



bushfire&natural
HAZARDSCRC

NORTH AUSTRALIAN BUSHFIRE AND NATURAL HAZARD TRAINING

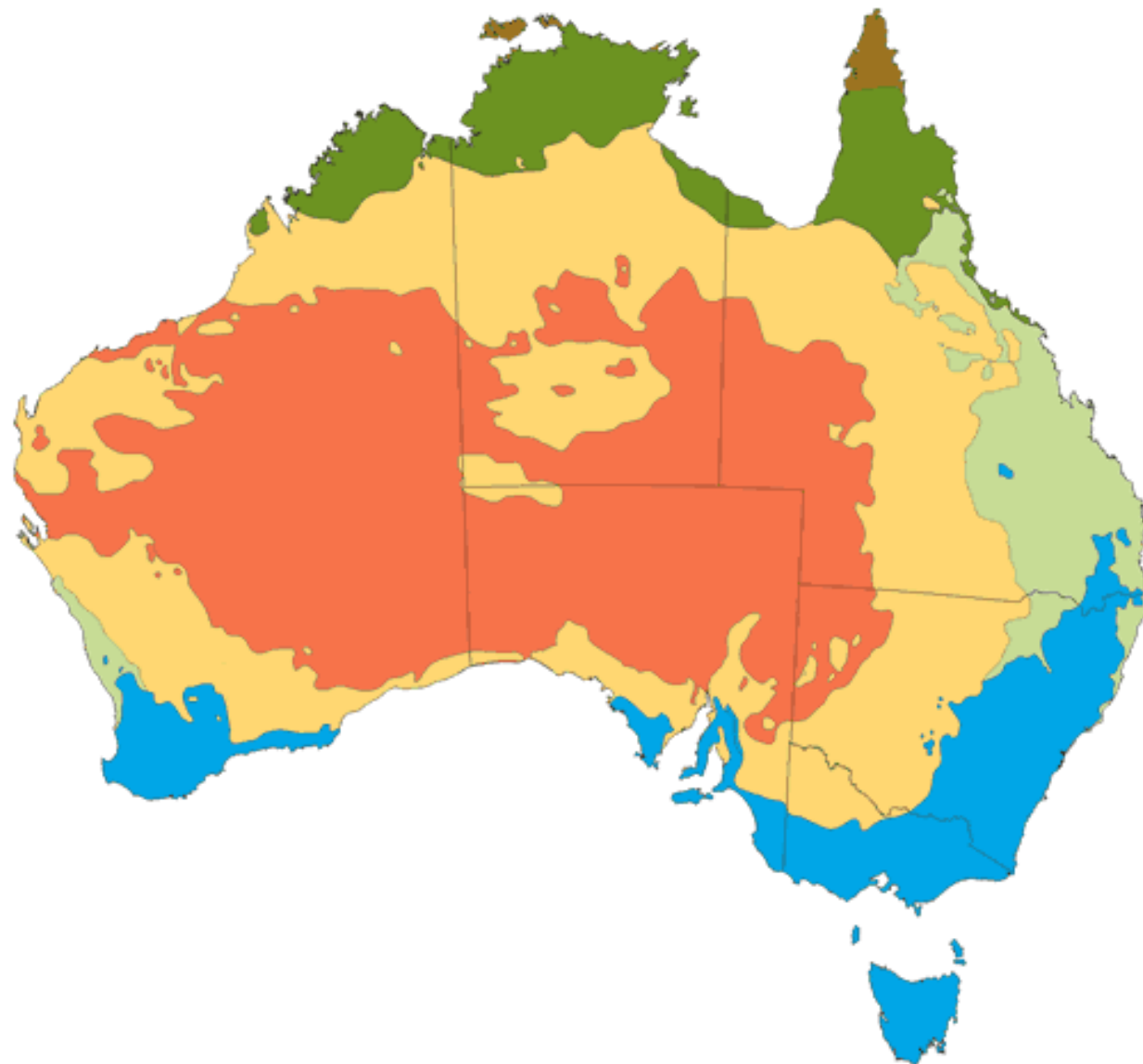
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An Australian Government Initiative

