FIRESTICKS ALLIANCE INDIGENOUS CORPORATION

Caring for Country through connecting to culture and tradition

Wadawurrung Country, Victorian Womens' Firesticks (wiyn kalkkalk)
Image: TJ Garvie Photography.

Quick facts

Project type:
Building community practice, nurturing Country

Location:
Australia wide

Aboriginal language landscape group:
National

Project scale:
Landscape scale

GOVERNMENT
ARCHITECT
NEW SOUTH WALES

NSW GOVERNMENT

The Firesticks Alliance Indigenous Corporation (Firesticks) is an Indigenous-led network that works with Indigenous and non-Indigenous people to re-invigorate the use of cultural burning, protecting Country and improving ecosystem health by applying traditional knowledge to land management practices.

Key outcomes

Healthy Country
Knowledge of using fire as a management tool has evolved over thousands of years. Cultural burning warms the ground, regenerating landscapes from deep-time seed banks stored within the soil. Cultural fire is low and cool, burning only grasses and protecting the tree canopy, which is sacred.

Healthy community
Firesticks supports cultural learning pathways which empower communities to practise cultural management. A community of practice through knowledge sharing is supported, working with online platforms such as Mulong and the Living Knowledge Place.

Protecting Aboriginal cultural heritage
Cultural fire credits have been developed through a collaboration between the Aboriginal Carbon Foundation and the Firesticks Alliance. These are available for purchase, providing pathways for First Nations' led and sustainably financed cultural burning practices.

Spatial implications / tips for designers

Acknowledge cultural burning as a living cultural practice and a way for community to return and care for Country.

Observe how Country shaped by cultural burning has a range of spatial qualities responsive to topography and climatic conditions, including through removing invasive plants and helping to return native flora and fauna to Country.

Understand how cultural burning can organise the landscape, to locate forested habitat and open space, allowing for wildlife and people to move through Country.

Awabakal Country, Biraban cultural burn
Image: Alex Brunton.

Firesticks supports cultural learning pathways that enable and empower communities to work collectively towards healthy, resilient and culturally connected landscapes, providing Indigenous leadership, advocacy and action to protect Country. Firesticks encourages people to look after Country, share their experiences and collectively explore ways to achieve their goals.

Firesticks is governed by traditional mechanisms. It is guided by Elders and knowledge-holders, with process and implementation based on cultural ideologies. Firesticks acknowledges Country and Traditional Custodians and serves under their authority.

One of Firesticks' particular objectives is to reinstate fire as the primary landscape management tool in Australia, using proven methods developed over thousands of years of continual practice and evolution. The practice of cultural burning considers natural/environmental, spiritual, economic, educational and social domains while encompassing values that are both similar and different from mainstream environmental management.

Building a community of practice through sharing knowledge

Firesticks supports a community practice of building and sharing knowledge and resources related to the use of fire to enhance ecosystem health. Knowledge is shared through mentoring, networking, training, implementing on-ground works and conducting scientific monitoring to establish a greater understanding of the ecological impact of cultural burning practices.

The alliance works with online platforms such as Mulong and the Living Knowledge Place to share knowledge from community and for community, and to showcase culture, Country and the people working to care for Country. This is achieved by sharing fire stories and communicating positively about the work that is undertaken and its value to people and place.

Firesticks programs give people the opportunity to build on their current knowledge of Country and to explore ways of making use of new technologies and understandings to support cultural identity and practice.

Using traditional knowledge systems

Aboriginal people have coexisted with the environment for tens of thousands of years. Traditional knowledge systems have developed over time and continue to be used to pass on skills, values and knowledge about protecting and managing Country to support biodiversity and manage resources. Aboriginal people use this traditional ecological knowledge (TEK) combined with cultural protocols to inform how they interact with Country, including land management practices. The use of cultural burning is one component of Aboriginal land management.

