



Report on the National Indigenous Fire Knowledge and Fire Management Forum

Building Protocols from Practical Experiences
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Cover image: Senior Tiwi Land Ranger, Willie Rioli.

Credit: Barbara McKaige, CSIRO.

Introduction

This report is part of the National Environmental Science Program's Northern Australia Environmental Resources Hub project designed to identify lessons learned from the incorporation of Top End and wider national Indigenous fire knowledge into fire management. This research will inform the incorporation of Indigenous knowledge in fire management and carbon abatement planning nationally. In meeting this goal, the project aims to:

- Document the successes and challenges associated with the different approaches used to share Indigenous Knowledge (IK) with western science, and to translate IK and historical purposes of Indigenous fire into contemporary fire management activities;
- Report on different perspectives, experiences and lessons learned from the incorporation and translation of IK into fire management; and
- Identify the institutional, social, cultural and other factors that enable or constrain the incorporation of IK into fire management goals and activities.

The results are intended to summarise key existing lessons and inform protocols that can be used to guide the incorporation of IK in fire management and carbon abatement programs across Australia.



Key issues discussed at the Fire Forum

Understanding fire knowledge

- What types of knowledge are used to manage fire?
- What are some key aspects of Indigenous fire knowledge used in different fire management activities today (e.g. fire for carbon, biodiversity, community livelihoods, asset protection)?
- What challenges and opportunities exist for using Indigenous fire knowledge to guide contemporary fire partnerships and programs?



Building effective fire programs and partnerships

- What are the main goals of fire programs and fire partnerships?
- How Indigenous people are involved and what role does Indigenous knowledge play in programs and partnerships?
- What opportunities and successes are there in using Indigenous fire knowledge to guide contemporary fire partnerships and programs?
- What additional value from Indigenous participation in fire management is created? What innovations can be generated?
- What challenges and risks exist for using Indigenous fire knowledge to guide contemporary fire partnerships and programs?
- Do you think the ways in which Indigenous fire knowledge is used to guide fire programs and partnerships should be monitored or evaluated? If so, are there any monitoring and evaluation tools to share?



Key messages

- **Indigenous fire knowledge** includes how fire can be used to manage country, to work with Indigenous Elders, and also knowledge needed to deliver successful Indigenous enterprises.
- **Indigenous fire knowledge** can include partnering with bodies including (Federal, state and local) government, corporate organisations, environmental non-government organisations, neighbours and neighbouring Indigenous groups.
- **Indigenous fire knowledge, management activities and partnerships are diverse and exist across Australia.**
- **Multiple (social, cultural, economic, environmental) benefits are delivered** from good (effective and appropriate) Indigenous fire management activities and partnerships.
- **Recognition of Indigenous fire knowledge is key** to successful fire management programs and partnerships.
- **Indigenous fire knowledge** can deliver health and education outcomes.
- **Indigenous people across Australia need to be resourced and supported** to learn from each other, share knowledge and build sustainable fire management activities and enterprises. Sharing knowledge is best done through a mix of 'face-to-face' forums, a national Indigenous fire network and use of social media.
- **Co-research** with Indigenous groups engaged in Indigenous fire management activities **is supported provided it empowers Indigenous knowledge, law and people.**
- **Key areas for further research** on Indigenous fire knowledge and management should focus on multiple benefits delivered from Indigenous fire management and enterprises, increasing non-Indigenous peoples' (including scientists) awareness about Indigenous fire knowledge and management systems, and the development of sustainable on-country fire management enterprises (e.g. through carbon markets).
- **Co-research** can be done by western scientists and institutions, and also by Indigenous researchers and Indigenous research institutions.



Understanding fire knowledge

Fire is of huge cultural and practical significance to Indigenous people. This means that training in fire begins early and continues throughout people's lives. Walking the country and seeing fire used first hand are really important parts of this learning.

"When I was born my cheeks my parents warmed my face with fire and taught me important lessons to guide my life... I learned fire knowledge from my parents as a child ... when I was older I had ceremony with fire, as I get older I learn more knowledge about fire ... it is important that I can now take out my grandson to teach him law ... including how to burn ... when I die the area sacred to my clan will not be burned until country is ready."

(Otto Champion, Gurruwilling Rangers)



Gurruwilling Ranger, Otto Champion, describing the cycle of life and fire to his working group.

School holidays are a great time to take the kids out. Share knowledge of how to burn right by walking the country. It is really important to take the girls out, so they can learn from Nanna's and Mum's.

