



Australian Government
Indigenous Land and Sea Corporation



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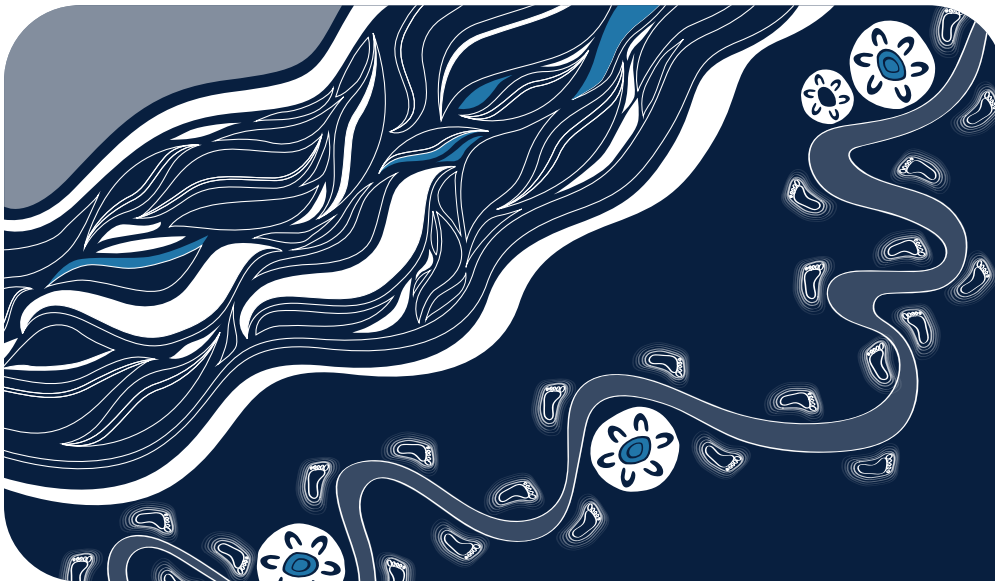
Sector Leadership

Carbon Companion Reader

*A guide to First Nations contribution
to the carbon sector*



Acknowledgement of Country



Artwork by Maisie Crawford-Owers.

In all our activities we pay our respect to the Traditional Owners and Custodians of the lands, waters and skies on which we live and work. We honour the resilience and continuing connection to Country, culture, and community of all Aboriginal and Torres Strait Islander people across Australia. We recognise the decisions we make today will impact the lives of generations to come.

A note on language

The terms 'Aboriginal and/or Torres Strait Islander', 'Aboriginal', 'Indigenous' and 'First Nations' may be used interchangeably throughout this document. Using these terminologies, we seek to acknowledge and honour diversity, shared knowledge and experiences as well as the right of individuals and communities to define their own identities. The C in Country is capitalised throughout this document as Country for Aboriginal and Torres Strait Islander people is a strong place of connection which provides

the upmost significance to their people and means more than physical land. In this document, Country may refer to land, freshwater and/or seawater.

Aboriginal and Torres Strait Islander readers are advised that this publication may contain the names or images of people who have died.

Established in 1995 under the *Aboriginal and Torres Strait Islander Act*, we provide for the contemporary and future land needs of Indigenous people, particularly those unlikely to benefit from Native Title or Land Rights. We work with our Indigenous partners to grow their economic, environmental, cultural and social capital by supporting their acquisition and management of land and water. In redressing dispossession, we provide for a more prosperous and culturally centred future for Indigenous people.

The Indigenous Land and Sea Corporation is a Commonwealth entity under the *Public Governance, Performance and Accountability Act 2013*.



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Cover photo: Thamarrurr Development Corporation
Ranger conducting an early dry season controlled burn.



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National Indigenous Land and Sea Strategy

In 2022, the Indigenous Land and Sea Corporation (ILSC) undertook a nationwide consultation with its stakeholders. This consultation informed the development of the National Indigenous Land and Sea Strategy (NILSS) and Regional Indigenous Land and Sea Strategies (RILSSs) 2023-2028. This consultation identified five priority sectors, in which stakeholders wanted to see ILSC partner with First Nations¹ to elevate influence and drive progress at scale. The priority sectors are:

- **Carbon**
- Environmental Markets
- Renewables and Clean Energy
- Inland Water
- Fisheries and Aquaculture

This document provides an overview of the legislation, policies and programs, challenges and opportunities that impact on the involvement and leadership of First Nations peoples in the carbon sector.