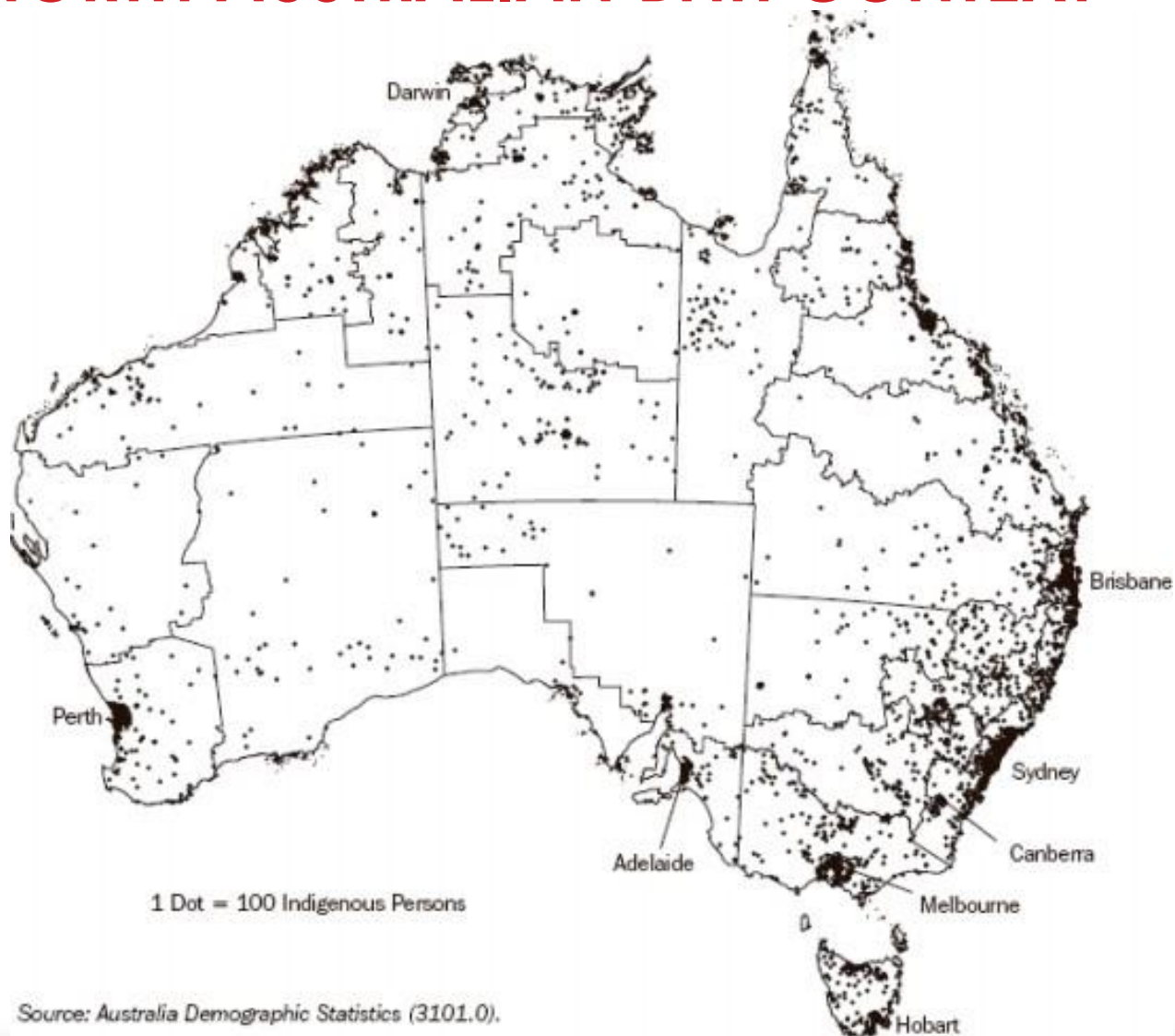




Major classification groups

- Equatorial
- Tropical
- Subtropical
- Desert
- Grassland
- Temperate

THE NORTH AUSTRALIAN BNH CONTEXT

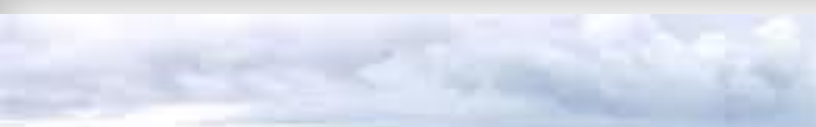


REMOTE NORTH AUSTRALIAN BNH CONTEXT 1

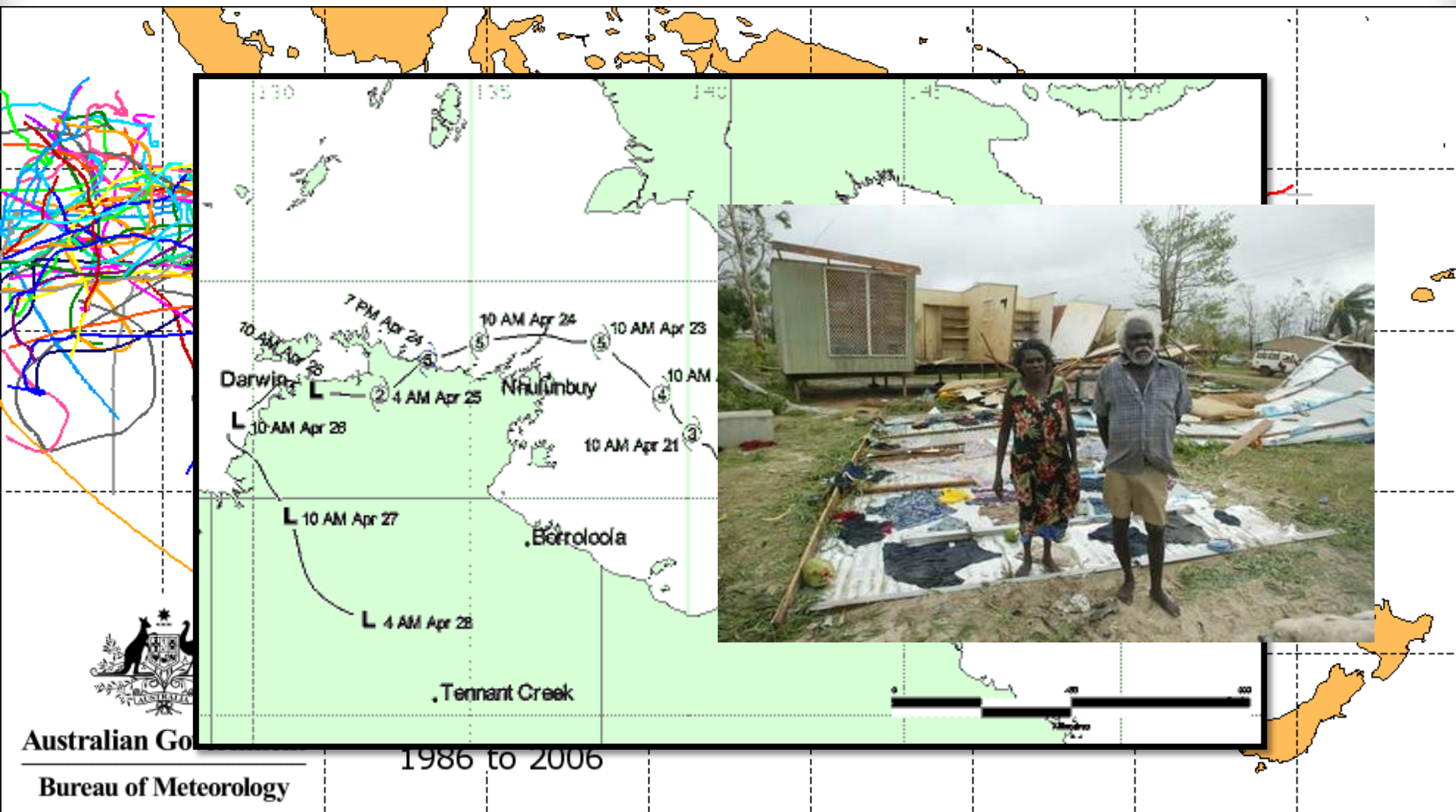
- Land managed (or not) as large parcels - landscapes
- Small population
- Large proportion of population remote communities mostly inhabited by indigenous Australians (% rises with remoteness)
- Poor infrastructure
- Poor communications
- Disconnect with emergency management paradigm
- Low levels of formal education and training
- Limited labour market experience

