



Carbon for Nature

Leveraging carbon farming investment
to deliver additional benefits for nature

Acknowledgement of Country

Regional Natural Resource Management (NRM) organisations and Carbon Market Institute (CMI) members work closely with Australia's First Nations communities across the country.

We acknowledge the Traditional Owners and Custodians of Country throughout Australia as the traditional custodians of the land. We recognise and respect the enduring relationship that Aboriginal and Torres Strait Islanders have with land and sea and pay our respect to Indigenous cultures, and to Elders past and present.

We support Indigenous carbon opportunities and traditional land, sea and fire management practices. We recognise the need for self-determination of First Nations people in carbon farming projects and thank them for their generous sharing of knowledge in this sector.

Obtaining free, prior and informed consent (FPIC) of appropriate First Nation peoples and organisations is the lynchpin of global best practice and a prerequisite to carbon for nature projects.

We commit to support First Nations leadership and objectives and to work together to care for Country.



Why carbon for nature?

Climate change and biodiversity loss represent an immediate and existential threat to people and ecosystems across the world. Climate change and its related impacts are accelerating, and there is an inextricably linked global biodiversity crisis, exacerbated by the changing climate. These effects are being strongly felt in Australia where we are experiencing compounding impacts from extreme heat waves, more frequent and severe floods, and longer, more intense bushfires. The 2020 Samuel Review found Australia's environment is in decline, and not resilient to future threats, including climate change impacts.¹ Additional research has also found that around half of Australia's gross domestic product (GDP) is moderately or highly dependent on nature, and at risk from a changing climate.² We urgently need to find practical, deliverable solutions for these wicked problems.

Carbon farming is already part of the solution to both our climate and biodiversity challenges but can be leveraged and optimised to deliver better outcomes for nature. Through storing carbon in terrestrial and aquatic vegetation or soils, or reducing its release through activities like early burning to reduce wildfires, there are opportunities to both reduce atmospheric CO₂ levels and preserve, protect and restore biodiversity. These nature benefits can be achieved primarily

through vegetation management and restoration projects that increase the area, landscape connectivity, or quality of available habitat, or contribute to climate resilience. However, government policies to date have favoured projects that support lower-cost emissions abatement, rather than high biodiversity value projects, which can involve greater costs that may limit their uptake. A pivot in enabling conditions and investment incentives is required to boost carbon for nature. Carbon farming methods have not proactively prioritised nature outcomes and can be optimised to specifically achieve additional, measurable nature outcomes at a landscape scale.

Positioning carbon farming investment to provide better outcomes for nature is part of the answer to the twin climate and biodiversity crises. It is an optimal time to develop a national carbon market strategy that articulates the role of carbon crediting in supporting decarbonisation and setting goals for reversing deforestation, ecological restoration and carbon removal. This will ensure greater nature outcomes at scale. It will also support investor certainty and underwrite social license for carbon for nature projects. It is also timely to develop an integrated carbon and nature roadmap to maximise alignment – to set a refreshed vision, address barriers and leverage opportunities whilst identifying actions required by the various actors across the carbon farming and nature repair supply chain. Taking a landscape approach to strategic policy and planning on carbon for nature projects, that are aligned with NRM plans, will deliver better outcomes for governments, businesses, communities and the economy.

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Acknowledgements

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NRM Regions Australia and CMI gratefully acknowledge independent contributors to this report, including Steven Lynch, Jayne Thorpe, Marnie Lassen and Elisa Rawlings. The report was prepared by Rachel Clarke – Knowledge Broker Carbon Farming and Environmental Markets, NRM Regions Australia and Janet Hallows – Director Climate Programs and Nature-based Solutions, CMI.

We also thank all the interviewees that provided their time to answer our questions and consider ways to deliver carbon for

nature. Your knowledge, insights and perspectives support the important task of boosting carbon investment to restore nature. Thank you for lending your voices to this work.

Citation note

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¹ Samuel, G. (2020), *Independent Review of the EPBC Act – Final Report*, Department of Agriculture, Water and the Environment, p. viii.

² Ernst & Young Australia (2023), *Creating a Nature-Positive Advantage*, p. 11.



**John Connor CEO
Carbon Market Institute**

CMI is an independent, member-based institute that promotes the use of market-based solutions and supports best practice in decarbonisation to accelerate the transition towards a negative emissions, nature positive world. Our membership includes 150+ primary producers, carbon service providers, First Nations organisations, legal and financial institutions, technology firms and emissions-intensive companies in Australia and Asia Pacific.

The CMI Board updates CMI's Policy Positions annually, drawing on practical insights from our members, but ultimately independent of them. CMI set a vision for a thriving domestic carbon farming industry with its Carbon Farming Industry Roadmap³ which is set to be revised to integrate nature outcomes. CMI also administers the Australian Carbon Industry Code of Conduct (ACI Code),⁴ which was established in 2018 to steward consumer protection and market integrity- key precursors to a more effective carbon for nature market.

"Australia is a leader in high integrity carbon credits – and we see a huge opportunity to combine and accommodate biodiversity in the market. While we acknowledge existing work, I believe we need to show leadership in development of a linked biodiversity market."

"CMI fully supports actions to boost and elevate carbon farming projects to deliver more for nature – but we absolutely acknowledge that markets cannot be an excuse for meaningful emissions reductions and environmental regulation to minimise harm."



**Kate Andrews CEO
NRM Regions Australia**

NRM Regions Australia is the national peak body of Australia's 54 regional NRM organisations that cover the continent. Our members work with land managers, Indigenous organisations, communities, governments and industries to manage our land, water, coast, plants and animals. With partners we work to restore and sustain Australia's biodiversity and productive landscapes.

"Australia's established carbon market framework provides an opportunity to also progress biodiversity investment and outcomes. Likewise, Australia's existing regional NRM sector – its people, knowledge, networks and NRM planning – provide an established continent-wide framework and mature institutional arrangements to deliver and maximise integrated outcomes for carbon and nature."

"Through applying a regional or landscape-scale we can build efficiencies and better outcomes for the environment and for landholders, such as enabling access for smaller landholders through collective aggregation opportunities and managing risk. We can maximise environmental outcomes across the landscape and minimise perverse ones. Realising this opportunity, and avoiding the pitfalls of the carbon market, will require government investment – to support appropriate policy infrastructure, transparency, informed and multiple models for participation, and to ensure our learning to date informs the pathways forward."

"The Carbon Farming Initiative Act 2011 requires carbon farming projects to be consistent with regional NRM plans. Consideration of the landscape-scale and local context described in NRM plans, including meaningful alignment of carbon farming projects to NRM plan objectives, will deliver better carbon for nature outcomes."

'Carbon for nature' means explicitly planning, and enabling carbon farming projects that improve outcomes for nature, where those outcomes are prioritised alongside carbon abatement.

³ Carbon Market Institute (2022), *Carbon Farming Industry Roadmap*

⁴ Carbon Market Institute (2021), *Australian Carbon Industry Code of Conduct*

Executive summary

The Australian and global context of carbon for nature projects

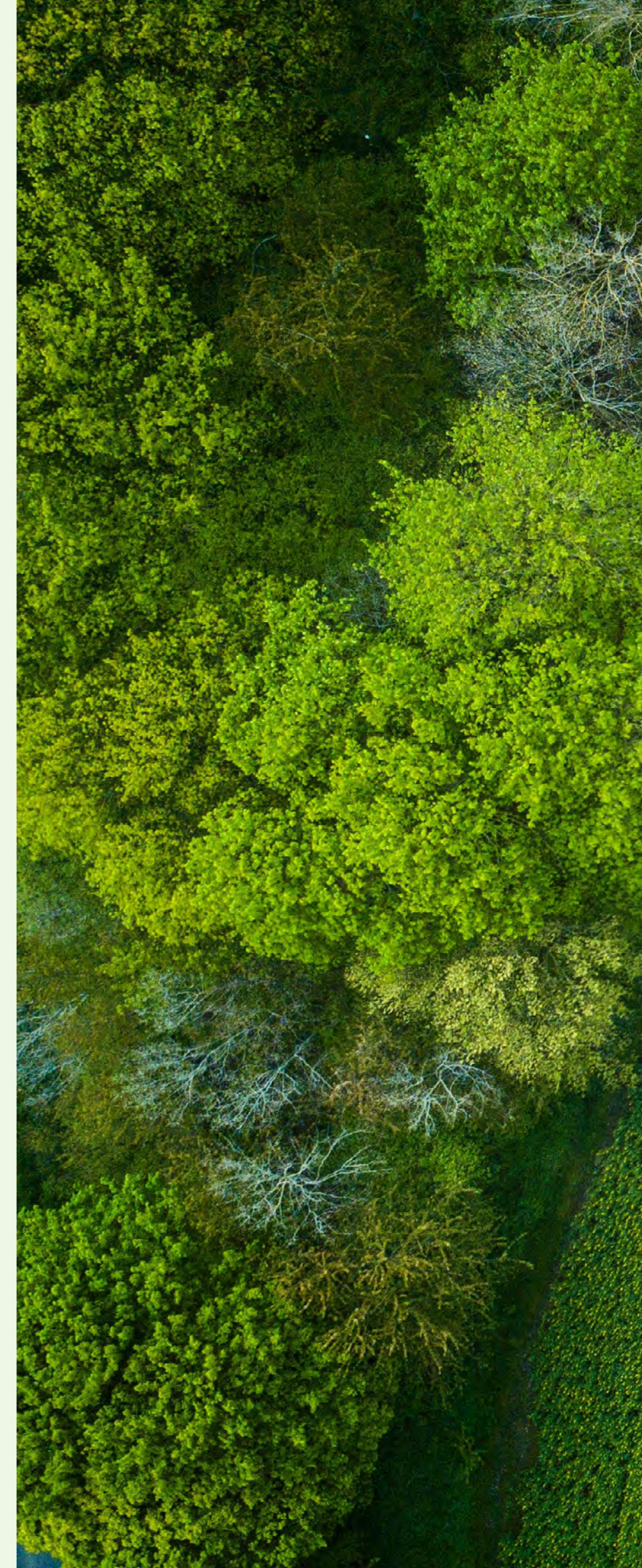
- Climate change and biodiversity loss are closely linked, and their associated impacts are accelerating.
- Developing carbon farming projects to specifically achieve additional, measurable nature outcomes at a landscape scale has the potential to concurrently address climate and nature restoration objectives while meeting emissions reduction and nature restoration and protection targets.
- Projects developed under methods in the Australian Carbon Credit Unit (ACCU) Scheme, particularly those that involve vegetation management, are already directly or indirectly supporting various outcomes for nature including reforestation, supporting forest regeneration and improving soil health – and can do much more.
- The Carbon Credits (Carbon Farming Initiative) Act 2011 (CFI Act) explicitly references environmental restoration as a subsidiary objective, including through its direction for consideration of regional NRM plans in carbon farming project development.
- Emissions reduction commitments and legislation drive investment in emissions reduction initiatives, but there are few regulatory incentives for private sector investment in nature positive outcomes.
- Alignment between the ACCU Scheme and the new Nature Repair Market may enable stacking of verifiable biodiversity outcomes with carbon farming projects, as ACCUs and Biodiversity Certificates can be generated concurrently.
- Obtaining free, prior and informed consent of appropriate First Nations peoples and organisations before registration of any ACCU projects is best practice to development of any carbon for nature projects.

Are we delivering carbon for nature?

- Bespoke carbon for nature programs are emerging, where achievement of co-benefits, including those for nature, are an integral component of the carbon project. These projects offer important insights into both the potential of carbon for nature, and what project proponents need to consider and include to optimise nature outcomes.
- Carbon farming projects that are delivered under certain methods, including the human-induced regeneration (HIR), environmental plantings, and savanna burning methods, may contribute to increases in the extent and connectivity of habitat within some ecosystems without particular consideration of biodiversity – however could be further optimised.
- Carbon farming projects have not typically included formal assessments of baseline biodiversity, benchmarked habitat conditions, or been monitored to verify improvements in ecosystem health. There are, however, a growing number of standards and frameworks that can be used to inform and verify nature outcomes from carbon farming projects – these are being used to verify outcomes from some projects now.
- Unless specifically planned for, supported, and invested in, it is unlikely that ACCU projects will increase the quality of native habitat to the extent necessary to contribute to restoration of our degraded ecosystems.
- Some current ACCU methods have the potential to have a negative impact on biodiversity outcomes, if ACCU generation is maximised at the expense of nature outcomes.
- Some ecosystems and geographic areas are unlikely to support carbon for nature projects. This is either because of their inability to reliably and permanently sequester carbon to an extent that is commercially viable (e.g. native grassland environments), or because the value of land for agriculture and other potential purposes in some areas is likely to make carbon farming uneconomical compared to other uses.
- Additional investment in nature is needed beyond what can be provided through carbon investment.

Key barriers to carbon for nature projects

- Higher establishment, maintenance and monitoring costs, as well as potential decreases in ACCU generation, mean carbon for nature projects are more expensive to develop and maintain and not always commercially viable.
- There is currently limited transparency around the extent to which carbon farming projects are planning and monitoring nature outcomes, or verifying co-benefit claims, although a number of interview participants were undertaking these activities.
- There is no empirical evidence that carbon farming projects are consistent with regional NRM plans. Views from report interviewees varied on the role of regional NRM plans in informing carbon farming projects, ranging from informing better biodiversity outcomes to supporting better land use planning.
- Buyers are paying a premium for ACCUs that can deliver additional environmental or social benefits – this includes both implied and verified benefits. However, the quantum of demand and long-term outlook for such investment is unclear.
- Emissions reduction policy does not support outcomes for nature, but alignment with Nature Positive Plan priorities should help to enable investment in carbon for nature projects.
- There are no clear regulatory nor clear business drivers for investment in carbon for nature projects. The success of carbon and nature markets will depend on how investible they are deemed.
- The potential of carbon for nature projects is unlikely to be realised under current policy settings and given known commercial considerations.



Central to this report are considerations for different stakeholders to help progress pathways to achieving carbon for nature.

Key considerations to boost carbon for nature

Better enabling conditions and investment to bridge the gap between a standard ACCU project and a nature-focused project are needed to maximise participation in, and contributions from, carbon for nature projects.

The following key considerations, which are described in more detail in section 6 of the report, can enable and fund more nature outcomes from carbon farming.

Considerations for the Australian Government – enabling conditions for carbon for nature

1. **Support development of a national biodiversity co-benefit verification standard and framework** to enable monitoring and verification of high integrity biodiversity outcomes from carbon for nature projects using a range of methods, including those under the Nature Repair Market.
2. **Implement a national register to improve transparency and information available on carbon farming co-benefits to provide evidence of the benefits** and market value of projects for both potential participants seeking to understand the opportunities, and for investors seeking assurance of outcomes from investments.
3. **Improve ACCU methods through new priority and review processes to recognise, enhance and protect nature** by identifying and including additional activities to generate, verify, and value biodiversity outcomes and ensure there are sufficient safeguards to protect nature from potential negative impacts of carbon farming projects as per the CFI Act requirement.
4. **Legislate for and invest in regional NRM organisations' role** to scale up nature benefits from carbon and other projects and realise the landscape-scale and community benefits that can be achieved through better alignment of carbon farming projects with regional NRM planning.

5. **Resource First Nations participation, leadership and economic opportunities** – Implement ACCU Review recommendations, including for FPIC requirements and ensure alignment with emerging Nature Repair Market obligations. Resource all organisations, especially, but not limited to, appropriate native title bodies, to ensure best practice guidance and implementation, elevation of Healthy Country Plans, and inclusion of Indigenous Ecological Knowledge in planning and method development.

Invest in First Nations knowledge regarding appropriate fire regimes for biodiversity and cultural heritage and seek opportunities to align carbon farming and nature repair methods to these, helping ensure methods don't undermine cultural practices or biodiversity outcomes.

6. **Develop a carbon market strategy** that articulates the role of carbon crediting in supporting decarbonisation and setting goals for reversing deforestation, ecological restoration and carbon removal. This will ensure better nature outcomes, greater investor certainty and support social license for carbon for nature projects.

Considerations for the Australian Government – investing in nature positive outcomes

7. **Create an Australian Government Nature-Positive Fund** for investments through the Nature Repair Market to establish early market demand for nature restoration projects, including those stacked with carbon projects, to ensure supply and establish confidence. Future Commonwealth investments under the Powering the Region Fund should be released from least cost mandate to prioritise nature and carbon removals deployment outcomes.
8. **Review of enhanced Safeguard Mechanism should consider purchase of ACCUs with co-benefits** and ways that can be further supported to provide a stronger or guaranteed market for carbon for nature projects.

9. **Deliver expanded and improved Agriculture Biodiversity Stewardship and Carbon Farming Outreach programs** with on-ground support from regional NRM organisations to encourage landholder participation and demonstrate alignment of the ACCU and Nature Repair Market schemes.

Considerations for the carbon industry

10. **Integrate nature-related risks and opportunities into the Australian Carbon Farming Industry Roadmap and update the Australian Carbon Industry Code of Conduct (ACI Code)** to minimise potential environmental harm and encourage further achievement of co-benefits in recognition of the significant opportunity that development of high integrity, verified nature outcomes offer to add value to carbon farming projects.
11. **Undertake ACCU method exploration to support co-benefit identification and integration** to define and develop a consistent, standardised list or classification index of primary co-benefits possible under each land-based ACCU method to support decision-making and price discovery of co-benefit asset classes and investment in carbon for nature.

Considerations for regional NRM organisations

12. **Update regional NRM plans (where necessary) with carbon sequestration potential information to guide carbon for nature projects** to increase the utility of all regional NRM plans to be used to identify opportunities to align carbon sequestration potential with opportunities to maximise nature outcomes.
13. **Seek funding for updated climate-smart modelling to be incorporated into all regional NRM plans** to ensure this information is up to date and fit for purpose in ensuring carbon for nature projects are being planned to maximise both project and landscape resilience, and to minimise risk.
14. **Analyse how regional NRM plans and planning resources are informing carbon project planning** to better understand the utility of the plans for industry

users in carbon for nature projects and to identify actions and opportunities to improve the contribution of regional NRM plans. This would encourage more widespread strategic use of NRM plans and a landscape-scale approach in carbon farming projects.

Considerations for business

15. **Integrate systemic organisational planning towards a net zero and nature positive economy** in recognition of the intrinsic link between our economy and nature and the efficiencies available when addressing climate change and nature loss concurrently.
16. **Prioritise carbon for nature in ACCU compliance purchasing** to provide market signals that encourage additional investment in carbon for nature projects.
17. **Engage in voluntary carbon for nature purchases to leverage existing ACCU purchases** for voluntary climate commitments to invest and report on nature in line with relevant frameworks (e.g. ESG, TNFD) to help mainstream carbon for nature investments.

Considerations for researchers and academics

18. **Explore carbon for nature schemes to enable informed policy and program delivery** to enable landholder participation in carbon for nature projects.
19. **Explore non-biodiversity co-benefits arising from carbon farming projects.** Better understanding of other ACCU co-benefits, how they may be valued by investors, and their relationship to nature outcomes, may make a more compelling case for participation in carbon for nature projects, and deliver better overall outcomes from carbon farming investment.

Considerations for the agricultural sector

20. **Invest in on-farm natural capital measurement methods and tools** to promote landholder participation in carbon for nature projects and enable uptake.

1. Introduction

NRM Regions Australia has partnered with CMI to explore and identify opportunities to increase the impact of investment in carbon farming to deliver positive outcomes for nature in Australia. There is a confronting shortfall in funding available to restore Australia's landscapes – the Wentworth Group of Concerned Scientists estimates at least \$7.3 billion of new funding per year is needed to restore them.⁵ However, climate investment into carbon farming activities offers one opportunity to utilise existing and future funding to achieve multiple outcomes – including for nature.