It has been prepared as a companion reader to the ILSC Sector Leadership Future Industries Initiatives, which provides a suite of initiatives for how the ILSC can contribute to the priority sectors.

The information contained in this companion reader was informed by First Nations carbon sector participants and originally collated by the Pollination Group on behalf of the ILSC. It is an overview of issues and opportunities for First Nations peoples with an interest in the carbon sector. The ILSC recommends that First Nations people considering projects in the carbon sector seek specific advice regarding regional issues, opportunities and business viability.



Figure 01. The National Indigenous Land and Sea Strategy 2023-28. Country and its people are at the heart of the NILSS and the reason for the ILSC's existence. Supporting Indigenous leadership in the priority sectors is a strategic commitment under the guiding principle of self-determination.

1. For the purposes of this companion reader, we have used Aboriginal and/or Torres Strait Islander, 'Aboriginal', 'Indigenous' and 'First Nations' interchangeably.

Introduction

The carbon sector plays a vital role in Australia's transition to net zero.

Carbon is a fundamental part of our natural world, found in the atmosphere, oceans, rocks, soils and plants. When left undisturbed, natural landscapes, with their soils and plants intact can act as carbon 'sinks,' absorbing, storing and slowly releasing carbon back into the atmosphere. However, when natural landscapes are disrupted through excessive clearing, burning, or other processes, the natural cycle is disrupted and carbon is released into the atmosphere, contributing to climate change. Climate change has been implicated in increasingly hot and erratic weather around the globe and rising sea levels, all of which create economic uncertainty and health and safety risks for all people.

For over 60,000 years, Indigenous communities have cared for Country. Scientists have identified that these processes maintain the natural process of the carbon cycle, effectively storing carbon in the landscape. As awareness of the risks presented by climate change grows, so does an understanding that removing carbon emissions is essential. Government and the private sector are realising the connection between protecting and restoring carbon sinks and economic stability.

Carbon market, credits and offsets

Voluntary and regulatory carbon markets have been established around the world, providing financial incentives for reduction and removal activities that cause carbon emissions. These markets facilitate the trading

of carbon credit units, which represent measurable reductions or removals of carbon emissions.

There are various types of carbon markets, including the Australian Carbon Credit Unit (ACCU) Scheme², independent voluntary programs administered by organisations such as the Verra verified carbon standard and The Gold Standard developed by World Wide Fund for Nature under the Clean Development Mechanism and international frameworks, namely the Paris Agreement's Article 6.

A carbon credit unit represents one tonne of carbon dioxide equivalent (CO₂e) that has been removed from the atmosphere by a project operated in accordance with an emissions reduction scheme. Companies purchase carbon credits from the project operator, to support their environmental claims or offset their emissions. For businesses, carbon credits enable credible emissions reduction claims, while for individuals or organisations conducting carbon reduction projects, credit sales provide money to sustain these efforts.

Carbon credits can be generated through either nature-based or technology-based solutions. Nature-based solutions (NbS) operate in natural landscapes to reduce carbon dioxide, such as by restoring coastal wetlands, regenerating forests, or planting trees. Technology-based solutions refer to engineered processes such as carbon capture and storage underground or production of carbon infused products i.e. concrete or mineralisation.



Figure 02. A company purchases credits to make claims relating to environmental performance.

2. [Australian Carbon Credit Unit \(ACCU\) Scheme.](#)

Sector landscape

The international and domestic carbon market landscape is evolving, with new carbon market schemes, initiatives and enabling programs being introduced.

Supply of carbon credits through carbon market schemes

Carbon credit markets operate under various schemes, administered by both public and private entities. In Australia, the primary domestic source of carbon credits is the ACCU Scheme. Under this scheme, a wide range of projects can generate carbon credits, including Indigenous savanna fire management, coastal ecosystem restoration, and forest regrowth and plantings.

While international voluntary standards, such as Verra and Gold Standard can also be used to develop carbon projects, their adoption in Australia remains limited. The pathway to market for projects using voluntary standards not aligned with the ACCU Scheme is uncertain, making voluntary carbon projects relatively rare in Australia.