The 2019–20 bushfire season was the most severe ever recorded in NSW[1], and as the climate warms and dries, such fire patterns are likely to become more frequent. Firesticks factors current and changing climate risks into short, medium and long-term decision-making using Aboriginal knowledge systems including TEK, cultural systems, cultural governance and traditional learning mechanisms. This approach combines TEK innovation with current-day approaches to manage climate risks.

Using fire to manage Country

The use of fire as a management tool by Aboriginal people has shaped Australia's landscape for tens of thousands of years. Fire is used to shape the location and extent of ecosystems, and also to maintain these systems. Many examples of this are presented in Steffensen (2020)[2] and Bradstock et al. (2012)[3].

Australia's flora and fauna have co-evolved with the use of fire by Aboriginal people, with many species evolving adaptations in response to historical burn regimes. The burn regime refers to the frequency (or burn interval), intensity (how hot the fire burns), the seasonality (time of the year) and patchiness of fire in an area.

Due to the dynamic and variable nature of fire across the landscape, many Australian plant species have evolved biological features that allow individual plants to survive fire. These features include thick bark or protected reproductive structures (commonly known as epicormic growth) deep within the trunk, limbs or base[4,5]. Some Australian plants have even evolved a dependence on fire for reproduction, requiring fire or smoke to stimulate flowering, or the release or germination of seeds[6,7]. Some longer-lived resprouting species also need fire to replenish growth[8].

Understanding the impacts of altered fire regimes

Many animal species are susceptible to being killed by fire, either directly or through the loss of habitat and food resources. High-frequency fire affects many threatened birds and mammals in NSW due to its capacity to disrupt lifecycle processes and damage vegetation, and is listed as a key threatening process[9] under the NSW *Biodiversity Conservation Act 2016*. Some animals are able to avoid fire through the ability to flee, or by taking cover underground or beneath structures such as bark, large logs, and tree hollows[10,11]. However, hot, high-intensity fires can ultimately destroy these habitat features[12]. Many animal (and plant) species maintain their populations by recolonising burnt areas from local unburnt refugia, but these may be limited in highly modified landscapes[13].

While fire is a natural part of the Australian landscape, and much of the flora of NSW depends on fire to assist in its reproduction and growth, many vegetation communities are now under pressure from too-frequent burning and too much heat intensity. Altered fire regimes as a result of European settlement have caused death and added to the extinction crisis. Too much or too little fire, or fire of too high an intensity, have had a major detrimental impact on the integrity, structure and sustainability of most ecosystems and many threatened species[14].
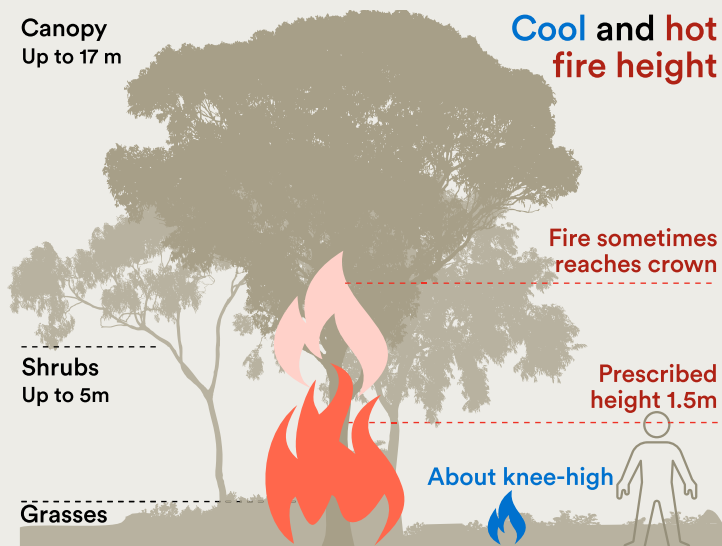
The removal of Aboriginal-led fire regimes and ongoing impacts of colonisation have impacted fire regimes across Australia[15]. There has been a marked increase in fire intensity in the past 200 years, with fire activity in more recent times decreased due to active suppression and landscape fragmentation[16,17].