A number of methods under the ACCU Scheme provide opportunities to support nature restoration – if delivered with that objective in mind. Financing the achievement of genuine, lasting outcomes at the scale needed will require us to plan and work at an integrated landscape-scale, knitting together investments and appropriate activities across landscapes to leverage change and multiple benefits, while creating efficiencies and minimising perverse outcomes. This integrated landscape approach is core business for Australia's regional NRM sector, which has operated across the country for over 20 years.

Between 2019 and March 2024, 66% of ACCUs (57 million) were generated through activities in the agriculture and land sector.⁶ Assuming an average spot price of \$30, these ACCUs represent around \$1.7 billion investment in carbon farming activities. Adjusting policy settings to direct at least a portion of these ACCU investments into explicit carbon for nature project outcomes could begin to bridge the biodiversity financing gap.

There is significant untapped potential for carbon farming to deliver much greater, more widespread benefits for ecosystems across the country if we understand the potential, drivers, and barriers of carbon for nature projects – and commit to actions to drive and enable outcomes for nature from carbon farming investment.

1.1 Report objectives

This report seeks to articulate the untapped potential for carbon farming projects in Australia to provide benefits for nature and identify opportunities to boost nature outcomes from carbon investment.

The report addresses:

- The Australian policy context for carbon for nature;
- How carbon farming is already delivering, and could further deliver, benefits for nature;
- Barriers to increasing investment in carbon for nature projects; and
- Considerations for government, business and other key players that could boost investment and help to deliver more carbon for nature projects.

1.2 Scope, methodology and limitations

This report was delivered with limited time and budget constraints in order to start an important conversation on opportunities to boost nature outcomes from carbon farming projects. It is not intended to be a definitive work, but to provide some insights from a range of key stakeholders and some useful points for parties to consider.

This report was informed by:

- Desktop research;
- Interviews with informed stakeholders, including researchers, project developers, State government environment departments, conservation sector representatives, the business sector, regional natural resources management organisations and First Nations Peoples. Quotes throughout the report were provided during interviews. The interviewee list is provided at Appendix A; and
- Expert knowledge from NRM Regions Australia and CMI.

The report does not explicitly explore or address other social and economic co-benefits – sometimes called core benefits – that can be delivered through carbon farming across Australia. Some of the considerations for increasing nature outcomes from carbon farming identified in this report, such as the need for robust monitoring and verification of co-benefit claims, may apply to co-benefits more widely. We note that other co-benefits are important outcomes for many participants in the carbon market, including Indigenous participants and we note the critical importance of self-determination of First Nations Peoples to lead and make decisions about carbon farming projects and the sale of ACCUs on and from their Country, and ensuring that carbon projects always involve FPIC of relevant owner groups.

While both the literature and comments by interviewees suggest there is significant potential for carbon farming projects to deliver additional benefits for nature, we know that carbon farming alone is not a solution for either the climate or nature crisis. An increase in the extent and number of carbon for nature projects should be additional to companies prioritising emissions reductions at source and within their value chain. Additionally, future use of, and investment in, carbon credits will play an important role in addressing residual or hard to abate emissions and contribute to critical land sector sequestration needed to support additional drawdown to manage a potential 'overshoot' of temperature goals.⁷

Nor can carbon farming support the restoration of every ecosystem. Some environments, such as native grasslands, simply aren't compatible with creation of a carbon stock that would make a project financially viable. While well-planned carbon farming projects can deliver much more for nature, they must be complemented by other restoration initiatives that fill these gaps as we move toward a nature positive future.

Despite best endeavours, we were unable to achieve the level of Indigenous input to the report that we had hoped, with interviews with only two First Nations participants undertaken. Both organisations recognise the high level of participation of Indigenous Australians in the carbon industry and their deep desire and ability to achieve good outcomes for Country and people through carbon projects.

We support deeper engagement and consideration of additional Indigenous perspectives on carbon for nature projects. We commit to exploring additional work in this area with First Nations partners, including supporting an Indigenous-led carbon for nature project, if appropriate.

⁵ Wentworth Group of Concerned Scientists (2024), *Blueprint to Repair Australia's Landscapes: National Case for a 30-year Investment in a Healthy, Productive & Resilient Australia, Part I: Synthesis Report*

⁶ Clean Energy Regulator (2024), *Quarterly Carbon Market Report March Quarter 2024*

⁷ Westpac and Carbon Market Institute (2024), Carbon Markets and Australia's Net Zero Challenge

2. The urgent need for action

Climate change and biodiversity loss represent the greatest threats to our planet's future, demanding large-scale, urgent and widespread action to safeguard our ecosystems and ensure a liveable world for generations to come.

As described by the Chair of the Intergovernmental Panel on Climate Change (IPCC) Dr. Hoesung Lee, "*Climate change and biodiversity loss combine to threaten society*."⁸ This is supported by the World Economic Forum Report⁹ that in 2024 added both critical change to earth systems, and biodiversity loss and ecosystem collapse to its Global Risks list, with stakeholder groups considering critical changes such as climate change as posing a severe risk of long term impacts for people, including reductions in food, water and health security.

In Australia, average temperatures have now exceeded an increase of 1.5 degrees Celsius since records began in 1910. The 2024 State of the Climate Report¹⁰ outlines that extreme climatic events in Australia are increasing: heavy, short-term rainfall events are leading to increased flooding; we are experiencing more extreme heat events; and extreme fire weather and fire season length is increasing, leading to more frequent and severe fires, especially in southern Australia. The report also warns that if current CO2 emissions levels persist, the remaining carbon budget for a 50% chance to limit global warming to a long-term

average of 1.5 degrees Celsius above pre-industrial levels will be exceeded by 2031 – indeed, this level of warming was reached globally for the first time in 2024 – the hottest year on record. The impacts of extreme weather may deplete available economic resources to mitigate and adapt to climate change.

At the same time, global biodiversity is declining at an alarming rate and Australia has one of the highest extinction rates in the world. Australia has lost more mammal species to extinction than any other continent, and the number of ecological communities listed as threatened increased by 20% in the five years to 2021.¹¹ As of August 2024, over 2,100 species were listed as threatened (or extinct) nationally under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act),¹² with additional threatened species listed under state and territory legislation.¹³ Climate change is exacerbating this issue.

Action to tackle the interrelated climate and biodiversity crises must be at a scale that reflects the significant risk posed to the world's environment, societies and economies – and ultimately, our survival as a species. Integrating activities that protect and enhance ecosystems while reducing and storing greenhouse gas emissions is part of the solution.

Action to tackle the interrelated climate and biodiversity crises must be at a scale that reflects the significant risk posed to the world's environment, societies and economies.

⁸ United Nations Sustainable Development Goals (2021), *Tackling Biodiversity & Climate Crises Together and Their Combined Social Impacts*

⁹ World Economic Forum (2024), *Global Risks Report 2024*

¹⁰ Bureau of Meteorology and CSIRO (2024), *State of the Climate Report 2024*

¹¹ Commonwealth of Australia (2021), *State of the Environment Report*

¹² Department of Climate Change, Energy, the Environment and Water (2024), *EPBC Act List of Threatened Species*

¹³ Commonwealth of Australia (2021), *State of the Environment Report*



3. Australian and global context of carbon for nature

KEY POINTS

- Australia has international and domestic emissions reduction and biodiversity targets and obligations that it is required to meet.
- Australian emissions reduction targets have a supporting regulatory framework that drives investment – nature restoration targets currently do not.
- The ACCU Scheme provides a mechanism for emissions reduction targets to be met through carbon credits – including those generated through carbon farming projects.
- The Nature Repair Market will provide a legislated framework for voluntary investment in biodiversity from 2025.
- There are frameworks for climate disclosures (including mandatory disclosures) and nature impact and dependency disclosures (voluntary), however these will not necessarily incentivise voluntary investment in climate or nature by businesses.

Australia, among many countries, has commitments to address the climate and biodiversity crises. These include our commitments under the Paris Agreement¹⁴ and the Kunming–Montreal Global Biodiversity Framework.¹⁵ These 2030 commitments include reducing emissions by 43% (and achieving net zero by 2050), protecting and conserving 30% each of both our land and oceans, and restoring at least 30% of degraded ecosystems.¹⁶

To meet its international and domestic commitment and obligations, the Australian Government is undertaking significant climate and environmental policy reforms.

Reforms undertaken over the past two years include:

- The Climate Change Act 2022 (CC Act),¹⁷ which legislates a national emissions reduction target of 43% by 2030 based on 2005 levels and the bipartisan commitment to net zero by 2050;
- Formation of a Net Zero Authority and framework development of a whole-of-economy Net Zero Plan underpinned by six sectoral emissions reductions plans for the agriculture and land, electricity and energy, transport, industry, resources, and built environment sectors. Work completed includes a Sectoral Pathways Review by the Climate Change Authority¹⁸ and a Future Made in Australia economic plan;
- Reforming the Safeguard Mechanism into a declining baseline and credit emissions trading system (ETS) to drive the decarbonisation of Australia's largest greenhouse gas emitters;
- The 2022 Independent Review of Australian Carbon Credit Units (ACCU Review) led by Professor Ian Chubb AC,¹⁹ and the Australian



Government's ongoing implementation of its 16 recommendations for improving governance, transparency and opportunities for participation;

- The introduction of mandatory corporate climate-related financial disclosures from 1 January 2025, starting with specified large companies;
- The Nature Positive Plan, including:
 - > Ongoing reform of Australia's environmental laws to better protect and enable private investment into nature, including:
 - » Reforming the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act);²⁰
 - » Establishing Environment Information Australia and the Environmental Protection Australia;
 - > The passage of the Nature Repair Act 2023 (NR Act),²¹ to establish the world's first voluntary market for private investment in nature, which intends to be aligned and interoperable with Australia's carbon market.

While Australia's new nature positive and biodiversity legislation, policies and programs are in their infancy, Australia's carbon market – the ACCU Scheme – is over ten years old and provides the basis for understanding the pitfalls and opportunities that emerging nature markets can offer.

The more ambitious climate agenda and launch of the Nature Repair Market provide an opportunity to consider, align and integrate existing and emerging climate and nature policies to realise the potential of carbon

farming projects to achieve measurable, demonstrable outcomes for nature. Marginal increased investment could achieve multiple outcomes, simultaneously.

Conversely, if Australia treats climate and nature as silos, investment will be funnelled into single-outcome projects – rather than nature-based solutions – diminishing the impact of the investment. Meanwhile, the window for achieving our ambitious 2030 climate and nature targets will continue to shrink. Australia can no longer afford to ignore the inextricable links between nature and climate.

How Australia addresses its commitments to addressing the twin climate and biodiversity crises will affect the land use and management of land in Australia. Land use changes and pressures on areas of traditional agricultural land include:

- Carbon farming projects and infrastructure for renewable energy projects.
- Calls for, and commitments to, increasing the area of land for conservation.
- Reduced productivity in some areas as a result of climate change impacts, adaptation interventions and/or the introduction of new activities.
- Increased value of agricultural land as a result of the competing pressures.

Carbon for nature projects offer a practical example of how integration of multiple objectives into one project can optimise land use to reduce pressure on land availability. Integrated landscape-scale planning, such as NRM regional plans, can help manage these land use trade-offs and related tensions.

¹⁴ United Nations Climate Change (2016), *The Paris Agreement. What is the Paris Agreement*

¹⁵ Department of Climate Change, Energy, the Environment and Water (2023), *A New Global Biodiversity Framework: Kunming–Montreal Global Biodiversity Framework*

¹⁶ Department of Climate Change, Energy, the Environment and Water (2022), *Nature Positive Plan: Better for the Environment, Better for Business*

¹⁷ Department of Climate Change, Energy, the Environment and Water, *Climate Change Act (2022)*

¹⁸ Climate Change Authority (2024), *Sector Pathways Review*

¹⁹ Chubb, I., Bennett, A., Gorring, A., Hatfield–Dodds, S. (2022), *Independent Review of Australian Carbon Credit Units: Final Report*

²⁰ *Environment Protection and Biodiversity Conservation Act (1999)*

²¹ *Nature Repair Act (2023)*

3.1 The ACCU Scheme

Carbon farming refers to land management activities that sequester carbon in our landscapes and/or avoid the release of greenhouse gases through active management of vegetation, fire, soil or livestock. Carbon farming is a well-established industry in Australia, where the ACCU Scheme sets out a regulatory framework that incentivises carbon abatement. Carbon farming under the ACCU Scheme is a key policy framework that can be leveraged to support Australia's global emissions reductions obligations under the Paris Climate agreement.

Under the ACCU Scheme, stakeholders that undertake projects that reduce, avoid or sequester greenhouse gas emissions in line with the requirements of an ACCU Scheme method can earn one ACCU for each tonne CO₂-e abated. Proponents can sell ACCUs or hold onto them for their own purposes.

The CFI Act²² provides the legislative framework for the ACCU Scheme which is administered by the Clean Energy Regulator (CER). ACCU Scheme methods ('methodology determinations'), are instruments created under the CFI Act that must meet legislated integrity requirements called the 'Offsets Integrity Standards'.

The first object of the CFI Act is to remove and avoid greenhouse gas emissions in order to meet Australia's obligations under international agreements. Importantly, the CFI Act also acknowledges that carbon farming projects have a responsibility to be consistent with environmental protection and restoration. Specifically, the third object of the Act is to increase carbon abatement in a manner that is:

- (a) consistent with the protection of Australia's natural environment; and
- (b) improves resilience to the effects of climate change.

In addition, Section 23 of the CFI Act, which refers to the form of application states that if:

"the project area, or any of the project areas, for the project is covered by a regional natural resource management plan (it) be accompanied by a statement about whether the project is consistent with the plan."

This requirement for consistency with the relevant regional NRM plan acknowledges that projects are more environmentally advantageous/unlikely to cause negative outcomes if they are consistent with the relevant regional NRM plans.

²² [Carbon Credits \(Carbon Farming Initiative\) Act \(2011\)](#)

SUMMARY

Regional NRM organisations and carbon farming

Australia's 54 regional NRM organisations cover the entire country. The regional NRM sector now has over 25 years of experience with the Council of Australian Governments adopting a regional landscape approach to natural resource management (NRM) in 2000, and many of the NRM organisations formed in the mid-1990s. While they have different governance arrangements, they all undertake sustainable land management and environmental protection and restoration work, and all undertake regional NRM planning.

Regional NRM organisations participate in carbon farming through undertaking on ground activities, providing guidance to land managers, and contributing input to policy development and research. The primary motivation for regional NRM participation in carbon farming comes from the potential to achieve co-benefits aligned with their NRM plan objectives which may not be possible without the carbon investment.

NRM organisations can play a diverse range of roles in carbon farming projects. The roles that an individual NRM organisation plays are influenced by their governance arrangements, available resources, the views of their community-based boards, and the applicability of available ACCU methods to land management in their regions. Some of these roles are described below.

Primary role – trusted providers of independent support and knowledge

Most regional NRM organisations play either a formal, or informal role, as independent, trusted knowledge brokers in the carbon farming space. Regional NRM staff regularly interact with landholders on farms and might provide general information on carbon farming opportunities and challenges in this setting. Many regional NRM organisations also provide formal training and advice on carbon farming, often alongside emissions reduction or natural capital training. Formal examples of this include through delivery of the Australian Government's Carbon Farming Outreach Program (Landscape Boards in South Australia and CMAs in Victoria); delivery of the Australian Government's Carbon plus Biodiversity Pilots (12 regional NRM organisations across six jurisdictions); and delivery of workshops to support landholders to apply and participate in the Queensland Government's Land Restoration Fund (LRF) carbon program (regional NRM organisations in Qld). NSW Local Land Services (LLS) are also delivering workshops across the state on natural capital funding opportunities, including advice on ACCU project opportunities.

Partnerships and collaboration

Many regional NRM organisations work as collaborators on carbon farming projects. For example, in NSW, North Coast LLS partnered with Greening Australia²³ to initiate a pilot to restore and connect an area of high priority for conservation through a biodiverse carbon farming project. The pilot is now a project being funded through the DCCEEW NSW Living Carbon Program. In Victoria, a number of CMAs have partnered with local governments²⁴ to offset their emissions through CMA delivered projects aligned with their regional NRM plan goals.

Research and knowledge

Carbon farming research and knowledge generation is also undertaken by regional NRM organisations. For example, in 2022 NRM South in Tasmania²⁵ was awarded one of five of the Australian Government's Blue Carbon Ecosystem Restoration Grant to restore an ecologically and culturally important saltmarsh and demonstrate the utility of the Tidal Restoration of Blue Carbon Ecosystems ACCU method. Goulburn–Broken CMA in Victoria also worked with a consultancy to undertake pilot research and develop a guide²⁶ on how co-benefits could be achieved, and co-investment attracted, through carbon farming projects.

Method development

Regional NRM organisations have participated in driving ACCU method development. In 2021 Victorian CMAs, Murray LLS and NRM Regions Australia provided funding and support for the coordination of a proposal by Deakin University's Blue Carbon Lab to develop two teal carbon methods. In Western Australia, Wheatbelt NRM is collaborating with Murdoch University, Corrigin Farm Improvement Group (CFIG), Facey Group and the project funder, the Department of Primary Industries & Regional Development, to provide data regarding the ability of three species of saltbush to sequester carbon in saline agricultural land, with the hopes it can become an approved ACCU method.²⁷

Project development

Very few regional NRM organisations undertake carbon project development— whether they are government institutions or NGOs, they generally operate as not-for-profits. However, there are a few regional NRM organisations that have associated 'profit-for-purpose' companies that undertake project development. This includes Rangelands NRM in WA, which runs the subsidiary Australian Producers Consortium and develops HIR projects.²⁸ This model is similar to that of a number of conservation organisations, including Greening Australia and their subsidiary Canopy.

While the CFI Act implies regional NRM plans provide an overarching framework for strategic planning of carbon farming projects that support environmental restoration and protection in Australia, the ACCU Scheme is designed to maximise carbon abatement. Historically, the Commonwealth has been the majority purchaser of ACCUs under a purchasing mandate of delivering 'least-cost abatement'.²⁹ Through a reverse auction process, future ACCUs were purchased under Carbon Abatement Contracts (CACs) financed by the government's former Emissions Reduction Fund (ERF). The government is considering changing their remit of purchasing 'least-cost' abatement to promote additional objectives, including social and environmental co-benefits, which could increase the demand for carbon for nature projects. The introduction of stronger and declining emissions limits – called 'baselines' – for facilities covered by the Australian Government's now-reformed Safeguard Mechanism³⁰ has provided a growing source of demand for ACCUs – at the end of September 2024, 45 million ACCUs were being held in accounts with 27.5 million (61%) of these being held by Safeguard entities.³¹



²³ NRM Regions Australia (2021), [Stories from the Regions – Partnering for Impact](#)

²⁴ NRM Regions Australia (2021), [Stories from the Regions – Local Government, Regional Solutions](#)

²⁵ NRM Regions Australia (2022), [Stories from the regions – Diverse Benefits of Blue Carbon: the Restoration of a Tasmanian Saltmarsh](#)

²⁶ NRM Regions Australia (2024), [Stories from the Regions – Optimising and Leveraging Carbon: Development of a Co-Benefit, Co-Investment Guide](#)

²⁷ See [Wheatbelt NRM](#)

²⁸ NRM Regions Australia (2021), [Stories from the Regions – Profit for a Purpose – Carbon Farming with Rangelands NRM](#)

²⁹ Department of Climate Change, Energy, the Environment and Water (2023), [ACCU Review Discussion Paper](#)

³⁰ For more detailed information on the reformed Safeguard Mechanism, see: [Carbon Market Institute \(2024\), Safeguard Mechanism FAQs](#)

³¹ Clean Energy Regulator (2024) [Quarterly Carbon Market Report – September Quarter](#)

SUMMARY

About the ACCU Scheme

The ACCU Scheme incentivises landholders and organisations to undertake projects that reduce, remove or avoid greenhouse gas emissions. It provides a range of pathways to generate ACCUs equivalent to the amount of emissions reduced or avoided, or for additional carbon stored across a reporting period. Not all ACCUs are delivered through carbon farming activities – the ACCU Scheme also enables generation of carbon credits through sectors such as waste management and transport.