The ACCU Scheme is Administered by the Clean Energy Regulator (CER) under the Emissions Reduction Fund (ERF). The ACCU Scheme includes the rules and systems for running carbon projects to earn carbon credits for activities that reduce or remove greenhouse gases from the atmosphere.

Each ACCU represents one tonne of CO₂ equivalent avoided or sequestered.

Projects must comply with methodologies approved by the CER, which outline the types of activities that can generate ACCUs, such as:

- savanna fire management
- planting and regrowing forests
- increasing the carbon stored in soils
- methane reduction from landfills or livestock management
- industrial energy efficiency improvements.

ACCUs are only issued after projects are verified to have delivered actual emissions reductions. This verification process ensures integrity and transparency in the system. Essential elements of integrity for carbon projects include:

- quantification and metrics
- additionality
- permanence
- monitoring
- reporting and verification.

Figure 03. Case study deep dive, ACCU scheme.

Demand and commercial opportunity

The price of carbon credits is a function of supply and demand. Generally, the demand for carbon credits has been steadily rising globally since the commencement of carbon schemes. This is the result of growing awareness of the need to reduce global emissions being reflected in international emissions reduction agreements and national and regional commitments.

Nationally, the supply of credits has not kept up with demand because projects, such as tree growing activities take time to set up and store carbon. Projects also generally only commenced once there is a sufficiently high price and demand for the landholder to have confidence in establishing the project.

The credit demand growing faster than supply has resulted in steadily increasing carbon prices; a trend that is expected to continue.

In Australia, domestic demand comes from a variety of sources as outlined in the below table.

Table 01. Australian sources of carbon credit demand.

Domestic Demand Sources		
The Safeguard Mechanism reforms require Australia's highest emitters to reduce emissions in line with Australia's target of 43 percent below 2005 levels by 2030, including through purchasing ACCUs	Voluntary purchasers with decarbonisation targets	Emissions Reduction Fund (Federal Government) auctions & State and Territory demand

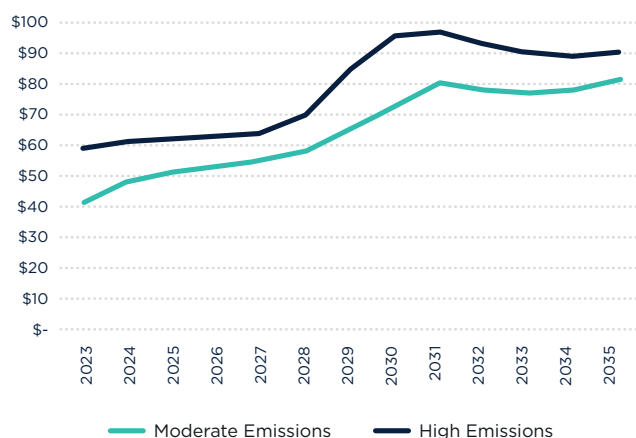


Figure 04. Price forecast of Australian Carbon Credit Units to 2035.³

As demand continues, price forecasts for ACCUs will vary depending on the speed of ACCU generation, which currently depends on the introduction of new methods and challenges with land access. Some of the current and projected demand trends include:

- Carbon neutral certifications increased from 52 to over 700 between 2017 and 2023, in Australia.
- 200mt CO₂e reductions will need to be undertaken by 2030 under the Strengthened Safeguard Mechanism obligations.⁴
- ~\$75/ACCU midway estimates in price growth by 2035 (see ACCU price forecast, above).

Carbon credits from First Nations projects have attracted a price premium in the carbon market over the last several years. Buyers have cited the integrity, environmental care and cultural outcomes that are produced from Indigenous-led carbon projects as motivating their willingness to pay more. These aspects are sometimes referred to as co-benefits or core benefits. Companies are increasingly prioritising high-integrity credits with co-benefits to meet growing scrutiny from shareholders and regulators.

3. [DCCCEW](#).

4. Reputex (2023) *Australian Carbon Credit Unit Market Analysis*.

Case Study

Tiwi Island Resources



Savanna Fire Management and the Tiwi Islands Carbon Project

Since 2017 the ILSC and INPEX have supported Indigenous communities establish carbon emissions reduction projects using the savanna fire management emissions avoidance method. The Savanna Fire Management (SFM) Program applies funding provided by the INPEX Australia led Ichthys Joint Venture to support the development of Indigenous savanna fire management projects in the Northern Territory.

