NORTH AUSTRALIAN BUSHFIRE AND NATURAL HAZARD TRAINING

Steve Sutton
Darwin Centre for Bushfire Research,
Research Institute for the Environment & Livelihoods
Charles Darwin University, Northern Territory
THE NORTH AUSTRALIAN BNH CONTEXT

Source: Australia Demographic Statistics (3101.0).

1 Dot = 100 Indigenous Persons
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

+ 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)
WHY I STUCK A CRACKER UP MY CLACKER
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

- Reflect north Australian 'mind set'
  - Fire is not a 'disaster we need to learn to live with' – it's a tool we use all year round to achieve our objectives'
  - Leave the land as you found it
- CF Bill Gammage 2012
- Need to include local knowledge
- Need for overarching objectives

### Native Terms and Weather Phases

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<tr>
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<th>January/February</th>
<th>March/April</th>
<th>May</th>
<th>June/July/August</th>
<th>September/October</th>
<th>November/December</th>
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<tr>
<td>Gudjelk</td>
<td>Main part of wet rains</td>
<td>Last rains</td>
<td>Early dry cold time</td>
<td>Middle dry</td>
<td>Early build-up</td>
<td>The build-up</td>
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<td>Banggerreng</td>
<td>Last rains</td>
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<td>Early build-up</td>
<td>Hot and sticky</td>
<td>First rains</td>
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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.
...FIRES OF DIFFERING INTENSITY RELEASE DIFFERENT AMOUNTS OF GREENHOUSE GAS...
Without abatement activity  
- baseline

Emissions (tCO₂e)

Late fire

100 0

Emissions  Offsets

With abatement activity  
- CFI project

Emissions (tCO₂e)  Credits

Early fire

80 20

Emissions  Credits
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’etre 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

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

Steve Sutton
Darwin Centre for Bushfire Research,
Research Institute for the Environment & Livelihoods
Charles Darwin University, Northern Territory