REMOTE NORTH AUSTRALIAN BNH CONTEXT 2

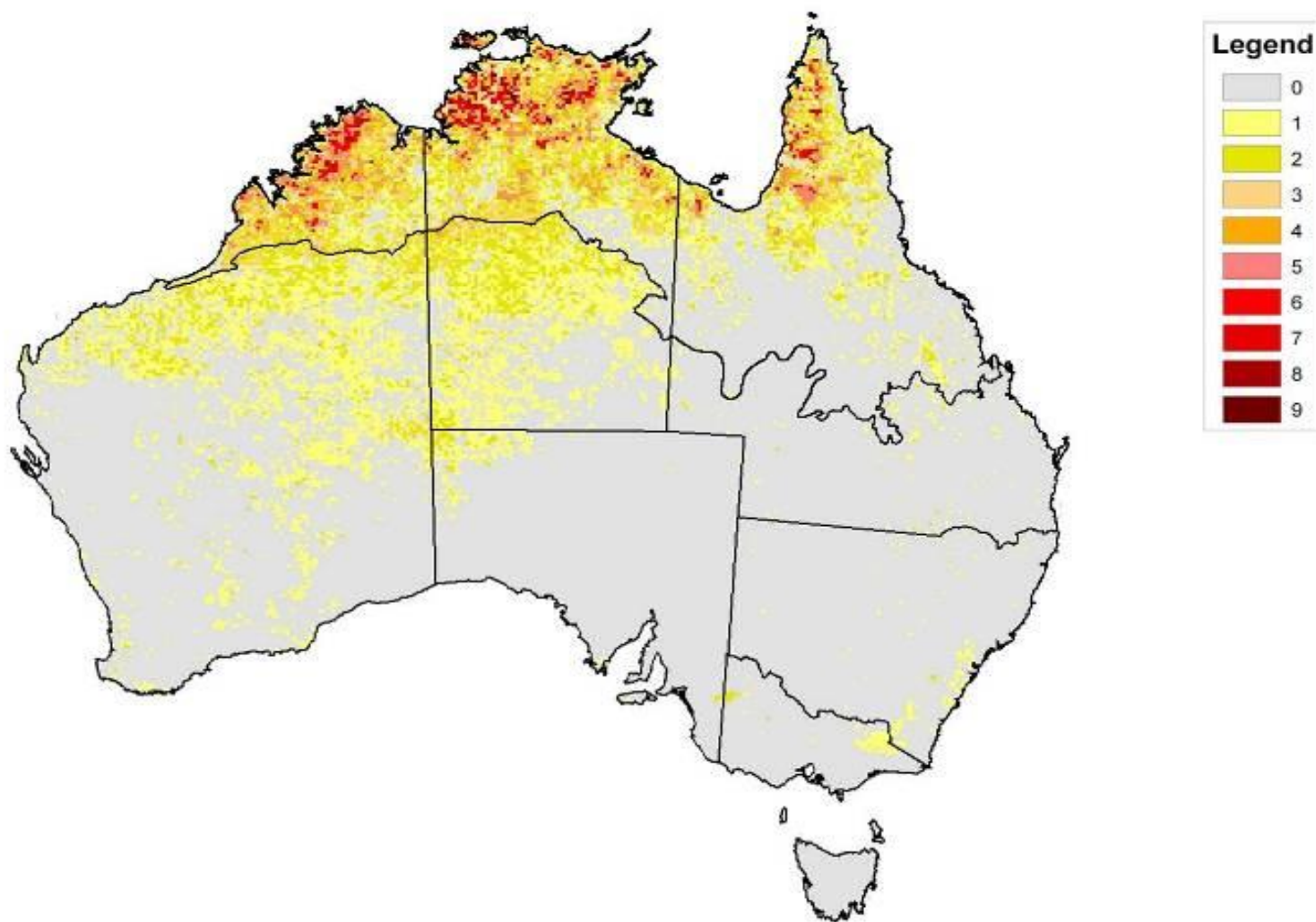
- + Emerging economic opportunities
- + Small population
- + Strong cultural connection with land and sea
- + High levels of traditional knowledge of land management
- + Growing acceptance of value of traditional land management in non-indigenous sectors (esp. fire management)



