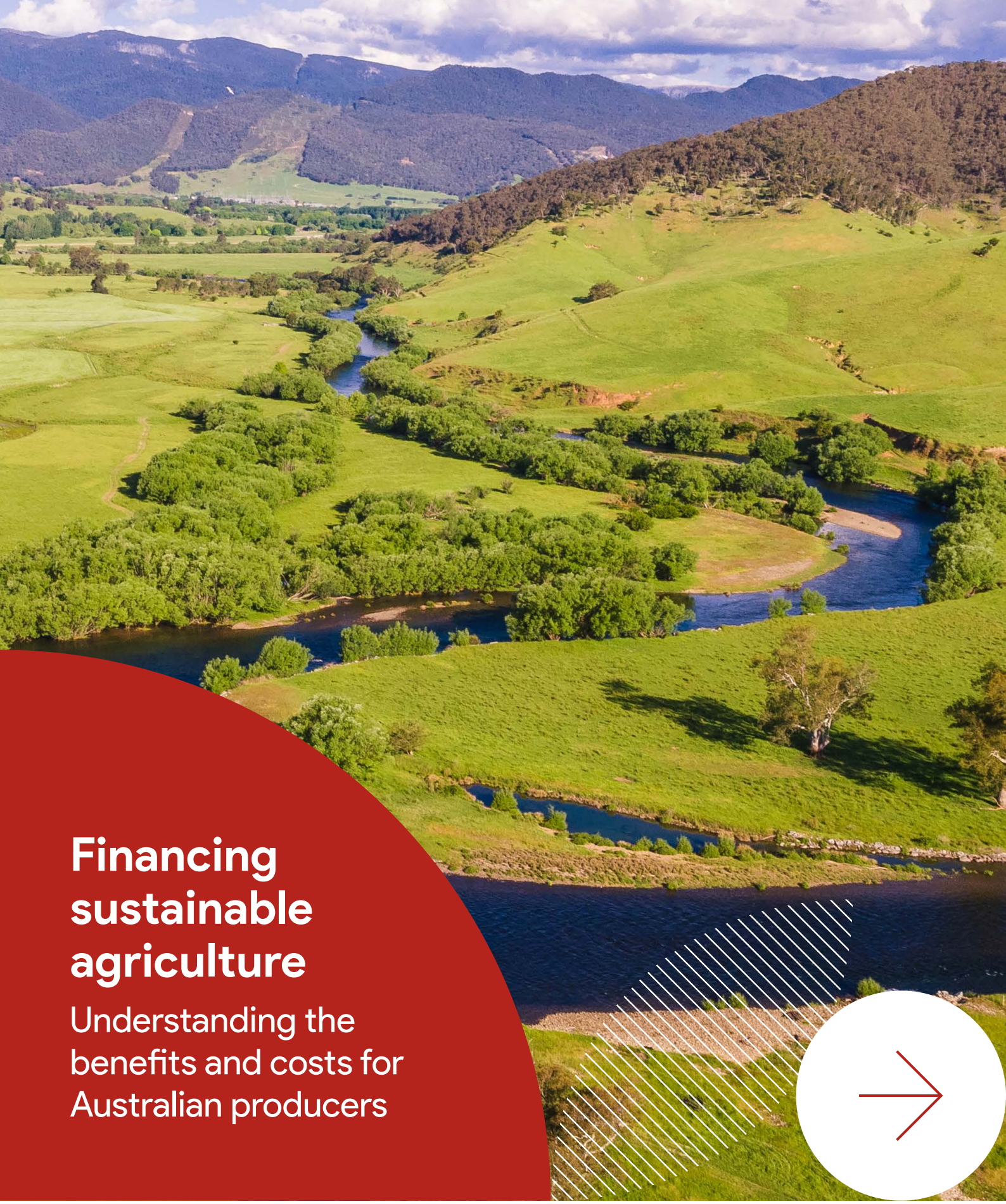

Financing sustainable agriculture

Understanding the benefits and costs for Australian producers

by Ernst & Young
September 2024

AgriFutures®
National Challenges and Opportunities

Financing sustainable agriculture: Understanding the benefits and costs for Australian producers

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Financing sustainable agriculture

Understanding the benefits and costs for Australian producers

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Foreword

The Australian agriculture sector is undergoing significant transformation as it adapts to an evolving global environmental, social and governance (ESG) landscape.

As value chains and financial institutions respond to increasing climate, nature and social-related regulatory pressures and consumer demands, sustainable agricultural practices are becoming increasingly important for farmers, fishers and foresters seeking to future-proof their businesses.

This *Financing sustainable agriculture: Understanding the benefits and costs for Australian producers* report, authored by Ernst & Young in collaboration with AgriFutures Australia, addresses the critical need for producers to understand the benefits and costs associated with sustainable agriculture and accessing sustainable finance opportunities. The sector faces challenges, such as climate change, environmental degradation and the need for improved social outcomes, and these necessitate a shift towards more sustainable practices to ensure long-term viability and resilience.

Key findings highlight the dynamic changes in the global ESG landscape, which are reshaping the operational, financial and strategic frameworks within which Australian producers operate. Sustainable agricultural practices are gaining attention due to heightened awareness of climate and environmental risks, evolving regulations and consumer demand for sustainable products. These trends present new opportunities and financial incentives for producers to both support and benefit from sustainability.

The report provides several key recommendations for producers, namely:

1. Understand how the regulatory and market landscape is changing, and how financiers are responding. Producers who integrate sustainability measures into their business will be better equipped to navigate the evolving ESG landscape and remain competitive.
2. Determine opportunities across your farming business to implement sustainable activities. Having a defined sustainability strategy will enable you to be clear on your business objectives and demonstrate your commitment to ESG.
3. Take action, establish a plan to measure ESG outcomes (greenhouse gas emissions reduction, improved water quality, employee satisfaction) and document these outcomes. Proactively integrating sustainability monitoring and reporting into everyday business operations will help you prepare for future reporting demands.
4. Understand the benefits and costs associated with sustainable finance. If sustainable activities cannot be self-funded, explore funding opportunities across public and private institutions and engage with your bank. Sustainable finance can open doors for producers to reap economic, social and environmental rewards.

This report was produced under AgriFutures Australia's National Challenges and Opportunities focus area. Work in this space aims to identify, understand and respond to cross-sector issues impacting Australian rural industries.

Jane Knight
Senior Manager, Rural Futures
AgriFutures Australia

Sustainable agricultural practices are gaining attention due to heightened awareness of climate and environmental risks, evolving regulations and consumer demand for sustainable products. These trends present new opportunities and financial incentives for producers to both support and benefit from sustainability.

Abbreviations

AASF	Australian Agricultural Sustainability Framework
ACCU	Australian Carbon Credit Unit
ASC	Aquaculture Stewardship Council
ASFI	Australian Sustainable Finance Institute
CBA	Commonwealth Bank of Australia
CBS	Climate Bond Standards
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries and Forestry
DCCEEW	Department of Climate Change, Energy, the Environment and Water
ESG	environmental, social and governance
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GHG	greenhouse gas
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
kWh	kilowatt hour
MLA	Meat & Livestock Australia
MRV	monitoring, reporting and verification
PICCC	Primary Industries Climate Challenges Centre
QRIDA	Queensland Rural and Industry Development Authority
STCs	Small-scale Technology Certificates
t CO_2e	tonnes of carbon dioxide equivalent

Contents

Author note

The information provided in this report is for general informational purposes only and is not intended to be a substitute for professional financial advice. The content of this report does not take into account the investment objectives, financial situation or particular needs of any specific individual or entity. Before making any financial decisions, readers should consider their own circumstances and seek independent financial advice from a licensed financial advisor in accordance with the *Corporations Act 2001* and the Australian Securities and Investments Commission's regulatory guidance.

The authors thank the stakeholders from across the agriculture, finance and government sectors who contributed to this report. Thank you also to the Commonwealth Bank of Australia for providing relevant case studies of sustainable finance for producers.

Purpose of this report

The Australian agriculture sector is undergoing significant transformation as it adapts to an evolving global environmental, social and governance (ESG) landscape.

As value chains and financial institutions respond to increasing climate, nature and social-related regulatory pressures and consumer demands, sustainable agricultural practices are becoming increasingly important for farmers and fishers and foresters – collectively referred to as producers –seeking to future-proof their business.

This report analyses the benefits and costs for producers from implementing sustainable practices and accessing sustainable finance opportunities. The objectives of this study were to:

- Highlight the economic, environmental and social benefits and costs of engaging in sustainable agriculture, including accessing sustainable finance.
- Showcase case studies of Australian producers pursuing or accessing sustainable finance to support their business growth and/or sustainability objectives.
- Support Australian producers to make informed decisions and navigate sustainable financing options with confidence.

This report is part of a series commissioned by AgriFutures Australia to guide producers through the shifting ESG landscape. Complementary publications, such as *Banking on sustainability: Environmental and social lending in rural industries* and *Navigating environmental and social lending opportunities: A guide for Australian producers*, offer insights into the market and regulatory trends influencing the evolution of sustainable finance, and their implications for Australia's agriculture sector.

Research approach

The findings in this report are drawn through a combination of desktop research and targeted stakeholder engagement.

A comprehensive review was undertaken to provide an overview of the benefits and costs of sustainable agriculture and accessing sustainable finance. The findings have been summarised, applying a triple-bottom-line framework to evaluate environmental, economic and social impacts. The report includes a due diligence framework to guide producers through the process of determining whether sustainable finance is right for them.

To complement the analysis, several stakeholders, including producers and financial institutions, were engaged to share case studies. The aim of these discussions was to gain insights into the sustainable finance products available to Australian producers and the lessons learned by producers who have accessed sustainable finance opportunities.

This report aims to equip producers with an understanding of the sustainable finance landscape and how it intersects with Australian agriculture, helping empower them to evaluate opportunities and make informed decisions in the context of their operations, the challenges and opportunities arising from them.

Twelve interviews were carried out with individuals involved with a diverse group of financial institutions, government departments, rural Research and Development Corporations (RDCs), and rural industry associations. Stakeholder interviews supplemented the desktop research by providing perspectives on current sentiments towards sustainable finance within the agriculture sector; how recent ESG landscape developments are shaping the industry; what this means for primary producers; and what needs to be considered to scale sustainable finance within the sector.

Key findings

The global ESG landscape is in a state of dynamic change. This is transforming the way regulations are prioritised, business is conducted and finance is allocated. These trends will reshape the operational, financial and strategic frameworks within which Australian producers operate.

Keeping informed across a changing global landscape is an ongoing challenge for producers. However, these changes also present new opportunities and financial incentives for producers to support and benefit from sustainability.

Sustainable agricultural practices are gaining attention with Australian producers. This is being driven by heightened awareness of climate and environmental risks, evolving regulations, consumer demand for sustainable products, and increasing expectations for better ESG transparency in supply chains. These trends are having ripple effects across agricultural value chains, raising the importance of sustainability in finance decisions and market access, and changing expectations on how food and fibre is produced.

As highlighted in the complementary *Navigating environmental and social lending opportunities: A guide for Australian producers* report, key developments driving sustainability in the Australian agriculture sector include:

- The Australian Agricultural Sustainability Framework (AASF), a joint initiative led by the National Farmers' Federation and supported by the Australian Government and the Australian Farm Institute. The AASF provides a unified understanding of sustainable agriculture in Australia. As the global ESG landscape continues to mature, the AASF serves as a useful tool to inform and inspire producers to make sustainable agriculture decisions that align with evolving market and lending requirements.
- The Australian Sustainable Finance Taxonomy, currently being developed by the Australian Government. The taxonomy will provide financial institutions with further detail on specific metrics for agricultural activities, including definitions, screening criteria and performance thresholds to underpin sustainable finance products in the future (ASFI, 2024). Although the taxonomy is yet to be released, producers can be proactive by embracing sustainability to align with emerging standards.
- The introduction of mandatory reporting on climate-related risks and opportunities by many countries, including Australia and its top agricultural export markets. This development will drive financial institutions to apply greater scrutiny to the impact of their financing activities. Captured entities will may engage sustainability metrics, such as greenhouse gas (GHG) emissions, from their downstream customers, including producers, to meet their own reporting requirements.

There is no one size fits all when it comes to sustainability in the agriculture sector. Australia has some of the most biodiverse ecosystems in the world, coupled with a huge variety of agricultural food and fibre production systems, each with their own specific methodologies. This means relevant sustainable agricultural practices will be unique to each business and region.

Embracing sustainability presents an opportunity for producers to improve access to capital and engage in natural resource stewardship, and could strengthen market performance. There is growing evidence that sustainable agricultural practices can improve environmental, social and productivity outcomes without compromising profitability (Fleming et al, 2019; NFF, 2023; MLA, 2024). There are other less-tangible benefits, such as the general enjoyment experienced by land managers who feel good about sustainable practices.

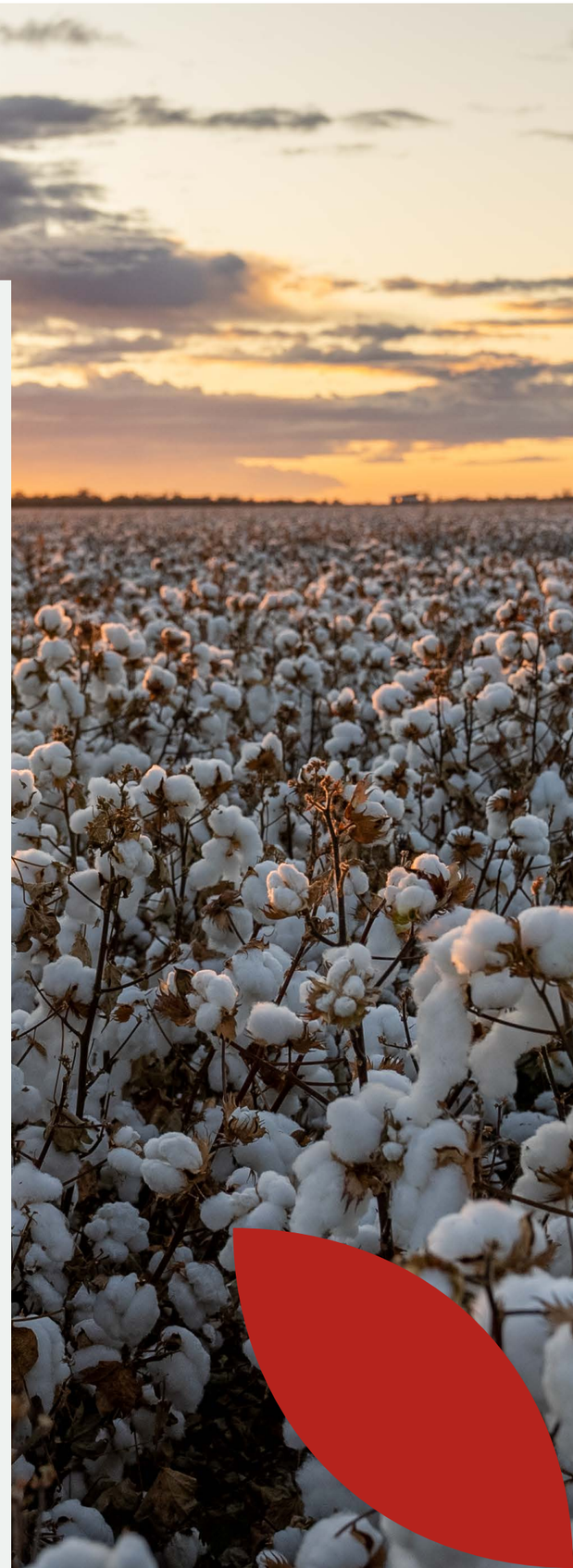
The cost of adopting sustainable practices can vary greatly, depending on producers' individual circumstances. A key consideration for producers in adopting sustainable agricultural practices and technology is the financial impact and whether there is an opportunity for financial gain. This is practical business sense as businesses need to be profitable to support the livelihoods of producers and their communities, and minimise the flow-on price impacts to consumers.