The SFM Program provides the reassurance of guaranteed funding during the start-up and development of Indigenous fire projects. In return INPEX Australia receives a share of carbon credits earned during successful project years during the start-up period. It is an excellent example of an ILSC-corporate partnership supporting Indigenous landholders establish a sustainable carbon farming business whilst caring for Country.

Last year Tiwi Islanders, Rangers, Tiwi Resources Pty Ltd and project partners celebrated an important milestone. The project had been supported by the SFM program whilst building capacity within Tiwi Resources to independently operate the projects. The success of the project has enabled the transition away from external funding to a fully independent Indigenous-owned carbon enterprise. This transition marks a crucial step in the Tiwi community's journey towards self-determination and local enterprise development.

“This transition to independent management is a monumental step for the Tiwi people. It reflects our dedication to self-determination and our commitment to managing our land in a way that honours our culture and preserves our environment.”

“We are proud to lead this project, which not only helps us maintain our traditional practices but also supports our community economically.”

Spokesperson from Tiwi Resources Pty Ltd

Registered in 2016, the project reduces greenhouse gas emissions by implementing strategic early dry season fires to prevent the destructive impacts of late dry season wildfires which are laden with greenhouse gases. The methodology is a blend of thousands of years of Indigenous knowledge and practice mixed with western science. As well as reducing greenhouse gas emissions, the project has many other benefits including the employment of Indigenous rangers and the protection of culturally significant sites.

The SFM Program investment in the Tiwi Fire and Carbon Program has been instrumental to the project's growth and success.

The Tiwi Fire and Carbon Project spans approximately 8,000 square kilometres of Aboriginal freehold land on Melville and Bathurst Islands. These islands, which have been continuously inhabited by the Tiwi people for millennia, are renowned for their rich cultural and biological diversity.

Since its official registration with the Australian Government's Clean Energy Regulator as an Emissions Avoidance project in 2016, the initiative has generated 230,020 ACCUs, valued at around \$8 million. These ACCUs are the foundation upon which the Carbon enterprise has been built.

Over the course of the project, more than a hundred Traditional Owners and their families, alongside Tiwi Rangers, have been actively involved in annual fire planning and operations. Additionally, 90 individuals have received accredited training to safely participate in fire management activities.

The SFM Program is currently working with four other Indigenous carbon project partners.

Carbon investment

The international and domestic carbon market landscape is evolving, with new carbon market schemes, initiatives and enabling programs being introduced.

Australia's investment landscape for carbon emissions reduction is expanding, with regulated markets and financial instruments linking carbon credit producers and buyers. These vehicles include green bonds, ESG funds, and carbon credit markets, enabling capital to flow into emission reduction projects.

ACCUs issued by the Clean Energy Regulator to carbon credit producers for renewable energy projects, reforestation initiatives, and industrial efficiency programs are bought by corporations seeking to voluntarily offset their carbon footprint or meet regulatory obligations under the Safeguard Mechanism.

Investment vehicles like carbon credit funds and exchange-traded products provide investors with exposure to carbon markets, facilitating liquidity and price discovery. The Clean Energy Finance Corporation (CEFC) and private investors also help bridge the gap by funding projects that generate carbon credits while delivering financial returns.

With increasing corporate net-zero commitments and government policies driving demand, Australia's carbon market continues to evolve, creating opportunities for both credit producers and buyers.

Ngurrara Ranger
Keith Njamme
ground burning.
Photo: Kerenza Sunfly



Indigenous participation



Aboriginal and Torres Strait Islander Peoples have been caring for Country for millennia and are uniquely positioned to lead and contribute to carbon projects, methodology development, and industry growth.

The Indigenous carbon industry holds significant potential. Between November 2021 and April 2024, its value grew by 11 percent, rising from \$53 million to \$59 million, with further growth expected as demand increases. Continued support for Indigenous participation and leadership, through carbon projects, methodology development, and targeted programs will be essential in sustaining this momentum.