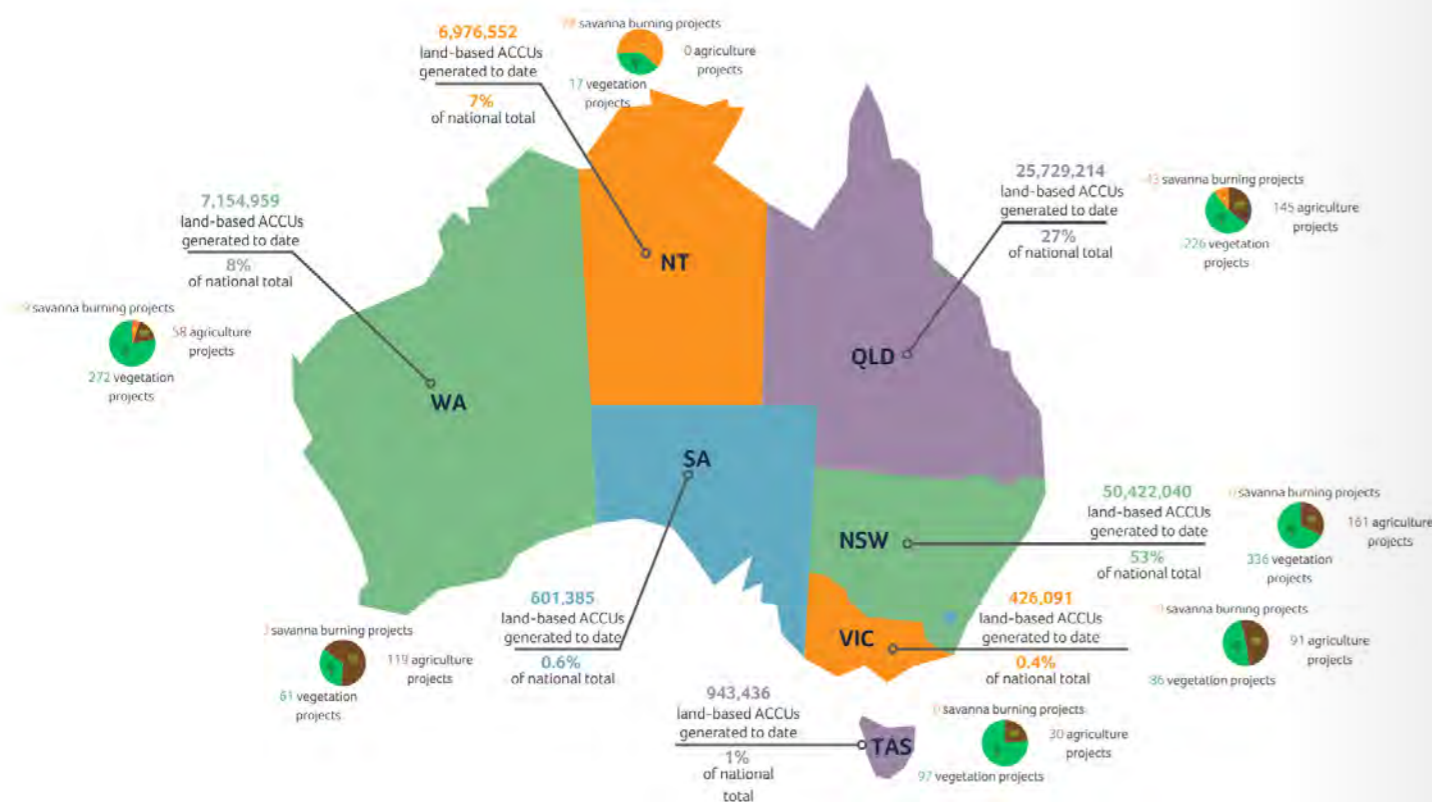
The Clean Energy Regulator issues ACCUs to registered projects for activities implemented following the method guidelines and rules known as methodology determinations or methods. These set out how a particular activity or project type must be undertaken, how emissions reductions are calculated, and the monitoring and reporting requirements for creating an ACCU. Landholders can

earn ACCUs through agricultural and land management activities such as reforestation, changed land and soil management to sequester carbon in soils and vegetation, and improved livestock management to reduce methane emissions.

Many ACCU project methods are complex and carbon farming projects involve balancing risks and opportunities, so many landholders work with commercial carbon project developers to plan and manage carbon farming projects.

Figure 1 illustrates the number of land-based ACCUs issued in each jurisdiction as of May 2024. Modelling shows there is greater potential for land-based carbon sequestration in Australia, underscoring the critical role landholders can play in Australia's emissions reduction pathway and contributing to nature restoration.

Figure 1: Land-based ACCUs generated across Australia³²



³² Carbon Market Institute, (2024), *Carbon Farming Scorecard*

Under the ACCU Scheme, existing methods are periodically reviewed, and can be revised, re-made (if they have lapsed) or removed from the scheme. New methods can also be proposed and developed where new technology or research justifies their development.

The rules of the ACCU Scheme are set out in the CFI Act.³³ Foundational elements of the ACCU Scheme include:

- One ACCU represents one tonne of CO₂ equivalent (t CO₂-e) not released into the atmosphere as a result of the activity undertaken under the scheme;
- ACCUs are tradeable financial products that can be sold to governments and private sector buyers;
- The Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW) is responsible for the development of ACCU methods;
- The Clean Energy Regulator is an independent statutory authority established and governed by the Clean Energy Regulator Act 2011 (CER Act);
- To generate an ACCU, projects must be registered with the Clean Energy Regulator and compliant with an approved ACCU method;
- Administration, compliance and oversight of the ACCU Scheme, including ACCU projects, is the responsibility of the Clean Energy Regulator;
- The ACCU Scheme is also overseen by the Emissions Reduction Assurance Committee (ERAC) – an independent statutory committee that assesses the compliance of methods against the legislated Offsets Integrity Standards.

³³ *Carbon Credits (Carbon Farming Initiative) Act (2011)*

³⁴ *Clean Energy Regulator Act (2011)*.

³⁵ *Emissions Reduction Assurance Committee*, Accessed November 6, 2024



3.2 Nature policy settings and frameworks

The Australian Government undertook significant reforms to national environmental laws and policies in 2022–24. These reforms are intended to respond to the 2020 Samuel Review of the EPBC Act,³⁶ which found that Australia's environment is in decline, and is not sufficiently resilient enough to withstand current or emerging threats, including the impacts of climate change. In response to the findings of the review, in December 2022 the Australian Government released its Nature Positive Plan (NPP),³⁷ which outlines the key features of the government's legislative and policy reform package which includes:

- Reforming the EPBC Act to better identify objectives for environmental protection via new National Environmental Standards;
- Creation of a new statutory body, Environment Protection Australia (EPA), which will administer Australia's environmental protection laws including powers to ensure effective compliance and enforcement.
- Introduction of Environment Information Australia (EIA) to provide accessible transparent up-to-date national environmental data and release the State of the Environment report every two years
- Passing the Nature Repair Act,³⁸ which came into effect in December 2023 to govern the operation of a national voluntary Nature Repair Market.

The Nature Positive Plan and suite of environmental reforms provide a range of opportunities to enable and drive more carbon for nature projects. For example, Environment Information Australia may provide additional and more accessible resources to inform optimisation of carbon for nature projects. However, given its potential alignment with the carbon market, the Nature Repair Market established under the Act is the most relevant legislative reform for carbon for nature projects.

Australia's Nature Repair Act

The Nature Repair Act established a framework for a world-first legislated, national and voluntary biodiversity credit market, the Nature Repair Market. The Nature Repair Market, which is due to begin operating in early 2025, seeks to mobilise private finance to support activities that repair nature on Australian land and waters. The Nature Repair Market will govern generation of Biodiversity Certificates, which are saleable certificates granted to eligible parties to certify nature restoration. Biodiversity Certificates may be purchased by companies or individuals who want to invest in nature positive outcomes. Landholders, including First Nations people and organisations, conservation groups, and farmers will be eligible to participate in the scheme.

The Nature Repair Market is intended to enable carbon farming projects that benefit nature through alignment and interoperability of the ACCU Scheme and Nature Repair Market, specifically targeting improved outcomes for nature and biodiversity. The first proposed method under the market is the replanting native forest and woodland ecosystems method, which can be stacked with carbon credits. The public consultation period on this method closed in late 2024.

The CER will administer the ACCU Scheme as well as the Nature Repair Market to support alignment between these markets. Both ACCUs and Biodiversity Certificates will be registered and traceable under the CER's new Unit and Certificate Registry, with a basic level of the registry made available to some users in late 2024 and more functionality due to be added early in 2025.³⁹



3.3 The private sector and carbon for nature

There are a number of regulatory and market drivers for private investment in climate and nature for both Australian and multinational companies.

As mentioned earlier, the key driver for investment in ACCUs by Australian emitters is the Safeguard Mechanism, however, a number of Australian corporations have made voluntary climate commitments and purchase ACCUs in the voluntary carbon market to help meet them. For example, Climate Active is an Australian Government scheme that certifies organisations (business operations), products, services, events, precincts and buildings that meet their Carbon Neutral Standard. A list of participating businesses is available on the Climate Active website, although the number of ACCUs purchased by scheme participants is not readily available. Under the Climate Active Carbon Neutral Standard, participants are also able to offset residual emissions using international credits – many may choose to use such credits given they are frequently cheaper than ACCUs.

In 2024 the Australian government mandated a disclosure regime for climate-related financial risks through the introduction of a Treasury Laws Amendment (Financial Market Infrastructure and Other Measures) Bill 2024 through Parliament. The legislation aligns with International Sustainability Standards Board (ISSB) standards, using the framework established by the Taskforce for Climate-related Financial Disclosures (TCFD), with disclosure requirements being phased in from 2025–2027. Entities required to report under the regime by 2027 will include all emitters that report under the National Greenhouse and Energy Reporting Scheme and large reporting threshold entities meeting designated criteria.⁴⁰

Modelled on the TCFD, the Taskforce for Nature-related Financial Disclosures (TNFD) provides a corresponding framework to guide companies in identifying, assessing, responding to, and, where necessary, disclosing their dependencies on nature, as well as their nature-related impacts, risks, and opportunities. Globally, 502 organisations from 55 countries have voluntarily committed to making disclosures based on TNFD recommendations, however, as of November 2024, only 23 of those companies were Australian.⁴¹ The Australian Institute of Company Directors (AICD) notes the expectation that over time, the government will consider policy settings regarding broader sustainability reporting such as TNFD, beyond the existing mandated climate reporting.⁴²

Alongside the TCFD and TNFD – and drafted to align with them and other widely used standards frameworks – the Science Based Targets Network (SBTN) provides a global framework for corporate target-setting for climate and nature. Further, a number of Australian corporates have internal environmental, social and governance (ESG) frameworks under which they have made, and report on progress against, various commitments in those spheres.

Because the TCFD, TNFD and new Australian Accounting Standards Board (AASB) standards are disclosure frameworks they do not mandate climate and nature action per se, even for those corporations mandated to make disclosures. This accordingly means that they do not mandate the purchase of ACCUs to offset emissions that can't otherwise be abated, so do not directly drive investments in carbon for nature.

Nevertheless, the combined effect of these mandatory and voluntary disclosure regimes has brought climate (and is starting to bring nature) to the attention of management and boards worldwide, including in Australia. For example, in its 2023 global Climate Risk Barometer report⁴³ Ernst & Young (EY) 'urgently' recommended that companies take the following actions, with their recommendations signalling the types of real-world action that climate disclosure regimes (and by extension, nature and other sustainability disclosure regimes) are expected to drive:

1. Using disclosure to drive behaviour rather than see it as a compliance burden;
2. Using data to drive action and reduce emissions – putting in place governance structures to harness and manage data in such a way that it is always integrated into strategic and operational risk management; and
3. Addressing climate data and related impacts at board level, enabling a holistic approach that encompasses operations, people, supply chain and technology.

While there is scant evidence to date of a large proportion of the Australian private sector implementing such actions, especially relating to nature rather than climate, the current wave of disclosure regimes appears to indicate an increased and more nuanced focus within the private sector on both climate and nature. This in turn could convert into on-ground action, including through Australian corporates investing in carbon for nature.

³⁶ Samuel, G (2020), *Independent Review of the EPBC Act – Final Report*, Department of Agriculture, Water and the Environment, p. viii.

³⁷ Department of Climate Change, Energy, the Environment and Water (2022), *Nature Positive Plan: Better for the Environment, Better for Business*.

³⁸ *Nature Repair Act (2023)*

³⁹ Clean Energy Regulator (2025), *The New Unit and Certificate Registry*. Accessed January 2025

⁴⁰ Australian Securities & Investment Commission (2024), *ASIC Urges Businesses to Prepare for Mandatory Climate Reporting*

⁴¹ Taskforce on Nature Related Financial Disclosures (2024), *Number of Australian TNFD Adopters Rises to 23*

⁴² Australian Institute of Company Directors, Deloitte, MinterEllison (2024), *A Director's Guide to Mandatory Climate Reporting*

⁴³ Ernst & Young Australia (2023), *How Will Understanding Climate Risk Move You from Ambition to Action?*

4. Carbon for nature – the opportunity and delivery

KEY POINTS

- There are numerous methods available under the ACCU scheme that are compatible with nature restoration.
- There is both government and private investment in programs that are specifically designed to deliver high quality, monitored, verified outcomes for nature from carbon farming projects.
- Where nature benefits have not been explicitly planned for in carbon farming projects, it is difficult to quantify the benefits of carbon farming for nature.
- Native vegetation extent and connectivity are likely to have improved in some areas, while improvements in habitat quality are harder to confirm.

The scale of activity required to achieve Australia's climate and biodiversity targets is daunting, but well-designed carbon farming projects provide an opportunity to achieve carbon sequestration and deliver benefits for nature.⁴⁴ The sections following outline the potential of carbon for nature, and how carbon farming is delivering for nature, now.

⁴⁴ Butler D.W., Halford J.J. and Evans M.C. (2014) *Carbon Farming and Natural Resource Management in Eastern Australia*, Queensland Department of Science, Information Technology, Innovation and the Arts, Brisbane.



4.1 ACCU methods that may benefit nature

The greatest opportunities for carbon for nature projects are aligned with approved vegetation methods, including those for reforestation, revegetation and avoiding clearing of native vegetation – interviewees in the project nominated the Reforestation by Environmental or Mallee Plantings (environmental plantings) method as the most likely existing method to deliver for biodiversity. Burning under the savanna fire management method, which reduces overall greenhouse gas emissions through reducing the number, intensity and extent of dry season fires, may also improve biodiversity values when applied at opportune times, and this was also mentioned by several interviewees. The Human

Induced Regeneration method (which has now sunset) was also credited with providing biodiversity benefits through providing potentially large increases in habitat extent. The degree to which these methods have the potential to benefit biodiversity varies spatially and temporally, and according to the quality of their implementation.

As of November 2024 there were 28 ACCU methods available for proponents to register new projects, and 11 of these methods may have direct or indirect benefits for biodiversity – the methods and potential benefits are described in Table 1. Both vegetation methods, and some agricultural methods, such as those for soil carbon and fertiliser in irrigated cotton, which may benefit soil biodiversity and water quality, have been included.

Table 1: List of approved carbon farming methodologies that may benefit biodiversity directly or indirectly.

Category	Method	Potential benefits
Vegetation	Avoided clearing of native regrowth method	Direct benefits for native vegetation, habitat for wildlife. Potential benefits for soil health and water quality.
	Designated verified carbon standard projects method	Direct benefits for native vegetation and habitat for wildlife. Potential benefits for soil health and water quality
	Plantation forestry method	Potential benefits for biodiversity
	Reforestation and afforestation method	Direct benefits for biodiversity
	Reforestation by Environmental or Mallee plantings FullCAM method	Direct benefits for biodiversity
	Savanna fire management methods	Indirect benefits for biodiversity through avoided loss and/or promotion of appropriate fire regimes for vegetation regeneration
	Tidal restoration of blue carbon ecosystems method	Direct benefits for biodiversity
Agriculture	Animal effluent management method	Indirect benefits for water quality and aquatic biodiversity
	Estimating soil organic carbon sequestration using measurement and models method	Potential benefits for soil biodiversity
	Estimating sequestration of carbon in soil using default values method	Potential benefits for soil biodiversity
	Fertiliser in irrigated cotton method	Indirect benefits for water quality and aquatic biodiversity



4.2 Carbon farming programs designed to incorporate and deliver nature benefits

The ACCU Scheme was not designed to deliver benefits for nature, however the development of carbon farming programs and projects that explicitly consider and plan for the achievement of biodiversity outcomes is increasing. Following the independent review of the ACCU Scheme in 2022 which touched on the need to “facilitate but not require provision of co-benefits” and subsequent new legislation to develop a domestic Nature Repair Market, there is further opportunity for carbon farming to deliver on nature outcomes.

In Australia, governments, NGOs, regional NRM organisations and private sector carbon farming project developers are developing programs, frameworks and tools to plan and deliver carbon farming projects with an enhanced nature focus that often work in tandem with Australia’s ACCU Scheme. Such programs include the Australian Government’s Agriculture Biodiversity Stewardship Program Carbon plus Biodiversity trial,⁴⁵ Land Restoration Fund programs in Queensland and Western Australia, and the World Wildlife Fund (WWF) Australia and Climate Friendly Koala Friendly Carbon Pilot.⁴⁶ These programs have the core objective of paying for the nature co-benefits associated with carbon projects, delivering on other fundamental strategic policy or program goals around land restoration, protection and conservation as well as promoting and engaging Indigenous rights and practices. Table 2 below provides an overview of programs in Australia that have been designed to achieve biodiversity and other co-benefits from carbon farming.

⁴⁵ Department of Climate Change, *Energy, the Environment and Water (2024), Agricultural Stewardship Carbon Plus Biodiversity Trial*

⁴⁶ World Wildlife Fund (2022), *WWF Australia and Climate Friendly Koala Friendly Carbon Pilot*

Table 2: Carbon programs that are designed to deliver nature (or other) co-benefits

Program name	Project description	Delivered by	Started	Eligible ACCU methods	Co-benefits sought	Monitoring/ verification framework for nature outcomes
Agricultural Biodiversity Stewardship Package	The Australian Government partnered with 12 regional NRM organisations across the country to demonstrate the potential to use the ACCUs to deliver enhanced biodiversity outcomes in a wide range of environments.	Commonwealth Government and regional NRM organisations	December 2021	Reforestation by Environmental or Mallee plantings	Biodiversity	A monitoring program designed by the ANU. The monitoring program will provide information on the extent to which the anticipated biodiversity outcomes of the projects are being achieved, and deliver insights on the level of monitoring that will be necessary to provide assurance of outcomes for the proposed Nature Repair Market and other programs.
Land Restoration Fund (LRF)	The Queensland Government’s Land Restoration Fund program has been operating for about four years, and provides funding to support carbon farming projects if they meet strong criteria for the delivery of measurable co-benefits, including for biodiversity.	Queensland Government	January 2020	Eligible methods are specific to each investment round	Environmental Socio-economic First Nations	The Land Restoration Fund Co-Benefit Standard ⁴⁷
Carbon Farming and Land Restoration Program	The program combines outreach and support with payments to landholders who deliver ACCU’s alongside one or more of a range of benefits. One of these benefits can be biodiversity or conservation. This program incentivises farmers at the start of a carbon farming project, helping the project through the establishment phase.	Western Australian Government	July 2021	Reforestation by Environmental or Mallee planting; Soil carbon sequestration; farm forestry; plantation forestry	Biodiversity Conservation Salinity mitigation First Nations Agricultural productivity Soil Health	CF-LRP’s Co-Benefit Standard ⁴⁸
Koala Friendly Carbon Pilot	Projects under this pilot Establish high density and high diversity locally relevant native plantings with koala food and habitat plants of >25 different species with stems up to 1,100 stems per ha.	WWF Australia and Climate Friendly	April 2022	Reforestation by Environmental or Mallee Plantings	Biodiversity – specifically koala habitat	Koala Assurance Method registered under the Accounting for Nature verification framework

⁴⁷ Queensland Government (2023), *Land Restoration Fund Co-benefit Standard*

⁴⁸ Government of Western Australia (2023), *Western Australian Carbon Farming and Land Restoration Program Co-benefits standard 2022–2023*

4.3 The general contribution of carbon farming to nature

As described in section 4.2, there are specific programs that have been designed to achieve and account for the benefits that they are delivering for nature. The three case studies throughout this report, demonstrate the opportunity for environmental restoration and protection that can be achieved through nature-led carbon farming projects. Where deliberate actions to restore nature have not been incorporated into program design, it is more difficult to determine the contribution of carbon farming to nature outcomes.