Sustainable agricultural activities can include several types of costs, including initial investment, ongoing day-to-day running costs and opportunity costs associates with choosing one investment over another. Specific costs could include upskilling, investing in technology or farm improvements (e.g. new fencing) and employing third-party contractors. It is important for producers to carefully weigh the financial benefits and costs when investing, whether using their own funds or external financing.

The extension of sustainable finance into the agriculture sector is a relatively recent development. ESG considerations are becoming central to strategic decision-making and customer engagement within the financial services sector. Sustainable finance is one way producers can accelerate their sustainability initiatives. A key factor in unlocking and scaling sustainable finance in the agriculture sector is providing producers with a greater understanding of the benefits and costs associated with engaging. This understanding is essential for producers to make informed decisions on whether pursuing sustainable finance is right for them.

To shift capital toward more sustainable outcomes, financial institutions are offering an increasing number of products. Green loans, sustainability-linked loans and green insurance products are being provided to encourage and incentivise positive social and environmental actions. Products specific to the agriculture sector have entered the market in recent times, targeting sustainable farming activities and outcomes.

Engaging with sustainable finance has some distinct benefits and costs. Sustainable finance can offer advantages, such as reputational/brand benefits and potentially flexible or discounted lending rates. However, there are additional costs and effort required to implement sustainable practices, and monitor and report outcomes. It is therefore important to conduct thorough due diligence for informed decision-making.



Four key takeaways for producers

This report points to four key areas of focus for producers to effectively navigate the evolving ESG landscape and financier requirements:

1. **Understand how the regulatory and market landscape is changing, and how financiers are responding.** The shifting ESG landscape is largely being driven by new regulations, heightened shareholder awareness of environmental risks and consumer demand for sustainable goods. Sustainability reporting regulations, although not yet directly capturing most producers, could indirectly impact the entire value chain of reporting entities. ESG data collection may become a central part of doing business, as many financiers seek to improve their understanding of their own sustainability metrics. Producers ready to integrate sustainability measures and report on ESG data will be better equipped to navigate the rapidly evolving landscape and remain competitive.

2. **Determine opportunities across your farming business to implement sustainable activities.** A core foundation of improving sustainability within agricultural businesses is a sustainability strategy, which may include a vision and goals, as well as an action plan or roadmap. There is no one-size-fits-all approach for sustainable farming, which means different activities, technologies and practices will apply across agriculture, and each has a range of benefits and costs specific to the commodity, geography and local context in which it is adopted. Determining opportunities through a strategy will enable producers to be clear on their business objectives, identify activities to prioritise and demonstrate their commitment to ESG, which they can then communicate to financiers and other stakeholders.

3. **Take action, establish a plan to measure ESG outcomes and document these outcomes.** Conduct research and seek advice to implement sustainable projects. This could include establishing a plan to measure outcomes achieved, such as GHG emissions reduction, improved water quality, amount of carbon stored in soil, enhanced animal health and efficiency, and higher employee satisfaction and wellbeing. Activities can be trialled and implemented at a smaller scale prior to full adoption. Make sure to establish and document the means to record data and monitor outcomes over time. It is important to baseline metrics, such as emissions and natural capital, so that improvements can be tracked. Each producer's journey and objectives will be distinct, but proactively integrating sustainability monitoring and reporting into everyday business operations will help producers prepare for future reporting demands.

4. **Understand the benefits and costs associated with sustainable finance.** If sustainable activities cannot be self-funded, explore funding opportunities across public and private institutions and engage with your bank. There are growing financial incentives for sustainable agricultural practices and banks are looking for opportunities to support sustainable outcomes. Sustainable finance in the agriculture sector can open doors for farmers, fishers and foresters to reap economic, social and environmental rewards. However, recognising the long-term commitments and reporting requirements associated with sustainable finance products is also important. This requires producers to conduct their own due diligence and understand their options and responsibilities.

ESG developments impacting Australian producers

Agriculture is a valuable part of Australia's economy, ensuring the nation's food security while accounting for about 14% of export trade, 2.2% of employment and 2.7% of value-added gross domestic product (DAFF, 2024a) (Figure 1).

As the world grapples with resource scarcity and changing consumer expectations, there is increasing demand for agriculture systems that are environmentally sound and socially responsible, and that can demonstrate their sustainability performance.

Regulators, consumers and financiers are increasingly focusing on sustainability

As well as being impacted by the effects of climate change, primary production also contributes to Australia's emissions. In the year to March 2024, agriculture contributed 19.3% of Australia's total GHG emissions (DCCEEW, 2024a). The sector therefore has an important a role to play in Australia meeting its obligations under the Paris Agreement, which commits the nation to reducing emissions to limit global warming to well below 2 °C, aiming for 1.5 °C (UNFCCC, n.d.-a) (Figure 1).

ESG regulations, laws and standards are rapidly evolving. This shift is largely driven by growing awareness of climate and environmental risks, consumer demand for sustainable products, and demands for better ESG transparency and corporate accountability (Rogers, 2023; World Economic Forum, 2024). Many countries, including Australia and its top agricultural export markets, are introducing mandatory reporting on climate-related issues.

Under Australia's recently legislated requirements, insurers and financial institutions will be obligated to report their operational emissions (scope 1 and 2), as well as the emissions originating across their value chain and portfolio (scope 3) (Australian Treasury, n.d.). This will impact larger operations captured directly by the reporting obligations and have flow-on impacts for producers who contribute to the value chain emissions (Figure 2). Increasingly, producers may be required to provide robust environmental data (i.e. GHG emissions) on their operations to their customers and lenders.

The European Union (EU), a driving force in shaping global ESG standards and rules, has also implemented regulation preventing goods linked to deforestation from entering the EU market from December 2025 for large companies, while smaller companies have until mid 2026. This may signal other regulatory changes across global markets in the future.

In addition, consumers are becoming more aware and conscientious about food provenance. Consumers wanting to minimise their environmental footprint may seek information on the ecological impacts of production and in subsequent processing and transport, and make purchasing decisions accordingly.

As a result of these trends, ESG is becoming central to financial institutions' strategic decision-making and customer engagement, with implications for producers (Figure 3). Producers taking action to integrate sustainability measures into the way they do business will be better equipped to navigate the rapidly evolving ESG landscape, remain competitive and position themselves to steer changing market access requirements.

For more information on changes to the ESG landscape and implications for Australian producers, refer to the complementary report *Navigating environmental and social lending opportunities: A guide for Australian producers*.

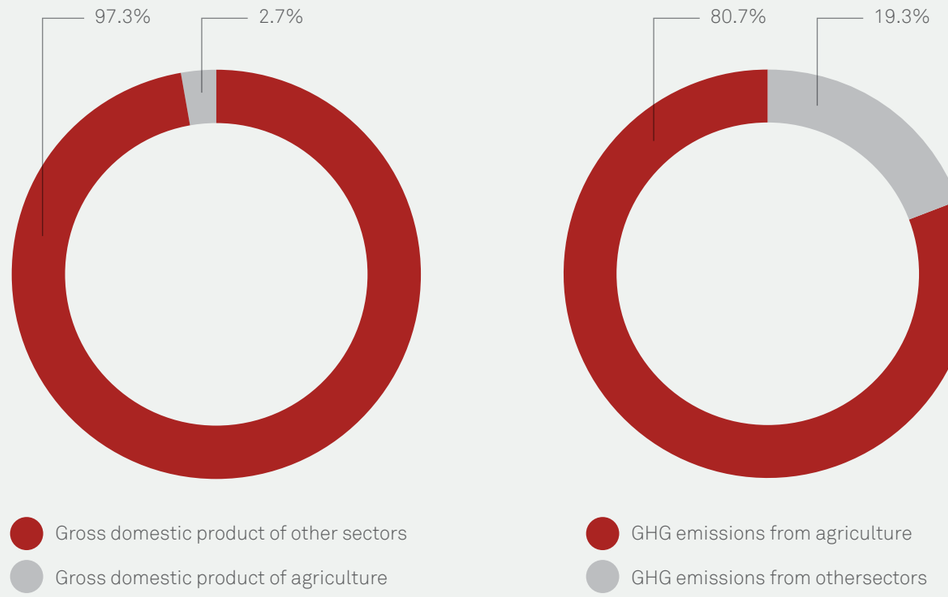


Figure 1. (Left) Australian agriculture gross domestic product as a proportion of national GDP. (Right) Australian agriculture greenhouse gas emissions as a proportion of national GHG emissions. Sources: ABS, 2024; DCCEEW, 2024a.

Notes: (1) GDP calculation is based on the ABS classification *Agriculture, Forestry and Fishing: 01 Agriculture*, series ID A2716161K; (2) DCCEEW emissions calculations for agriculture do not include sequestration from forestry activities.

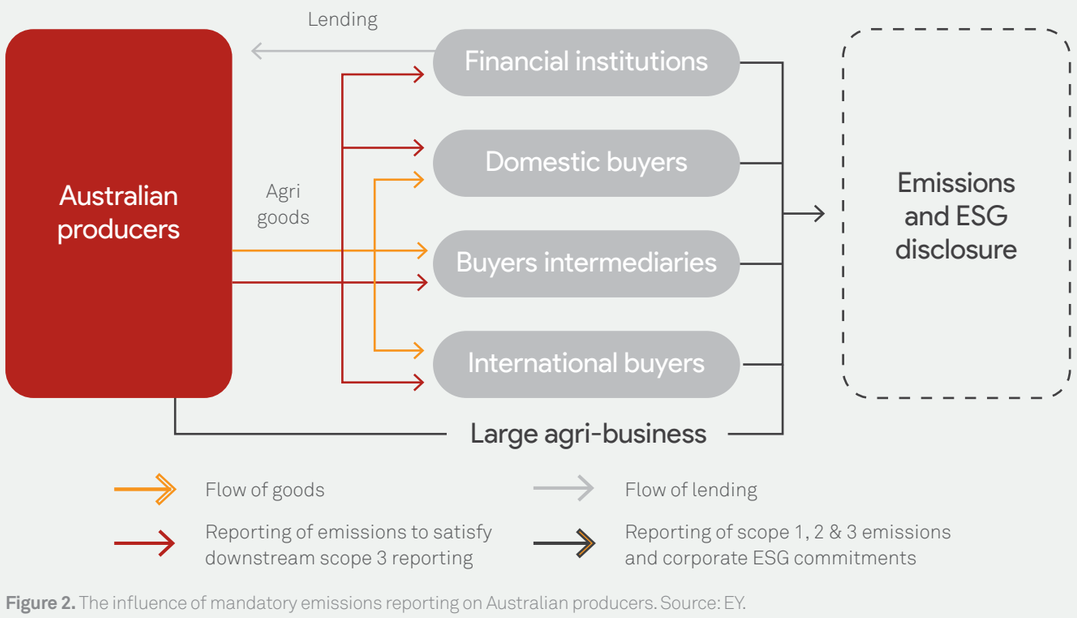


Figure 2. The influence of mandatory emissions reporting on Australian producers. Source: EY.

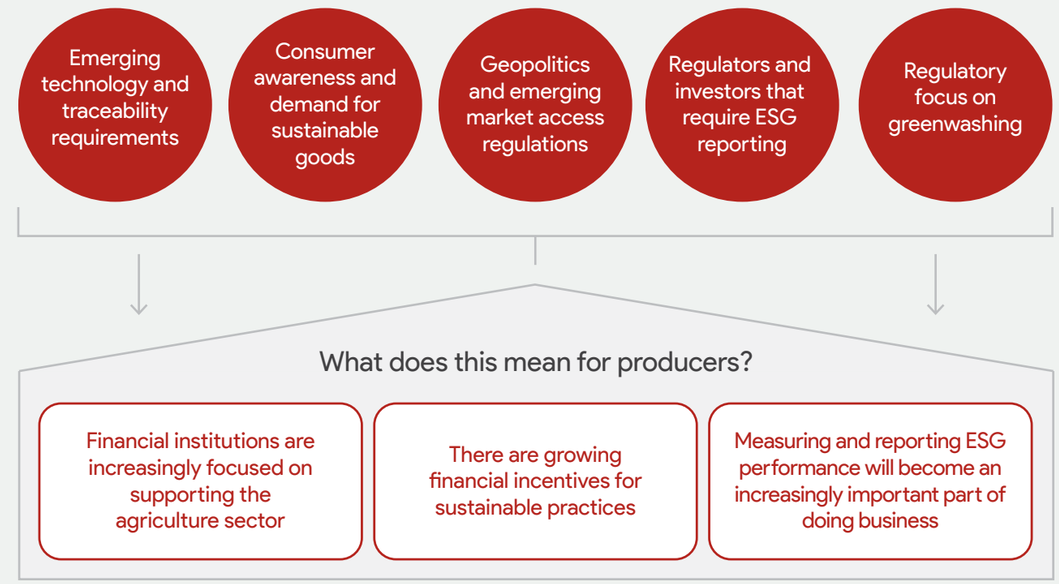


Figure 3. ESG landscape developments impacting producers. Source: EY.

The agriculture sector is responding by focusing on sustainable farming

Sustainable practices are already commonplace for many Australian producers. These include activities such as sound land management (e.g. rotating legumes and pulses, channelling, implementing shelterbelts, no-till) and installing fences to protect waterways (MLA, 2019; NSW DPI, 2006). Some producers are taking more proactive steps by embracing regenerative agriculture, aiming to not just sustain but actively restore and improve their land, and integrating activities to reduce on-farm emissions (Box 1) (WA DPIRD, 2023).

The Australian Agriculture Sustainability Framework (AASF) has been developed to set out a unified understanding of sustainability objectives across Australia's diverse agriculture industries through a standard set of themes, principles and criteria (AFI, 2023). The themes encompass environmental stewardship; wellbeing of people, animals and the community; and economic resilience (Figure 4). The AASF is useful to understand the strategic sustainability priorities of the sector, but does not provide targeted actions and therefore has limited applicability to day-to-day operations. It is, however, complemented by a range of commodity-specific frameworks, such as for cotton, beef, sheep, chicken meat and more.

Producers seeking more information on sustainable practices suitable for their business and region can find resources and guidance through industry research and representative associations, agricultural extension services, and sustainability-focused organisations dedicated to supporting the transition to more sustainable farming.

Box 1. Snapshot of Australian regenerative projects and activities

Cotton producers, in partnership with Landcare Australia and Country Road, are working to regenerate 60 hectares of cotton-farming land, improving local biodiversity, preserving natural resources and delivering financial outcomes for producers (Landcare Australia, n.d)

Sustainable Farms, an initiative of the Australian National University, involves a team of ecologists based in regional New South Wales and Victoria conducting long-term biodiversity surveys on farms to understand the role of natural assets. Their work explores the benefits of sustainable activities, such as shelterbelts, farm dam management, farm biodiversity and riparian restoration (Sustainable Farms, 2024).

Bellinger Landcare's Regenerative Farming Project is actively supporting producers to adopt regenerative agricultural practices. Actions such as fencing and planting in riparian zones help to reduce erosion, simplify stock management, and improve water quality and river health (Bellinger Landcare Inc., n.d).

Soils for Life works to support Australian farmers to regenerate soils for resilient people, communities, businesses and landscapes. It supports producers to regenerate the health of their soils, providing peer-to-peer learning communities, soil health monitoring access, and partnerships with government and researchers (Soils For Life, 2023)

The owners of Brookfarm in Byron Bay have been focusing on regenerative farming, planting 4,000 macadamia trees and more than 35,000 rainforest and eucalyptus trees. This has created homes for native insects, lizards, snakes, birds and other animals. According to the owners, the biodiverse environment has established an ecosystem where pests are managed, pollination occurs and soil is regenerating (Brookfarm, n.d).