NOT 100 SINGLE'S PARTY @ BEACHFRONT TONIGHT!







WHY NEW TRAINING?

- Current training contains much that is not relevant to north Australia
- Current training omits much that is necessary for northern Australia
 - [Constant complaints to this effect]
- National Strategy for disaster resilience
 - National Equity
- Support emerging economic opportunities
- ‘Bottom-up’ development of BNH resilience
- Emerging understandings from new research

WHAT STAKEHOLDERS WANT

- Focus on safety
- Emphasis on applied skills & knowledge
- Delivery needs to be field based
- “kabardibimbukan” - apprenticeship
- Training for ‘here’
- Training for ‘us’

WHAT STAKEHOLDERS WANT

January February	March April	May	June July August	September October	November December
Gudjelk	Banggerreng	Yegge	Wurrgeng	Gurrung	Gunnemeleng
Main part of wet rains	Last rains	Early dry cold time	Middle dry	Early build- up	The build-up
	Drying out		Eucalypt flowering	Hot and sticky	First rains
			Burning time		



PHASE 1 – FOCUS ON FIRE

ABORIGINAL USE OF FIRE

Fire continues to be important in the life and culture of Aboriginal people today.

Aboriginal people still use fire -

- to cook
- to hunt (eg kangaroo fire drives, collect honey)
- to clear walking tracks
- to clean domestic spaces
- for ceremony
- for signalling
- for warmth
- to encourage bushtucker and medicine plants to grow
- to protect sacred sites
- protect jungle
- to keep the dreaming and the country alive

Phase 1 – Focus on Fire

Pastoral /agricultural use of fire

Many pastoralists use fire to manage their land.

- to control woody weeds and fuel loads,
- to create fire breaks
- improve pasture
- control stock
- to fight fire
 - Reduce wildfires which:
 - damage infrastructure such as fences, bore pumps & irrigation, yards
 - burn valuable feed
 - burn livestock
 - sometimes promote the growth of woody shrubs.

