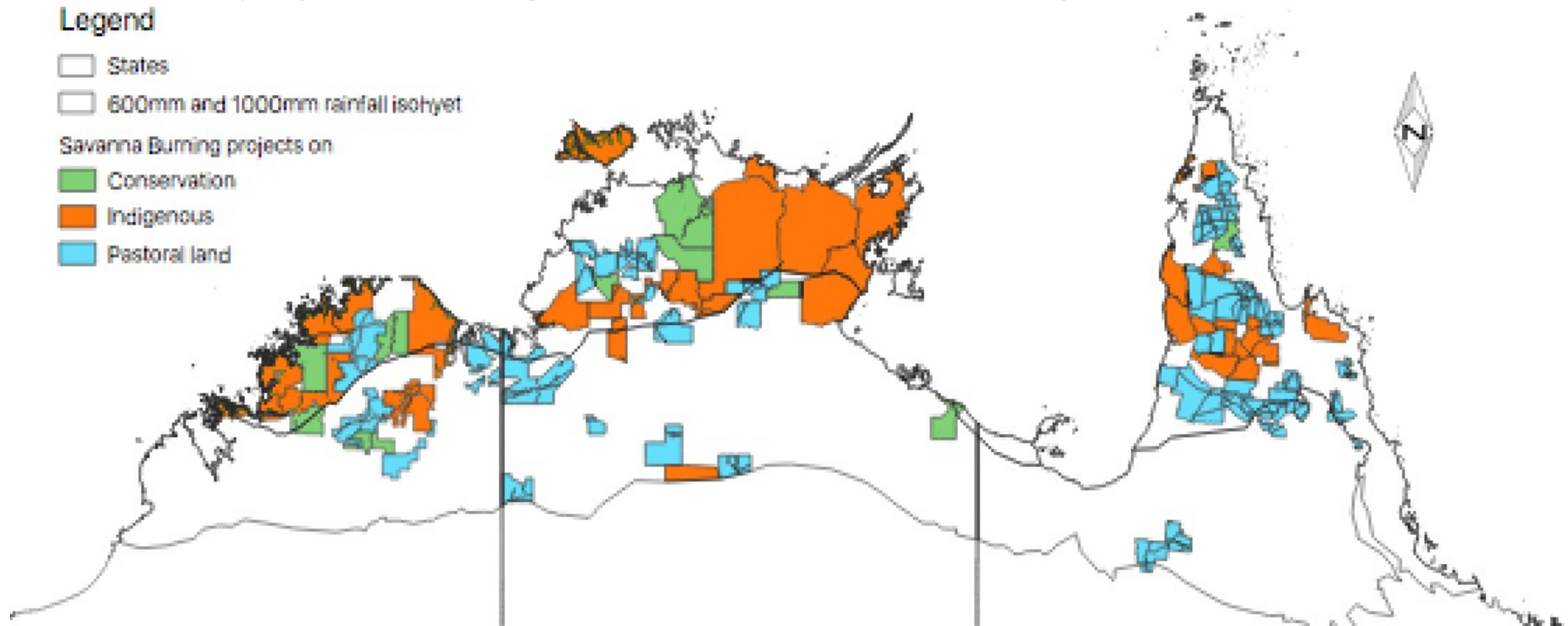
600mm and 1000mm rainfall isohyet

Savanna Burning projects on

Conservation

Indigenous

Pastoral land





## Our future efforts: Expanding C to ES economies



### Current situation in remote northern Australia:

Frequent bushfires, cyclones and flood events causing damage to the socio-economic-ecological systems.

### Solutions to build resilient savanna landscapes and communities



Mitigating the risk fire by managing the country



Land/Fire management through Savanna fire management: **Developing Payments for Ecosystem Services/C economy**



Building culturally appropriate regional economies



Enhanced Peoples' well-being



Enhanced natural, cultural, social and built capitals



**Sustainable ecosystems, culturally-appropriate regional economies and enhanced community well-being**





## **Managing natural resources benefits all of us:**

- maintenance of ecological functions and processes
- diversity of flora and fauna
- good air, water and food services

### Cultural services

- educational opportunities to learn about nature
- recreational opportunities

### Well-being of all!!!





**THANKS**



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