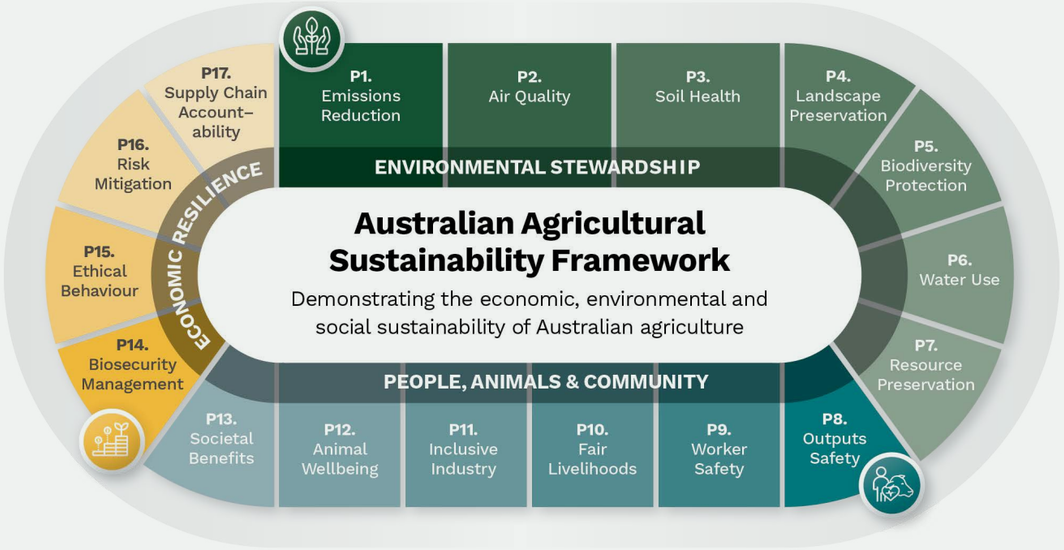


Figure 4. The Australian Agricultural Sustainability Framework. Source: AASF, 2023.

Key takeaways for producers

Regulators, consumers, shareholders, and financiers are increasingly focusing on sustainability in the agriculture sector.

Mandatory sustainability reporting will indirectly impact the entire value chain of reporting entities, meaning financiers will require ESG data from producers to meet their own reporting requirements.

Due to market demands, consumer expectations and regulatory compliance, sustainability is becoming an increasing focus in the Australian agriculture sector. The Australian Agriculture Sustainability Framework (AASF) sets out a unified understanding of sustainability objectives across Australia's diverse agricultural industries through a standard set of themes, principles, and criteria.

Producers taking action to measure their footprint, identify opportunities to implement more sustainable equipment, systems or processes with measurable benefits will be better equipped to navigate the evolving ESG landscape and position themselves to capitalise on the opportunity's new developments present.

There are opportunities for value creation for farmers through their management of natural capital and farming practices.

Sustainable agriculture: Environmental, social and financial considerations

There is growing evidence that sustainable agricultural practices can reduce costs, provide productivity gains and improve environmental outcomes without compromising market performance or profitability (Fleming *et al.*, 2019; NFF, 2023; MLA, 2024).

Embracing sustainability could help producers secure 'green' premiums, improve their market access and access capital while supporting natural resource stewardship. Indeed, in many parts of Australia, producers are already adopting sustainable practices for both financial and value-driven reasons, often self-funded as a part of operational decisions.

A focus on sustainability considers the environmental, social and financial impacts

Attention to sustainability gives consideration to all dimensions of a business (Figure 5), sometimes referred to as the triple bottom line; this includes the environmental, social and financial aspects. Embedding sustainability in on-farm practices in this way can:

- **Improve decision-making** by helping producers consider the full spectrum of consequences across societal, environmental and financial outcomes
- **Embed sound corporate governance** by establishing decision-making approaches that support the creation of more resilient business models and improve reputation
- **Improve the management of risks and opportunities** by helping producers anticipate and address a broader range of financial, social and environmental risks and opportunities
- **Assist communication with key stakeholders** by equipping producers with a set of metrics and narratives to effectively communicate their sustainability efforts with key stakeholders
- **Improve access to, and the cost of, debt capital** by performing activities that are eligible for sustainable finance, which can offer reduced interest rates and flexible lending terms.

The benefits and costs of sustainable agriculture can vary widely depending on the activity, the local context and the producer's unique reasons for undertaking the activity. While some benefits may be more obvious, such as more productive farmland, this chapter explores the variety of benefits and costs across the environmental, social and financial aspects of sustainable farming.

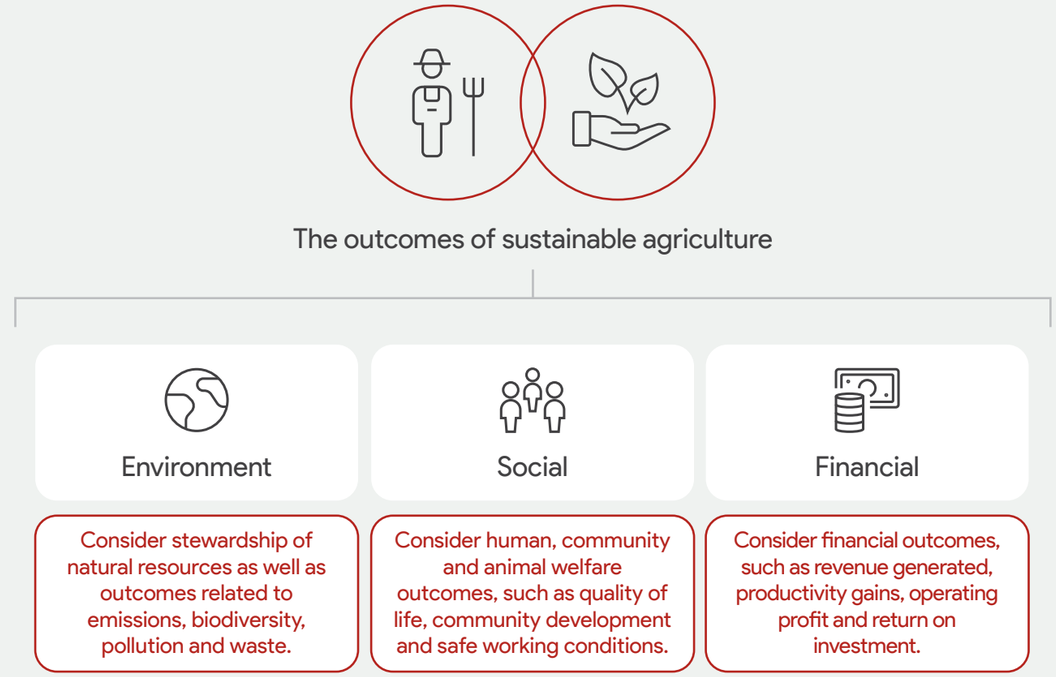


Figure 5. The outcomes of sustainable agriculture. Source: EY.

Sustainable farming works with nature to enhance environmental benefits

Australian agricultural producers are subject to climatic extremes and manage some of the world's most unique environments. Improper agricultural practices can lead to environmental degradation, soil erosion and pollution, and impact the productive ability of crops, livestock and landscapes.

In contrast, sustainable agricultural practices can lead to a wide range of environmental benefits. These can be across soil, biodiversity, water and waste, and can have flow-on benefits for stock health from nutritious pastures, water sources and disease risk (Figure 6). Sustainable practices can also deliver increased productive capacity.

Examples of the environmental benefits of sustainable agricultural practices are 'as follows.

Climate resilience

Climate resilience, a fundamental concept of climate risk management, refers to the ability of agricultural systems to adapt to, absorb and recover from the impacts of climate change. Climate-resilient and climate-smart practices can strengthen sustainability and build drought preparedness and resilience.

Climate-resilient practices might include using heat and drought-tolerant crop varieties (such as CSIRO's drought-tolerant wheat; CSIRO, n.d.), enhancing healthy soils to increase organic matter and support water-holding capacity, planting cover crops to reduce soil erosion and planting trees to provide canopy cover (FAO, 2023).

Lower greenhouse gas emissions

Many activities are available to producers to reduce their carbon footprint, and often these have production benefits. Examples include adopting precision agriculture, using coated fertilisers, composting, improving manure management and using renewable energy sources, such as solar or captured methane (Kazimierczuk *et al*., 2023).

Additionally, emerging technologies, such as methane vaccines, low-emitting animal genetics and feed supplements (i.e. *Asparagopsis* sp. and 3-NOP, the active compound in Bovaer®) are anticipated to become more commercially available and viable in the medium term.

Improved soil carbon and quality

Protecting and improving soil quality can improve the land's productive capacity, support animal health, build drought resilience, minimise erosion and provide flood mitigation. Practices to improve soil quality vary widely but include adopting cover crops, planting shelter belts, building soil microbiology, reducing synthetic inputs, and rotational grazing. Benefits demonstrated in initial research include improved profitability from higher soil carbon following a transition from cereal cropping to grazed pasture (Meyer *et al*., 2015; PICCC, 2015).

Less pollution and waste

Sustainable agriculture can help reduce pollution and waste, delivering both environmental benefits and cost savings. For example, nutrient management through the precision application of water, fertilisers, pesticides and other chemicals can improve profitability through lower input costs and minimise environmental impacts, such as chemical run-off and waterway pollution.

Protected and restored natural capital

Regenerative and sustainable agriculture techniques focus on enhancing natural capital and building resilient and functional ecosystem services. Benefits such as improved biodiversity help ecosystems better manage pests and diseases, and cope with scarcity (WEF, 2023). Healthy organic soils are more adept at storing carbon and retaining water, providing more resilience to drought and flooding (Gosnell, 2019).

Regenerative agriculture techniques include utilising green manures and compost; implementing biological pest control; managing grazing; diversifying crops; implementing conservation tilling; and intercropping native shrubs and trees with crops or livestock (known as agroforestry). Restoring natural capital through these practices offers many public and private environmental and financial benefits.

Sustainable water management

Variable rate irrigation allows the irrigation rate and location to be optimised, reducing the risk of excess water use, wastage and run-off. According to Dairy Australia (2018), environmental benefits include water savings of 20-30% coupled with lower pumping costs and improved grass and crop quality. For livestock, improved water management around dams (e.g. fencing to manage livestock impacts) can improve water quality, water security, biodiversity and ecosystem services (Australian National University, 2024).

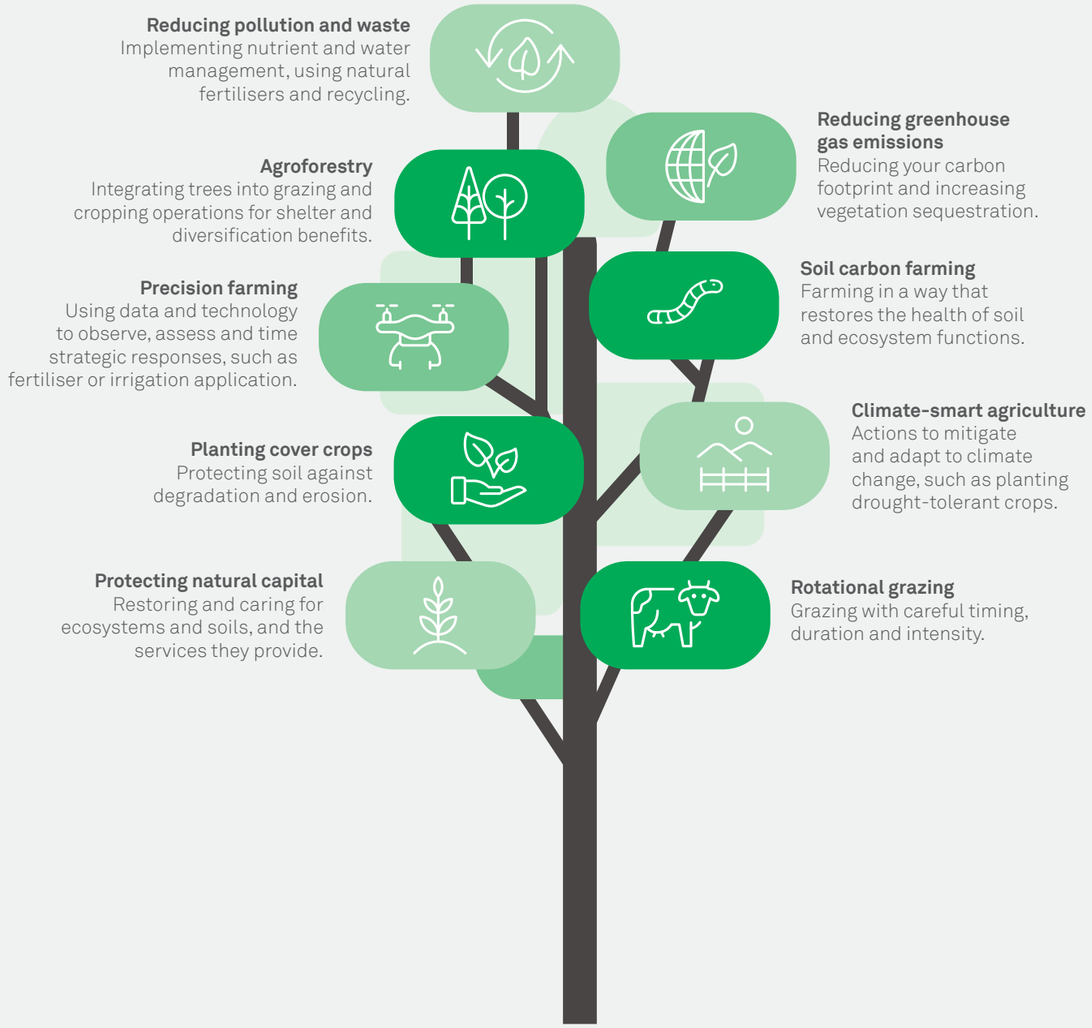


Figure 6. Examples of sustainable agricultural practices. Source: Adapted from IUCN (2021).

Box 2. Measuring the value of natural capital and ecosystem services

Natural capital is the stock of natural resources that producers manage, such as water, soil, vegetation and fauna. These can be referred to as environmental assets and provide ecosystem services. Producers rely heavily on ecosystem services, which are the direct and indirect contributions that ecosystems provide, such as nutrient cycling and photosynthesis (IPBES, 2019).

Natural capital and their ecosystem services provide several public and private financial benefits that support livelihoods (Figure 7). However, the benefits of natural capital are often not appropriately or clearly accounted for in traditional financial valuations, which typically only consider equipment and other infrastructure as assets (Farming for the Future, 2024).

Changes in natural capital stocks, such as increased soil organic carbon, can have significant environmental benefits and directly impact the cashflow and profitability of agricultural operations. A study of 113 farms found a positive correlation between natural capital and farm performance through increased productivity, lower input costs, and greater resilience to climate and market shocks (MLA, 2024). Farms with more natural capital released annual profit growth of $20-175/ha, with results varying by region. Natural capital helped producers cut back on expensive inputs, such as energy, feed, animal healthcare and labour (MLA, 2024).

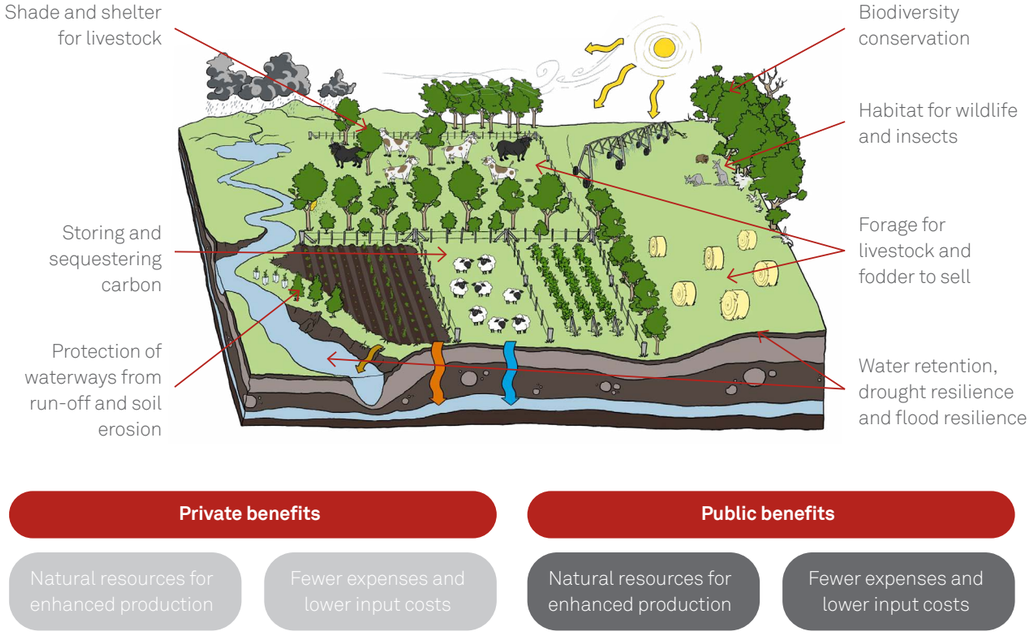


Figure 7. Natural capital and ecosystem services. Source: Adapted from Farming for the Future (2021).