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 CH_4
 N_2O

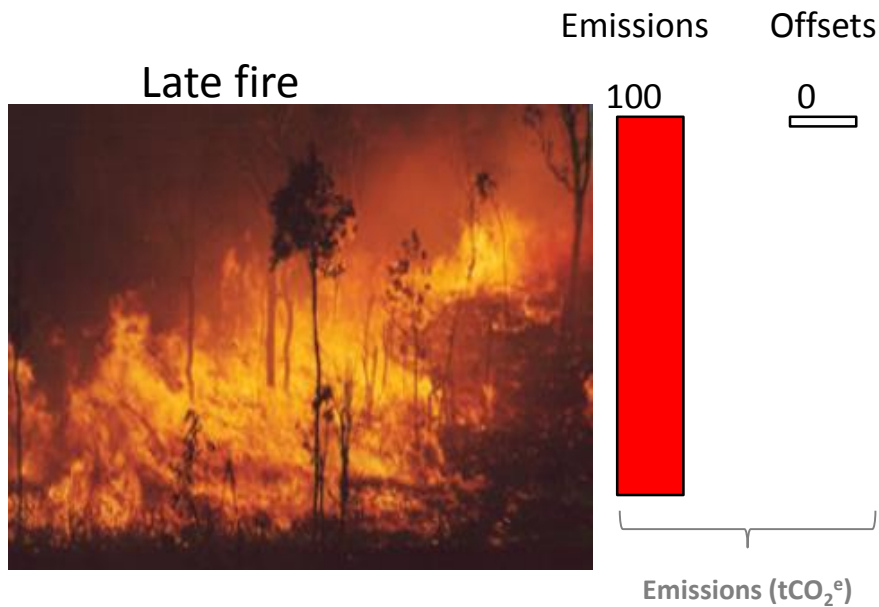
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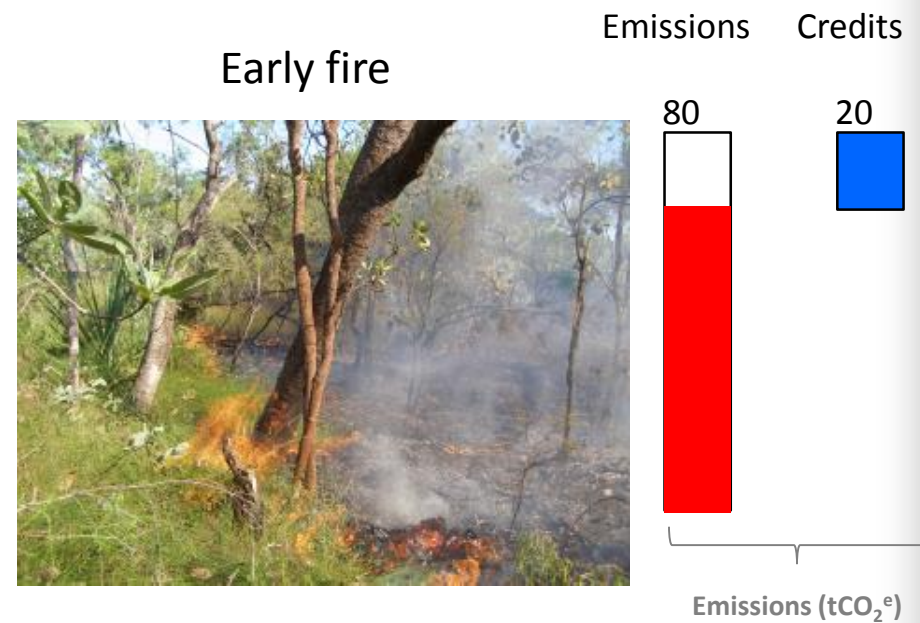


**...FIRES OF DIFFERING INTENSITY RELEASE
DIFFERENT AMOUNTS OF GREENHOUSE GAS...**

Without abatement activity - baseline



With abatement activity - CFI project



TAILORING TRAINING

- Workshops
- Interviews with individuals
- Interviews with groups
- Participants from all three jurisdictions
BNH Agencies, Aboriginal organisations,
pastoral and horticultural producers

OVER-ARCHING OBJECTIVE

“Training that supports north Australian needs and world view”

- Chosen fire regimes
- Emergency management approaches

COURSE DEVELOPMENT I

Identified skill sets

Develop curriculum framing documents

curricula

delivery materials

...mapped to existing courses

New training units to fill 'gaps'

Start with 'philosophy' and raison d'être as
stated previously

Contextualised for local circumstances...

SKILL SETS

Skill sets.

Mapped for: Assistant /Beginner
Practitioner
Supervisor
Manager

Initial Focus on Cert III (Supervisor)