Generally, investment in carbon farming projects provides additional finance for nature in two key ways:

1. Funding from carbon markets where carbon is the driver increases the extent of on-ground nature-related activities that may not otherwise have been funded/viable e.g. vegetation-focussed methods such as HIR or environmental plantings projects; and
2. Investment where biodiversity is at least equally valued with carbon, and biodiversity gains are built-in (e.g. by increasing species diversity or funding understory plantings in a carbon project).

As described in sections 4.1 and 4.2, some carbon projects are being delivered with a specific focus on nature outcomes. The proportion of deliberate 'carbon for nature projects' compared to standard ACCU projects, however, is not known.

There are four principal ways that carbon for nature projects can deliver biodiversity benefits:

1. By increasing the area of available habitat;
2. By increasing the functional connectivity of habitat in the landscape;
3. By improving the quality of habitat; and
4. By building climate resilience.

The following section explores what can be inferred about carbon farming projects contribution to nature more generally.

Increasing habitat extent

Carbon farming is likely to already be increasing the area of habitat across Australia in previously cleared or degraded landscapes, although carbon projects using vegetation methods are generally restricted to the east, southeast and southwest regions of Australia and the ecosystems found there. In heavily cleared landscapes, report interviewees noted the inherent benefits of carbon projects – even without a specific focus on biodiversity – in returning habitat to the landscape. Projects under the HIR method (now discontinued) established permanent native forests on land that had previously been cleared and/or vegetation suppressed. This method has historically generated the largest volume of ACCUs. The HIR method also requires active management of fires, weeds and pests which may assist the recovery of native species⁴⁹ In his interview for this project, ANU Professor Don Butler noted that despite his concerns about the additionality of carbon abatement in some HIR projects, carbon farming projects contribute to biodiversity gains that may not otherwise happen.

“The key thing about the projects that are doing good things for biodiversity, is that they are improving the condition of native ecosystems in ways that are unlikely to happen without the carbon market.”

– Prof. Don Butler, ANU.



However, interviewees emphasised that the priority of the carbon market is to create ACCUs, not deliver biodiversity benefits. Carbon farming projects are delivered under an economic paradigm that may incentivise a homogenous implementation strategy. Projects are incentivised to go where carbon yields are high, relative to restoration costs. Thus, carbon farming projects may not increase habitat extent where it is most needed, for example in areas that have been heavily cleared for cropping activities, and / or in areas with relatively high land prices, like western Victoria. This is supported by recent research from James Cook University researchers,⁵⁰ which found that ACCU projects are primarily located in low-cost, arid lands of lower productivity, with fewer, and smaller, projects located in more productive lands, which are the areas that tend to overlap more with threatened species habitat. This finding means the species that most need to have their habitat restored, are the least likely to have it restored under current carbon farming settings that are delivering large-scale sequestration. However, the James Cook research did note that there was some overlap of threatened species habitat areas with carbon farming projects – of the fauna and flora species assessed, there was around a 32 percent overlap of habitat areas with ACCU project areas, with higher numbers of threatened species occurring in areas where active restoration (environmental plantings method) projects were delivered, compared to HIR or avoided deforestation projects.

Improving habitat quality

There is limited evidence that carbon farming projects are improving habitat quality relative to a baseline. Recent analysis by EY⁵¹ found that while current carbon focused policies can drive large-scale land sector sequestration, these will not necessarily deliver habitat restoration at scale. This was reflected in feedback by some interviewees, who felt that carbon farming projects are often 'tree planting' projects rather than ecosystem restoration projects, and although plantings may reflect vegetation found in that area, interviewees felt that few projects involve formal assessment of baseline biodiversity or benchmark habitat conditions.

There is an underlying assumption that planting trees and shrubs will have a benefit for biodiversity in a cleared landscape, which is often true. However, restoring ecosystems and the biodiversity contained within is more complex and includes the restoration of a broader suite of species, structure, age class and underlying ecosystem processes. Optimised biodiversity projects might also include elements such as dead logs and rocks, that are very unlikely to be included in a carbon project due to both methodological, practical implementation and cost constraints.

The savanna burning ACCU method has led to important opportunities for First Nations Peoples to undertake traditional burning which can support improvements to habitat. Debbie Symonds, General Manager of the Olkola Corporation observed:

“We are seeing more endangered species, [like the] Red Gosling Hawk, seeing things we haven't seen before, every time we finish a season we see new things. The boys will notice that grass species are coming back, different types of grasses that we haven't seen in different areas before, and they are checking in with the Elders – there are grasses and other vegetation they haven't seen since they were kids.”

⁴⁹ Carbon Market Institute, *Human-Induced Regeneration Fact Sheet*. Accessed November 2024

⁵⁰ Engert, J. E., & Van Oosterzee, P. (2024), *“Limits to the Ability of Carbon Farming Projects to Deliver Benefits for Threatened Species”*, Nature Ecology & Evolution.

⁵¹ Ernst & Young Australia (2023), *Creating a Nature Positive Advantage*

Improving habitat connectivity

Report interviewees perceived habitat connectivity as a key biodiversity benefit that could be achieved through carbon farming projects, while noting that this didn't always happen in a strategic manner. If strategically placed, carbon farming projects have the potential to increase connectivity between protected areas, nature reserves or national parks, leading to beneficial outcomes.

"Where you are consolidating existing areas of habitat and ecosystems, there is a clear outcome."

– Gabrielle Davidson, ecologist and Terrain board member.

Increasing the structural connectivity of vegetation between remnant vegetation patches is likely to have a number of biodiversity benefits, including an increase in an area available as a home range, by reducing the perimeters of patches and facilitating species movement across the landscape, especially animals that can disperse through treed landscapes, such as possums and gliders.

Environmental planting projects without a concerted biodiversity focus were also seen as delivering important landscape-scale outcomes by some interviewees – just at a slower pace – e.g. as trees become established, they provide habitat for birds and animals to 'do the rest' by spreading seeds of additional native plant species.

One interviewee stated that developing carbon farming projects in areas with adjacent biodiversity can also support the carbon farming project to succeed, reducing risk:

"Connectivity helps the carbon project get up – you aren't just trying to plant a carbon forest in a desert, the ecosystem services provided by large remnant tracts support successful carbon projects." – Jay van Rijn, Covalent.

Building climate resilience

Strategically planned carbon for nature projects can also play a role in reducing risk from climate change impacts in a variety of ways. Increasing biodiversity lowers risk for nature and carbon project success because:

- Diverse locally adapted environmental plantings are often more drought resilient than introduced species or native monocultures;
- Complex vegetation structures within a system are more able to withstand shocks and provide connectivity and refugia for wildlife;
- More biodiverse systems are more resilient to disease, including the growing risk of climate-borne diseases.

Carbon for nature projects that strategically consider best practice adaptation and risk reduction in a landscape context to deliver additional benefits for people and nature under existing ACCU methods could include:

- Revegetating catchments and maintaining high levels of groundcover to increase rainfall retention, build drought resilience, reduce soil loss through erosion and reduce impacts on built infrastructure from downstream flooding and streambank erosion
- Restoration of mangroves and other coastal vegetation to reduce the erosive impacts of sea level rise; and
- Deploying cultural fire management and green firebreaks across landscapes to sequester carbon and reduce bushfire risk.

It is important to note that carbon farming projects need to be planned to be climate resilient, in order to deliver ecosystem resilience. Polly Mitchell from NSW National Parks and Wildlife Service said:

"[With] Any sort of plantings, we are looking at considering climate-ready revegetation to ensure the expansion of resilience of those systems".

CASE STUDY

Koala Friendly Carbon Initiative Pilot Program

Project objectives

Generate more habitat for Koalas as an endangered species. The program hopes to recruit landholders to plant 10,000ha of quality koala habitat over 10 years. If the project meets its planting target, up to 8 million high-quality biodiverse ACCUs could be generated through the program.

Project progress

Since 2022 WWF has recruited ten individual landholders, with total project area across all farms adding up to 720ha with 275ha planted to date. The program is receiving the first issuance of ACCUs from the first pilot of five projects—the carbon credits were available for purchase from late 2024.

ACCUs generated are shared between the landholder, WWF Australia, Climate Friendly, and the Koala Friendly Carbon Initiative revolving fund – which helps to provide support to future rounds of landholders to undertake plantings. The biodiversity co-benefits of the projects are expected to attract a premium price compared to standard environmental planting ACCUs, but will not be available for general sale. A very high demand criteria has been set, so the ACCUs can only be sold to buyers with ambitious climate targets – compliance buyers are not eligible.

Project monitoring and verification

Biodiversity benefits will be monitored and assured by WWF according to a Koala Assurance Method developed by WWF and partners and registered under the Accounting for Nature verification framework. The Koala Assurance Method involves monitoring both habitat quality improvements from a baseline, and koala population increases, at years 2, 5 and 10.

"We want people to purchase credits that have a nature positive impact. We expect the demand will be there."

– Tanya Pritchard, WWF Australia

Photos courtesy of WWF Australia



PROJECT MANAGEMENT AND PARTNERS:
WWF Australia with Climate Friendly and individual landholders, with some funding support from the NSW Government.

ACCU METHOD:
Reforestation by Environmental or Mallee Planting with a 100-year permanence period.



PROJECT ACTIVITIES:
Establish high density and high diversity locally relevant native plantings with koala food and habitat plants of >25 different species of up to 1,100 stems per ha.



LOCATION:
Koala habitats along the east coast of Australia.



TIMING:
The first pilot was established in 2022, with the program aiming to run for 10 years.

"The Koala Friendly Carbon Initiative is one of the worlds' first premium carbon credit schemes to provide real measurable improvements in the recovery of a threatened species. It's a koala conservation project with a carbon co-benefit."

– Manager for Koala Recovery and Landscape Restoration Tanya Pritchard, WWF Australia

5. Barriers to carbon for nature projects

KEY POINTS

- Carbon farming projects that deliver additional, verified benefits for biodiversity cost more than projects with a primary focus on carbon.
- Carbon farming projects with methods that have lower establishment costs, such as HIR, have historically dominated supply over methods such as environmental plantings, driving ecosystem outcomes based on price rather than strategic planning.
- Carbon farming projects, in accordance with ACCU methods, are monitored and verified for carbon outcomes with few undertaking additional MRV and certification of biodiversity claims. There are currently few clear pathways or accepted standards or frameworks to achieve this.
- Meaningful alignment with NRM plans would improve nature outcomes from carbon farming, particularly connectivity. Whilst carbon farming project proponents typically state that projects are consistent with regional NRM plans – there is no oversight or evidence mechanism.
- Carbon farming projects under the ACCU Scheme are typically driven by a robust, liquid carbon market targeting emissions reductions – there are no equivalent policy drivers for investment in nature (aside nascent sub-national programs), limiting the incentive for development of these sorts of projects.
- The scale and reliability of demand for investible carbon for nature projects is unclear.
- Some buyers are prepared to pay a premium for carbon for nature ACCUs (and other co-benefits), and business reputation and the opportunity to reduce supply chain risks through investments in areas of company operation are drivers for voluntary investment in carbon for nature projects.
- Carbon and nature outcomes are not always complementary. Some carbon farming projects provide valuable outcomes that are not associated/ incompatible with nature outcomes (i.e. necessary timber from plantation forestry projects) and likewise some ecosystems that are worthy of restoration, such as grasslands, are unlikely to generate stable carbon sequestration at quantities that would be economically viable for emissions reduction investment.

While it is clear that there are supplementary opportunities to deliver additional, at-scale benefits for biodiversity from carbon farming projects, current policy and market settings are not optimised to deliver these outcomes. The following section discusses the key barriers to achieving more carbon for nature projects.

5.1 Carbon for nature projects are more costly

Carbon farming projects that deliver additional, verified benefits for biodiversity generally cost more than projects targeting carbon outcomes. This higher cost may include:

- Additional planning and establishment costs for a more diverse species mix, including plants that are used less commonly, and may not contribute to ACCU output;
- Potential delivery of fewer ACCUs for projects that are planned to focus at least equally on biodiversity and other nature outcomes;

- Ongoing costs associated with MRV outcomes for nature alongside requirements for ACCUs (and potentially certification, where required).

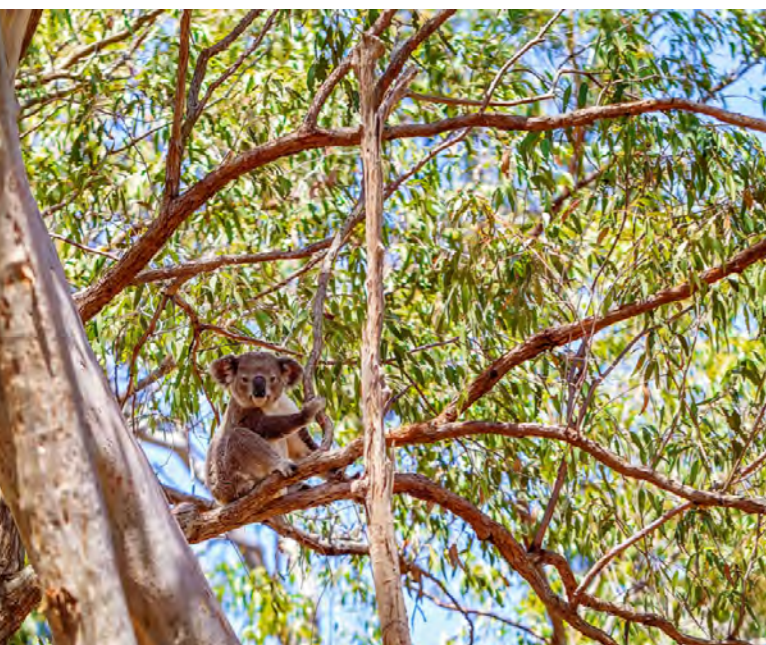
Carbon-led projects provide funding for some, but not all biodiversity-related activities (Table 3). For example, reforestation carbon methodologies support the regeneration or planting of trees and shrubs >2m high, but do not require understory plantings, thereby constraining the overall biodiversity benefits derived from a standard ACCU project under current methods.

Table 3: Carbon-led revegetation projects fund fewer desirable biodiversity features than may typically be required for a high integrity biodiversity project.

Desirable biodiversity features	Typically funded through carbon markets	Potentially funded through biodiverse carbon markets
Biodiversity planning	Limited	✓
Trees	✓	✓
Shrubs >2m	✓	✓
Shrubs <2m	X	✓
Increased diversity of species mix, regardless of strata	X	✓
Potential increase in plants per hectare, depending on ecosystem	X	✓
Groundcover & understorey plants	X	✓
Hollows and nest boxes	X	✓
Rocks	X	✓
Reinstatement of natural processes, e.g. fire dynamics, flooding and drying cycles	Fire dynamics through savanna burning method	✓
Pest animal control	Herbivores and ferals	May require additional control (e.g. feral cat control)
Project maintenance	Trees and shrubs only	More intensive maintenance may be required
Biodiversity monitoring	Plant species, compliance-based monitoring only	Allows for more comprehensive biodiversity monitoring
Land use limitations	Livestock exclusion during plant establishment	Livestock access allowed only where compatible with biodiversity outcomes

Interviewees noted that the current ACCU method most likely to provide benefits for nature is the environmental plantings method. As noted by EY,⁵² environmental plantings have inherently more complex establishment requirements and lower carbon sequestration compared to monoculture carbon forestry plantings, and that is before they have been optimised for biodiversity. This is supported by the work of Engert and Oosterzee (2024)⁵³ cited earlier which noted that restoration of biodiverse environments is very costly, and that this has been reflected in the development of many more ACCU projects in areas that are more marginal for both agriculture and biodiversity under methods such as HIR and avoided deforestation, that are comparatively cheap and straightforward to establish and maintain. As of October 2024, only around 2% of ACCUs sold from vegetation projects came from projects using the environmental plantings method.⁵⁴

Interviewees pointed out that the requirements of the environmental planting method under the ACCU Scheme can be met, and at the same time biodiversity benefits can be achieved, but maximising biodiversity benefits through carbon farming comes at an additional cost. This includes high up-front costs – WWF Koala Friendly Carbon Initiative projects are estimated to cost 30–40% more to establish than carbon focussed environmental plantings. This is due to including more species, and higher overall density, than what is required under the ACCU method.



The long-term cost of preserving the biodiversity values in carbon for nature projects was also mentioned by interviewees, with different methods or pathways discussed. For example, there was a question about how the ongoing maintenance of 100-year permanence period carbon farming projects will be paid for to ensure and maintain ongoing benefits for nature. This is especially relevant where projects may produce fewer ACCUs than anticipated due to climatic conditions, or fail, and require replanting. Polly Mitchell from NSW National Parks and Wildlife Service commented on some issues with their environmental planting project.

“There have been issues with the environmental plantings project. [It was] planted in a drought, then there was fire, floods, and Covid... now we are going through a review with the regulator to find a more reasonable delivery for that project.”

The NSW Biodiversity Conservation Trust (BCT) was flagged as an example for how ongoing maintenance should be managed, e.g. an endowment fund could be developed to maintain biodiversity benefits from carbon farming projects in perpetuity following the end of the crediting period or permanence period. A recently published report on carbon farming in south-western Queensland⁵⁵ noted that accounting for the broader ecosystem services of a carbon farming project may make it viable – particularly if the payments continue beyond the crediting periods.

While incorporating additional biodiversity values into carbon farming projects may reduce competition for land where biodiversity and climate related goals can be met – and resourced – concurrently, there are still instances where these objectives compete with others. For example, one project developer said they don't typically seek to maximise biodiversity outcomes from projects, because their focus is on planning environmental plantings projects that can be reincorporated into farmland once the trees are sufficiently mature.



“Canopy cover and designing the planting that will enable mixed land use into the future, including bringing stock back into the landscape. We are not focused on shrubs, herbs, or floral biodiversity”.