Enriching social outcomes supports producers, their staff and their communities

The wellbeing of producers, employees and communities is critical to business success in the agriculture sector. Business practices that build skills, prioritise safety and respect the rights and knowledge of First Nations people are key components of success. Adopting sustainable agricultural practices can support producers, their staff and their communities in several ways (Brown *et al.*, 2021) (Figure 8).

The vitality of producers is intrinsically linked to the state of the environments they manage (Brown *et al.*, 2021). Recognising the intersection between sustainable farming, human health and planetary health is important because people are who implement agricultural practices. Beyond being a production method, sustainable farming also fundamentally impacts social outcomes. Examples of this are shown below.

Producers as employers, supporting their workforce

Sustainable practices frequently require learning new techniques and technologies, which can broaden the skillsets of producers and their staff, leading to personal growth and job satisfaction. This also builds knowledge and skills in rural areas, improving prosperity and community development. The flow-on impacts can drive sustainable economic activity, benefiting farm businesses, communities and the Australian economy.

In addition, providing a welcoming, safe and meaningful work environment for employees can also improve satisfaction, attraction and retention. One study found that 79% of Australians want more sustainable initiatives at their workplace, and 62% consider sustainability credentials when choosing an employer (Eco Voice, 2023).

Community engagement

The agriculture, fisheries and forestry sectors are integral to the prosperity of thousands of communities in regional Australia, providing about 31% of the nation's economic output and jobs for about one-third of Australia's workforce (DITRDCA, 2024). Many sustainable practices, such as local food systems and community-supported agriculture, encourage direct interaction with consumers, fostering stronger community ties and mutual support.

First Nations knowledge and collaboration

Integrating traditional knowledge and respecting the land management practices of First Nations people can lead to more holistic agriculture methods. Australia's First Nations people have a deep connection to Country. Involving diverse stakeholders in project design and delivery, including First Nations groups, can open avenues for sharing knowledge and resources, and coordinating efforts (VAHC, 2021).

Individual and community wellbeing

Adopting sustainable agricultural practices can have beneficial mental and physical effects (Brown *et al.*, 2021). Research has found that sustainable agriculture can improve an individual's connection to land and nature, and can contribute to them having a sense of meaning and purpose (Box 3). Sustainable agriculture can also lead to less manual labour and/or less use of harmful chemicals and pesticides, resulting in safer conditions for workers and fewer health issues.

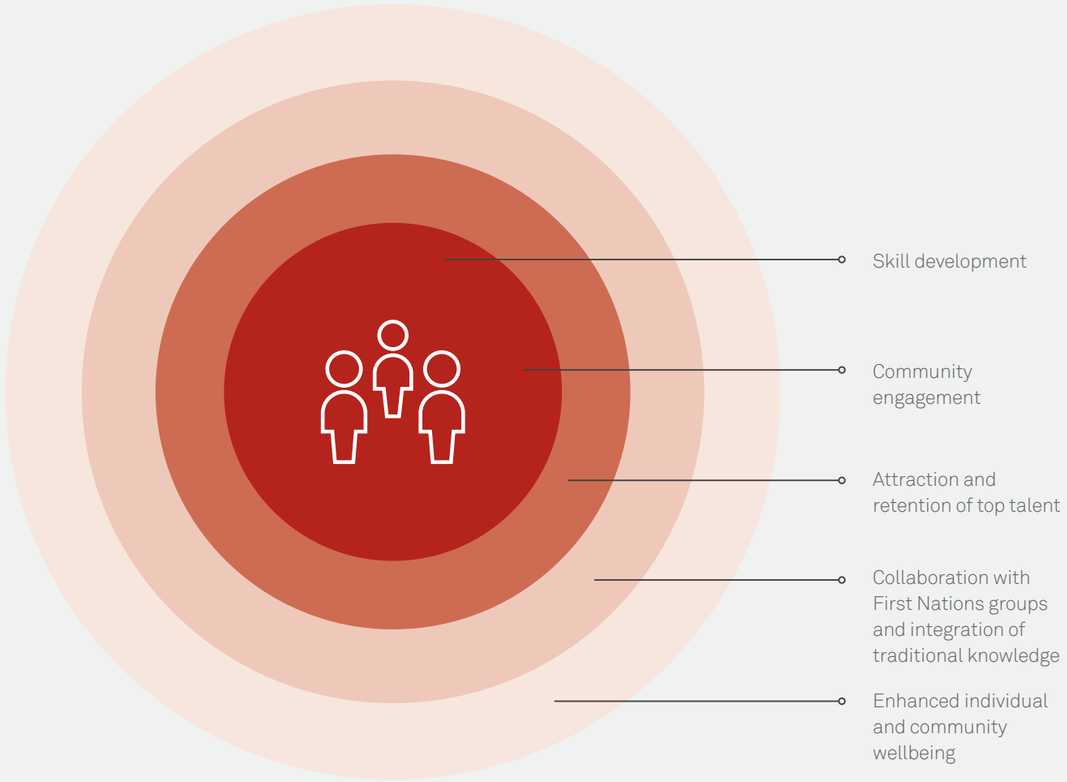


Figure 8. Social outcomes of sustainable agriculture. Source: EY.

Box 3. Sustainable farm practices and farmer wellbeing

Sustainable farming directly influences the health, wellbeing, and social connectedness of producers. Research conducted by Brown *et al.* (2021) comparing more than 800 regenerative and conventional graziers in Australia found that producers practising regenerative farming had 0.75% higher satisfaction with life achievements, reflecting greater feelings of meaning and purpose, had 0.62% greater satisfaction with their health and experienced 0.57% higher overall life satisfaction.

While these increases might appear modest, they are significant in the context of subjective wellbeing (SWB) research, where wellbeing scores are generally stable and small improvements are meaningful. These findings underscore the important link between regenerative agriculture and improved wellbeing, supporting the case for considering the social outcomes when deciding whether to adopt sustainable agricultural practices.

Sustainable farming creates opportunities for improved profitability and resilience

A key consideration for producers in adopting sustainable agricultural practices and technology is the financial impact and whether there is an opportunity for financial gain. This is practical business sense as businesses need to be profitable to support the livelihoods of producers and their communities, and minimise the flow-on price impacts to consumers.

The financial impact of adopting these practices can vary greatly, depending on the nature, objective, complexity, duration, size and location of a particular activity. It is important for producers to develop a transition plan to carefully weigh the risks, benefits and costs when investing in sustainable practices (Figure 9). While there are likely to be additional costs to consider, a growing body of evidence demonstrates sustainable agriculture can improve productivity and farm profitability (Gosnell *et al.*, 2019; Meyer *et al.*, 2015; NFF, 2023).

These benefits are rooted in improved productivity, cost savings and access to new markets, customers and types of finance. Some benefits, such as how improvements to ecosystem services improve the overall vitality of a farm, or the rate of cumulative improvement over successive years, can be difficult to quantify.

Financial benefits of implementing sustainable agricultural practices are shown in Figure 9 and are discussed in further detail below.

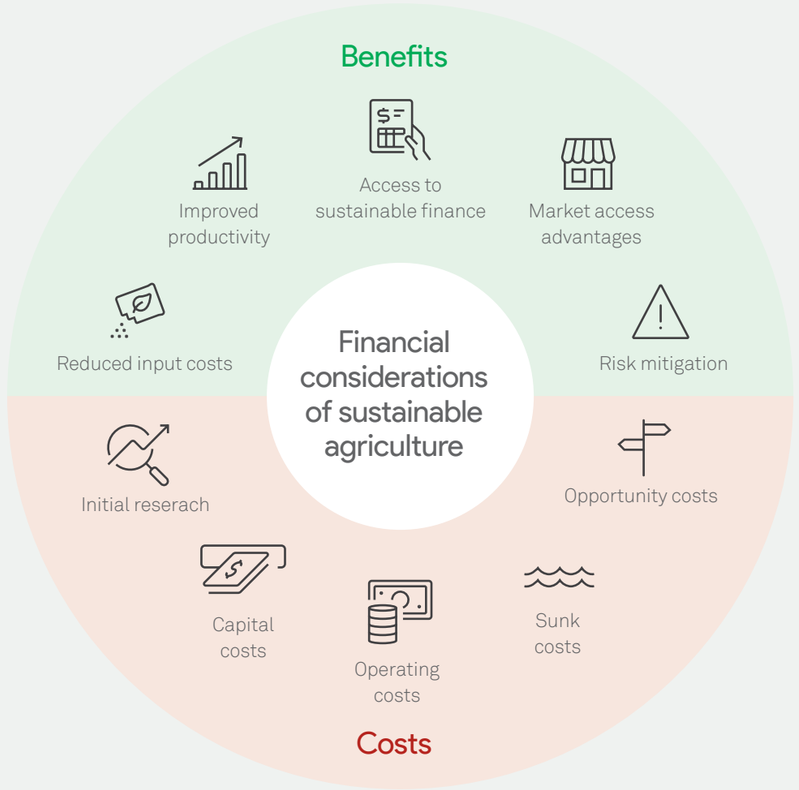


Figure 9. Benefits and costs of sustainable agriculture. Source: EY.

Improved productivity

Sustainable practices that focus on improving natural capital, such as soil and water conservation, lead to healthier soils and crops, and faster-growing livestock, which in turn can result in greater yields, lower input costs and production efficiencies (Gosnell *et al*., 2019; Meyer *et al*., 2015). This can translate into more output and revenue without proportionally increasing costs. For example, research has shown:

- Higher soil carbon can improve profitability following a transition from cereal cropping to grazed pasture, and can increase pasture production value between $42.51-$156.19/ha, depending on rainfall intensity (Meyer *et al*., 2015; PICCC, 2015).
- Increased livestock weight gain from improved water quality in farm dams, with an average per-farm benefit-cost ratio based on set assumptions of 1.5 for New South Wales and 3.0 for Victoria in areas where rainfall exceeded 600 mm annually (Dobes *et al*., 2021).
- Shelterbelts (Figure 10) can boost pasture production for livestock by up to 8%, reduce mortality of lambs by 10%, increase wool production by more than 30%, increase weight gain in livestock by more than 20% and reduce the populations of pest invertebrates, such as the redlegged earth mite (Sustainable Farms, 2024). In addition, the buffer from wind and weather protects against soil erosion and improves livestock productivity by reducing energy expenditure diverted to extreme temperature management (Bird et al, 1992).

Lower input costs

Leveraging natural processes and/or optimising resource use can lead to less expense on fertilisers, pesticides, water and energy. For instance, solar panels can deliver substantial energy cost savings for producers while simultaneously reducing their carbon footprint; an example of a 43% reduction in energy costs is provided in Box 4. As another example, GRDC (2017) research on the economic benefits of precision agriculture noted about 25% of cases studied generated a net economic benefit of $30-75/ha, while the remaining 75% generated a net economic benefit of less than $30/ha. The majority (90%) of the latter group generated a benefit in the range of less than $10/ha.

Risk mitigation

Sustainable agriculture can increase climate resilience, reducing the risk of crop failure and livestock loss due to extreme weather events or pest outbreaks (George *et al*., 2018; Van Dijk *et al*., 2024). For example, soil moisture monitors aid in efficient water usage, increasing resilience to drought (DAFF, 2023). This can lead to more stable income streams during challenging periods and lower insurance costs. Insurers may also provide premium discounts for producers who operate sustainably (Achema, 2021).

General enjoyment

Positive feelings about conservation and regeneration, along with the aesthetic pleasure, can bring joy to land managers, but this may not be measurable.

Access to sustainable finance

Sustainable practices are becoming increasingly valued by financial institutions seeking to improve their own environmental performance and reporting. A proven track record on sustainability can boost a producer's attractiveness to investors and potentially lead to favourable financing options through green, social or sustainability-linked loans. Further detail on the costs, benefits and considerations for producers accessing sustainable finance is provided below.

Improved reputation

As ESG credentials are becoming increasingly demanded in global markets, adoption of sustainable practices can support reputation and brand attributes. By showcasing sustainability commitments and ethical practices, producers can improve the quality perceptions of their produce and attract consumers seeking products that align with their values.

Market access and premium pricing

Overseas regulators are increasingly considering producers' ESG credentials, and these could soon become pivotal to accessing global markets. Additionally, studies suggest producers could access 'green premiums' for sustainably produced goods, with consumers increasingly seeking out eco-friendly products (Nijssen-Smith and L'Huillier, 2021; Rogers, 2023). However, premiums are yet to be commonplace in the market; while consumers seek sustainable products, evidence suggests they are not yet willing to pay for them (Schäufele and Janssen, 2021).

Diversified revenue streams

Producers who adopt sustainable practices may gain access to environmental certificate markets, such as Australian Carbon Credit Unit (ACCU) Scheme or the future Nature Repair Market. These carbon units can be sold to the government or on the secondary private market to generate additional income while benefiting the environment. There are a number of approved methods to generate carbon units from agriculture and vegetation management (Figure 11).

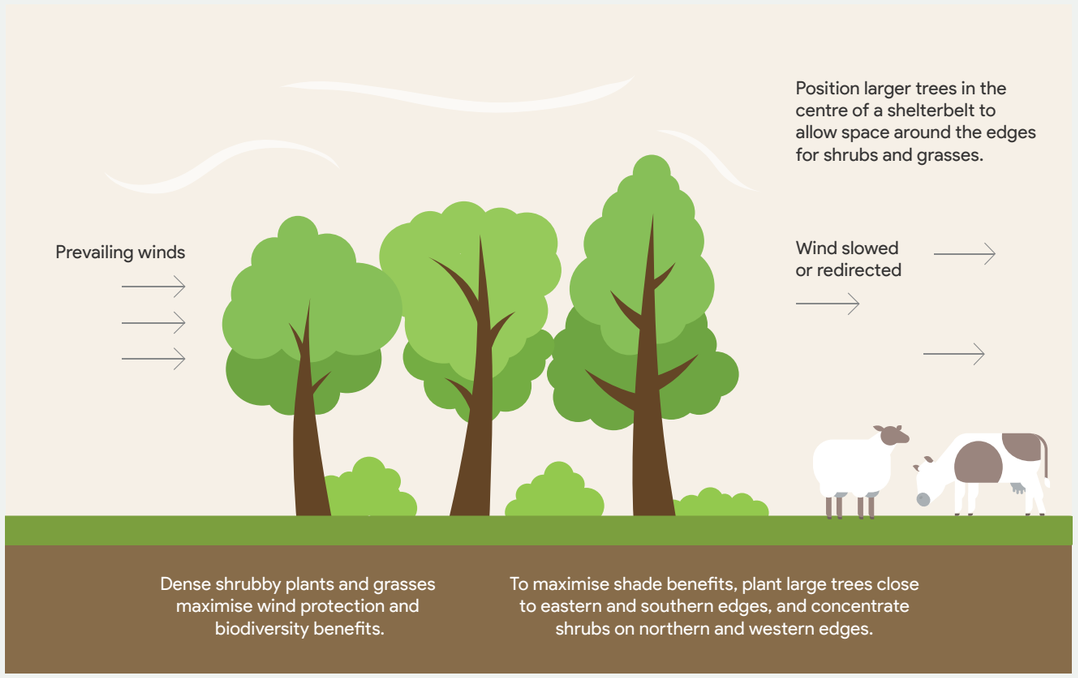


Figure 10. How shelterbelts work. Source: Sustainable Farms, 2024.