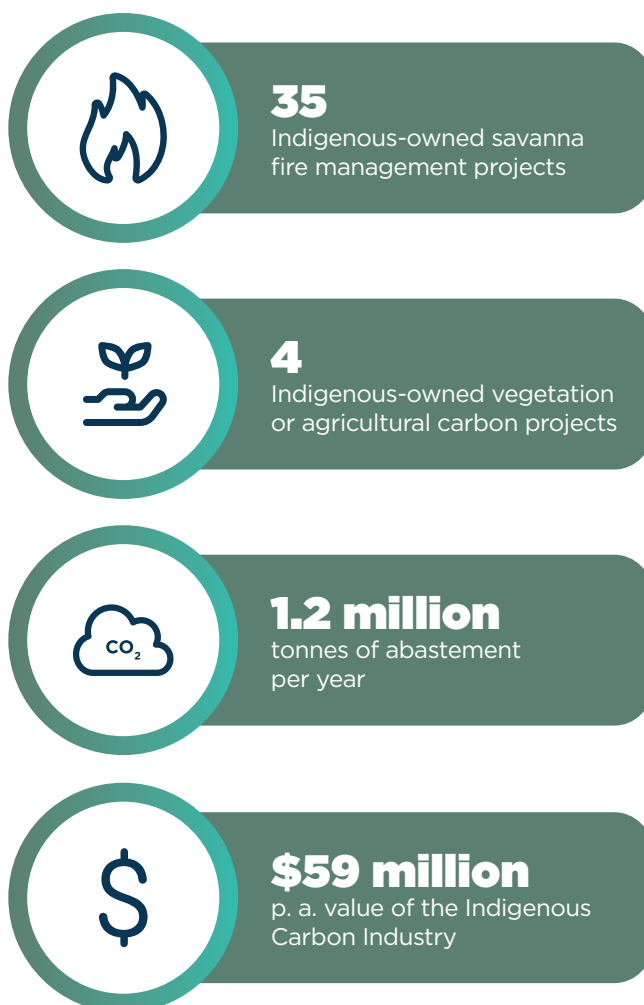


Figure 05. Indigenous carbon industry snapshot.

Indigenous participation



Indigenous Carbon Projects

There are various ways First Nations people are involved in carbon projects. At a minimum, legal requirements treat First Nations as stakeholders for consultation if they hold legal rights or eligible interests in the land. Therefore, Free, Prior, and Informed Consent (FPIC) must be obtained from Native Title rights holders, and benefit-sharing arrangements should be pursued⁵.

However, best-practice First Nations participation is achieved through ownership, where First Nations communities play a direct role in the operation and governance of a carbon project. This ensures that communities have control of the project and direct access to revenue from the sale of carbon credits.

Engaging local communities and establishing models that share benefits are essential to the integrity of a project and sustain the generated credits. Involving First Nations communities creates a reinforcing cycle of breaking cycles of disadvantage and improves local communities.

In the market, these benefits are referred to as carbon ‘co-benefits’ or ‘non-carbon benefits.’ However, many Indigenous communities prefer the term ‘core benefits’ to highlight and elevate the social impact of carbon projects on their communities. These benefits often command a price premium, financially incentivising projects to prioritise stronger First Nations participation and giving Indigenous-led projects a competitive advantage.

Table 02. Examples of Indigenous ownership and co-ownership of carbon emission reduction projects.

 ALFA Arnhem Land Fire Abatement	 ABORIGINAL CARBON FOUNDATION	 KIMBERLEY LAND COUNCIL
ALFA in the Northern Territory is an example of a First Nations project ownership model.	Aboriginal Carbon Foundation is an Indigenous-owned not-for-profit carbon project aggregator, trader and project developer.	The North Kimberley Fire Abatement Project is run by the four north Kimberley native title groups Dambimangari, Wilinggin, Wunambal Gaambera Unguu and Balanggarra with the Kimberly Land Council providing co-ordination and technical support services to the PBC's.

5. [ICIN](#) (2024).

Indigenous Desert Alliance



Tanami Rangers at
Ljamanu Airport
Photo: Tamati Smith

Tanami Indigenous Desert Alliance Project

The 'savanna fire management method' is a government-approved approach to undertaking a carbon project to earn carbon credits, by managing fire in northern savanna Country. The savanna method has enabled many Indigenous land managers in the north to undertake carbon projects in tropical savanna lands. However, to date that method has not been available for use in the Northern Arid Zone (NAZ) even though similar savanna vegetation and fire risks occur there. The main reason for this is a lack of scientific data about greenhouse gas emissions from fire in that Country.