(Workshop small group point)

"Songlines are connected with fire also. Everything is connected. Fire is connected to water, songlines, country, and language, all of it."

(Workshop small group point)

“Fire walks were a natural thing in the past, nowadays we are fitting all those things in our work periods. [Fire walks] give me time to consider the beginning of life, through ceremonies, how it came together with neighbouring groups. I walk with my country-men and women... Pick up by sharing with friend, participating in walks all that. It is really sad, that there is no more old people living with us... We bring young people, teach knowledge to the kids... get out of the community, out in the bush. They can hear the tunes of the wild things birds, animals. People on country can feel the spirits, can see the birds fly around.”

(Dean Yibarbuk, Warddeken Land Management)



Indigenous knowledge of fire is diverse and comes from different places and experiences. This includes experiences with other people and experience of the country and how it responds.

“Women’s fire knowledge is very different to men’s fire knowledge.... it helps country and community in different ways.”

(Pansy Nulgit, Wilinggin)

“We learn about fire from fire itself, and from the country. Where and when it will burn, where it will not.”

(Fred Hunter Kakadu ranger)

“Down at Oriners, blue tongue lizard and wallabies came back when we burned properly. The native animals come back. A lot of us know when one of our family pass away, we send the spirit back to a big waterhole there. You got to remember that, you don’t just burn, our spirits are there.”

(John Clark, Kowanyama)

Indigenous people have also learned about fire in new contexts, such as culture camps, schools and training courses.

“When I went to school we never spoke about fire. We just did it naturally through our elders, burn the country, watching our fathers and grandfathers. Now with our Tiwi way we’ve come back, we’ve started up a Ranger group, with our partnerships CSIRO, Melbourne Uni, it’s been fantastic, you can see the changes in our kids, we have the Tiwi College for our kids, we concentrate on 14 year olds, going out doing burns, we’re doing fire roadshows in the communities, working with CSIRO.”

(Willie Rioli, Tiwi Land Rangers)



“It is important to hold culture camps to share the stories and teach the kids.”

(Workshop small group point)

“Training is important to prevent injuries, and for new knowledge – satellites, weather forecasts, gel torches.”

(Workshop small group point)

There are barriers to people sharing and using their fire knowledge. This also limits the practice of fire knowledge.

“The old people were shot at. They were badly hurt by that. ‘You shot us out of here, so we are not going to give you the knowledge’. It was happening in the 1900s, not so long ago. We find skulls with bullet holes. Really closing the gap requires knowing and respecting the community protocols.”

(John Clark, Kowanyama)

“One of the things we struggle with is tenure, pastoralists, farmers. Land council land isn’t big, you want to work for the whole landscape but stuck in these little parcels. A lot of people very scared of fire, quick to brand us and say that ‘they are going to cause devastation’. You have to have a few walks with a lot of people, get a relationship, build trust.”

(Michelle Hines, Central Tablelands Local Land Service)

“Top End fire managers have a different mandate. Central NSW has lots of restrictions, lots of protocols with legislation. One set of restrictions comes with the Rural Fire Service. There is a very different mandate there, we have to dot the ‘i’s and cross the ‘t’s. RFS admit they are good at putting them out but don’t know a lot about lighting them.”

(Larry Towney, Central Tablelands Local Land Service)

“People wanted to burn at night, the right time. RFS said they don’t work at night, so the people could not do it the right time as RFS had to be there.”

(Workshop group point)

Proper support to learn about country and to burn it in the right way are really important.

“We need to get something that will reframe our children’s education, that is what we are doing. Today it is about the hybrid economy, it is fantastic, we are making our own money. IPA project money needs to continue – country needs people, people need country.”

(Dean Yibarbuk, Warddeken Land Management)

A key part of supporting Indigenous fire knowledge is understanding the true nature of fire.

“Fire can be a threat but it is also a tool, for culture and for funding.”

(Workshop group point)

“Media reports about fire talk about destruction, devastation, fear. Aboriginal people talk about fire as health, revitalisation, regeneration.”

(Workshop small group point)

Indigenous fire knowledge is still growing and adapting as Indigenous people access new information, respond to local contexts and learn from practical experiences.

“Now rangers are role models, they have to pass on their knowledge [to children and younger people], show them how. They [children and younger people] need to be always watching and asking why, why, why?”

(Workshop small group point)

“When we went to the [Cape York] fire workshop we saw how fire was managed up there ... this gave us confidence to talk to our community and get the appropriate training ... so we now can do cool season burning in Tassie.”