Agriculture methods	Vegetation methods
Animal effluent management method	Avoided clearing of native regrowth method
Beef cattle herd management method	Designated verified carbon standard projects method
Estimating sequestration of carbon in soil using default values method	Plantation forestry method
Estimating soil organic carbon sequestration using measurement and models method	Reforestation and afforestation method
Fertiliser use efficiency in irrigated cotton method	Savanna fire management methods
	Tidal restoration of blue carbon ecosystems method
	Reforestation by environmental or mallee plantings – FullCAM method

Figure 11. Australian Carbon Credit Unit Scheme methods relating to agriculture and vegetation. Source: CER, 2024b.

Box 4. Reducing energy costs by 43% from installing solar panels

A horticulture farm spanning 60 hectares in the Atherton Tablelands, Queensland had high electricity costs due to its year-round irrigation needs. Through a program funded by the Queensland Farmers' Federation and the Queensland Government, the farm accessed a free energy audit. The audit provided several recommendations, including investing in a larger solar system and adjusting how irrigation equipment and cold storage was managed to reduce the loss of cold air.

Acting on the recommendations, the farm invested in a solar system and a food temperature probe for their cold room at a capital investment of $22,990 and an estimated payback period of 3.5 years. The investment resulted in 63% lower energy consumption and 43% lower energy costs. The farm also reduced its annual carbon emissions by 25.9 t CO_2e.

Agriculture methods	Pre-implementation	Post-implementation	Savings
Energy consumption (kWh)	50,541	18,543	63%
Energy cost ($)	10,104	5,730	43%

The savings achievable from installing solar panels will differ between producers, yet this remains a compelling option for those with high energy demands. Generating electricity onsite reduces reliability on the grid, making production less vulnerable to volatile energy prices or power outages.

As solar systems become more widespread and efficient, the payback period is improving (CEC, 2024). This, combined with sustainable finance products that offer lower interest rates, is making solar systems more affordable and accessible for a wider range of producers.

Additional support can be accessed through the Clean Energy Regulator's National Small-scale Renewable Energy Scheme, which enables individuals to produce Small-scale Technology Certificates (STCs) that can be sold. Various state government programs also exist, such as the Queensland Rural and Industry Development Authority issuing sustainability loans with preferential financing terms for the purchase of renewable energy systems.

Source: Queensland Ag Energy Hub, n.d.

Cost considerations for adopting sustainable agriculture

The cost of adopting sustainable agricultural practices depends on the unique characteristics of the project. Technological complexity, property conditions, labour needs, prior training and experience, timeframes, and whether third-party contractors are needed are variables that will influence costs. Any project, including sustainable agricultural activities, will involve several types of costs

- **Capital expenditure:** The initial investment in new or upgraded assets, equipment, infrastructure or technology
- **Operating expenditure:** The day-to-day running costs
- **Opportunity costs:** The potential profits foregone by choosing one method over another
- **Sunk costs:** Expenditure that cannot be recovered should the project be abandoned or on-sold.

Table 1 shows these cost categories specific to a project involving the installation of solar panels to power a rain sensor technology irrigation system. Not shown in the table are commensurate benefits derived from energy savings, lower emissions and water savings from implementing the project.

Adopting sustainable practices can at first reduce profitability. This is due to upfront investment not matching return cashflows that may take longer to materialise. These upfront costs can be a deterrent because many producers fund sustainable activities out of their own pockets, evidenced by the hundreds of small and large sustainability projects implemented all over Australian landscapes (FCA, n.d.; WA DPIRD, 2023; MLA, n.d.). Such circumstances may provide opportunity for funding initial capital expenditure through sustainable finance. This would help eliminate the barriers of high upfront costs and enable the producer to reduce the cost of borrowing compared to a standard business loan.

Box 4 and Box 5 are case studies of where upfront capital investment is required before the project yields benefits.

Table 1. Cost related to transitioning to and implementing sustainable agricultural practices.

Category	Definition	Example
Capital expenditure	Money spent buying or improving long-term assets to undertake the project (e.g. property, land or equipment).	Cost of purchasing and installing solar panels and rain sensor technology irrigation system.
Operating expenditure	Money spent on the daily operation of the project, including fixed costs that do not change based on production or usage, and variable costs that scale depending on the amount of production and usage.	Annual maintenance contracts for the irrigation system (fixed cost).
Opportunity costs	The benefit you miss out on when choosing one option over another.	The space used for installing solar panels might have been used for alternative production, which now represents foregone revenue from those activities.
Sunk costs	Money that has already been spent and cannot be recovered.	Initial research costs spent to evaluate the feasibility of solar panels, which cannot be recovered even if the project is not pursued.

Box 5. Benefits and costs of establishing a legume-grass pasture

Leucaena is a resilient perennial legume known to benefit soil health, and has a potential life of more than 30 years (MLA, 2021). When sown into pastures, leucaena is known to provide significant financial and environmental benefits for grazing businesses by allowing for a higher stocking rate, increasing animal weight gain, and improving water infiltration and soil health, resulting in fewer inputs (Antonio, 2019; Buck *et al.*, 2019; Conrad *et al.*, 2017).

Research conducted in central Queensland found that leucaena-grass pastures can be 2.6 times more productive (kg liveweight/ha) and 1.9 times more profitable ($/ha) than grass-only pastures (Bowen *et al.* 2018). Leucaena can also remove the need for annual forage crops due to its longevity, reducing costs for farmers in the long term.

The initial capital expenditure to establish leucaena within a pasture can vary depending on the chosen planting method, whether a contractor is used, previous land use, available machinery and soil fertility. Based on research conducted in Australia, estimates to establish leucaena are:

Capex establishment cost estimates

Leucaena seed cost		$10-50/kg
Establishment costs (i.e. to clear paddocks and for machinery, chemicals and fertiliser)	For a producer with their own machinery on previously farmed land	>$200/ha
	For a producer with their own machinery on land that must be cleared	>$300/ha
	For a producer who requires contractors on land that must be cleared	>$400-600/ha

The operating expenditure to maintain leucaena is influenced by how well it establishes and the ongoing cost of any inputs, irrigation and equipment used. However, following establishment, pasture systems generally incur minimal costs, except in cases where fertiliser application and irrigation is required (MLA, 2021).

It is important to note potential opportunity costs during the establishment phase. If soil moisture levels are sufficient, leucaena may be ready for grazing six months after planting, but if planting failures occur, this could extend beyond two years, leading to considerable income loss (Antonio, 2019). This underscores the importance of considering a small-scale feasibility trial on farm prior to investing in full-scale implementation.

Key takeaways for producers

Research suggests that sustainable agricultural practices can improve financial performance, natural resources and community wellbeing.

The benefits and costs of adopting sustainable farming practices are unique for each producer, and depend on the activity implemented and the local context.

Adopting sustainable practices can improve productivity, provide cost savings and unlock access to sustainable finance, potentially leading to favourable and flexible lending terms aligned with the environmental and social outcomes of activities.

All over Australia, producers are undertaking self-funded sustainable agricultural practices for both financial and value-driven reasons. These practices may also be eligible for sustainable finance.

Sustainable finance in the agriculture sector

Sustainable finance in the agriculture sector is gaining attention, yet remains an emerging opportunity. Australian financial institutions are developing tailored products for the sector, such as green loans, green vehicle and equipment finance, social loans, sustainability-linked loans, and sustainability-linked insurance (Figure 12).

These products reward producers who can demonstrate sustainable practices with discounted interest rates or premiums. Sustainable finance products can be used for a specific project that has eligible expenditure, or for general business purposes with agreed sustainability outcomes.

Given the diversity of the sector, agriculture faces specific challenges in scaling sustainable finance due to the emerging industry practice in standardised definitions for 'sustainability' across geographies and commodities. While international standards exist, localised guidance has been absent to date.

The Australian Sustainable Finance Taxonomy is being developed by the Australian Sustainable Finance Institute (ASFI), supported by the Australian Government. The taxonomy will provide sector-wide clarity and transparency on the technical criteria for defining sustainability in the sector across a range of sub-sectors and activities. This will form the foundation for future growth in a broader range of sustainable finance products and services for the sector (ASFI, 2024).

Banks may consider a range of activities or measurable sustainability outcomes as eligible for sustainable finance. These could include renewable energy upgrades, regenerative pasture and soil activities, and management practices such as precision agriculture. Figure 13 outlines clean energy, soil and vegetation, and management projects that may be eligible for a green loan; further detail is available on the websites of many financial institutions. Producers and banks will agree on the specifics of the projects, what is eligible for sustainable finance, and the frequency and content of reporting as part of the establishment process. Environmental markets, such as the ACCU Scheme and the future Nature Repair Market, are also emerging as significant sustainable finance opportunities in the agriculture sector. These markets channel investment into projects that deliver tangible environmental outcomes, such as carbon sequestration or biodiversity conservation. In return, the stewards of eligible projects can earn credits, which are tradable financial products (CER, 2024a). Growing demand for carbon credits and biodiversity certificates may present an opportunity for farmers to unlock new markets and diversify revenue streams.

Among the practical considerations highlighted in the *Navigating environmental and social lending opportunities: A guide for Australian producers* report, a key factor in unlocking and scaling sustainable finance in the agriculture sector is providing producers with a greater understanding of the benefits and costs associated with engaging. This understanding is essential for producers to make informed decisions on whether pursuing sustainable finance is right for them. For further reading on sustainable finance in the agriculture sector, including the implications for Australian producers, refer to the complementary reports *Banking on sustainability: Environmental and social lending in rural industries* and *Navigating environmental and social lending opportunities: A guide for Australian producers*.

Emerging labelled sustainable finance products in the agriculture sector

Labelled sustainable finance products are emerging in the agriculture sector. Examples of the different types of products developed and offered by the finance sector are outlined below. Refer to KPMG Australia's *Banking on sustainability* report for a detailed description of these products and case study examples.

Emerging labelled sustainable finance products

Green equipment and vehicle finance

A finance product where the proceeds must be used to purchase green equipment or vehicles, such as electric vehicles or solar panels. The product might offer a discounted interest rate for the purchase of eligible assets.

Social loan

A loan product where the proceeds must be used to deliver an eligible project with beneficial social outcomes. The loan might offer a lower interest rate for eligible projects as defined by the financier or in a third-party framework.

Green loan

A loan product where the proceeds must be used to deliver an eligible project with beneficial environmental outcomes. The loan might offer a lower interest rate for eligible projects as defined by the financier or in a third-party framework.

Sustainable trade finance

A loan product that establishes a partnership between a bank and a partner downstream in the supply chain, such as a retailer, to provide suppliers with working capital. Suppliers who meet ESG performance targets are provided advanced payment or a lower interest rate.

Sustainability-linked loan

A loan where the achievement of specific ESG targets determines the interest payable. The interest rate might be discounted when ESG targets are met or exceeded, and penalties may apply for poor performance against ESG targets.

Sustainability-linked insurance

Insurance products where sustainable on-farm management practices are incentivised through lower premiums. Farmers who implement sustainable management practices, often defined by a third-party framework, receive a premium discount.

Figure 12. Emerging labelled sustainable finance products. Source: EY.

Clean energy projects	Carbon sinks, soil and vegetation	Management projects
On-farm renewable energy i.e. solar panels, wind power or hydropower	Converting degraded land	Deploying precision agriculture and variable rates of fertiliser
Purchasing electric equipment	Practices to improve soil water-holding capacity and drought resilience	Sustainable use of crop residues
Bioenergy projects	Establishing legumes or cover crops	Waste management
Energy-efficient assets, green building upgrades and low e-glazing insultation	Planting trees or establishing shelter belts	Increasing groundcover or pasture diversity
	Registered soil carbon projects	Implementing a controlled traffic cropping system
	Registered environmental projects	Transitioning to regenerative farming

Figure 13. Eligible green loan projects as referenced by Australian banks.

Key takeaways for producers

Mandatory sustainability reporting, such as that detailed within the Corporations Act 2001, presents opportunities for producers to access market premiums or favourable lending terms from financial institutions. To meet their own reporting obligations, financial institutions are offering tailored products, such as green loans and sustainability-linked loans, which reward producers who can demonstrate sustainable practices with discounted interest rates or premiums.

Banks may consider a range of activities or measurable sustainable outcomes eligible for sustainable finance. These could include renewable energy upgrades, regenerative pasture and soil activities, and management practices such as precision agriculture.

Environmental markets, such as the ACCU Scheme and the future Nature Repair Market may present an opportunity for farmers to unlock new markets and diversify revenue streams.

Accessing sustainable finance

Sustainable finance encompasses lending options, such as green loans, social loans and sustainability-linked loans, designed to support projects or companies with delivering positive environmental or social outcomes.

These finance products are intended to help facilitate equipment purchases or the implementation of systems or practices that deliver measurable environmental or social benefits. They provide producers with a range of advantages, including lower interest rates compared to traditional products and potential brand, marketing or reputational benefits. An overview of the benefits and costs of accessing sustainable finance is provided below. This is supported in the next section by five case studies sharing practical insights from producers who have accessed sustainable finance.

What are the benefits of sustainable finance?

Favourable interest rates, premiums and terms

Banks and some insurers are starting to offer targeted financial products that promote sustainability in the agriculture sector through discounted interest rates or favourable terms. Producers who meet eligibility criteria could benefit from favourable financing conditions, reducing the tenor and total cost of a loan (Box 6).

Reputation and brand benefits

Sustainable finance provides an avenue for producers to strengthen their reputation and brand by providing evidence of verified sustainable activities and outcomes. An example of this is providing your sustainability credentials when engaging with a buyer or distributor to reflect your commitment to sustainable agricultural practices.

Strengthened relationship with the bank

Engaging in sustainable finance can strengthen the relationship between the bank and the producer by aligning on criteria or activities that improve environmental and social outcomes.

What are the costs of servicing sustainable finance?

Transaction costs

Transaction costs are expenses relating to initiating a financing arrangement. While engaging with banks to find suitable financing options is standard, sustainable finance may incur additional costs to measure performance baselines, negotiate sustainability targets, evaluate project eligibility and establish ongoing reporting requirements. Producers may need to speak to several banks to find the right arrangement for them, which could require extra time and effort in these preliminary steps.

In addition, some loans may include an administration fee and need to be secured, which may necessitate asset valuation and other documentation. Unsecured loans, in contrast, are based on cashflow and credit rating.

Monitoring, reporting and verification costs

Monitoring, reporting and verification (MRV) costs are expenses associated with tracking the progress, outcomes and impacts of the financed project, as required by lenders and international sustainable financing principles. The complexity of MRV requirements will be contingent on the lender, the type of loan and the duration of the project. Green equipment finance loans may only require initial proof of purchase. However, a sustainability-linked loan might require monitoring and reporting of annual progress against several sustainability performance targets agreed with the lender. MRV-related expenses are explored further in Table 2.

Box 6. How does a lower interest rate from a sustainable finance product scale?

A significant advantage of sustainable finance is the potential to reduce financing costs through a lower interest rate. This can be especially important for larger loans. The table below illustrates how discounted interest rates can decrease annual repayment obligations. While the savings may appear modest on smaller loans, they become increasingly impactful as the loan amount grows.

Loan amount	Annual repayment on 7.28% loan	0.50% reduction	1.00% reduction	1.50% reduction	2.00% reduction
$20,000	$1,456	$100	$200	$300	$400
$200,000	$14,560	$1,000	$2,000	$3,000	$4,000
$20,000,000	$1,456,000	$100,000	$200,000	$300,000	$400,000

Given this, producers should consider the capital required for projects and potentially self-fund smaller sustainable agriculture projects and engage sustainable finance for larger, more strategic investments. This is particularly important when the cost of MRV is taken into account, as these costs may offset savings from the lower interest rate.