SKILL SETS

Themes	Roles / Responsibilities			
	Beginner / Assistant	Practitioner	Supervisor	Senior Practitioner / Manager
Fire	Basic fire behaviour	Savanna fire and ecology** Northern Australian climate, weather and fire interactions Respond to wildfire	Landscape Fire Suppress wildfire*	Implement fire management in social and political context
Prescribed Burning	Assist with Prescribed burning*	Conduct Prescribed Burning* Introduction to Traditional burning (principles)	Advanced Traditional Burning (operational knowledge) Fire management for fire regime control (pastoral, U/R interface) Develop prescribed burning plans	Plan and implement a savanna burning project
WHS	Work Safely* Introduction to Situational Awareness Participate in OHS Processes* Introduction to WHS law and policy	Prevent Injury* Advance situational awareness and dynamic risk assessment Apply Standard Operating Procedures (SOPs)	Identify risk and apply risk management Supervise implementation of SOPs	Develop and implement SOPs Develop risk management systems* Implement continuous improvement plan
Teamwork & Leadership	Work in a team* Provide and receive feedback Cross cultural awareness	Tactical leadership Participate in a debrief Community engagement and cultural protocols	Frontline leadership Indigenous leadership Indigenous knowledge systems and remote Indigenous perspectives Conduct a debrief Decision making in information-poor situations	Executive leadership and governance Establish community engagement process Plan and implement a debrief program Mentor and champion Indigenous leaders
I.C.T.	Operate communication systems and equipment* Navigate in remote or trackless areas*	Advanced navigation (with/without GPS) Collect basic GPS data* Apply web-based fire management tools Use ICT to monitor program delivery	Manipulate and analyse data within GIS* Prepare reports using ICT data*	Monitor and report on fire management program Produce maps for fire management purposes*
Plant & Equipment	Assist with routine maintenance of machinery and equipment* Operate basic machinery and equipment*	Prepare, maintain and test response equipment Safety around aircraft Operate aerial incendiary equipment	Task and supervise operation of plant and equipment. Supervise air operations	Budget for and program deployment of : plant and equipment, aerial operations, wildfire suppression
Logistics & Planning	Operate in isolated and remote situations*	Develop operational work plans	Plan and supervise remote area operations Plan logistics for savanna burning and north Australian fire management projects	Implement adaptive management plan
Policy & procedure	Follow procedural requirements	Understand legislative basis for operations	Supervise the implementation of legislation and policy: HR and Fire Manage financial resources in an organisation*	Establish processes to ensure compliance with legislation and policy. Oversee the management of financial resources in an organisation*

Fire		Landscape Fire Suppress wildfire*
Prescribed Burning		Traditional fire management principles+ Advanced Traditional Burning (operationalise traditional knowledge - contextually localised) Fire management for fire regime control (Aboriginal, pastoral, U/R interface) Develop prescribed burning plans
WHS		Identify risk and apply risk management processes* Supervise implementation of SOPs
Teamwork & Leadership		Frontline leadership Indigenous leadership Indigenous knowledge systems and remote Indigenous perspectives Conduct a debrief Decision making in information-poor situations
I.C.T.		Manipulate and analyse data within GIS* Prepare reports using ICT data*
Plant & Equipment		Task and supervise operation of plant and equipment. Supervise air operations
Logistics & Planning		Plan and supervise remote area operations Plan logistics for savanna burning and north Australian fire management projects
Policy & procedure		Supervise the implementation of legislation and policy: HR and Fire Manage financial resources in an organisation*

KNOWLEDGE

- Landscape fire and fire regime management
- Savanna burning methodology
- Aboriginal traditional burning and fire management philosophy and techniques
- Understanding of the behaviour of fire in different habitats, weather, topography – including
- Effects of fire on areas and places of cultural significance
- Knowledge of aboriginal land tenure systems, ownership and land management protocols in the project area.
- Understanding of current stakeholder views on fire and incendiary use
- Effective operation in remote areas
- Maintenance of effective communication in dispersed work teams
- WHS law and risk management standard
- GIS analysis and reporting including advance NAFI features
- Logistics and deployment of resources including tracking of personnel and equipment
- Frontline leadership