(Andry Sculthorpe, Aboriginal Land Council of Tasmania)

“Every place is different. The local knowledge must be there. You cannot have a training course that tells everything, that kills off what people know, the creativity. What we do is not how the RFS and others do it. I said we use leaf blowers to put out the fire – they laughed at us but it works here in the north.”

(Jake Weigl, Warddeken Land Management).



Challenges and opportunities exist for using Indigenous fire knowledge to guide contemporary fire partnerships and programs

A range of social, environmental economic and cultural benefits associated with Indigenous people's efforts to share, build and apply fire knowledge to engage in landscape burning were identified.

"We all here about fire management, but we can use other projects. In our area we do songs, songlines are connected to fire. We ... go out on trips learning to sing, learning to dance, but also talking about fire. Fire is connected to everything our songs, our animals, our animals uungu, the water, rock art, when you keep your songs, fire is all connected, and language like wurung ... We can share ideas about what other places you can use and get those projects."
(Rona Charles, Willinggin)

"Our kids are watching what we do and wanting to be a ranger when they grow up."
(Workshop small group point)

Indigenous groups noted that a lot has been learned over the past decade of landscape burning activities for carbon markets and environmental management.

"Opportunities for native title holders have arisen from carbon markets, however there's been a lot of pressure from the WA Government in relation to native title holders generating an economic return on native title lands. ... There's also been a lot of scrutiny of the safety of our fire operations. This has made us really get our act together so now KLC has best practice fire operations policies and procedures. We host a regional calendar that includes each ranger groups burning schedule and permits so we can ensure fire is managed strategically across the region in accordance with State regulations."
(Ari Gorring, Kimberley Land Council)



Institutional barriers are key challenges facing Indigenous communities in their efforts to develop and sustain on-country fire enterprises. Government regulations, permits, political support were all mentioned as key issues that restrict Indigenous communities engaging in carbon markets, providing environmental services through fire management contacts.

Three key consequences were noted from restricted resources, regulations and legislation.

- 1) Indigenous fire managers struggle to adequately resource training, re-training, delivery and assessment efforts to ensure effective and safe fire management activities*
- 2) Indigenous fire managers are constrained to undertake adaptive fire management regimes that are sensitive to the local biophysical (e.g. wind) and social-cultural/legal (e.g. negotiating consent) conditions*
- 3) Indigenous fire managers find it difficult to trust fire management partners because they find that short funding cycles and fluctuating program support can limit achievement and success of long-term fire management partnerships*

“Aboriginal people are losing faith and trust in white bureaucracy. We don’t know how much knowledge the leaders have in our area, it seems that they are not willing to share it any more. A lot of people have come into our area, they research stuff and not even offer loaf of bread in return. People don’t trust anymore. Even me, working for an organisation like Local Land Services. We have some good staff in the Local Land Services, also ecology, the people we work with, the younger generation are very hungry for that type of knowledge.”

(Larry Towney, Central Tablelands Local Land Service)

There is great concern about the loss of Indigenous knowledge needed to manage fire. Restricted or lack of access to country and to burning, loss of interest in Indigenous landscape burning from younger generations, and serious health and social issues facing Indigenous communities around Australia were all identified as key issues facing efforts to build and sustain Indigenous fire knowledge and management

“We are burning country to bring country back to good health. But for the whole of Australia we are missing the health of the Aboriginal people to bring country back, we are missing that, the government needs to start looking at that ...”

(John Clark, Kowanyama)

Protocols for Indigenous fire management partners

Protocols were discussed to guide partnerships and efforts to support on-country Indigenous fire enterprises.

Key principles to guide protocols identified

- Indigenous fire knowledge is the intellectual property of Indigenous people.
- Supporting fire enterprises means supporting the best methods for learning fire knowledge and for passing that knowledge on. Other tools are needed to manage large areas, but walking the country together is the best way to learn about Indigenous fire knowledge.
- Every region is different. Fire partners need to be prepared for local diversity in Indigenous fire management knowledge, principles and techniques.
- The right people need to be informed about and involved in fire management – traditional owners need to be part of the fire management partnership, along with local fire managers and external partners.
- Fire partners need to understand Indigenous fire management priorities. This may mean burning at times and in places that are different from the times and places that fire partners would choose.
- Fire programs have social, cultural, health, and economic benefits for Indigenous people. These are important for partners to recognise, understand, and record.