The above interest rate reduction figures are illustrative and may not reflect what is available in the market. Each producer will have a different interest rate reflective of their specific circumstance.

Source: RBA, 2024. Base interest rate was derived from the *Lenders' Rates Table* for small business new loans as at June 2024.

Table 2. **Monitoring, reporting and verification costs.**

Category	Definition	Example	Example
Definition	Ongoing measurement of sustainability performance and impact.	Documenting and presenting the monitored information	Independent assessment of reported data to check its accuracy and reliability
Cost factors	Frequency of data collection	Complexity of data analysis Report design and production Frequency of reporting	Fees for third-party auditors Complexity of the data being assured Scope and depth of verification required
		Examples	
Electric vehicle	None	Provision of receipt	None
Soil carbon	Soil sampling strategy and timelines (years) Labour for collecting soil samples Third-party carbon content analysis	Software for processing and visualising data Time spent writing and compiling reports Adherence to reporting guidelines	May be none assuming soil testing is done by a third party
Water conservation	Installation of flow meters and soil moisture sensors Manual checks and system calibrations Data systems to track water usage	Software for processing and visualising data Time spent writing and compiling reports Adherence to reporting guidelines	Hiring a third party to verify measurements or calibrate equipment

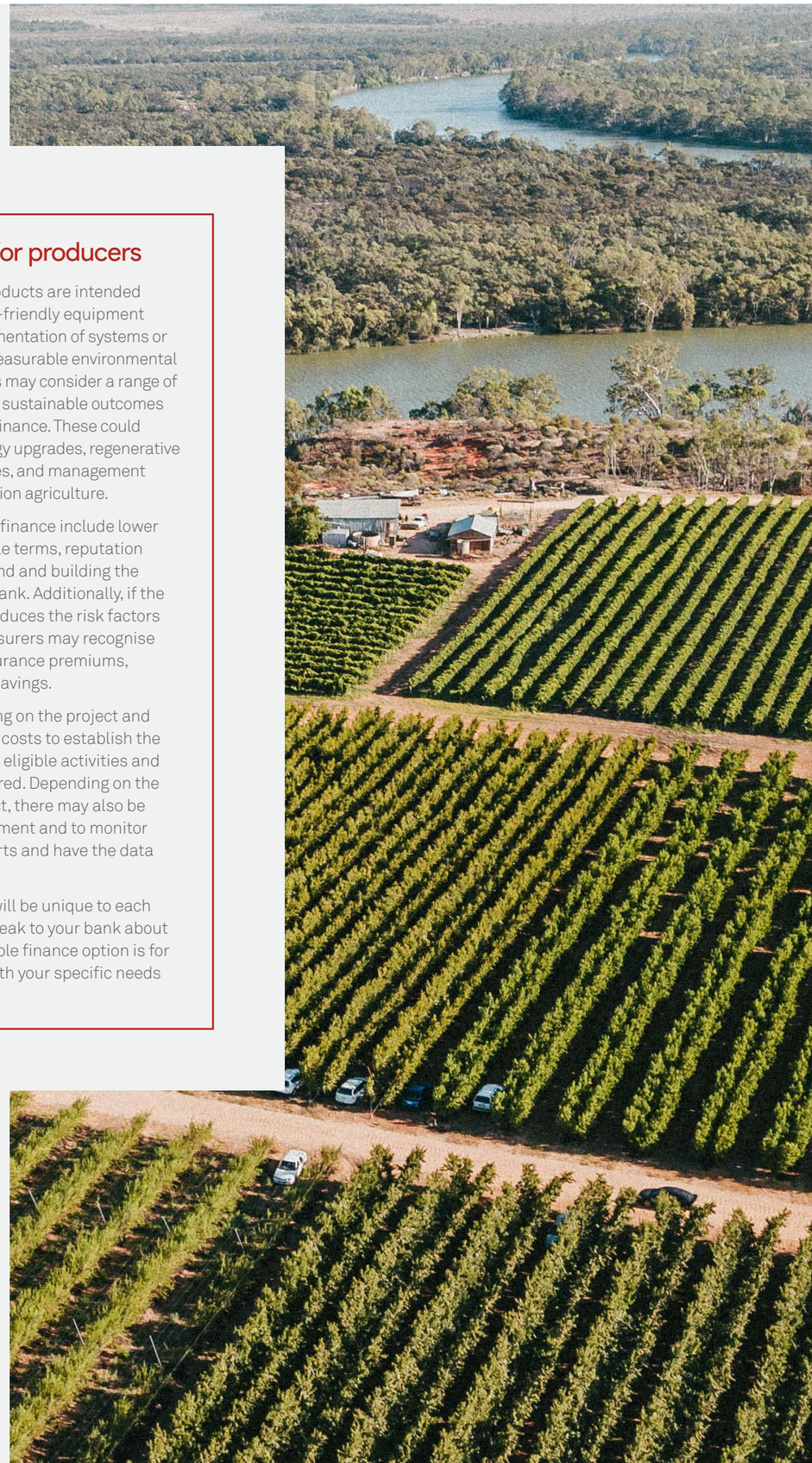
Key takeaways for producers

Sustainable finance products are intended to help facilitate planet-friendly equipment purchases or the implementation of systems or practices that deliver measurable environmental or social benefits. Banks may consider a range of activities or measurable sustainable outcomes eligible for sustainable finance. These could include renewable energy upgrades, regenerative pasture and soil activities, and management practices such as precision agriculture.

Benefits of sustainable finance include lower interest rates, favourable terms, reputation uplift, an enhanced brand and building the relationship with your bank. Additionally, if the sustainability project reduces the risk factors your operation faces, insurers may recognise this and offer lower insurance premiums, leading to further cost savings.

Costs will vary depending on the project and the lender. There will be costs to establish the loan, including agreeing eligible activities and how they will be monitored. Depending on the complexity of the project, there may also be ongoing costs for equipment and to monitor activities, produce reports and have the data verified by a third party.

Sustainable financing will be unique to each producer. You should speak to your bank about what the right sustainable finance option is for you and how it aligns with your specific needs and goals.



Sustainable finance in action

This section outlines five case studies of producer experiences with sustainable finance. The purpose of these is to provide examples of Australian producers and businesses that have embraced sustainable agricultural practices and secured sustainable finance.

These case studies aim to be educational, offering practical and insightful information to help producers make informed strategic decisions.

Case study approach

Case studies were selected based on desktop research and stakeholder outreach to financial institutions, industry representative groups and research and development corporations. A range of factors were considered to ensure the case studies represented a variety of commodities, industries and geographic regions relevant to Australia's food and fibre sector.

Interviews were conducted with the producers/agricultural business representatives to explore their experiences of engaging with sustainable finance. Interview questions included:

1. What is the sustainable farming project and what motivated you to seek sustainable finance?
2. What were the implementation costs e.g. equipment, infrastructure, upskilling?
3. How did you plan, engage and negotiate the sustainable financing agreement?
4. What economic benefits have resulted from the project e.g. improved productivity, access to alternative revenue streams, cheaper loan?
5. What environmental benefits have resulted from the project e.g. lower emissions, improved soil organic matter, biodiversity conservation?
6. What social benefits have resulted from the project e.g. improved health and safety, collaboration with First Nations people, skills development?
7. Where this information is publicly available or not commercially sensitive information, can you share the amount of the loan, the duration of the loan term, the interest rate of the loan and the estimated savings? What, if any, sustainability-related targets are tied to the loan?
8. What metrics are you required to monitor, report and verify? What costs are associated with doing so?
9. What advice would you give to producers interested in securing sustainable finance?

Due to the sensitive nature of financial information and commercial data, some details were not disclosed.

Case study approach

The five case studies presented in detail below are:

1. Albany Farm Fresh Foods – Sustainable finance funding a renewable energy transition
2. Macka's Group – Accelerating the growth of sustainable beef
3. Baxter family farm – Investing in sustainable waste and water management
4. Cheyenne Pastoral Partnership – The case for carbon farming
5. Funding shelterbelts in South Australia

Albany Farm Fresh Foods – Sustainable finance funding a renewable energy transition

1

Background

Albany Farm Fresh Foods, run by Colin and Beau Ford in Cranbrook, Western Australia, produces free-range pork and eggs and operates a farm shop in Albany. To improve the health of their chickens and the quality of their eggs, the Fords designed and constructed custom-built, automated and movable solar-powered shelters, which allow for free range egg production with high animal welfare. The renewable energy system was funded through green asset finance from the Commonwealth Bank of Australia (CBA).

Why pursue sustainable finance?

To fund the purchase of solar panels for their portable shelters, Colin and Beau initially approached their bank. But they were turned down as their innovative and sustainable, but less-conventional, system was unable to be used as collateral due to insufficient collateral. After exploring other options, they engaged CBA, which recognised the broader farming and natural assets on their farm, which increased their borrowing power. CBA provided them with green asset finance because the purchase of solar panels qualified as an eligible sustainable agriculture activity. The loan's interest rate was lower than a traditional loan.

The Fords reported that the process was straightforward. They found a supplier, ordered the solar panels and passed the details on to the bank, which handled the payment directly. Once installation was complete, they submitted photos to CBA. A site visit was conducted to verify the installation.

What have been the benefits?

By pursuing sustainable finance and implementing their portable shelter, the Fords have realised several benefits. The improved living conditions for their chickens have led to better animal welfare, resulting in healthier birds and higher-quality eggs. Since implementing their free-range approach, they have negated the routine use of antibiotics and pesticides. They have also noted strong supplier interest and engagement with their free-range products, which has led to higher demand and prices.

Portable shelters enable the use of different areas of the farm. By rotating chickens across various plots, combined with a lower stocking rate, the soil is naturally fertilised and then rested for long periods, reducing the need for chemical fertilisers and pesticides. The Fords noted that this practice has supported healthier soil and a more balanced farm ecosystem.

Lastly, the use of renewable energy complemented their sustainable approach to farming. Securing green asset finance provided the Fords with a more favourable interest rate, lowering their interest repayments compared to a traditional business loan.

The monitoring and reporting requirements for the green asset finance product were not a burden. The process was straightforward once they had agreed the eligibility of their project with CBA; they were only subject to a standard lending policy after that.

> "I didn't know about green finance at the time, but the bank manager mentioned it, it was a pleasant surprise."
>
> *Colin Ford, Albany Farm Fresh Foods*

Figure 14. The portable, solar-powered shed. Source: Albany Farm Fresh Foods.

What have been the costs?

According to the Fords, the renewable energy system has a favourable payback period and can often be a more reliable source of power. For the shelters, the upfront costs were lower than a conventional layer shed. Ongoing costs, however, are higher due to manual, twice-daily picking of the eggs and regular inspections. Importantly, there are no ongoing MRV costs related to maintaining their green asset finance loan, except for an annual site visit by a CBA representative.

Advice for pursuing sustainable finance

Communicate with your bank

Clearly communicate what you are trying to achieve with your project, particularly the environmental benefits, as it might be eligible under the bank's sustainable finance criteria. Banks have specific guidelines for what qualifies as a sustainability activity. If your project aligns, you could access better financing terms.

Consider how sustainable farming can improve product quality

Sustainable farming practices can improve the quality of your products through having healthier livestock and better-quality produce. If you can demonstrate that your sustainable approach results in higher quality, you may be able to achieve a market premium.

Macka's Group – Accelerating the growth of sustainable beef

2

Background

Macka's Group, a paddock-to-plate Angus beef cattle operation in Salt Ash, New South Wales is believed to be one of the first Australian beef producers to achieve carbon neutrality without offsets. The company is pursuing sustainable finance to support the expansion of its operations. It has reached pre-approval stage following conversations with its lenders.

Why pursue sustainable finance?

Sustainability is central to Macka's Group's operations and customer value proposition. The company sought finance to support its expansion and was introduced to sustainable finance options through discussions with banks. Given its established sustainability practices, these options aligned with Macka's Group's goal to integrate sustainability across the business.

> "People need to know that it is very achievable to become more sustainable and start the journey, it's not scary."
>
> *Robert Mackenzie, Macka's Group*

What have been the benefits?

Macka's Group has already implemented sustainability initiatives in its operations, with plans to expand them further, including:

- Improving soil carbon sequestration through pasture management and employing light detection and ranging technology, which enables the use of precision fertilisation.
- Increasing biodiversity by working with First Nations people to adopt traditional land management practices.
- Ensuring shorter gestation periods and more efficient cattle growth by investing in optimal genetics and monitoring animal diets.
- Reducing their carbon footprint and energy costs by using renewable energy, and investing in energy-efficient equipment.

What have been the costs?

Macka's Group had an existing investment strategy for improving and monitoring their soil carbon performance. The cost to renovate and plant a more productive pasture that assists in sequestering carbon and also provides a healthier, plentiful pasture for cattle is $700/ha. This cost also covers all necessary testing for, and management of, the program.

Figure 15. Solar panels installed at a Macka's Group property. Source: Macka's Group.

Advice for pursuing sustainable finance

Throughout the pre-approval process for sustainable finance, Macka's Group representatives learned two key lessons that other producers can benefit from.

Start your sustainability journey early

As building sustainability credentials can take time, Robert advised that producers should begin their journey early, well in advance of seeking sustainable finance. He emphasised the importance of investing in MRV technology alongside practice changes, as this helps inform your performance, can be relatively low cost, and helps to build an evidence base to provide to financial institutions.

Engage with your financial institution on your sustainability outcomes

Financial institutions are increasingly interested in working with producers who are committed to sustainability. Robert encouraged producers to engage with financial institutions regarding their sustainability efforts and how these activities may provide access to financial incentives or favourable terms for both existing and new loans.

Baxter family farm – Investment in sustainable waste and water management

3

Background

Chris Baxter and his family are fourth-generation dairy farmers who run a 50-stand rotary dairy on 714 acres near Mortlake, in southwest Victoria. The region is a high-rainfall area and cattle can be subjected to cold conditions. Wet pastures can come under pressure from damage caused by cows tearing up the soil structure, known as 'pugging'. The Baxters recognised there may be better ways to farm and explored investing in a concrete feed pad, a wastewater catchment pond and a dairy shelter.

Why pursue sustainable finance?

Initially the Baxters' intention was to self-fund the project. However, once the full cost became apparent, they reached out to the CBA for a loan. CBA identified that some activities were eligible for their Agri Green Loan, and so they pursued this avenue.

> "We can have wet, cold winters in our part of Victoria, so we wanted to explore ways to maximise land usage while supporting pasture rehabilitation and the care of our cows. With our farm advisor, over about two years we visited a number of dairy farms to see different ways of livestock management around the dairy shed."
>
> *Chris Baxter, dairy farmer*

What have been the benefits?

The combination of the feed pad, catchment pond and dairy shelter have several environmental and production benefits. Protecting soil structure and pasture growth protects the natural carbon in the soil and its ability to sequester carbon. Additionally, keeping cattle fed on the feed pad after milking during wet months reduces their need to search for grass in the paddock, which protects the pasture from over-grazing. The Baxters noticed improvements to their pastures within six months of constructing the feed pad.

A key production benefit from feeding out in troughs on the feed pad is that doing so is more efficient than feeding out in the paddock, where feed can be soiled, so there is minimal wastage. This approach also provides an opportunity to use excess feed or crop that has been harvested for hay or silage.

The effluent pond is a key environmental benefit and has helped with waste and water management. Urine and faeces from the feed pad and shelter are washed into the pond. A vibrating wall separates solids from liquids. Water is recycled on farm, so no bore water is used, and the solid waste can be spread as an organic fertiliser, reducing the need for synthetic fertilisers.

The shelter allows the cattle to be kept in warmer, dry conditions. This is good for cattle welfare and conserving energy for milk production, and also protects the pasture from pugging when wet. While it is early days, the Baxters have been pleased with milk yields and cell counts.

The Agri Green Loan was easy to set up and provides a lower interest rate that would not have been possible via a standard agri-business loan.

What have been the costs?

Costs relating to the sustainable practices include the time commitment to research an appropriate upgrade to the farm and the capital costs for the feed pad, shelter, pond and pumps. Operating costs include energy to pump water and operate the pond, as well as employing third-party contractors to spread the organic solids. Going forward, renewable energy could be considered with the shed space.