– Jay van Rijn, Covalent

In this case, maximising biodiversity outcomes from carbon farming projects might conflict with the business goals of project developers or landholders, although the interviewee noted that a reliable increase in the value of a carbon for nature ACCU might make it worthwhile and modify the determination of the highest and best use of a property. Further, the opportunities provided by enhanced on-farm natural capital for agricultural productivity gains are supported by extensive research. Farming for the Future is building the first national-scale evidence base that documents on-farm natural capital and its relationship to business performance on Australian farms. Data collected from 113 farms in selected regions in NSW, Victoria, Tasmania and Western Australia indicates that natural capital is positively correlated with production efficiency, gross margin, earnings before interest and tax (EBIT) and resilience to both climate and market shocks.⁵⁶ Examples of on-farm natural capital and related ecosystem services include:

- Increased on-farm woody vegetation in shelterbelts decreases heat/cold stress, leading to fewer livestock deaths (particularly of young or vulnerable animals) and improved productivity/weight gain.⁵⁷

- Riparian vegetation increases soil stability and improves water quality and temperature, which also contribute directly and indirectly to soil health and livestock productivity and health.⁵⁸
- Increasing the vegetation around farm dams and reducing direct livestock access leads to reduced methane emissions from the dams and improved water quality, which may lead to increased feed intake by livestock and weight gain efficiencies.
- High natural capital farms have lower input costs (energy, fodder, health and labour – researchers suggested that natural capital may replace or substitute some of these inputs, contributing to production efficiency.
- Farms with high amounts of natural capital have higher resilience to both climate and market shock.⁵⁹

Upskilling farm advisors, including carbon project developers and advisors, to better understand and communicate the quantum of gains that can be supported by a healthier on-farm environment to landholders, could also drive more participation in carbon for nature type projects. A new ACCU method currently under co-development, the Integrated Farm and Land Management (IFLM) method, may incentivise additional on-farm natural capital and increased biodiversity by enabling crediting for multiple activities including managed regeneration, plantings and soil improvements.

⁵² Ernst & Young Australia (2023), *Creating a Nature Positive Advantage*, p.42.

⁵³ Engert, J. E., & Van Oosterzee, P. (2024), *“Limits to the Ability of Carbon Farming Projects to Deliver Benefits for Threatened Species.”*, Nature Ecology & Evolution.

⁵⁴ Clean Energy Regulator (2024), *ACCU project and contract register*

⁵⁵ Pollinate and Band Consulting (2024) *Study into the Impacts of Carbon Farming on South-West Queensland Communities*.

⁵⁶ Farming for the Future (2024), *‘An impact focussed research and change program for Australian producers’*

⁵⁷ England, J.; O’Grady, A.; Fleming, A.; Marais, Z.; Mendham, D (2020) *Trees on farms to support natural capital: An evidence-based review for grazed dairy systems*, *Science of The Total Environment* (704).

⁵⁸ Dobes, L., Crane, M., Higgins, T., Van Dijk, A. I. J. M., & Lindenmayer, D. B. (2021). *Increased livestock weight gain from improved water quality in farm dams: A cost-benefit analysis*. PLoS ONE, 16(8).

⁵⁹ Ogilvy, S., Heagney, E., Gregg, D., & The Macdoch Foundation (2024). *Farming for the future*.

Cassowary Credits

Project objectives

Tropical North Queensland is home to two interconnected World Heritage areas – the Wet Tropics Rainforest and the Great Barrier Reef. The area is a biodiversity hotspot, but is threatened by development pressure, invasive species and climate change. The Cassowary Credit Scheme was developed to enable investment to restore the unique and diverse tropical ecosystems. This investment may eventually be supplemented by stacking with ACCUs.

Project progress

An investigation of environmental market schemes started by Terrain NRM in 2018 found that no existing schemes would meet the needs of the landscape, with its diverse tropical ecosystems, or explicitly deliver social and cultural benefits to the regional communities. Terrain undertook a feasibility study and engaged with the local community to develop Cassowary Credits.

The scheme provides a framework to quantify the biodiversity gain from projects and convert this to biodiversity credits. Projects will also deliver carbon outcomes and testing is underway to determine if a Cassowary Credit project can be stacked with a carbon project to generate both biodiversity and carbon credits.

“Building the scheme from scratch gave us that opportunity to build in the critical requirements for benefits to flow through to the regional community and Rainforest Aboriginal People.”

– Bronwyn Robertson, Project Leader at Terrain NRM.

Bronwyn said science shows that repairing and restoring forest areas is one of the most important things for building resilience against threats to the Wet Tropics.

Project monitoring and verification

Cassowary credit projects are conducted in accordance with the approved Standard methodology, which is now registered with EcoMarkets Australia. A Cassowary Credit represents a unit of rainforest condition improvement over one hectare of land. Projects are implemented, maintained and monitored, with outcomes independently validated and credits calculated.



Photos courtesy of Terrain NRM



PROJECT MANAGEMENT AND PARTNERS:
Terrain NRM, WWF Australia and the Queensland Land Restoration Fund.



ACCU METHOD:
Potential to stack Cassowary Credits with the Reforestation by Environmental or Mallee Plantings method.



PROJECT ACTIVITIES:
Revegetation with a high diversity of tropical rainforest species.



LOCATION:
Wet tropics in far north-east Queensland



TIMING:
Pilot projects commenced in 2024.



5.2 Lack of a consistent, transparent framework for planning, monitoring and verifying biodiversity outcomes in carbon projects

Best practice for planning and verifying biodiversity project outcomes involves planning to deliver an achievable biodiversity gain, establishing a baseline for the present level of biodiversity, and undertaking monitoring using an established, science-based method to establish what, if any, improvement in condition has occurred.

Overall, the majority of carbon farming projects under current ACCU methods are not designed to deliver, nor are they monitored for, biodiversity outcomes. While a consistent, transparent framework to support the planning, design and MRV of carbon for nature projects would be welcome, interviewees suggested that current levels of information and data are adequate to support carbon projects to benefit biodiversity. In other words, data is not perceived to be a key limiting factor. A tool or tools that combine biodiversity data with carbon farming data to help optimise biodiversity outcomes from all carbon farming projects could support additional participation in carbon for nature projects.

There is currently no uniformity or transparency in how, or if, projects that make claims about biodiversity benefits from carbon farming projects, are monitored or verified. While the CER website says that biodiversity and other co-benefits may be achieved from carbon farming projects, it is explicit that it does not have the regulatory function to check or provide assurance on non-carbon benefit claims, and that buyers are responsible for undertaking due diligence when purchasing ACCUs that claim co-benefits.⁶⁰ The CER goes on to state that “Commercial agreements should specify the project details and provide authenticity assurance of the non-carbon benefits delivered by the project”. In 2019 Baumber et al.⁶¹ found that while both buyers and sellers in environmental market schemes need to be confident payments made are commensurate with the quantity of services being delivered (or likely to be delivered), availability of data and visibility of information around the co-benefits of carbon farming is low.

However, there are a number of recognised approaches to establish biodiversity baselines and to monitor and verify outcomes from biodiversity projects that could be, or are already, used to verify biodiversity co-benefits from carbon farming projects. Table 4 provides an overview of some current approaches that can, and are, being used to model, measure and verify nature outcomes from carbon farming.

⁶⁰ Clean Energy Regulator, *Carbon Credits*, Accessed November 2024

⁶¹ Baumber, et al. (2019), *Promoting Co-benefits of Carbon Farming in Oceania: Applying and Adapting Approaches and Metrics From Existing Market-based Schemes*. Ecosystem Services.

Table 4: Approaches for defining, measuring and valuing natural capital can be used to verify nature outcomes from carbon farming

Approach	Description	Value and examples
Accounting and reporting standards and frameworks		
System of Environmental Economic Accounting (SEEA) ⁶²	The SEEA is a statistical system that brings together economic and environmental information into a common framework to measure the condition of the environment, the contribution of the environment to the economy and the impact of the economy on the environment.	A blue carbon project being undertaken by NRM South in Tasmania under the Australian Government's Blue Carbon Ecosystem Restoration Program is using this approach to monitor and verify co-benefits from the project.
Accounting for Nature ⁶³	Accounting for Nature (AFN) provides a transparent, verifiable and certifiable environmental accounting framework to inform better investment, policy and management decisions in natural capital. These include carbon co-benefits, green bonds, environmental offsets and impact investments.	The Koala Assurance Method developed by WWF and partners is registered under the Accounting for Nature verification framework and will be used to verify outcomes from WWF Australia's Koala Friendly Carbon Projects. The QLD Government's Land for Nature Biodiversity Co-benefits also use methods verified under AFN.
Society for Ecological Restoration Standards ⁶⁴	To raise the standard of restoration and rehabilitation practice across all sectors. The document provides a blueprint of principles and standards that will aid voluntary as well as regulatory organisations in their efforts to encourage, measure and audit ecologically appropriate environmental repair in all land and water ecosystems of Australia.	Canopy (Greening Australia) have used the SERA restoration standard and are looking to standardise their monitoring practices around this standard.
Land Restoration Fund (LRF) Co-benefit Standard ⁶⁵	LRF has developed a co-benefits standard which sets out processes and requirements for LRF projects to measure, report and verify co-benefits. LRF projects may seek to claim co-benefits from one of more of the following co-benefit categories: <ul style="list-style-type: none"> • Environmental – Co-benefits for the environment, such as improved biodiversity and habitat for threatened species, as well as healthier soils, wetlands, and water systems; • Socio-economic – Co-benefits that improve the resilience and strength of regional communities by supporting direct and indirect employment and skills and increasing economic opportunities; • First Nations – Co-benefits that provide on-Country business opportunities and new service delivery businesses for First Nations people, as well as supporting cultural and customary connections. 	This outlines an accepted approach to measure, report and verify LRF co-benefits leveraging the Accounting for Nature framework and the Core Benefits Verification framework.
Core Benefits Verification Framework ⁶⁶	A verification process developed by the Aboriginal Carbon Foundation that can be used by all Indigenous people globally. A key principle of the framework is Indigenous ownership of the verification process. It covers the following domains: social, cultural, environmental, economic, health and political/self-determination. It can be used in conjunction with Australian carbon methods.	Indigenous-developed and owned. Used within the Land Restoration Fund.
Reef Credit Standard ⁶⁷	A scheme overseen by Eco-Markets Australia. The standard ensure that Reef Credit Projects meet stringent environmental, financial and community integrity conditions to effectively contribute to water quality targets described in the Reef 2050 Water Quality Improvement Plan (2018) ⁶⁸ and any subsequent revisions to the water quality targets. New methodologies under the Reef Credit Standard claim they may be stackable with ACCUs	Applied to developing Reef Credit Projects and methodologies; validate, register, monitor, and verify Projects; and issue, track and transfer Reef Credits amongst other matters.
Nature Repair Market methods (in development)	Legislative instruments that set out requirements for Nature Repair Market projects, including conditions for project registration, certificate issuance, activities, reporting, notification, record-keeping and monitoring. Methods are still in development, with the first method (Replanting Native Forest and Woodland Ecosystems) recently made available for public consultation.	Methods still in development. Proposed Replanting Native Forest and Woodland Ecosystems method intended to be stackable with Reforestation by Environmental or Mallee Plantings (ACCUs) method. Nature Repair Market methods are to be supported by an Ecological Knowledge System (EKS) to assist market participants design projects and assess benefits to biodiversity.
Accessible planning tools for carbon and biodiversity projects		
Landscape Options and Opportunities Calculator - Biodiversity (LOOC-B) ⁶⁹ and Landscape Options and Opportunities Calculator - Carbon (LOOC-C) ⁷⁰	The LOOC-B tool offers a consistent standardised assessment of biodiversity indicators suitable for monitoring how biodiversity has changed over time and for anticipating the likely benefits of implementing different management strategies. LOOC-C provides estimates of what carbon increase is possible so that you can consider whether a project is viable based on project size and land condition. It matches farm details and activities to ACCU methods and the Land Restoration Fund (LRF) program.	LOOC-B and LOOC-C from CSIRO can provide a starting point to estimate the potential biodiversity benefits of changing land management practices and opportunities to deliver ACCUs but they are not integrated.
Platform for Nature and Land Repair (PLaNR) ⁷¹ (in development)	Aims to: <ul style="list-style-type: none"> • Help landholders to get information about the attributes of their property and plan biodiversity projects; • Help landholders to monetise the biodiversity services they provide by enabling them to connect with buyers; • Help corporate and/or philanthropic organisations to voluntarily buy biodiversity services to support their organisational goals; • Kick-start private sector biodiversity markets by building transparency and credibility in the market. 	A starting point to estimate the potential biodiversity benefits of changing land management practices and estimate carbon sequestration potential. Intended to allow definition of a biodiversity project area, record details of biodiversity certificate issuance and facilitated trading of biodiversity certificates.

⁶² [System of Environmental Economic Accounting \(SEEA\)](#), Accessed November 2024

⁶³ [Accounting for Nature](#), Accessed November 2024

⁶⁴ [Society for Ecological Restoration Standards](#), Accessed November 2024

⁶⁵ Queensland Government, [LRF Co-benefit Standard](#), Accessed November 2024

⁶⁶ Aboriginal Carbon Foundation (2019), [Core Benefits Verification Framework](#)

⁶⁷ [Reef Credit Standard](#), Accessed November 2024

⁶⁸ Department of Environment, Science and Innovation (2024), [Reef 2050 Water Quality Improvement Plan](#)

⁶⁹ [LOOC-B](#), Accessed November 2024

⁷⁰ [LOOC-C](#), Accessed November 2024

⁷¹ Department of Climate Change, Energy, the Environment and Water [PLaNR](#), Accessed November 2024



“Being able to have standardised ways to be able to demonstrate a level of certification and outcomes for a biodiversity project within a particular standard would probably improve the ability to have a price signal”

– James McGregor, Canopy

One project developer said their company had just increased baseline monitoring on projects to 'leave the door open' for payment for verifiable environmental benefits at a later stage. A number of project developers interviewed stated that they undertake biodiversity monitoring that is additional to what is required by carbon methods because they see themselves using the carbon market to enhance biodiversity or nature, not only to generate carbon credits.

The lack of transparency around verification of biodiversity benefits may undermine both supply and demand of carbon for nature projects. Interviewees from the business sector noted that investors are wary of potential greenwashing accusations, and that transparent verification processes for nature outcomes would increase confidence and reduce risk.

Integrity of the carbon and nature repair markets will be key to driving investor confidence and the flow of finance. Issues around integrity led to the 2022 Independent Review of ACCUs⁷⁵ (ACCU review), with the Australian Government implementing a number of recommended changes to build on, and strengthen the integrity of carbon farming in Australia, including measures to increase transparency. CMI suggests the reforms are critical for maintaining investor and community confidence in the scheme and learnings from the carbon market must apply to the development of the Nature Repair Market.⁷⁶

5.3 Consistency with regional NRM plans is unsupported

As per section 3.1 of this report, the CFI Act requires project proponents to make a statement about where their project is consistent with the relevant regional NRM plan in which the project occurs. The Act also requires the project proponent to disclose if the project becomes inconsistent

with the relevant plan. An assessment of projects registered under the environmental plantings ACCU method found that of more than 260 registered projects registered to October 2024, all claimed they were consistent with the NRM plan – as did all other vegetation-based ACCU projects, including those for plantation forestry.⁷⁷ There is currently no auditing or oversight by the CER or another designated body to determine whether carbon farming projects are consistent with regional NRM plans.

Both the interviews conducted within this project, and previous communications between regional NRM organisations and project proponents/developers, found that regional NRM plans are used in a varied way with no standardised framework, nor assessment criteria. Some project proponents use regional NRM plans to actively identify opportunities or to inform development of projects. Without reference to a regional NRM plan and its landscape-scale approach to planning, carbon farming projects risk being piecemeal and disconnected. Regional NRM organisations and others interviewed in the project agreed

that increased consideration of regional NRM planning in carbon farming projects could help achieve better biodiversity outcomes:

“You would get more of a landscape scale approach if project developers looked at plans more closely – for example, looking specifically at biodiversity, you might stand back and create a vegetation corridor that has a higher ecological value whereby you can look more broadly across the landscape, and see what needs to be achieved and target activities in the broader environment.”

– Jennifer Hemer, NRM South

As traditional agricultural land diversifies into multiple, or other uses, including for renewable energy, carbon farming, and nature restoration projects, regional NRM plans were



Internationally, various international carbon crediting frameworks also include voluntary standards to account for non-carbon benefits of carbon projects – such as the Verified Carbon Standard Community, Climate and Biodiversity Standards⁷² under VERRA and Gold Standard⁷³ which combines climate (carbon) and development co-benefits. While they differ in their detail, they are aimed at creating rigour around the transparency and consistency of reporting biodiversity, social and other benefits created by carbon projects. However, because Australia automatically includes emissions reductions from Australian-based vegetation projects (Full Carbon Accounting Model (FullCAM) calculation tool for modelling Australia's greenhouse gas emissions from the land sector) in its national inventory toward its Nationally Determined Contribution reporting under the Paris Agreement⁷⁴ use of any international standards for carbon credits in Australia raises issues of double-counting – limiting the uptake of the associated international co-benefit standards.

Approaches described by interviewees for substantiating biodiversity co-benefit claims ranged from little or no monitoring, to approaches which include the use of bird surveys as a proxy for overall biodiversity health, the adoption of Society for Ecological Restoration Standards, and the use of methodologies verified through the Accounting for Nature framework. Interviewees saw value in having overarching standards, or interoperability between verification methods and frameworks:

⁷² Verra (2013), Community, *Climate and Biodiversity Standards*

⁷³ *Gold Standard*

⁷⁴ Dept. Climate Change, Energy, the Environment and Water, *Tracking and reporting greenhouse gas emissions*

⁷⁵ Chubb, I, et al, (2023), DCCEEW, *Independent Review of Australian Carbon Credit Units*

⁷⁶ Carbon Market Institute (2024), *Carbon Farming Scorecard*

⁷⁷ Clean Energy Regulator (2024), *ACCU project and contract register*

seen as having a critical role in ensuring that carbon farming projects are appropriate land use for that area or how they could contribute within a mixed land-use scenario:

"We really need to have the regional and environmental context, so that information in the NRM plans are really important, and they are the only avenue for that information – there are no comparable plans."

– Bronwyn Robertson, Terrain NRM

Regional NRM plans also include information about climate risk. Funded through the Australian Government, climate smart planning was built into regional NRM plans in around 2016 through work with the National Climate Change Adaptation Research Facility (NCCARF). Investment in updating this modelling for all regional NRM organisations would provide up to date, landscape-specific information to inform planning of carbon for nature projects to limit risks to the carbon farming project, the nature benefits it seeks to support, and to people, assets, and investors, as appropriately considered and informed vegetation projects can reduce the risk from climate related extreme weather events and/or play a role in climate adaptation.

More recently Biodiversity and Natural Capital Assets Emergency Preparedness Response Plans (EPRPs) were developed by all 54 NRM regions (completed 30 June 2024)



with funding through DCCEEW, and the Department of Agriculture, Fisheries and Forestry (DAFF). The plans define the priority natural capital (Matters of National Environmental Significance) and agricultural assets in each NRM region and identify the risks to those assets presented by extreme events. The plans will be used by the NRM regions and emergency management agencies in emergency phases to ensure that risks to assets are minimised as far as possible, that natural capital assets are protected during emergency responses, and that best possible recovery actions are implemented.

Strategically considered, biodiversity-focused carbon projects can occur in areas that are not traditionally optimal for carbon sequestration. The WWF Koala Friendly Carbon Initiative case study in this report locates projects to deliberately build corridors and maximise conservation benefits for koalas. The LRF schemes in Queensland and Western Australia provide state-based incentives for the biodiversity benefits from carbon projects. These programs promoted carbon farming to occur in areas, or at a scale, where it otherwise might not have occurred, and with enhanced outcomes for biodiversity. Better utilisation of regional NRM plans to inform carbon farming projects can build on these efforts to deliver additional, landscape-scale benefits. As NAILSMA CEO Barry Hunter noted:

"If you get Country right, then every species on Country will benefit...it's a web."

5.4 Misalignment between carbon farming and biodiversity policy

As described earlier in the report, the ACCU Scheme and Australian climate policy generally has been developed to deliver low-cost emissions reduction, not biodiversity outcomes. Recent analysis by EY⁷⁸ informed by modelling by CSIRO, found that continuing on our current approach of carbon-focused policy settings will result in almost no habitat restoration within the land sector (6% of area). By contrast, EY found that taking a 'balanced approach' to climate policy, where more environmental plantings projects are incentivised in key areas that would benefit more threatened and vulnerable native species, can deliver more than seven times more native habitat but 20% less carbon by 2050, compared with the carbon-plantation (monoculture forestry) focused approach that would be delivered under current settings. EY found that 'tilting incentives can achieve significant habitat restoration with only modest impacts on carbon sequestration'.

