

## A joint platform to manage natural disasters in remote locations

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North Australia is at risk from bushfires, cyclones, storms and floods. In 2016-17 the average cost of major natural hazards was \$11 billion for a region of ~ 1 million people. Emergency management resources are concentrated in the larger centres from Broome through Darwin to Townsville. Over 90% of people outside the larger population centres are Indigenous, and often at risk from natural disasters. In this research we found that remote communities were not involved in disaster management planning nor decision making, there are limited resources and little access to these resources. Here we propose a framework that integrates building disaster resilience, with the health, cultural and social needs of remote Indigenous communities, also of benefit to the natural environment.

Inter-connected Social and Natural landscapes with natural disasters impacting on social, economic, cultural and natural systems.

# Natural landscape and related biophysical processes

- Open forests and woodlands (and associated fauna) experience extensive bushfires almost annually
- Highly impacted by cyclones and storms
- Impacts on pastoral enterprises (major land use)
- Impacts on conservation area, Indigenous cultural and sacred sites
- Impacts on carbon enterprises operating under Savanna Burning methodologies

#### Management Interface

- . Recognition of Indigenous knowledge of social and natural landscapes
- Integration of that knowledge into buildingEM plans and services model
- 3. Building effective and respectful relationships among all parties
- 4. Proper consultations with the elders and rangers to form a community-based EM group
- 5. Involving community EM group in decision making processes
- 6. Training the locals/rangers to manage natural disasters
- 7. Institutions supporting locals for providing infrastructure, resources, training, etc., and
- 8. Offering part-time or full-time employment to retain the trained workforce for dealing with EM issues that impact the communities constantly almost throughout the year.

### Socio-cultural landscape

- Remote communities
  often experience wildfires,
  large storms, floods, and
  cyclones
- Disasters impact on local access to food, health services, livelihoods, and cultural and sacred sites in remote areas
- Disruption of cultural ceremonies and practices
- Impacts on biodiversity
- Impacts on land and water resources for the wider public
- Long-term threats to health and social networks

Collaborative EM policy planning and management

#### Organisational and Institutional systems

Organisations: NTPFES, NTFRS, NTES and Bushfire NT

- Coordination and cooperation among all the agencies at the local community scale
  - Effective and updated management strategies developed and implemented in participation with Indigenous communities
    - Active and incentivised engagement of locals in Emergency Management