DELIVERY

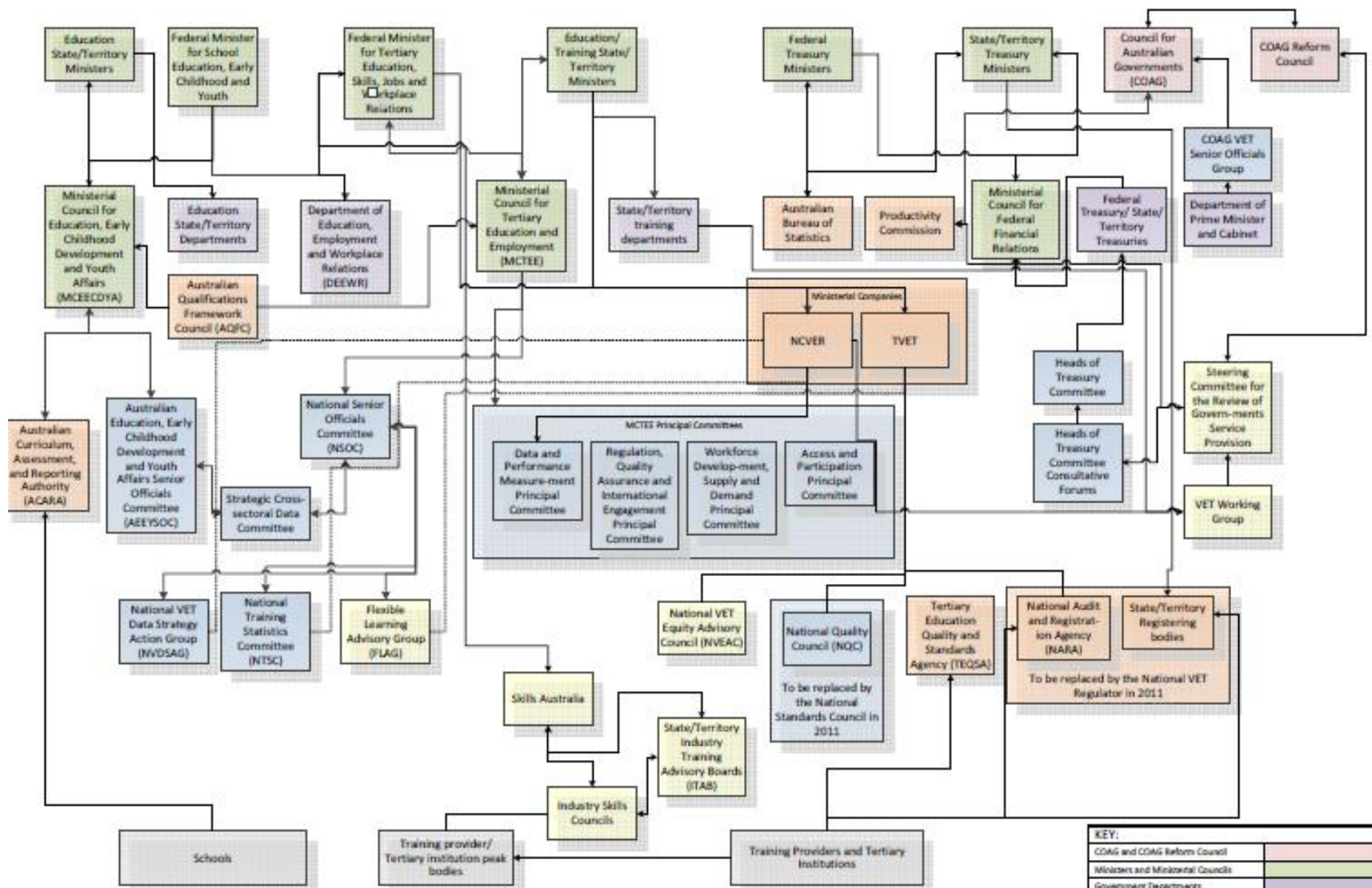
- Interactive
- Tailored and locally relevant
- Reliance on local expertise, use of elders & leaders
- Strong practical component
- 'On-ground' competence assessment
- Use researchers
- Iterative

EVALUATION

- Ongoing, starting at course development
- In field and through documentation
- Iterative: feedback incorporated throughout program to improve / adapt course material
- Institutional and local community perspectives

COORDINATION

- Adoption of info and resources from BNHCRC projects
- Higher Education Participation Partnerships Program
- Charles Darwin University Higher Education Courses including conservation and land management
- Charles Darwin University Masters in Emergency Management
- Batchelor Institute of Indigenous Tertiary Education
- Australian Centre for Indigenous Knowledges and Education
- National Remote Indigenous Communities Working Group



KEY:	
COAG and COAG Reform Council	
Ministers and Ministerial Councils	
Government Departments	
Committees of officials/experts	
Independent bodies, ministerial companies, statutory bodies, registering agencies	
Advisory bodies	
Schools/providers and their peak bodies	



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THANK YOU

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