Many interviewees suggested that changing or adapting carbon farming methods to focus on achieving nature positive outcomes could provide a pathway to increasing environmental outcomes. Interviewees also suggested new

methods could be developed and adopted, enabling carbon farming projects to be undertaken in new areas or targeting the achievement of biodiversity outcomes in more diverse ways.

Interviewees also mentioned some new or emerging methods that would drive additional nature outcomes. The existing blue carbon methodology and future iterations were seen as likely to contribute to implicit nature outcomes. The draft IFLM, requires ecosystem benchmarking, and may provide an important new pathway to both preserve and enhance biodiversity through carbon farming investment. Some feedback suggested that nature positivity needs to be the central goal and carbon farming should be positioned as one of the enablers to help achieve it. The possibility of this is demonstrated through the case studies in this report. As put by Paul Dettman of Cassinia Environmental:

"The carbon story in the landscape needs to be led by nature-positive aspirations."

Interviewees were hopeful that the Nature Repair Market could generally improve the standard of carbon farming projects and provide a good framework to verify biodiverse carbon projects, however there was some doubt among interviewees about how complementary single-issue biodiversity certificates created through the Nature Repair Market might be to ACCUs. One interviewee also noted there would be risk in running all carbon for nature projects through the Nature Repair Market, given the additional governance, monitoring and delivery burden and cost that will likely be required for projects in the market – carbon projects that currently claim or imply delivery of a biodiversity co-benefit can attract a premium without any real verification. Nonetheless, the interviewee did note that alignment of carbon projects to the Nature Repair Market may give comfort to investors on integrity grounds.

CMI also notes in their annual Carbon Farming Scorecard report of 2024, that the passage of the Nature Repair Act has put in place a framework for building legal protection of nature, including the opportunity for nature market instruments, and their integration with carbon markets. Several jurisdictions have invested in projects to capture co-benefits. The challenge is now to implement these frameworks, ensure interoperability and scale solutions, within a much stronger Nature Positive vision and legal framework.⁷⁹

⁷⁸ Carbon Market Institute (2024), *Carbon Farming Scorecard*

⁸⁰ Goliya, K & Ghosh, A. (2024), "After the Safeguard reforms: ACCU supply, demand and price trends", *Carbon Market Report 2024, S&P Global*.



5.5 Demand for carbon for nature projects is unclear

It is clear that there is some demand for more costly and expensive carbon farming projects that could, or do, produce additional benefits for nature. As noted, high integrity biodiverse carbon projects have higher costs, however interviewees from the financial sector and some project developers noted that carbon credits that deliver co-benefits such as biodiversity are sold for a premium. Interviewees were typically selling, or planning to sell, their carbon for nature ACCUs through private buyers, and such transactions are typically commercial-in-confidence, so determining the potential premium for these projects is difficult. Interviewees' views were that some carbon for nature ACCUs might attract double to triple the ACCU spot price.

Some indications of the quantum of a carbon for nature premium can be inferred through the spot trade values on ACCU methods that interviewees considered to be best suited to carbon for nature outcomes. In March 2024, environmental plantings ACCUs, and savanna fire management ACCUs being generated by First Nations groups, were both trading at a significant premium of \$56 and \$48.90 respectively, relative to so-called 'baskets of generic ACCUs' that were valued at around \$35.20

Table 5: Comparison of the Land Restoration Fund median price per ACCU with the ACCU spot price for the same quarter

Timing	Land Restoration Fund (LRF) Median ACCU price (including co-benefits) ⁸¹	ACCU Spot Price at the end of the same quarter ⁸²
LRF Round 1 closed April 2020	\$52.50	\$15.85
LRF Round 2 closed Dec 2021	\$81.20	\$51.00

per ACCU according to the CMI Carbon Market Report⁸⁰ 2024. Information on whether these types of projects had any verified co-benefits was not included – the report concluded that the higher price was paid based on their perceived 'high quality'. The premium for the environmental plantings projects was based on a low number of ACCUs, since overall spot trading of these ACCUs is limited, due to low environmental plantings supply and high price. Thus, while these figures may provide an indicator of the premium, spot market trades don't necessarily reveal a reliable price for enhanced carbon for nature ACCUs.

An example of the potential premium can also be seen when comparing the Land Restoration Fund median price per ACCU (including co-benefits) with the ACCU Spot Price. Table 5 shows that LRF prices were considerably higher than the ACCU spot price in the 2020 and 2021 LRF rounds of investment.

The extent to which projects go to maximise biodiversity in a carbon farming project can often be determined by the quantum of funds available and requirements of a particular ACCU customer or client. Report interviewees stated that projects developed specifically for biodiversity outcomes were typically done so with the views or values of a client in mind, and a commitment to accommodating the additional costs. For example, global pharmaceutical company AstraZeneca has partnered with Greening Australia to invest in large-scale, strategically placed biodiverse carbon plantings for landscape restoration in alignment with their stated commitment to support nature as part of supporting health.

A September 2024 report on voluntary biodiversity credit markets by Pollination⁸³ found that only around US\$325,000 – \$1,870,000 worth of voluntary biodiversity credits are likely to have been sold globally, to date. The report identified marketing/brand as the strongest perceived driver for purchase, followed by risk mitigation, including physical risks, nature-related transition risks and systemic risk. The report found that buyers may prefer biodiversity projects that are close to their operations, investments and/or sourcing areas – this was also commented on by an interviewee that noted that a large corporation was keen to purchase carbon credits that were delivering nature and sustainability benefits in locations where their operations were sourcing agricultural produce. A report by the CMI on nature-based investment in the APAC region⁸⁴ further highlighted that although the desire for non-carbon benefits is growing, they are not yet a primary driver and carbon is thus the investment carrier. Carbon as a commodity has traditionally underscored the financial return of these nature-based projects as it enables compliance needs and emissions targets to be met, can yield a financial return from carbon credits traded, and provides measurable and reportable greenhouse gas (GHG) emissions reduction and sequestration.

Financial sector report interviewees differed in their views as to whether mandatory and voluntary disclosure and reporting under frameworks such as the TCFD and TNFD were likely to drive additional investment into nature. One interviewee noted that fears of greenwashing claims might discourage voluntary reporting of nature impacts and felt more confident that both nature reporting and investment were likely to increase as a result of reporting opportunities.

Another interviewee noted that ACCUs with additional biodiversity values have an advantage over investment in pure biodiversity projects through their ability to realise a return on investment– this is supported by CMI's Carbon Market Report⁸⁵ which noted there is renewed interest in investing in environmental plantings projects due to their potential to generate higher returns in coming years. The rising spot price for ACCUs and the possibility of corporations needing to invest in both nature and net zero targets, might make purchase of carbon for nature ACCUs increasingly attractive.

The lack of transparency around price and demand also impacts supply pipelines. For instance, with full price discovery, project developers and landholders aware of price premiums, may be more likely to participate in carbon for nature projects. Some interviewees reported that an insufficient certainty of financial return was a barrier for some project developers to actively plan and implement additional biodiversity measures. One interviewee commented that the primary barrier to getting better biodiversity outcomes is a clear economic case:

"We may look more at biodiversity when you can monetise it more... we don't have a market for biodiversity credits at the federal level and we don't have clear ways to accredit the biodiversity outcomes, so we don't have an incentive to integrate these into projects."

More corporations may eventually seek projects that simultaneously offset their carbon and biodiversity impacts and may be willing to pay a premium for carbon credits with co-benefits. One way that corporations can help address this issue is to invest in early-stage projects, and/or enter into offtake agreements that provide demand certainty and hence increase the chances of carbon for nature projects being developed in the first place. However, understanding of the timing and scale of corporate investment in carbon for nature projects to offset businesses carbon and biodiversity impacts and risks is, at best, unclear.

Demand for ACCUs from the Australian Government is also decreasing as the Safeguard Mechanism reduces the necessity for government purchased emissions reductions, and as a result of the government's policy decision to allow fixed delivery exit arrangements, as per Table 6 below. While the Australian Government policy of least cost abatement didn't historically support purchase of higher value carbon for nature ACCUs, the government has been considering amending this policy to target ACCUs that deliver additional benefits.⁸⁶ Greater market and investor certainty, alongside social license, could be underpinned by the Federal Government developing a comprehensive net zero plan with nature-positive priorities and a commitment to improve land sector and regional economic outcomes. The Carbon Market's 2024 Carbon Farming Scorecard recommended the government develop a carbon market strategy that articulates the role of carbon crediting in supporting the decarbonisation and setting goals for reversing deforestation, ecological restoration and carbon removal. Additionally, with a policy change away from least cost abatement, other means of incentivising carbon for nature outcomes may be necessary, such as a Nature Positive Fund.

Table 6: Australian Government ACCU purchases have declined

Year of government purchase	Total delivered volume (tonnes)	Total delivered value (million dollars)
2020–21	13.12	\$162.96
2021–22**	8.56	\$107.34
2022–23**	2.58	\$36.48

** Fixed delivery exit arrangements

⁸¹ Queensland Government (2024), *The Land Restoration Fund*

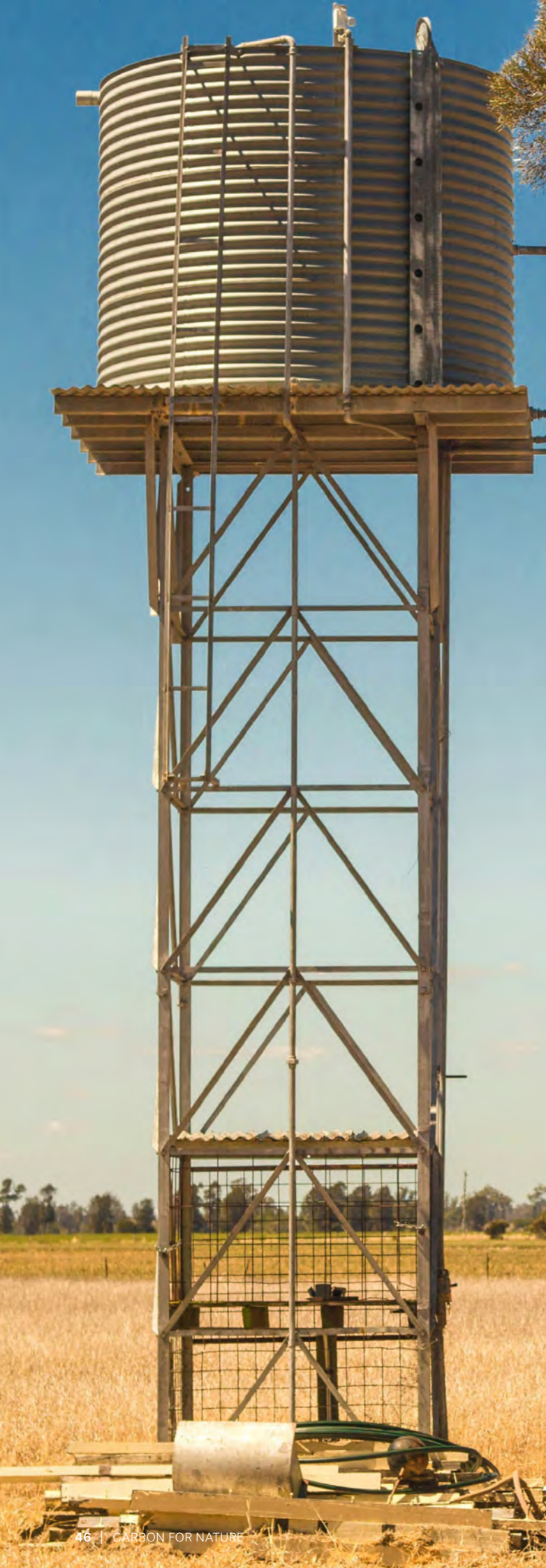
⁸² Clean Energy Regulator (2024) *Quarterly Carbon Market Report March Quarter 2024*

⁸³ Waterford, FitzSimons & Back (2024), *State of Voluntary Biodiversity Credit Markets: Current supply and demand dynamics*, Pollination.

⁸⁴ Carbon Market Institute (2021), *Nature-based Investment in the Asia-Pacific Region*.

⁸⁵ Goliya, K & Ghosh, A. (2024), "After the Safeguard reforms: ACCU supply, demand and price trends", *Carbon Market Report 2024*, S&P Global.

⁸⁶ Department of Climate Change, Energy, the Environment and Water (2023). *ACCU Review Discussion Paper*



5.6 Carbon and nature goals are not always complementary

A study in the Goulburn Broken CMA region in 2023⁸⁷ found that selecting a property to maximise both carbon and co-benefits is not always possible. To meet the ACCU Scheme's Offsets Integrity Standards,⁸⁸ carbon farming project activities must be 'additional' in that they would be unlikely to occur in the ordinary course of events. This means that the many landscapes in Australia which contain significant amounts of existing remnant vegetation of different age classes are ineligible under current carbon farming methods, yet they are still hugely important to preserve, restore and enhance from a biodiversity perspective. Wetland ecosystems are also ineligible for carbon farming activities, although there are hopes that teal carbon methods may become available to finance their restoration in the future – a teal carbon method for environmental wetlands and farm dams proposed by Deakin University's Blue Carbon lab in 2021 was unsuccessful, but may be proposed again in the future.

Carbon for nature projects would, ideally, deliver restoration and regeneration of priority habitat and ecosystems at scale. However, available literature suggests current carbon farming projects can negatively impact biodiversity under some circumstances.⁸⁹ For example, shifting fire regimes for carbon abatement do not consistently benefit terrestrial vertebrate biodiversity in Australian savannas,⁹⁰ and carbon farming projects can result in monoculture plantations or limited species plantings that are likely to have limited ecological value.⁹¹

In areas with open woodlands or grasslands, many of which contain endangered species, application of carbon farming methods which rely on a certain tree planting density for economic viability might undermine ecosystem values. Interviewees generally felt that carbon farming projects were unlikely to negatively impact biodiversity relative to a baseline, although several interviewees raised concerns that native grasslands or grassy woodlands may have been, or could be, planted with trees at a higher density than such an ecosystem would naturally support.

⁸⁷ Ndevr environmental (2023), *Carbon and Co-benefits Co-Investment Guide, Part A*

⁸⁸ Emission Reduction Assurance Committee (2021), *Committee considerations for interpreting the Emissions Reduction Fund's Offsets Integrity Standards*, CER

⁸⁹ Enríquez-de-Salamanca, A. (2024), *Environmental and Social Impacts of Carbon Sequestration. Integrated Environmental Assessment and Management*

⁹⁰ Perry, Justin J., Vanderduys, Eric P., Kutt & Alex S. (2016), *Shifting fire regimes from late to early dry-season fires to abate greenhouse emissions does not completely equate with terrestrial vertebrate biodiversity co-benefits on Cape York Peninsula, Australia*, International Journal of Wildland Fire.

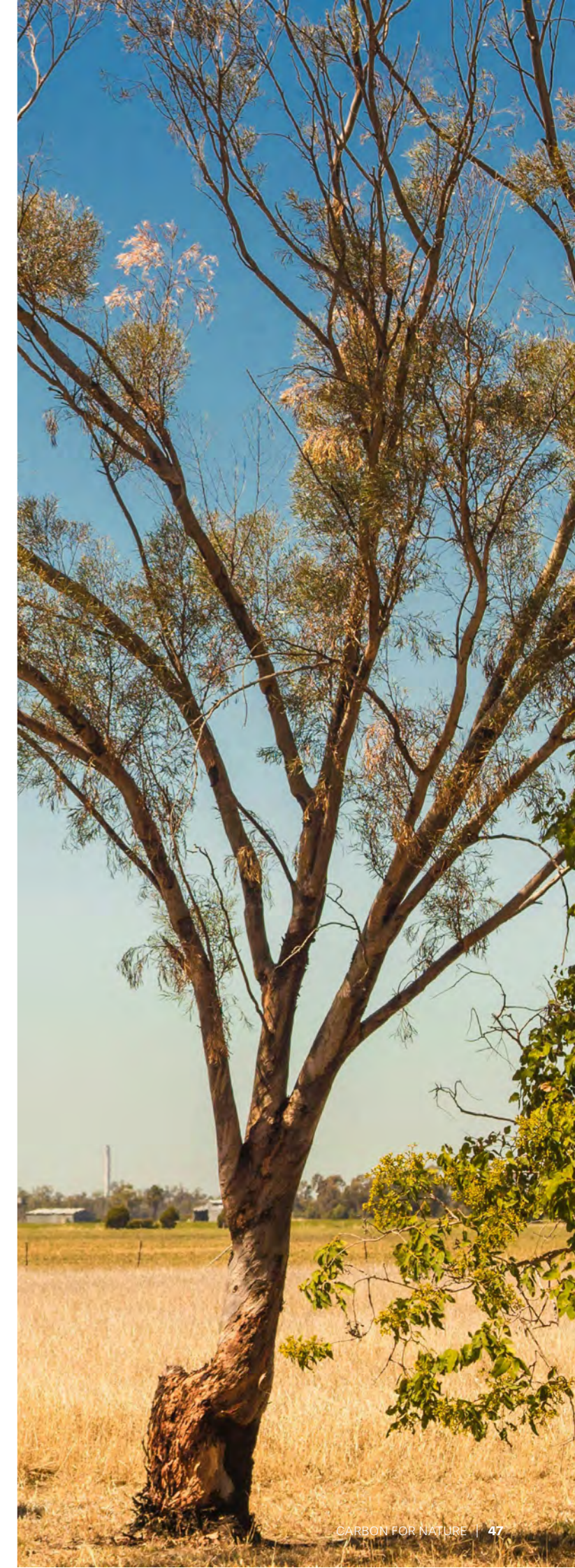
⁹¹ Bekessy, S. A., & Wintle, B. A. (2008), *Using Carbon Investment to Grow the Biodiversity Bank*, Conservation Biology.

There was also some feedback from report interviewees on the potential of savanna burning projects to impact biodiversity if burning was undertaken too frequently, or if there was no retention of long-unburnt vegetation within a landscape (i.e. vegetation of more than three years old) to provide particular habitat functionality.

Multiple interviewees noted that the savanna burning method had been set up with burning periods based on what was considered appropriate for the Northern Territory, rather than northern Queensland, where it is also widely used. It was noted, however, that these negative biodiversity impacts of savanna burning were considered less significant than the biodiversity impacts of severe wildfires, which the method seeks to limit. NAILSMA CEO Barry Hunter noted that the timing for burning under the method was also at odds with cultural practice, which is aligned to traditional knowledge on biodiversity.

"Fire in itself as a cultural approach was all year around – storm country needs to be burned before the rains come, so [carbon farming] detracts from, and changes, the cultural approach towards biodiversity and then also the impact on biodiversity. The method is too restrictive for biodiversity and culture- they might think it is a sound approach for biodiversity, but actually it can be detrimental in the long term."

In addition, there was some question around whether elements of a carbon farming method or its activities might change the overall land use impact on a landscape. For example, changed grazing management through increases in fencing and watering points in projects under the now-expired HIR method might lessen the impact on rangeland health caused by heavy grazing in some areas, while distributing the impact more evenly across the landscape, including into areas that may not have previously been impacted by cattle grazing.



Traprock Landscape Impact Project

Project objectives

Less than 5% of the critically endangered box gum grassy woodland in the Traprock region remains in good condition and is in small and isolated patches. Bringing together landholders from the Traprock Grower Group provides an opportunity to scale the impact of the restoration and protection efforts and the potential to attract private investment.

Project progress

Regen Farmers Mutual, a farmer member-owned company, approached the Traprock Grower Group with the idea of multiple farmers collectivising to tap into carbon and biodiversity markets and protect and restore the box-gum woodland. So far the project team has recruited seven farmers with the project covering an area of more than 2,000 ha.