With funding assistance from the ILSC, the Indigenous Desert Alliance (IDA) has led a significant collaborative research program to collect scientific data to underpin an extension of the savanna method into the NAZ. The NAZ includes large portions of the Tanami and Great Sandy deserts in WA and NT that are predominantly Indigenous-owned and managed. The program saw Indigenous Rangers from across the NAZ lead managed fire operations and the collection of fire emissions data. The program supported the groups to gain fire operations management, decision-making and record keeping experience that will support operational projects. Rangers working with scientists collaborated in vegetation sampling and emissions data collection.

The results of this research were published in the *Journal of Environmental Management* in 2023. The paper set out the scientific case for extending savanna burning accounting methods into the northern arid zone. This paper and the associated data were provided to the Australian Government's Method and Inventory Teams, the Clean Energy Regulator, and to CSIRO staff who have incorporated the data into the Full Carbon Accounting Model (FullCAM). The IDA advocated to the Clean Energy Regulator and the DCCEE method development team that savanna burning accounting methods be extended further south as soon as possible to provide northern desert Indigenous groups an opportunity to participate in the carbon economy. In 2024, the Emissions Reduction Assurance Committee (ERAC) assessed 39 expressions of interest and the IDA proposal, "Extending Savanna Fire Management to the Northern Arid Zone", was one of only four to be prioritised for method development.

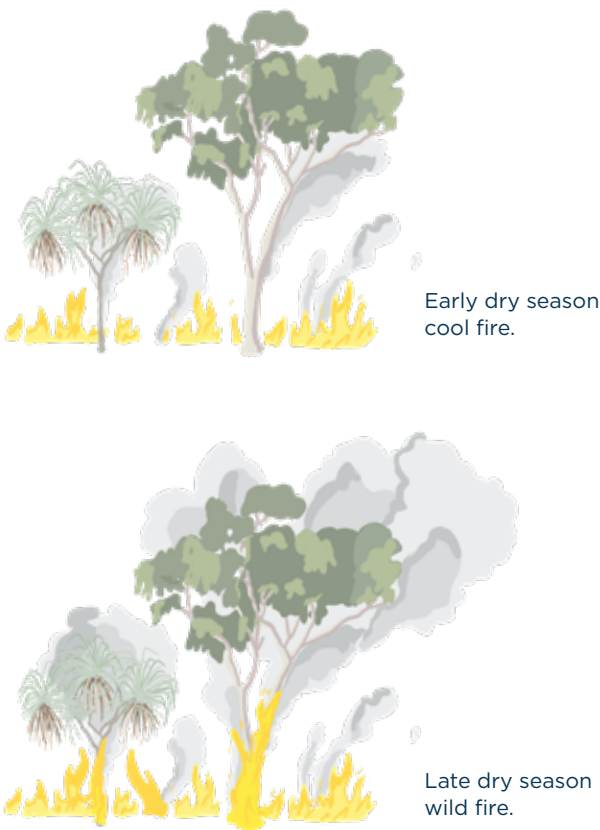
Extending the Savanna Fire Management method into the NAZ will provide land managers with an opportunity to generate an income from carbon credits by implementing right-way fire management. The proposed extension (which is down to 350mm average rainfall) would cover an area of 850,000km², mostly under Indigenous ownership, and includes the operational areas of approximately 15 different Indigenous ranger groups.

Indigenous participation

Indigenous carbon methodologies

First Nations communities have played a key role in developing the Savanna Fire Management Emission Reduction Method, drawing on their deep traditional ecological knowledge. As one of the first carbon methodologies, it enables Indigenous land managers to use traditional fire practices to generate ACCUs.

However, large areas of Indigenous land currently lack eligible carbon methodologies under both the ACCU Scheme and voluntary standards. The development of new methods and revisions to the ACCU Scheme that support First Nations-led methodology creation could expand opportunities for Indigenous-led carbon projects. This approach would better align carbon initiatives with Caring for Country principles and carbon reduction goals.