The loan process was straightforward. The initial loan approval required a budget, invoices and a site visit. Additionally, the bank required an effluent management program to demonstrate the technical aspects and benefits of the catchment pond. The Baxters engaged a third party to develop the program at their own cost (approximately $5,000). Chris' view is that this was a worthwhile expense that has prepared them for demonstrating their sustainability activities.

While the loan term is five years, there is no further MRV for the Baxters now that the installed facilities have been inspected. CBA representatives will undertake ongoing monitoring through annual site visits.

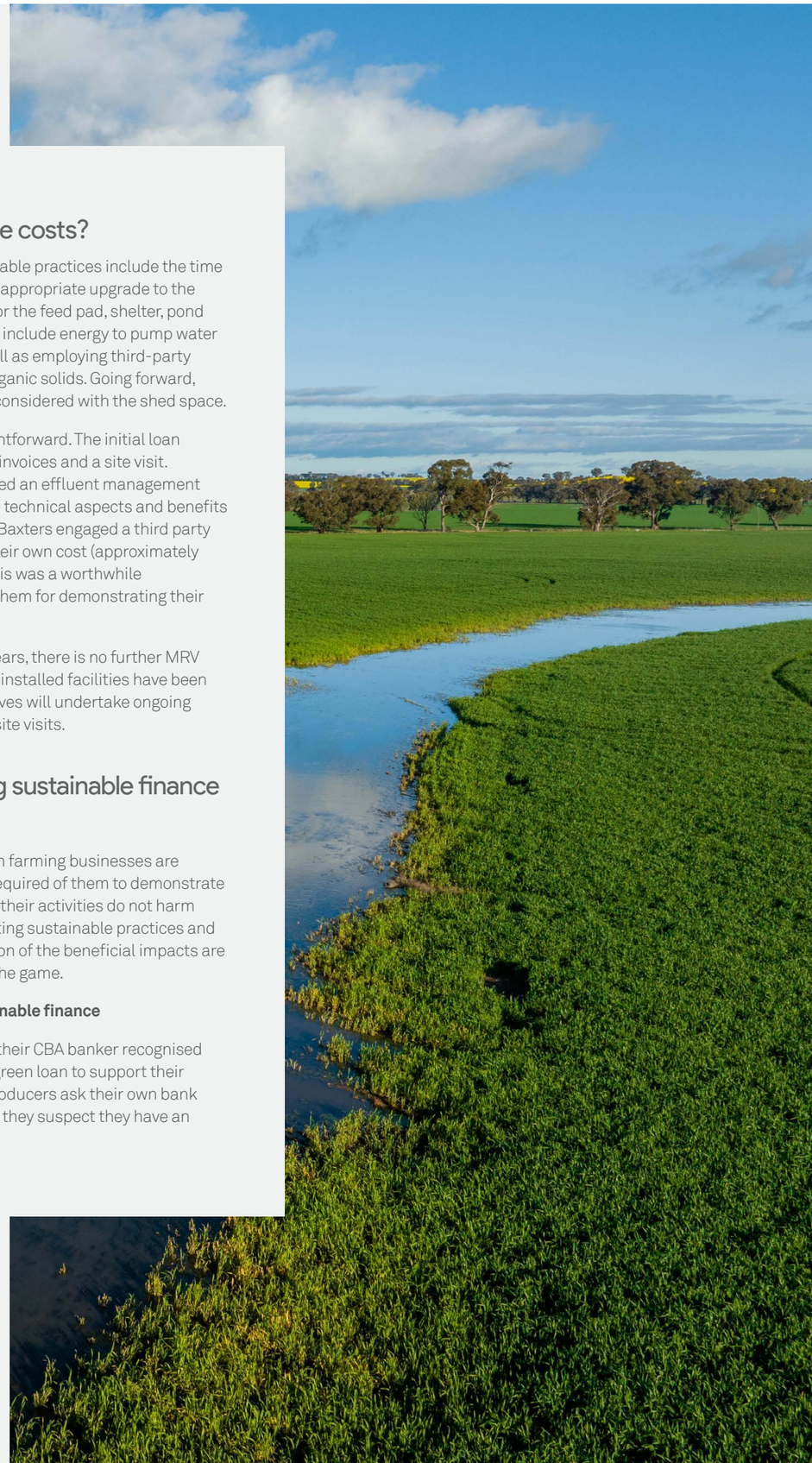
Advice for pursuing sustainable finance

Get ahead of the game

Chris notes that demands on farming businesses are changing and more will be required of them to demonstrate their sustainability and that their activities do not harm the environment. Implementing sustainable practices and getting third-party verification of the beneficial impacts are great steps to get ahead of the game.

Ask your bank about sustainable finance

The Baxters were fortunate their CBA banker recognised the opportunity for an agri-green loan to support their project. They recommend producers ask their own bank about sustainable finance if they suspect they have an eligible project.



Cheyenne Pastoral Partnership – The case for carbon farming

4

Background

The Cheyenne Pastoral Partnership is a multi-generational beef cattle operation near Walcha in the Northern Tablelands region of New South Wales. The partnership's operators recognised an opportunity to shift to regenerative agriculture practices to restore over-grazed pastures, enhance the land's productivity, reduce their reliance on inputs and diversify revenue through ACCUs while delivering environmental and biodiversity outcomes.

Nick, the owner and operator of Cheyenne, sought sustainable finance to support his carbon soil project. He was unsuccessful in finding a banking partner, however his experience provides valuable insights for producers navigating access to sustainable finance.

Why pursue sustainable finance?

Nick initially relied on traditional agri-lending to fund the early stages of his carbon farming project. However, when it became necessary to fulfil the interest-holder consent requirements for ACCUs to be issued, his bank was unable to agree to the terms.

> "The bank couldn't agree to the project because they didn't understand what I was doing and which led me to look to refinance."
>
> *Nick Blomfield, Cheyenne Pastoral Partnership*

Over an 18-month period, he engaged multiple banks in an effort to secure sustainable finance, but faced challenges in conveying the economics of his regenerative agriculture practices, noting that its benefits were delivered over a longer time horizon compared to traditional agriculture practices. Nick ultimately partnered with CBA, which supported him to refinance his existing agri-loan and comply with the ACCU requirements.

Although CBA could not offer Nick a sustainable finance product due to his specific circumstances, its support enabled him to continue his regenerative farming initiatives and be issued ACCUs.

What will be the benefits?

The implementation of the regenerative agriculture practices has led to significantly improved production and lower input costs, such as for fertiliser, in parallel with being able to sell ACCUs.

Figure 16. (Main) Healthy pastures at the Cheyenne Pastoral Partnership property. (Inset) Coring machinery for soil sampling. Source: Cheyenne Pastoral Partnership.

Rotational grazing over the past 15 years has doubled the farm's stocking capacity, to an average of 500 head of cattle, through protecting pasture from over-grazing and increasing biomass production. The majority of this productivity improvement has been derived over the past eight years.

Switching from superphosphate to chicken manure has improved soil health through reducing harm on soil biology, and reduced his reliance on synthetic fertilisers, which Nick no longer uses. Cumulatively, the practices have increased soil carbon on the property and enabled Nick to receive ACCUs and diversify his revenue sources.

What have been the costs?

The costs associated with regenerative agriculture have primarily been for machinery to set up fencing and transport water, both of which are essential for improved grazing management. Additionally, pursuing ACCUs required substantial outlay for soil testing, baselining and monitoring to ensure compliance with regulatory requirements.

As Nick did not have access to sustainable finance, there were no costs directly associated with obtaining a sustainable finance product or meeting specific financing terms. However, he notes that he invested significant time during the 18 months he was seeking sustainable finance.

Advice for pursuing sustainable finance

There is misalignment of cashflows and credit risk assessments

One challenge Nick noted was that banks' level of comfort with longer-term projects and delayed cashflows was still emerging. Nick's carbon soil project spans 25 years but, in his experience, the banks needed more certainty about nearer-term cash inflows than the project could provide.

Longer-term projects require ongoing commitments

The ACCU Scheme is a 25-year commitment, known as the permanence obligation. This requires an ongoing focus on the project. However, the benefits the project has yielded after 12 years with regards to both productivity enhancements and aesthetics are impressive. The farm is rich with vegetation and "everything is so green".

Traditional agri-finance can still support sustainable outcomes

Even though Nick was unable to secure a sustainable finance product, he leveraged his agri-loan to support his project. CBA has been very engaged and there are ongoing discussions about how a sustainable finance product could be applied to his circumstances in the future.

Funding shelterbelts in South Australia

5

Background

Aimee and Blake, farmers in South Australia, faced challenges related to soil erosion, pasture productivity and the wellbeing of their livestock when weather conditions were inclement. To address these issues, they established a shelter belt on their property to create windbreaks for livestock, with the additional goals of improving pasture and enhancing biodiversity.

Why pursue sustainable finance?

While researching financing options, Aimee and Blake identified a bank that recognised their project as eligible under its sustainable financing criteria. The bank offered sustainable finance in the form of a green loan, which gave them access to more favourable financing terms than a traditional loan.

What have been the benefits?

Aimee and Blake are expecting several benefits from their shelter belt over the long term. Lower windspeed and improved microclimates on the protected side of the shelterbelt are anticipated to increase pasture production. Livestock being protected from wind and having access to shade will assist in reducing energy losses and stress, and improving weight gain and survival rates. Increased biodiversity is expected as a result of the trees attracting and supporting native insects, birds and wildlife. Lastly, the shelterbelt should aid in absorbing and storing carbon, contributing to a lower overall carbon footprint.

What have been the costs?

The costs to establish the shelter belt were primarily for the native trees but also covered fencing supplies and labour for planting. The ongoing costs are minimal but primarily relate to maintaining the health of the trees and managing fire risk.

The verification process was straightforward; it involved providing a budget and then receipts for the purchases and labour, followed by a bank representative conducting an inspection before the trees and bushes were planted, and again after. Bank representatives are expected to conduct annual inspections to observe the shelterbelt in place.

Should the shelterbelt fail, the bank would discuss a range of options with Aimee and Blake, such as replanting the trees or forfeiting the interest rate discount. Special conditions apply in periods of drought and fire.

Advice for pursuing sustainable finance

Do your research when selecting a sustainable finance product

Aimee and Blake encourage other farmers to research the various sustainable finance products on offer as each will have different eligibility criteria and verification processes; it may take time to find one that matches your needs and project. Producers should reach out to multiple banks to have a conversation specifically about sustainable finance.

Verification requirements do not have to be onerous

Aimee and Blake were concerned the transaction costs of a green loan, such as for monitoring and reporting and potential third-party verification, would be significant. However, for their small-scale sustainable agriculture project, the MRV requirements were simple and low cost, which allowed them to continue focusing on farming and their lives.

Due diligence framework for producers accessing sustainable finance

Navigating the path to accessing sustainable finance is important for any producer seeking to accelerate their sustainability initiatives. While noting that each producer should investigate their own individual financial needs and circumstances, this due diligence framework (Figure 17) has been developed to guide producers through the steps involved in considering sustainable finance.

This framework does not constitute financial advice. Producers should engage with their banking, business and financial advisors to ascertain whether sustainable finance products are suitable for their specific circumstances.

The framework includes six steps, each with its own set of considerations. These steps are presented in a linear fashion, however some may be conducted concurrently.

Step 1 – Identify and understand your project: Review your long-term business plan to identify existing or planned projects or activities that deliver sustainability outcomes in a way that strategically aligns with the business.

Step 2 – Determine your need for finance: Once you have decided on a sustainable project to undertake, estimate the costs to work out whether the project can be self-funded, or if finance is required.

Step 3 – Assess the project's feasibility: Determine whether the project is environmentally and technically feasible for you to implement across the lifetime of the loan, and validate the potential outcomes.

Step 4 – Contact your bank to determine eligibility: Conduct research or engage your bank to understand the criteria for sustainable finance and whether your project is eligible.

Step 5 – Perform a detailed benefit-cost analysis: Assess whether the project will deliver reasonable financial benefits and returns after costs are considered.

Step 6 – Complete final due diligence: Develop a detailed implementation plan and contingency plan, and understand the potential risks and legal implications of entering into a sustainable finance agreement.

By following these steps, producers can better position themselves to take full advantage of the opportunities that sustainable finance offers. It's important to note that each producer's journey will be unique, and, as such, this framework is intentionally high level to serve as a guide, rather than a prescriptive set of rules.

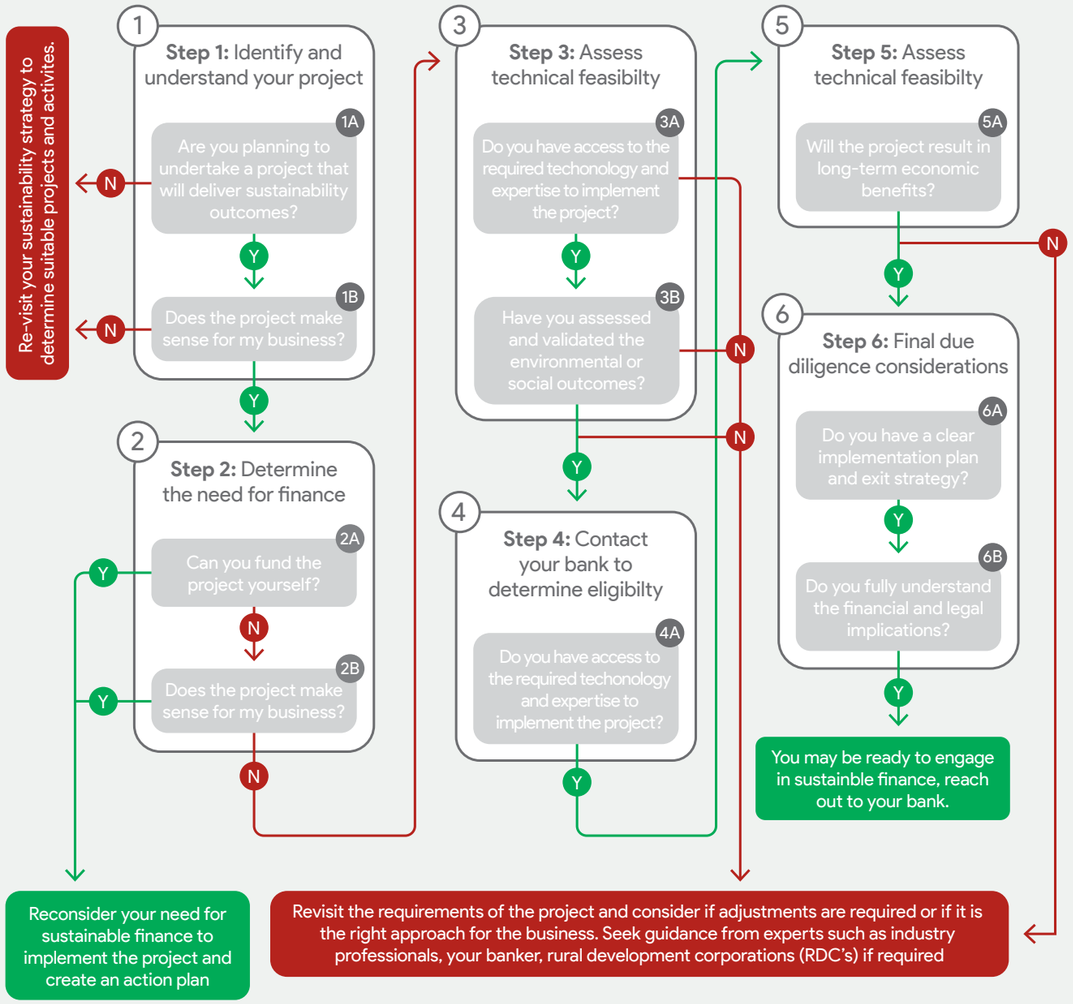


Figure 17. Framework for producers considering sustainable finance activities. Source: EY.