Key protocols identified

To ensure fire activities are appropriate, legal, communicated and safe

- Traditional protocols to guide when and where to burn, e.g. weather, seasons.
- What to use when burning (walking, flying, quad-bikes etc.).
- Appropriate permits/legislation to carry out burns.

To ensure fire experts and practitioners are trained and safe

- Safety – Occupational Health & Safety (OHS) protocols.
- To stock, and stocktake, field equipment.

To ensure country is burned so that important species and sites are protected

- Data collection, record keeping protocols for key species and places.
- Monitoring and evaluation protocols to Traditional Owners, elders after the fire and fire season.
- Outsiders need to understand protocols that guide who needs to be involved in fire management decisions.

For consultation and communication before and after burns

- Consultation with different clan groups about where and when to burn/sorry business.
- Media protocols – particularly good stories to highlight successful activities and efforts. Sometimes there can be a tension with land council media protocols and the time needed to satisfy these protocols (need to get good stories out, needs to get them out fast and the land council sometimes can't move quickly enough for the news cycle).
- For outsiders – e.g. to monitor/check other fire users (e.g. access to Indigenous land permits).

For outsiders, such as Government and scientists

- Establish relationships early with Traditional Owners.
- Consult properly, gain informed consent and genuine collaboration.
- Recognise rights and aspirations of Indigenous people as the primary guide to develop other activities around.
- Need protection of intellectual property and cultural practices.
- Protocol can provide continuity and assist new people/projects.
- Builds foundation, could be a tool for multiple needs, shared understanding.
- Efficiency, don't re-invent the wheel or repeat mistakes.



Some closing comments from Fire Forum participants

“Really impressed with knowledge and enthusiasm in the room. Indigenous fire knowledge is paramount going forward, to manage that land in the future.”

(Rhys Swain, Kimberley Land Council)



Ari Goring and Rhys Swain from the Kimberley Land Council

“... it’s a good thing we all meet up in a big session like this and hear all the different things that happen around rest of Australia.”

(Fred Hunter, Kakadu)

“Our fire projects are just starting off, for me just so valuable to hear people with experience and knowledge talking about how they do things. It’s so important for how we are going to build our fire projects.”

(Richard Ingram, Cradle Coast Authority, Tasmania)

“Forum like this you learn a lot. Is good to get together with the Rangers now here, would be better with the elders as well, get the experience. Need more girls too, more female rangers, not only men have knowledge of fire, so have the ladies.”

(John Clarke, Kowanyama)

“As Indigenous people we are walking this real line between culture and governance and it’s good to see that everyone is on the same page, walking in the same direction, on one side you have all the traditional ways, on the other side all the compliance mechanisms they don’t match and this is a good way forward to getting that on the table.”

(Debbie Symonds, Olkola)

“Really enjoyed, specially hearing about what is happening in other parts of the country. The recognition of Indigenous people in terms of fire management in this region, in the context of Australia, is really important.”

(Anthony Kerr, Territory NRM)

“Forums like this, sharing ideas between our own people, working out ways happening round the country, good to see southern people coming in sharing information, we have come a long way with our traditional practices, a key element of how country is being looked after, it is a tool that should still be carried on, even though parks put knowledge for burning country, we over-ride it because fire is the only tool for making health of our land, our environment, our people. Great to meet, good to catch up again with you guys, we are going forward.”

(Dean Yibarbuk, Warddeken Land Management)



“Found this forum very interesting and education about burning on country. We also say, we Indigenous people, if you don’t look after the country the country won’t look after you.”

(Brendan Ross, Olkola)

“I’ve been travelling a long way to get here, and last few days I learnt a lot. I take it really seriously, I will take it back, I will talk to my country men. I have a lots of hats, sometimes I work for other mob, we always have partners, without partners you can’t get anywhere without building good relationships.”

(Otto Campion, Gurruwilling Rangers)

“Big thing out of this forum I would like to see is getting the importance of supporting Traditional Owners to do fire on country and communicating this to government, that’s a big thing. Good to network with everybody from different places.”

(Jake Weigl, Warddeken Land Management)



“Feels good ... the sharing of knowledge in here, of information, and to hear the struggle that we face, we sometimes [struggle with] our own mob, but especially with the government.”

(Rona Charles, Wilinggin)

“If they do more research, needs to be in health, last year we had 22 deaths, 2 every month, health is a big thing for our people, next thing on the research list it needs to be health so it can come back.”

(John Clarke, Kowanyama)



CSIRO Project leader Cathy Robinson (left) with fellow CSIRO team members, Ro Hill and Marcus Barber.



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