Understanding different types of cultural burning

Cultural burning has multiple objectives centred around respecting and increasing the health of Country. These may include but are not limited to:
— spiritual objectives, health and wellbeing (healthy Country – healthy people)
— cultural and landscape resilience
— traditional practices and use
— intergenerational knowledge transfer
— ecological outcomes
— cultural species management.

These objectives are different to hazard reduction burning where the primary purpose is to reduce or manage vegetation fuel (leaf litter and bark biomass) that can carry a bushfire. Burning to manage biomass is usually undertaken on a large scale and has many variables that can go wrong, including those relating to time since the last burn, amounts of litter on the ground, flame height and landscape aspects. Large intense fires tend to burn soil and soil biota but can still protect Country. However, a cultural burn must consider and achieve important spiritual and cultural objectives. Whether a burn is considered a cultural burn, and how this is realised, is determined by Aboriginal people on Country.

Cultural burn
Image: Rachael Cavanagh.

Canopy
Up to 17 m

Cool and hot
fire height

Fire sometimes
reaches crown

Shrubs
Up to 5m

Prescribed
height 1.5m

About knee-high

Grasses

Cultural burning objectives, methods and implementation are also different to those of ecological burning. Ecological burning follows government frameworks and policies, whereas cultural burning reflects lore and cultural protocol[16]. Ecological burns are focused on outcomes for a specific ecosystem or species, compared to the various interrelationships which cultural burning considers. (For comparisons of drivers between different burn types see Standley (2019)[18] Table 2.1).

Cultural burning is cool and slow moving

A key feature of cultural burning is that it uses 'cool', slow-moving, low flames. The fire is controlled on a local scale and creates a mosaic of burnt and unburnt areas[19]. Over time, this creates vegetation patches of different ages, helping to maintain biodiversity across the broader landscape[13]. This technique leaves refugia areas for animals to move out of the path of fire and provides food and habitat immediately after a fire. It also allows cool soil and the ability to walk amongst the fire, creating a cultural experience space as well as allowing monitoring and caretaking of the fire.

Aboriginal fire practice of mosaic burning over varying time scales has increased species richness in some areas[20]. In some cases, Aboriginal small-scale mosaic burning may have allowed more fire-sensitive species and vegetation communities to persist in some areas that historically would have received greater intensity burns. For examples of this, see Evans and Russell-Smith (2020)[21].

Changing perceptions of land management

Aboriginal land management informed by TEK is increasingly being recognised by governments. Advocacy by cultural fire knowledge-holders, Aboriginal Elders including Dr George and Dr Musgrave (Kuku Thaypan Elders) and Indigenous-led organisations such as the Firesticks Alliance is changing the perception of fire and helping to publicise the continuation of cultural burning throughout Australia[18]. Burning as an Aboriginal land management technique occurs Australia-wide, with over 130 projects implementing fire management[22]. The many benefits of Aboriginal-led cultural burns have been well documented. In some cases, cultural burning is returning fire to Country where burns had not occurred since European settlement[23]. The extensive TEK held by

Aboriginal peoples, combined with cultural values and protocols, is being increasingly recognised and applied to current fire management practices in numerous areas across Australia[24].

Acknowledging a reciprocal relationship between people and Country

Cultural burning practice is premised on the understanding that a reciprocal arrangement exists between people and Country. This is often summarised in the statement 'healthy Country – healthy people'. That is, healthy people with knowledge, authority and capacity are required and have a responsibility to manage Country. In return, a healthy landscape is required to support the physical, mental and spiritual needs of the people who are the custodians.

Traditional cultural burnings have been practised by Aboriginal peoples for many thousands of years specifically to improve both the ecological performance of land and the health of people as well as all other living biota. Australia has a vegetation ecology that has evolved in response to fire, and can continue to evolve through reciprocal relationships with Country and the undertaking of cultural practice, including cool burning.