Step 1. Identify and understand your project

1A. Are you planning a project that will deliver sustainability outcomes?

Review your long-term business plan. Consider whether you have any existing or planned projects that could deliver positive sustainability outcomes. Document how these projects contribute to your business strategy and their specific environmental and social outcomes, such as reducing carbon emissions, improving water efficiency or improving biodiversity.

1B. Does it make sense for your business?

Conduct a high-level assessment of the potential business implications of the project. Evaluate the long-term financial savings and benefits the project could bring to your business, ensuring it makes sense from both a sustainability and an economic standpoint. Understand any market benefits or new revenue streams that could arise as a result of the project. Consider whether you fully understand the steps involved in executing the project, who needs to be involved, what external assistance or expertise you may require, and how your local community would respond. This initial assessment will help you determine whether the project is a strategic fit for your business, and if it warrants further exploration or investment.

Step 2. Determine the need for finance

2A. Can you fund the project yourself?

Undertake a high-level analysis of the approximate costs of the project. Discuss with your business or financial advisor whether you have sufficient reserves or cashflow to self-fund the project, or whether debt may be a sensible option. This involves reviewing your budget and savings, and whether existing resources can be reallocated. If self-funding is not viable, external finance becomes necessary to pursue.

2B. Are there any alternative funding sources?

Explore alternative funding sources. Investigate government programs that offer low-interest loans specifically designed to support sustainability projects in the agriculture sector. Look into grants that could partially or fully fund certain aspects of your project, reducing the need for borrowed capital. You may consider accessing your Farm Management Deposit if the sustainable practice assists in building resilience to natural disasters and drought (DAFF, 2024b). Investors may also be interested in supporting your business to undertake sustainability initiatives in exchange for a stake in the project or business, or other agreed-upon returns.

Post-implementation, your project may generate alternative revenue through environmental markets, such as carbon credits or biodiversity certificates. These returns may materialise following project execution and certification. They can provide an additional financial incentive, reduce the return-on-investment time horizon, and contribute to the overall viability of the project.

A range of financial resources are available from the Australian and state governments, agriculture-focused organisations, industry bodies and rural assistance authorities. Examples include:

- Australian Government's Farm Management Deposit Scheme
- Australian Government's Grant Connect
- Australian Government's Business grants and programs finder
- Farm Table's Ag Grants
- Queensland Government's Grants Finder
- Queensland Rural and Industry Development Authority's programs and services portal
- NSW Rural Assistance Authority's low-interest loans portal
- NSW Rural Assistance Authority's grants and subsidies portal

Step 3. Assess the technical feasibility

3A. Can you access the skills, equipment and technology needed?

Determine whether you have the necessary skills, or if you need to train staff or engage a third-party to implement the project effectively. Assess the equipment and technology requirements and whether you possess them or need to invest in new tools. This may involve researching the latest advancements in sustainable technology relevant to your project or seeking guidance from industry bodies on the most effective approaches available. Consider the logistics of acquiring and integrating new equipment or technology, including any downtime and learning associated with their implementation.

Skills and technology resources available include:

- University short courses, such as the University of Melbourne's carbon-neutral agriculture course or the Australian National University's sustainable farms resources
- AgriFutures Australia's Knowledge Hub
- National Farmers' Federation programs
- Australian Government's Carbon Farming Outreach Program training package
- NSW Government's Agtech Training Program
- Farmers for Climate Action resources
- Landcare Australia's Landcare Agriculture Program
- Resources developed by research and development corporations

3B. Have you assessed and validated the environmental or social outcomes?

When contemplating finance linked to environmental and social outcomes, it's critical to:

- **Test the project's feasibility:** Conduct due diligence to check that your land, waterways or properties are conducive to the proposed initiatives. This could include small-scale trials or seeking installation quotes that provide proof of concept and help refine project parameters.
- **Gather evidence of achievable outcomes:** Gather robust evidence to demonstrate to lenders that the intended outcomes are attainable with the provided finance. This may include data from pilot studies, feasibility assessments and stakeholder consultations.

By proactively validating the feasibility and potential outcomes, you not only secure lender confidence but also set a solid foundation for successful project execution.

Step 4. Contact your bank to determine eligibility

4A. Is the project eligible for sustainable finance?

Many Australian banks offer green finance options, with some offering sustainable finance options tailored to the agriculture sector. Engage with your bank to discuss the nature of your project and its alignment with their sustainable finance lending opportunities. Provide a clear outline of the project's intended environmental or social benefits and ask what the bank requires to fund such initiatives. While leveraging your relationship with your current bank may be beneficial, consider exploring options with other financial institutions, as each has unique sustainable finance products and eligibility criteria.

When discussing eligibility, it may be beneficial to reference national and global standards that define eligible green activities. Familiarise yourself with these standards so you can articulate how your project aligns with the criteria for sustainable finance. The Climate Bonds Standard, for example, provides a framework for assessing the environmental impact and credentials of green projects. Alternatively, examine the list of eligible activities set out by the bank.

If your project is not eligible for a labelled sustainable finance product, such as a green, social or sustainability-linked loan, traditional financing may be a viable alternative. Regardless, be prepared to present your financial records and credit history to the bank. This will include recent financial statements, tax returns and any other documents that demonstrate your financial stability and creditworthiness. Make sure that you understand the lender's terms and conditions for sustainable and traditional finance.

Eligibility and standards resources include:

- Australian Agriculture Sustainable Framework
- Climate Bonds Standard's agricultural production criteria
- Sustainable finance and sustainable agriculture sections of bank websites

Step 5. Perform a detailed benefit-cost analysis

5A. Will the project result in long-term economic benefits?

To determine the financial viability of your project, it's important to conduct a detailed benefit-cost analysis once you have an idea of the project's technical feasibility and potential lending arrangements. A benefit-cost analysis could factor in:

- **Estimated cost savings or revenue impact:** Project the potential increase in productivity and how this translates into cost savings or additional revenue. Consider factors such as higher yields, lower input costs, access to alternative revenue streams from environmental markets and premium pricing for sustainably produced products.
- **Implementation costs:** Collate all costs associated with project implementation. These will include initial outlays for equipment and technology, fees for any third-party services such as consultants or environmental assessors, loan repayments and lender-specific administration fees.
- **Ongoing monitoring, reporting and verification costs:** Estimate the costs to meet the lender's ongoing MRV requirements. These may include costs for data collection, third-party verification services and staff effort.
- **The return-on-investment time horizon:** Assess the timeframe over which the project is expected to pay for itself and start delivering financial returns. Consider whether this investment horizon aligns with your business objectives and cashflow requirements.

By carefully evaluating these aspects, you can make an informed decision about whether the project aligns with your long-term economic goals and is a sound investment for your business.

Step 6. Final due diligence considerations

6A. Do you have a clear implementation plan and exit strategy?

Careful and detailed planning will help protect your business's interests and contribute to the project's success. You should develop a:

- Detailed implementation plan: Outline the steps, timelines and resources required to execute the project, considering material risks and mitigation strategies to address potential challenges.
- Contingency plan: Establish a clear exit strategy in case the project encounters unforeseen difficulties or doesn't proceed as expected. This plan should detail how to minimise losses and protect your business's financial stability.

6B. Do you fully understand the financial and legal implications?

As the final step in your due diligence process, it's important to fully understand the financial and legal implications of entering a sustainable finance agreement. As required, producers should engage with financial or legal advisors to review their contracts or agreements. This may be particularly important for projects involving carbon or biodiversity markets, as they often come with permanence periods and other legal obligations tied to certificate creation. This groundwork will lay a strong foundation for the successful implementation of your project and fulfillment of your sustainability commitments and legal obligations.

Conclusion

The global ESG landscape is in a state of dynamic change, testing the boundaries of how business is conducted and finance is allocated. Although staying abreast of changing developments in sustainable finance can be challenging, being up to speed could provide additional opportunities for your agriculture, forestry or aquaculture business.

This report informs producers of the benefits and costs associated with adopting sustainable agricultural practices and considering sustainable finance as a funding mechanism. As demonstrated in the examples and case studies, integration of sustainable finance presents opportunities for farmers, fishers and foresters to benefit economically, socially and environmentally. However, recognising the commitments associated with sustainable finance products is also important for producers. Four key takeaways for producers to effectively navigate and thrive amongst evolving sustainable finance landscapes are detailed below.

Understand how the regulatory and market landscape is changing, and how financiers are responding

The shifting ESG landscape is largely being driven by new regulations, heightened shareholder awareness of environmental risks and consumer demand for sustainable goods. Sustainability reporting regulations, although not yet directly capturing most producers, will indirectly impact the entire value chain of reporting entities. ESG data collection will become a central part of doing business, driven by financiers demanding sustainability metrics to meet their own reporting requirement. Producers ready to integrate sustainability measures and report on ESG data will be better equipped to navigate the rapidly evolving landscape.

Determine opportunities across your farming business to implement sustainable activities

A core foundation of improving sustainability within agricultural businesses is a sustainability strategy, which may include a vision and goals, as well as an action plan or roadmap. There is no one-size-fits-all approach for sustainable farming, which means different activities, technologies and practices will apply across agriculture, and each has a range of benefits and costs specific to the commodity, geography and local context in which it is adopted. Determining opportunities through a strategy will enable producers to be clear on their business objectives, identify activities to prioritise and demonstrate their commitment to ESG, which they can then communicate to financiers and other stakeholders.

Take action, establish a plan to measure ESG outcomes and document these outcomes

Conduct research and seek advice to implement sustainable projects. This could include establishing a plan to measure outcomes achieved, such as GHG emissions reduction, improved water quality, amount of carbon stored in soil, enhanced animal health and efficiency, and higher employee satisfaction and wellbeing. Activities can be trialled and implemented at a smaller scale prior to full adoption. Make sure to establish and document the means to record data and monitor outcomes over time. It is important to baseline metrics, such as emissions and natural capital, so that improvements can be tracked. Each producer's journey and objectives will be distinct, but proactively integrating sustainability monitoring and reporting into everyday business operations will help producers prepare for future reporting demands.

Understand the benefits and costs associated with sustainable finance

If sustainable activities cannot be self-funded, explore funding opportunities across public and private institutions and engage with your bank. There are growing financial incentives for sustainable agricultural practices and banks are looking for opportunities to support sustainable outcomes. Sustainable finance in the agriculture sector can open doors for farmers, fishers and foresters to reap economic, social and environmental rewards. However, recognising the long-term commitments and reporting requirements associated with sustainable finance products is also important. This requires producers to conduct their own due diligence and understand their options and responsibilities.

Glossary

Term	Definition
Adaptation	Adjusting to the actual or expected future climate. The goal is to reduce vulnerability to the harmful effects of climate change, such as sea level encroachment, more intense extreme weather events or food insecurity.[1]
Australian Sustainable Finance Taxonomy	A classification system established to define and categorise sustainable economic activities in Australia, providing clarity on which activities can be considered sustainable for investment purposes.[2]
Biodiversity	The variety of life in the world or in a particular habitat or ecosystem, often used as a measure of the health of biological systems.[3]
Carbon credits	A permit that allows the holder to emit a certain amount of carbon dioxide or other greenhouse gases. One carbon credit permits the emission of a mass equal to one tonne of carbon dioxide.[4]
Carbon dioxide (CO_2)	An invisible, non-toxic gas without a distinct smell that naturally exists in the atmosphere. Carbon dioxide is produced by burning fossil fuels. While it does not harm human health directly, it captures infrared radiation from the Earth, contributing to the potential increase in global temperatures.[5]
Carbon footprint	The total amount of greenhouse gases (including carbon dioxide and methane) generated by our actions, typically expressed in equivalent tonnes of carbon dioxide (CO2e).1
Carbon neutral	A state where the net carbon emissions released into the atmosphere are balanced by an equivalent amount of carbon sequestration or offsetting.
Carbon sequestration	The process of capturing and storing atmospheric carbon dioxide, for example in trees and plants. Carbon sequestration is one method of reducing the amount of carbon dioxide in the atmosphere, with the goal of mitigating global climate change.[5]

[1] UNDP. (2023). The Climate Dictionary. United Nations Development Program. https://www.undp.org/sites/g/files/zskgke326/files/2023-10/undp-the-climate-dictionary-v3.pdf

[2] ASFI. (n.d.). Taxonomy Project. Australian Sustainable Finance Institute. https://www.asfi.org.au/taxonomy

[3] DCCEEW. (2024). Biodiversity. Department of Climate Change, Energy, the Environment and Water. https://www.dcceew.gov.au/environment/biodiversity

[4] DCCEEW. (2024). Australian Carbon Credit Unit (ACCU) Scheme. Department of Climate Change, Energy, the Environment and Water. https://www.dcceew.gov.au/climate-change/emissions-reduction/accu-scheme

Term	Definition
Climate change	Long-term changes in global or regional weather patterns, often characterised by shifts in temperature, precipitation and extreme weather events. Climate change is primarily driven by human activities, notably the emission of greenhouse gases, leading to global warming and changes in the Earth's climate system.
Ecosystem	A community of living organisms in conjunction with the non-living components of their environment, interacting as a system.[5]
Emissions	Gases discharged into the atmosphere, such as the carbon dioxide released when fuels are burned. Emissions can occur as either deliberate or accidental releases.[5]
Global warming	The long-term heating of Earth's climate system observed since the pre-industrial period (between 1850 and 1900) due to human activities, primarily fossil fuel burning, which increases the amount of heat-trapping greenhouse gases in Earth's atmosphere.[5]
Green loan	A loan instrument and/or credit facility specifically designed to finance or re-finance, in whole or in part, new and/or existing eligible green projects that deliver environmental benefits.[8]
Greenhouse gas (GHG)	Gases that absorb heat in the atmosphere, including carbon dioxide, methane, nitrous oxide and fluorinated gases. They are responsible for global warming and climate change.[5]
Methane (CH_4)	A hydrocarbon and a potent greenhouse gas, with a global warming potential 21 times greater than that of carbon dioxide. Methane is generated through the anaerobic (oxygen-free) breakdown of waste in landfills, digestion by animals and decay of animal manure, as well as during the extraction and transportation of natural gases and oil, coal mining, and the incomplete combustion of fossil fuels.[5]
Mitigation	Efforts to reduce or prevent the emission of greenhouse gases, such as using new technologies and renewable energy, making older equipment more energy efficient, or changing management practices or consumer behavior.[1]

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Term	Definition
Nitrous oxide (N_2O)	A significant greenhouse gas with a global warming potential of 310, primarily produced by agricultural soil management, particularly through the use of synthetic and organic fertilisers, as well as from the combustion of fossil fuels, the production of nitric acid, and the burning of biomass.[5]
Paris Agreement	A legally binding international treaty on climate change adopted by 196 Parties, including Australia, at the 21st United Nations Climate Change Conference (COP21) in Paris, France on 12 December 2015. Its overarching goal is to hold "the increase in the global average temperature to well below 2 °C above pre-industrial levels" and pursue efforts "to limit the temperature increase to 1.5 °C above pre-industrial levels".[9]
Renewable energy	Energy from sources not depleted when used, such as wind or solar power. The opposite to renewable energy is fossil fuels, of which there is a finite supply.[5]
Scope 1 emissions	Direct greenhouse gas emissions that occur from sources controlled or owned by an organisation, such as emissions from combustion in owned or controlled boilers, generators or vehicles.[10]
Scope 2 emissions	Indirect greenhouse gas emissions associated with the purchase of electricity, steam, heat or cooling. Although the organisation does not directly emit these gases, their emission is a consequence of the organisation's energy use.[10]
Scope 3 emissions	Indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.[10]
Sustainability	Meeting the needs of the present without compromising the ability of future generations to meet their own needs, often with particular focus on the natural environment and economic and social development.[11]
Sustainable finance	Financial services integrating environmental, social and governance criteria into business or investment decisions for the lasting benefit of both clients and society at large.[12]
Sustainability-linked loan	A loan product that incentivises the borrower's achievement of predetermined sustainability performance objectives. The loan terms are typically tied to the borrower's performance against these objectives.[13]

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