Southern Queensland Landscapes NRM have supported landholder engagement and provided data and mapping resources to help target projects to maximise impact in line with their regional NRM plan objectives. Andrew McCartney from SQL says it's been a good opportunity for them to get a sense of possible roles in emerging market areas, particularly one of independent assessment through their role as an independent not-for-profit.

Project monitoring and verification

The Australian National University has been funded through the Land Restoration Fund to develop a bespoke box gum grassy woodland method that can provide certification of the biodiversity outcomes and may also allow landholders to generate nature positive credits. The method can be scaled: more involved monitoring enables a higher level of certification, plus the opportunity to generate biodiversity credits. Biodiversity credits can be issued based on the extent and quality of the biodiversity outcomes, as compared to regional and national averages of the condition of box gum grassy woodland.

"We can make that independent third-party objective assessment. We're evidence based, science based, so we think there could be a role for us to play in the future."

- Andrew McCartney, SQL

Photo courtesy of Southern Queensland Landscapes



PROJECT MANAGEMENT AND PARTNERS:
Regen Farmers Mutual, Southern Queensland Landscapes NRM, Australian National University and the Queensland Land Restoration Fund.



ACCU METHOD:
Avoided Clearing of Natural Regrowth Method.



PROJECT ACTIVITIES:
A range of activities can be incorporated under these projects, including protection, enhancement and expansion of the box gum grassy woodland.



LOCATION:
The Traprock landscape in the Southern Queensland Landscapes (SQL) NRM region



TIMING:
Launched in 2022



6. Considerations: maximising the potential of carbon for nature

Maximising the potential of carbon for nature will not happen organically, and it won't happen quickly enough to drive the actions that are needed to help restore ecosystems at the necessary landscape scale. Current policy settings do not prioritise biodiversity outcomes – carbon farming projects that deliver additional biodiversity benefits often cost more, and while some value-aligned buyers may be willing to pay a premium, the extent of the current and future market demand for higher value, higher cost ACCUs is largely unknown.

A carbon for nature approach requires action by policy makers, regulators, industry, researchers and other stakeholders across the value chain to drive a market for genuine, verifiable outcomes from carbon projects for biodiversity. There is no single action or change that will optimise nature positive outcomes from carbon farming projects. For example, changing ACCU methods to require biodiversity standards to be met would not address the cost and demand issues, and not all ACCU methods can deliver on biodiversity outcomes i.e. plantation forestry projects are necessary to meet growing demand for timber products, produce ACCUs, and are – by their nature – monocultures. A mix of policy changes and market optimisation interventions will be needed to enable, and then drive, investment into carbon farming projects that will deliver more for nature.

The following provides a list of key actions, in the form of stakeholder considerations, that can elevate carbon for nature projects by addressing the two key limitations:

- Enabling conditions for increased output of verified, biodiversity outcomes from carbon farming projects; and
- Paying for enhanced nature benefits of carbon farming projects.

A mix of policy changes and market optimisation interventions will be needed to enable, and then drive, investment into carbon farming projects that will deliver more for nature.

6.1 Considerations for the Australian Government

Amendments to existing government policy provides the most straightforward way to both increase demand for, and investment in, carbon projects to deliver verified biodiversity benefits and ensure perverse outcomes are not incentivised. This also provides the best opportunity to optimise projects to support, measure, and confirm the achievement of Australian Government nature positive policy objectives. Opportunities to maximise other co-benefits from carbon farming investment could also be incorporated through policy changes.

Enabling conditions for nature outcomes in carbon projects

1. Develop a national biodiversity co-benefit verification standard and framework

There are numerous methods for monitoring and verifying biodiversity outcomes from projects generating carbon credits and a growing number of standards and/or certification schemes. However, there is no pathway, framework or meta-standard that enables the comparison of the methods for verifying benefits, or opportunities for buyers to understand whether benefits have been verified. We recommend the development of a framework, or meta-standard to enable accreditation of a range of robust methods – both existing and new – governed by a national standard. The government's Nature Repair Market will provide one pathway for ACCU projects to verify biodiversity outcomes, which could be used as the basis for other methods. This would be particularly efficient given that the CER has oversight of both the carbon and nature repair markets. Accounting for Nature is another example of a nature accounting standard commonly used in the market that is verifiable and certifiable.

A meta-standard, or framework approach allows for diversity of tools without imposing a restrictive, overly prescriptive, top-down standard. Most importantly, the meta-standard would provide guidance around co-benefits visibility in the market, designating reporting structures, inclusion in registries, etc. Promoting market harmonisation, consistency and simplicity on robust monitoring and verification methods will assist in scaling up the market, catalysing the growing market appetite for investment in nature-based climate solutions. Providing transparent guidance to carbon project proponents and ACCU buyers/investors will also reduce risks to the environment, the carbon industry, and investors that might otherwise result from unverified claims.

The CER unit and certificate registry could provide a transparent way to confirm and promote verified co-benefits of projects.

2. Implement a national register to improve transparency and information available to verify carbon farming co-benefit claims.

Obtaining consistent, verifiable information about carbon farming projects with co-benefits is difficult. There is no national register for ACCUs that are claiming to produce co-benefits. Instead, buyers must rely on their own research and due diligence. Implementation of a national register or integration into the ACCU register to provide an opportunity for carbon for nature project proponents to provide details of co-benefits and the methods (within an approved framework) used to verify the benefits, can help leverage carbon investment, ensure integrity, build community and

investor confidence, unlock additional supply, and promote the benefits of investing in achievement of co-benefits. The CER's register for ACCUs and Biodiversity Certificates, should be developed to accommodate and promote additional certified co-benefits from carbon farming projects, including biodiversity benefits verified according to the suggested standard – not just those developed according to Nature Repair Market methods.

DCCEEW undertook consultation on Rules for the Nature Repair Market – results from the consultation on what should be included in the register for biodiversity certificates may help to inform what content will be most useful for buyers and sellers of verified biodiversity co-benefits from carbon projects.

3. Improve ACCU methods through new priority and review processes to recognise, enhance and protect nature

ACCU methods focus on carbon storage or emissions avoidance and therefore place little intrinsic value on, or incentive for, biodiversity outcomes. Nor do the methods under the ACCU Scheme provide sufficient safeguards to prevent the negative impact of carbon farming projects on biodiversity values where this might conflict with maximising ACCUs. The current, narrow focus of ACCUs could be broadened to more fully integrate protection and enhancement of nature. Relevant carbon farming ACCU methods could be modified to identify additional activities to generate, verify, and value biodiversity outcomes. This might also include amendments to enable 'biodiversity additions' such as understory plantings in existing projects, where



this does not undermine integrity of the ACCUs. Processes for accreditation of biodiversity outcomes should be built into the Nature Repair Market, although this need not be the only pathway. Any such changes would need to be carefully designed so as to maximise incentives to enhance biodiversity and minimise unintended perverse outcomes. Meanwhile, there is considerable scope to prioritise and develop new methods under the ACCU Scheme that can deliver dual carbon and nature outcomes. The current suite of ACCU methods is limited and carbon focussed – failing to harness the full potential. Integrated, landscape-scale methods can drive investment and projects into areas that have not benefited from current carbon-focused policy. They could also target specific priorities such as addressing land clearing and habitat loss and degradation. For highly productive agricultural land, methods that allow for stacking of diverse opportunities and incentivising multiple, non-competing outcomes could be prioritised and the important evidence demonstrating the interconnectivity between natural capital increases and agricultural productivity elevated.

All land-based ACCU methods should also be reviewed, and modified where necessary, to ensure ecosystem specific values are not compromised in the pursuit of ACCUs. This will ensure consistency with the CFI Act 2011 objective that carbon farming projects be consistent with protection of our natural environment.

4. Legislate for and invest in regional NRM organisations' role to scale up nature benefits from carbon projects

The federal government has provided in-principle support for the 2023 recommendation by the CCA that it:

'amend the CFI Act to expand the role of regional Natural Resource Management (NRM) plans and organisations in informing the planning and establishment of ACCU projects, and resource NRM organisations accordingly'.

We propose the government prioritise implementation of this recommendation. Increased involvement of regional NRM organisations is an efficient way to achieve better, landscape-scale outcomes for nature from carbon farming because:

- **Regional NRM organisations undertake participatory, landscape-scale regional natural resource management planning.** Regional NRM plans and the significant resources, including spatial and long-term monitoring data and knowledge that sit behind them, can be used to inform and plan carbon farming projects to optimise both landscape-scale environmental benefits and other social and economic outcomes that regional communities are seeking. They can also help inform potential climate risks, mitigations and adaptations for nature outcomes.
- **Regional NRM organisations are trusted to provide independent support to landholders** Regional NRM organisations are local organisations that are trusted by landholders to provide independent support. Because regional NRM organisations have staff with technical knowledge and expertise on a wide range of areas, including carbon, biodiversity, soil health, water quality and sustainable land use, NRM organisations can provide guidance on carbon farming projects that are aligned with individual landholders' whole-farm plans and business aspirations.
- **Regional NRM organisations partner widely** NRM organisations are ideally placed to knit together carbon and biodiversity projects that realise multiple benefits by working with their existing networks and partners including local landholders, Indigenous organisations and Traditional Owners, governments, businesses, community groups, and industry to leverage investment from other programs and investors seeking biodiversity outcomes.

5. Resource First Nations participation, leadership and economic opportunities

Implement ACCU Review recommendations, including for FPIC requirements and ensure alignment with emerging nature repair market obligations. Resource all organisations, especially, but not limited to, appropriate native title bodies, to ensure best practice guidance and implementation,

elevation of Healthy Country Plans, and inclusion of Indigenous Ecological Knowledge in planning and method development.

Invest in First Nations knowledge regarding appropriate fire regimes for biodiversity and cultural heritage and seek opportunities to align carbon farming and nature repair methods to these, helping ensure methods don't undermine cultural practices or biodiversity outcomes.

6. Develop a national carbon market strategy for Australia

A national carbon market strategy would both articulate the role of carbon crediting in supporting decarbonisation and set goals for reversing deforestation, ecological restoration and carbon removal. This would establish a framework for policy and ensure greater investor certainty and support social license for carbon for nature projects. In 2022, the CCA recommended that the Australian Government develop and publish a National Carbon Market Strategy.⁹² This was elaborated in a CMI Policy Brief⁹³ that outlined key components of a successful strategy that would strengthen current market-based frameworks, expedite necessary legislative and policy reforms, clarify the Government's purchasing role in carbon and nature markets and support mutual complementarity between Australia's carbon and nature markets – including interoperability between the ACCU Scheme and Nature Repair Market. We recommend that a national carbon market strategy be developed with a view to leveraging markets for multiple outcomes of net zero and nature positive.

Funding nature in carbon for nature projects

Higher establishment costs and MRV of outcomes lead to higher costs for carbon for nature projects. The below options could be adopted to fund the shortfall between carbon and nature.

7. Create an Australian Government Nature-Positive fund

It is clear that government investment in the Nature Repair Market will be necessary, given early voluntary demand for Biodiversity Certificates seems highly uncertain. Experience from the carbon market shows strong benefits from government investment. The Emissions Reduction Fund (ERF) played a key role in establishing early market demand to ensure supply and establish confidence. We suggest that the government establish a new Nature Repair Fund. The fund could be used to purchase Biodiversity



Certificates from both stand-alone biodiversity projects, and from or alongside carbon for nature ACCUs if and when the government enters the ACCU market to support the cost-containment mechanism in the Safeguard Mechanism or to contribute to domestic emissions reductions more generally. Such investment would ensure support for restoration of a wide range of ecosystems, whilst providing a reliable market for ACCUs generating verified co-benefits to permit scaling up of biodiverse carbon methods with higher up-front costs and to provide price signals to the market. Queensland's LRF may provide a model for such a fund.

8. Review of enhanced Safeguard covered facilities should consider requirements to purchase ACCUs with co-benefits

Facilities regulated under the Australian Government's Safeguard mechanism must purchase Safeguard Mechanism Credits (SMCs) or ACCUs to offset emissions they are unable to reduce in line with declining emissions baselines. A scheduled review of the Scheme in 2026–27 could consider whether it is appropriate to require Safeguard covered facilities to purchase at least a proportion of land-based ACCUs that include biodiversity co-benefits (and other verified public-good co-benefits) if they exceed their emissions caps. This would support the government's Nature Positive Plan objectives, alongside climate policy. It would also provide a guaranteed market for carbon farming project proponents that deliver additional biodiversity outcomes. A scheme in California similarly requires a minimum proportion of credits purchased from offset projects to meet certain environmental requirements, and to be located within California.⁹⁴



⁹² Recommendation 7 in Climate Change Authority (2022), *Review of international Offsets*.

⁹³ Carbon Market Institute (2024), *A National Carbon Market Strategy for Australia: CMI Policy Brief*

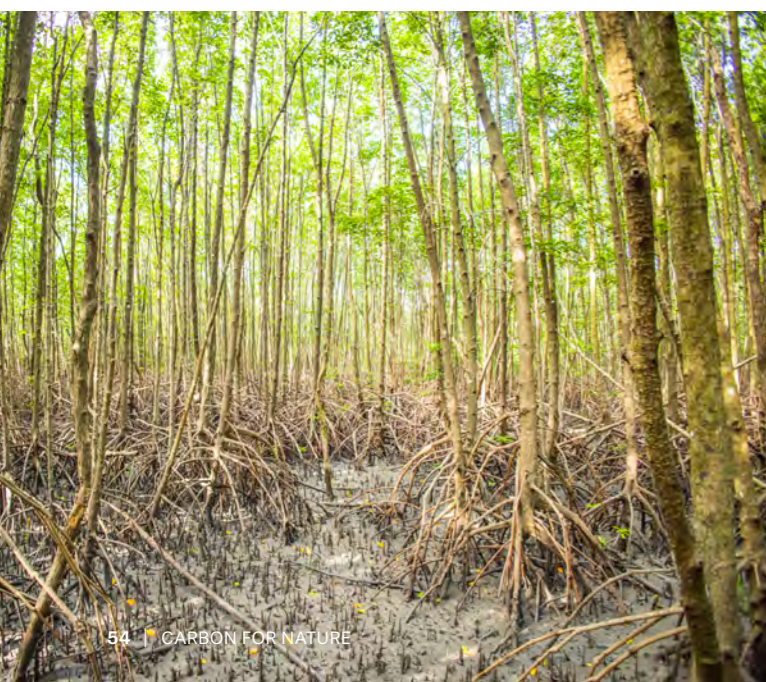
⁹⁴ California Air Resources Board, *Direct Environmental Benefits in the State (DEBS)* (Accessed November 2024)

9. Deliver expanded and improved Agriculture Biodiversity Stewardship and Carbon Farming Outreach programs

The Australian Government's Agriculture Biodiversity Stewardship Packages program played a key role in preparing landholders for participation in environmental markets. The two program components – the Carbon + Biodiversity and Enhanced Remnant Vegetation pilots, were run across six states in partnership with twelve regional NRM organisations. Delivering a similar program nationally, that could also interact with the new Nature Repair Market, could play a key role in supporting understanding and interest in environmental market participation. It could also provide insights into how smaller, individual landholders might promote their projects, collaborate to aggregate and leverage their projects for efficiencies and risk management, or connect with buyers to sell Biodiversity Certificates, with or without associated ACCUs. As noted in the report, participation of landholders with smaller holdings in biodiversity hot spots is desirable to maximise outcomes from carbon for nature investment.

Additional investment in workshops under the Carbon Farming Outreach Program (CFOP), could be used to not only make the case for participation in carbon for nature projects, but to invite participation in the evolved Agriculture Biodiversity Stewardship program.

Participating regional NRM organisations provided input into the design of the national Agriculture Stewardship scheme and supported the on-ground delivery of the projects, including project design and site inspection. Regional NRM organisations are also delivering CFOP workshops in South Australia and Victoria. The role of NRM organisations could be scaled up in a national program to strategically target landholders to maximise biodiversity outcomes at a landscape scale.



6.2 Considerations for the carbon industry

Carbon project developers are key players in optimising outcomes from carbon farming projects, and stand to be beneficiaries of measures to increase demand for value-added ACCUs. The industry must have a role in informing and implementing measures to create more verified biodiversity impacts from carbon farming.

10. Integrate nature-related risks and opportunities into the Australian Carbon Farming Industry Roadmap and update the Australian Carbon Industry Code of Conduct (ACI Code)

There are significant opportunities for the carbon industry in better accounting and verification of biodiversity benefits from projects – many project developers are already realising these. The industry should update the Australian Carbon Farming Industry Roadmap to encourage further achievement of co-benefits in recognition of the significant opportunity that development of high integrity, verified nature outcomes offer to add value to carbon farming projects.

The roadmap should be national in scope, provide a shared vision, and invite the participation of all relevant stakeholders. A stakeholder action plan would consist of clear and defined actions for the primary stakeholder groups across the carbon farming supply chain to establish the pillars required for biodiversity co-benefit recognition and development.

The ACI Code is a voluntary code of conduct for Australian carbon industry participants administered by CMI, which defines industry best practice for project services and advisory services provided within Australia's Carbon Industry and represents the minimum standards that all Signatories agree to meet.⁹⁵ The ACI Code notes that achievement of co-benefits is best practice, and requires signatories consider the potential for achieving co-benefits 'at their discretion'. Updating the code to require signatories to consider and deliver co-benefits through carbon farming projects in line with a national Roadmap could lead to enhanced outcomes, but may not be supported by project developers without a clear financial incentive.

The ACI Code could also be updated to require signatories to consider potential harms arising from carbon farming projects, and to undertake actions to avoid perverse environmental (and other) outcomes. To operationalise this, a checklist of potential perverse outcomes from different methods could be included as an appendix to the ACI Code.

⁹⁵ For more information on the ACI Code, see: Carbon Market Institute (2024), *Australian Carbon Industry Code of Conduct*

11. Undertake ACCU method exploration to support co-benefit identification and integration

Carbon industry members have detailed knowledge of ACCU methods and a role to play in identifying and describing co-benefits that might arise from the implementation of the various methods. The Australian carbon industry should collaboratively define and develop a consistent, standardised list or classification index of primary co-benefits attributable or possible under each land-based ACCU method. Using this index in all carbon farming materials will provide an important, consistent decision-support tool and support price discovery of co-benefit asset classes and investment in carbon plus biodiversity projects.

Further, the carbon industry can actively collaborate with the conservation sector, research bodies and others to develop new or revised ACCU methods that focus on dual priorities of carbon sequestration and emissions avoidance and enhanced biodiversity outcomes.

6.3 Considerations for regional NRM organisations

12. Update regional NRM plans (where necessary) with carbon sequestration potential to guide carbon for nature projects

Regional NRM plans can provide guidance on priorities for investment at a landscape scale, including for strategic protection and enhancement of biodiversity. To varying extents, regional NRM organisations have information on carbon sequestration potential incorporated into their plans. Where not currently available, regions could explore investing in a strategic abatement layer to be incorporated into, and leverage, their regional NRM plans. This would enable the identification of potential carbon sequestration and biodiversity 'hotspots' for targeted investment, beneficial for both government and the private sector. External funding may be required by NRMs to incorporate sequestration data.

13. Seek funding for updated climate-smart modelling to be incorporated into all regional NRM plans

The role of regional NRM planning in climate adaptation and mitigation work has been acknowledged previously with the Climate Smart planning investment over 10 years ago. Regional NRM organisations worked with the (now concluded) National Climate Change Adaptation Research Facility (NCCARF) and CSIRO to incorporate climate projections and implications into their NRM plans. This work is still useful today. A new investment would provide a step change to build upon this continent-wide foundation and inform planning to support more resilient carbon for nature projects and reduce risk to investors and landholders.



14. Analyse how regional NRM plans and planning resources are informing carbon project planning

A limited number of carbon project developers were interviewed in this work, and they expressed varied views on how useful regional NRM plans were for project planning. Better understanding the utility of the plans for industry users in carbon for nature projects and identifying actions and opportunities to improve the contribution of regional NRM plans could encourage more widespread strategic use of NRM plans and a landscape-scale approach in carbon farming projects. This is an opportunity for a future, joint CMI/ NRM project.