Firesticks aims to improve cultural health for Country by teaching and practising a holistic approach to land management and ecological regeneration, grounded in the belief that when you properly care for Country, Country will care for you. This holistic approach considers all aspects of Country (i.e. people, water, plants, animals) in a way that generates health equally for all these critical broader dimensions of Country.

Practitioners and training teach a relational mentality with Country through the concept of kinship, which further strengthens community members' connection to the land and all other species and services that Country provides. Through its teachings and work, Firesticks creates a reciprocal outcome of resilience along with health benefits for both Country and people.

Working in cultural fire improves Country with a holistic approach using traditional land management methodology, and by using traditional ecological knowledge (TEK) in the space. The application of cultural fire benefits Country, all aspects of Country, people, water, plants and animals. It's about having understanding and knowledge of reading Country … to protect ecosystems and landscapes with the right fire methodology by reading and understanding Country in broader landscape perspectives, using kinship connections to be able to implement what's needed.

—Rachael Cavanagh, Community Programs and Stakeholder Engagement Manager, Firesticks Alliance Indigenous Corporation

Natarsha Bell,
Truwana Country,
Womens Workshop
Image: Vica Bayley,
Aboriginal Land Council
of Tasmania.

Wonnarua Country,
North Rothbury
Cultural Burn
Image: Alex Brunton.

Taking on the role of custodian to create resilience

Compared to a human-centred, egocentric position, a Country-led or ecocentric position places humans as part of the dynamic system of ecological processes. For Aboriginal people this human positioning is as a custodian or steward, and the role is that of shared responsibilities in the functionality of the relationship. For many this is an inherited role, to reciprocate to Country a responsibility back to the ecological system and nature[25].

This can include understanding the historical fire regimes of an area, and how the response of flora and fauna can inform planning for cultural and ecological outcomes. Factoring climate change risks into decision-making, fostering adaptation mechanisms, and helping the vulnerable, including kin (other living species) is a necessary action towards environmental and human resilience[26].

Committing to 3 long-term goals

The aim of making a commitment to improving the health and wellbeing of Country is to help realise 3 long-term strategic goals:
— reduce the impacts of natural events such as wildfire, drought and flooding through sustainable land and water use practices
— value and respect Aboriginal cultural knowledge, with Aboriginal people co-leading design
— ensure Country is cared for appropriately and sensitive sites are protected by Aboriginal people having access to their homelands to continue their cultural practices.

Using air, heat and fuel

To put this into practice, Firesticks invests in people, communication pathways, education and on-ground land management work to foster a resilient social and ecological landscape. Firesticks is achieving this through the following processes:
— air – making space – building understanding and recognition; sharing stories and information; connecting communities with each other; driving change
— heat – facilitating action – delivering on-ground planning; training through workshops; managing Country by burning; revitalising Country and knowledge by building community networks and recording cultural knowledge
— fuel – reading Country – supporting learning with observation, mentoring and sharing of knowledge on Country.

Firesticks processes
Image: Firesticks Alliance
Indigenous Corporation
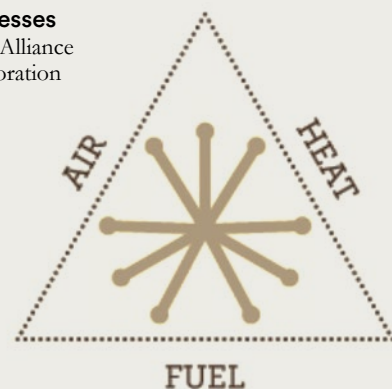
Healing landscapes and communities through a range of initiatives

Firesticks uses a range of initiatives to help people share their experiences and collectively explore ways to heal landscapes and communities:

Cultural fire credits – working with the Aboriginal Carbon Foundation to support Indigenous-led projects and provide pathways for implementing traditional land management practices to heal, protect and manage Country. At all stages, from governance through to market generation and verification, cultural fire credits are Aboriginal-owned. This ensures projects engage the wider community and deliver equitable benefits and outcomes for communities, corporations, agencies, organisations, educational and research institutions, and individuals.