Savanna fire management activities involve undertaking fire management in early dry season to reduce fuel loads and reduce the bigger, hotter wildfires later in the season, which reduces emissions.

Figure 06. Savanna fire management activities.

Indigenous carbon sector programs and players

A growing ecosystem of First Nations enterprises and programs is developing to support Indigenous participation in the carbon sector. Below is a snapshot of the various players and their roles in the sector.

Table 03. Indigenous carbon sector programs and players.

Project administration
First Nations-owned projects and project developers include KLC , ALFA , Central Land Council and the Aboriginal Carbon Foundation .
Project financing
ILSC's Savanna Fire Management Program is an example of the facilitation of project financing into First Nations-owned projects (funding is coming from a non-Indigenous-owned business INPEX).
Project implementation
Across Australia there are several Ranger groups and other First Nations organisations participating in project implementation. Their roles range from the end-to-end management of carbon projects, through to provision of services to projects owned by non-Indigenous interests.
MRV
There are some examples of First Nations becoming involved in measuring, reporting and verification through collaboration with technical partners, such as the savanna fire mapping website North Australian Fire Information .
Transacting
Several Indigenous-owned enterprises sell carbon credits into the market, including, e.g., ALFA, Aboriginal Carbon Foundation, and KLC.
Knowledge sharing and capacity building
There are a number of organisations which provide knowledge sharing, capacity building and advocacy to support Indigenous participation and leadership, including the ALFA , Indigenous Carbon Industry Network (ICIN) , Aboriginal Carbon Foundation and ILSC .

Opportunities and Challenges

The unique rights, interests and experiences of Australia's First Nations People present unique opportunities and challenges.

Opportunities

The Australian carbon sector presents opportunities for First Nations participation and leadership, especially where Indigenous knowledge and land management practices intersect with the growing demand for sustainable climate solutions.

Increasing demand for high quality NbS credits

- Demand for high-quality Nature-based Solution carbon credits and biodiversity credits will increase, meaning a growing market for Indigenous carbon developers and participation in these markets.

Traditional ecological expertise as a competitive advantage

- Aboriginal communities' deep expertise in traditional land management, beyond savanna burning, positions them to lead in carbon abatement projects that align with cultural practices.

Leadership in shaping carbon markets

- Indigenous groups can lead carbon projects and define how carbon projects should engage with their communities, setting standards for meaningful, ethical and high-integrity participation in the growing carbon market.

Economic empowerment and job creation

- New skills and jobs will be needed to service the market value chain as the industry grows.
- Carbon projects offer long-term income and job opportunities across the value chain in both urban and rural areas, driving economic growth and creating culturally appropriate roles in land management, project development, and monitoring, verification and reporting.

Reinforcing sovereignty and land rights

- By leading carbon initiatives, Indigenous communities can strengthen sovereignty over their lands, ensuring that projects respect cultural values and protect biodiversity.

Increased pressure to partner

- Increasing scrutiny on project developers to meaningfully engage with Indigenous communities (e.g., beyond the FPIC process), creates an opportunity for Indigenous communities to define what that engagement looks like, and what Indigenous-led means.

Challenges

As environmental markets continue to develop and the role of First Nations people evolves, it is important that any existing challenges are solved in partnership with Indigenous communities.

Access to Country

- Many First Nations people with aspirations to develop carbon projects as part of caring for Country may have limited capacity to acquire exclusive rights to operate a project due to land acquisition costs or other land access related barriers

Access to early-stage funding

- High upfront costs for projects, such as tree-planting projects, particularly in rural and remote areas, can prevent Aboriginal communities from entering the carbon market.
- Financial support is needed to prevent risks in early stage and innovative projects.

Workforce capability

- Expansion of carbon markets will require new skills and jobs.
- There is currently a gap in workforce planning and training to ensure Aboriginal people have the necessary skills to participate in carbon projects across the entire value chain.

Setting the terms

- There is limited transparency in the commercial negotiations with project developers and other parties in carbon projects on land with Indigenous rights. This limits competition for partners and bargaining power.

Lack of appropriate carbon methodologies

- Outside fire-prone tropical savannas, other carbon methodologies are poorly aligned with Indigenous approaches to managing country, and no methodologies are currently readily applicable to significant areas with Indigenous rights and interests in the arid and coastal zones.



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