The CMI administered ACI Code requires signatories to keep records on how information in applicable NRM plans has been considered in planning carbon farming projects. Where available, such records would be a valuable source of information for this research alongside consultation with ACI Code signatories.

6.4 Considerations for business

15. Integrate systemic organisational planning towards a net zero and nature positive economy

Given the dual biodiversity and climate crises, and the intrinsic link between our economy and nature, businesses are well-served to integrate climate and nature considerations into their organisational planning. Net-zero and nature positive aligned business models should include assessment of risks, impacts and dependencies on nature, carbon and biodiversity targets and reporting and disclosure under TCFD and TNFD or similar frameworks. By addressing these issues in an integrated way, businesses are more likely to identify and implement strategies that minimise risks to their businesses arising from the changed climate and nature loss and maximise opportunities to achieve outcomes for both climate and nature simultaneously. It is particularly important that the private sector measures and assesses its impacts on nature and immediately identifies and undertakes actions to halt and reverse nature loss. Climate and nature positive business policies will better enable businesses to future proof their operations against these dual crises.

16. Prioritise carbon for nature in ACCU compliance purchasing

In planning their compliance-based ACCU purchases, businesses should prioritise carbon for nature ACCUs and shift their purchasing away from lowest-cost carbon abatement ACCUs. This will provide important market signals that encourage additional investment in carbon for nature projects. Businesses can also consider investing in carbon for nature projects during their start-up phase to help address the establishment costs barrier, and/or entering into an offtake agreement to provide important demand certainty to carbon for nature project developers.

17. Engage in voluntary carbon for nature purchases

Some Australian businesses already make investments in ACCUs through the voluntary carbon market to meet their own emissions reduction commitments. These businesses should consider reorienting some or all of those investments toward carbon for nature projects. By reporting annually on these investments (in line with ESG, TCFD, TNFD or other frameworks), businesses can help mainstream carbon for nature investments. They should prioritise carbon for nature projects using robust monitoring and verification frameworks to measure the ACCUs' nature co-benefits, and report on these outcomes to help improve market transparency and integrity.

6.5 Considerations for researchers and academics

18. Explore carbon for nature schemes to enable informed policy and program delivery

Getting better biodiversity outcomes from carbon farming projects on agricultural land relies on the willingness of landholders to participate. Understanding, documenting, and addressing limitations to participation in existing and past carbon plus biodiversity type projects is crucial to maximising the development of these sorts of projects, and providing insights into how they can be scaled up to have a landscape impact. Evaluations of the set up and early stages of projects (e.g. Marsden Jacobs, 2023)⁹⁶ need to be supplemented with further research to understand the outcomes of these projects for participants, and particularly to understand the perspectives of those that expressed interest but then chose not to participate.

Evidence-based, data-driven research on carbon for nature opportunities will assist in identifying potential, priority landscapes and/or regions, method gaps and identification of short and long-term targets.

19. Explore non-biodiversity co-benefits arising from carbon farming projects

Although beyond the scope of this project, carbon farming projects can lead to a range of other co-benefits beyond biodiversity outcomes that are of interest to both regional NRM organisations and CMI. First Nations communities participating in carbon farming have reported a range of benefits for Country and People, including transfer of intergenerational knowledge, maintenance of culture, supporting communities to live and work on Country and providing leadership opportunities. Further exploration, including the ability to quantify some of these benefits, could help inform ACCU pricing for other co-benefits, make a more compelling case for participation in carbon for nature given multiple additional benefits, and deliver better outcomes from carbon farming investment, overall. Regional NRM plans, local government plans and First Nations plans can all be used to understand and describe the co-benefits sought from carbon farming investment, and to better target carbon investment into areas where these additional benefits are most needed and carbon farming projects are desired.

6.6 Considerations for the agricultural sector

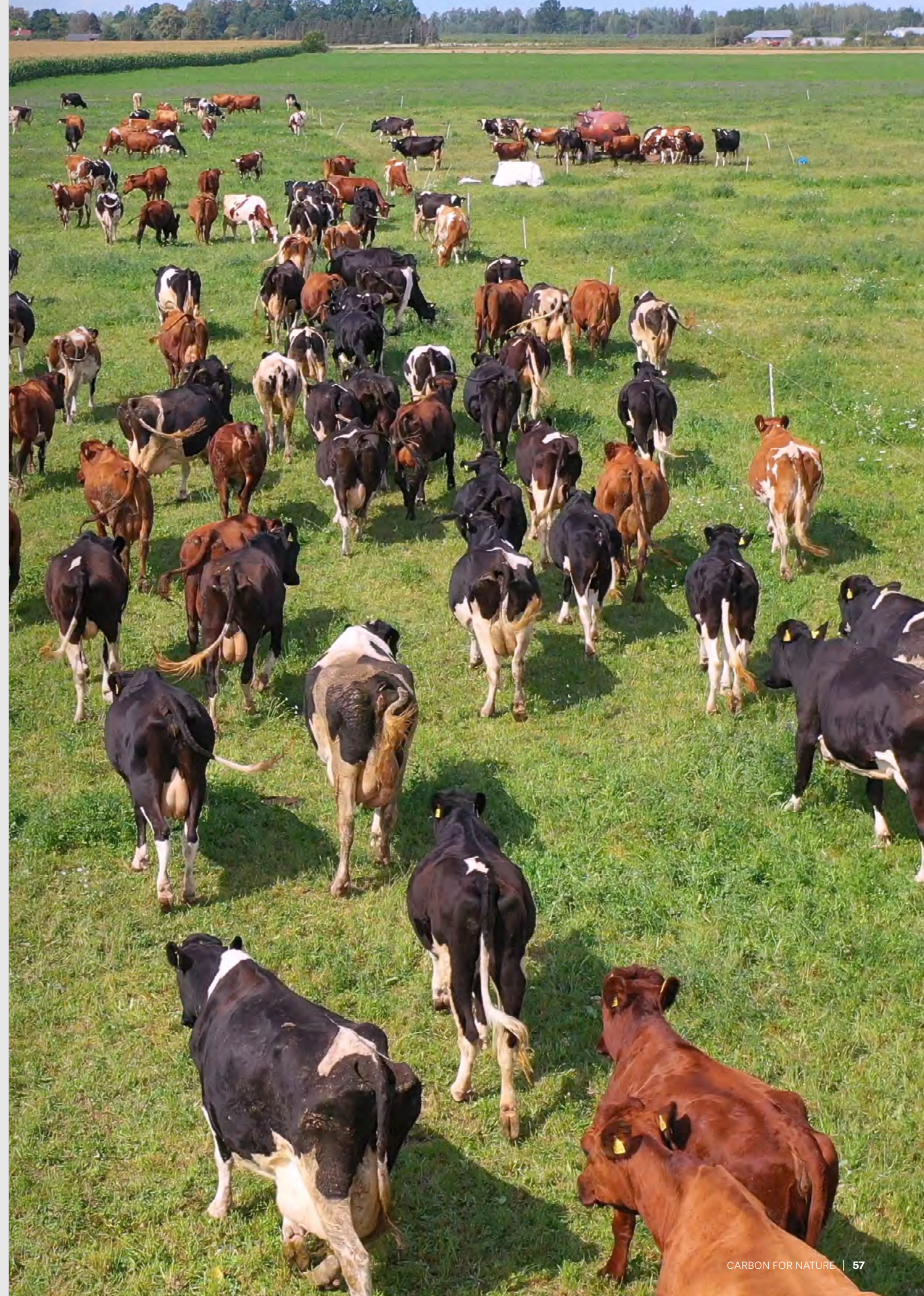
Increasing or improving on-farm natural capital, including strategically improving and increasing the extent of native vegetation, has the potential to improve farm productivity. Carbon farming provides an opportunity to finance natural capital improvements, but widespread adoption of such practices will rely on better understanding and promoting these practices.

20. Invest in on-farm natural capital measurement methods and tools – and enable uptake

While it is possible to measure natural capital at the farm level, it typically involves expensive and time-consuming assessment by experienced third party-providers. Cheaper, accessible tools for measuring on-farm natural capital and the productivity benefits of natural capital improvements are needed for landholders. Top up investment by landholders, particularly in the up-front costs of more diverse plantings, may increase if benefits are quantified. This may also support landholders to demonstrate their sustainability credentials with markets, supply chains, banks and investors – promoting more widespread understanding and support for natural capital improvements in agriculture.

⁹⁶ Jacob, M., O'Connor, P., Rolfe, J., Marsden Jacob Associates Pty Ltd, Central Queensland University, & University of Adelaide (2023), *Review of the Agriculture Biodiversity Stewardship Pilots to inform the Nature Repair Market*.

⁹⁷ Dumbrell, N. P., Robinson, C. J., Ricketts, K. D., Urzedo, D., Walker, L., & Bond, A. J. (2024), *Toward Land Restoration Transitions: Elevating Regional Voices and the Provenance of Co-benefits in Queensland Rangelands*. The Rangeland Journal, 46(1).



7. Conclusion

Carbon farming has been operating in Australia in various forms since 2011,⁹⁸ and over that time it has become an established and growing industry.⁹⁹ Through both the desktop review and interviews, it is clear that carbon farming is already making some contribution to improving Australia's biodiversity.

However, the extent of biodiversity benefits from carbon projects is unclear. ACCU methods and many carbon farming projects are not designed to maximise biodiversity benefits, and for those that are there is not an agreed approach to measure or verify the biodiversity co-benefits provided through carbon farming. This represents a significant opportunity for improvement.

A number of government programs are seeking to realise additional biodiversity gains through providing up front establishment costs to landholders coupled with requirements to measure the biodiversity outcomes from carbon farming projects and framework standards. This is a welcome development, and outcomes from these programs should be used to better leverage the ACCU Scheme for priority nature outcomes and help inform how the emerging nature repair market can work alongside, and be interoperable with, the carbon market. Demand from the conservation sector for carbon investment in biodiversity projects, or emerging demand from corporate entities seeking to meet ESG or SBTN requirements may also drive optimisation of carbon projects to deliver biodiversity outcomes.

The increased focus on "nature positive" outcomes, including the emergence of the Nature Repair Market, provides avenues to better consider how the policy environment for carbon farming and nature can work more closely together, and how carbon farming can help to meet both climate and nature commitments.

Increased emphasis on landscape-scale benefits that can be delivered through carbon farming investment is important. As discussed, carbon farming projects can help restore landscape function, and healthier landscapes will be able to better support storage of carbon. A more supportive policy environment could see carbon farming projects delivered in places where they achieve greater biodiversity benefit. As recognised in the CCA review,¹⁰⁰ increased resourcing and involvement of regional NRM organisations in planning carbon projects has the potential to support better alignment with regional NRM plans – and better outcomes. With increased funding and changes to the CFI Act, regional NRM organisations could play a more prominent role so that additional landscape-scale biodiversity benefits can be realised.

Carbon farming alone is not a solution for either the climate or nature crisis we face but, in combination with other strategies, has the potential to make a meaningful contribution. Carbon farming projects that consciously deliver biodiversity outcomes are more expensive and require investment support and drivers but there are examples of viable projects developed with specific conservation co-benefit objectives. Not every location or ecosystem that needs investment to restore biodiversity will be compatible with a viable carbon farming project. Carbon farming can be improved on and leveraged to deliver optimal, multiple outcomes and provide an important source of investment in nature, both through compliance and voluntary climate commitments. Undertaking actions to enable increased visibility of the contribution that carbon for nature projects can, and do, make along with actions to secure additional public and private funding to optimise the nature component of carbon for nature can deliver a significant and efficient contribution to meeting Australia's domestic and international climate and nature commitments, and help protect environments, communities and businesses from the most extreme impacts of climate change and nature loss.

⁹⁸ Climate Change Authority (2023), *2023 Review of the Carbon Credits (Carbon Farming Initiative) Act 2011*

⁹⁹ Carbon Market Institute (2024), *Carbon Farming Scorecard Report*

¹⁰⁰ Climate Change Authority (2023), *2023 Review of the Carbon Credits (Carbon Farming Initiative) Act 2011*

Next Steps

Continuing the conversation

The Carbon for Nature report is intended as a conversation starter. The perspectives and information contained in this report are valuable, however more detailed understanding and ongoing conversations are needed to deliver the reports key considerations. CMI and NRM Regions Australia will be continuing these conversations and testing the considerations with different stakeholder groups at the Carbon Farming Industry Forum and through the NRM network.

Revise the Carbon Farming Industry Roadmap

In 2025 CMI will revise and update the carbon industry roadmap to ensure it promotes and includes pathways to enable carbon for nature projects.

Better use of NRM plans

Further work to understand the alignment of carbon farming projects with regional NRM plans is needed. As noted in the report, there is little transparency in how project proponents consider and align their projects to regional NRM plans, and mixed views on the utility of the plans to inform carbon farming projects. Additional research on this is being planned.

Indigenous-led carbon for nature

While many efforts were made to interview Indigenous carbon farming participants in the report, there is more work to do. In our view, an additional, Indigenous-led project exploring the issues, priorities, barriers and benefits for Australia's First Nations of carbon for nature and other environmental market projects would be valuable to better understand and promote their interests, perspectives and knowledge on this topic. We commit to exploring this idea further with First Nations partners, and supporting an Indigenous-led carbon for nature project as appropriate.



8. Appendix A – Interviewee list

Name	Role and organisation	Involvement in carbon and nature projects
Debbie Symonds	CEO, Olkola Aboriginal Corporation	Olkola Aboriginal Corporation has planned and run carbon farming projects under the savanna burning method since 2015. Olkola's carbon farming projects are aimed at improving Country and supporting social and economic outcomes for the local community. Debbie is Olkola's CEO and an Olkola Traditional Owner, who also previously worked in field operations on Olkola's carbon farming projects.
Barry Hunter	CEO, North Australian Indigenous Land and Sea Management Alliance (NAILSMA) Chair of Terrain NRM	Barry is the former Chair of the Aboriginal Carbon Foundation, a member of the Indigenous Carbon and Biodiversity Alliance and a member of the Biodiversity Council. Barry has extensive experience working as a consultant to Indigenous organisations to support registration and delivery of savanna burning projects. Barry is a descendant of the Djabugay speaking people of Cairns hinterland.
James McGregor	General Manager – Origination, Canopy Nature Based Solutions	Canopy is a profit-for-purpose subsidiary of Greening Australia that delivers large-scale environmental plantings projects.
Paul Dettmann	Founder / Director, Cassinia Environmental	Cassinia Environmental is a landscape restoration company that delivered the Victorian Government's private land stream of BushBank focusing on carbon and biodiversity benefits.
Anjali Nelson	General Manager – New Initiatives, Green Collar	Green Collar is a large project developer of carbon farming projects in Australia and has launched NaturePlus in 2022 to encourage investment in biodiversity.
Prof. Donald Butler	Professor, Australian National University	Prof. Donald Butler is an ecologist and biogeographer focusing on biodiversity stewardship in Australia's agricultural landscapes. Don had a leading role in the development of the Australian Government's Agriculture Biodiversity Stewardship Program, including the Carbon plus Biodiversity pilot.
Prof. Jeremy Russell-Smith	Professor, Charles Darwin University	Prof. Jeremy Russell-Smith has 40 years of experience researching savanna fire ecology, carbon markets, ecosystem services, and associated livelihood opportunities for land managers and Indigenous (Aboriginal) communities and was involved in the development of the savanna burning ACCU method.
Matthew Dawson	Business Development Manager, North Central Catchment Management Authority (CMA)	North Central CMA in Victoria is delivering a number of carbon farming projects, including the Australian Government's Carbon plus Biodiversity trial and a more localised Community Carbon Pilot. The North Central CMA has also been working with DCCEEW and CSIRO on an Ecological Knowledge System (EKS) that supports the Nature Repair Market.

Name	Role and organisation	Involvement in carbon and nature projects
Kerrie House	Program Director – Carbon Farming and Bioenergy (Low Carbon Futures), Department of Primary Industries & Regional Development (DPIRD, WA)	Kerrie House oversees the delivery of the WA government's Carbon Farming and Land Restoration Program and the development of the restoration economy.
Robbie Burns	Director – Natural Capital Fund Management, Department of Environment, Science and Innovation (DESI), Qld	The Natural Capital Fund Management unit of DESI leads the administration of the Land Restoration Fund, leveraging the carbon market to deliver environmental, social and economic co-benefits to Queenslanders.
Laura Waterford	Executive Director, Pollination	Pollination is a specialist climate change investment and advisory firm. Laura is a leading expert on voluntary biodiversity credit markets and has deep expertise on carbon markets.
Jay van Rijn	Covalent Land Australia, Chief Operations Officer,	Covalent is a carbon project development company that specialises in ACCU vegetation methods with a focus on environmental plantings projects for clients.
Polly Mitchell	Manager – Carbon and Restoration Programs, NSW National Parks & Wildlife Service	NPWS are trialling carbon farming projects in Parks areas as part of the carbon positive strategy and climate adaptation planning for public conservation areas in New South Wales.
Gabrielle Davidson	Environmental consultant and Board Director of Terrain NRM	Gabrielle is an environmental consultant with a wide range of experience in ecology and the carbon industry including undertaking carbon project audits, development, and environmental assessments in northern Australia. She is a Board Director of Terrain NRM.
Tanya Pritchard	Senior Manager Koala Recovery and Landscape Restoration, WWF	Tanya leads the 'Koalas Forever' forest landscape restoration and wildlife conservation program in Eastern Australia with a focus on forest carbon sequestration and abatement through designing and implementing nature-based solutions.
Elizabeth O'Leary	Global Chair – Agriculture and Natural Assets, Macquarie Asset Management	Macquarie Asset Management has diverse interests in agricultural land holdings and has invested significantly in emissions reduction methods and carbon storage in land and wetlands. Elizabeth has decades of experience in agricultural and natural capital assets and investments.
Jennifer Hemer	Program Manager – Water and Marine, NRM South	NRM South is a regional NRM organisation in Tasmania. NRM South was one of the pilot regions in both the Australian Government's Carbon plus Biodiversity pilot and is also involved in a blue carbon ecosystem restoration pilot.
Bronwyn Robertson	Project Coordinator – Biodiversity and Climate, Terrain NRM	Terrain NRM has developed an accounting mechanism – Cassowary Credits – to model, verify and accredit the environmental outcomes from rainforest restoration activities, which may also be compliant with the ACCU environmental plantings method.
Radha Kuppalli	Non-Executive Director	Radha is Non-Executive Director of Re-Vi, an Australian biochar and CO2 removals company; Greening Australia; and Accounting for Nature. She is also a member of the Australian Government's Nature Finance Council and is an advisor and investment committee member to climate impact fund managers in Australia, the UK, and Vietnam. She previously spent 17 years at New Forests.

9. Appendix B – Acronym glossary

Acronym	Meaning
ACCU	Australian Carbon Credit Unit
ACI Code	Australian Carbon Industry Code of Conduct
CAC	Carbon Abatement Contract
CCA	Climate Change Authority
CER	Clean Energy Regulator
CMA	Catchment Management Authority
CMI	Carbon Market Institute
CFI Act	Carbon Credits (Carbon Farming Initiative) Act 2011
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries and Forestry
DCCEEW	Department of Climate Change, Energy, the Environment and Water
ERAC	Emissions Reduction Assurance Committee
ERF	Emissions Reduction Fund (Now ACCU Scheme)
FPIC	Free, prior and informed consent
FullCAM	Full Carbon Accounting Model
GHG	Greenhouse Gas
HIR	Human induced regeneration
IFLM	Integrated Farm and Land Management
LLS	Local Land Services
LRF	Land Restoration Fund
MRV	Monitoring, reporting & verification
NRM	Natural Resource Management



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