National Indigenous fire workshops – evolving from the Awu-Alaya Elders Fire Management Project in Cape York in 2004, these on-Country workshops have been held annually since 2008 and have been developed over the years to strengthen culture and share the importance of recognising and reviving cultural fire regimes to care for Country. Participants gain an insight into Indigenous fire methodology and the cultural responsibility of looking after Country. As well as gaining knowledge, participants are immersed in Indigenous culture and practice. Masterclasses include cultural fire, Indigenous ethnobotany, weaving, toolmaking, dance, music, reading Country and monitoring. These greatly respected workshops have inspired communities all over Australia and brought people together to learn about Indigenous cultural fire and land management practice.

Nationally accredited training – supporting the maintenance and reinvigoration of cultural burning through providing training in holistic principles and Country-based methodologies. Working with partner educational institutions, Firesticks has developed a specific cultural burning training and education course that is nationally accredited and facilitates cultural learning pathways for Aboriginal people. This training involves direct fire response training, cultural understandings of fire and fire application, implementation of on-ground works and conducting scientific monitoring to establish a greater understanding of the biocultural and ecological impact of cultural burning practices. The program aims to enhance ecosystem health by improving habitat condition and supporting connectivity within culturally connected landscapes.

Co-design partnerships – working with the NSW Biodiversity Conservation Trust (BCT) to co-design frameworks for managing privately conserved lands in NSW. One aspect of this initiative is acknowledging and removing barriers to implementing TEK, enabling Aboriginal landowners with conservation agreements, and facilitating cultural fire practitioners to use processes informed by cultural systems, such as using indicators in the landscape to inform when and where Country can be burnt.

The BCT supports Aboriginal landholders who are already burning Country to continue to use TEK to implement the relevant burn regime, including using indicators to determine how frequently burns should occur, the burn pattern, and fire intensity. The aim is to ensure the burn regime considers culturally significant species, threatened species and ecological communities protected by conservation agreements.

Landscape triggers may be communicated as part of traditional knowledge systems or recorded as part of a traditional seasonal calendar or simply just through access to Country for cultural practice. The BCT encourages use of these tools to assist with the intergenerational transfer of such knowledge.

Where cultural burning is being reintroduced onto Country, co-design of burn regimes combining TEK and available scientific resources can help landholders to ensure burns are undertaken within the existing legal framework and using methods that will protect Country. The aim is to provide opportunities for people to build on the knowledge they already have on Country, and to look for ways to make use of new technologies and understandings.

This approach is helping to build a community of practice, sharing fire stories and communicating positively about the work that is undertaken and its value to Country – including people, kin and place – in a holistic approach.

Traditional ecological knowledge that is used to define burn regimes and inform cultural burning will always be the intellectual property of the Aboriginal community applying this knowledge[27].

Awabakal Country, Biraban cultural burn
Image: Alex Brunton.

Firesticks aims

— Help affected communities and Country to heal in the aftermath of recent and future bushfires.
— Apply alternative fire principles, management and practice based on TEK.
— Deliver and support community education, training and capacity-building activities, including training for accredited cultural fire practitioners across Australia.
— Empower local communities to take an active role in decision-making by building community skills and capacity and providing a greater sense of custodianship.
— Create partnerships with industry to deliver joint-venture commercial and community activities that will provide mentoring and information exchange, promoting capacity building with Aboriginal enterprise.
— Raise community awareness and understanding, and gather information on how cultural and environmental issues can create positive change.
— Build recognition of cultural practice and knowledge in science and resilience frameworks.
— Deliver and assist cultural values mapping and monitoring projects.
— Support Traditional Custodians in maintaining and building fire knowledge and practice.
— Maintain and enhance the Firesticks Alliance Community of Practice.
— Acknowledge and respect past and present Traditional Custodians and honour their contribution and connection to Country.

Further resources

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Credits

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