Climate
Change Office

Emissions Reduction and Resilience Plan – Agriculture

Consultation draft – September 2024

In recognition of the deep history and culture of these islands, we acknowledge all Tasmanian Aboriginal people as the continuing Custodians of this Land and Sea Country and pay our respect to Elders past and present.

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Publisher: Department of State Growth

Date: September 2024

Contents

Cover images: Chris Crerar

We want to hear from you

Consultation questions

1. What future opportunities (outlined in this draft Plan) do you think will have the most impact?
2. Are there any priorities or future opportunities missing from this draft Plan?
3. How can we collaborate to reduce emissions and build resilience in the agriculture sector?

Key dates

Draft Plan released:	6 September 2024
Written submissions close:	11 October 2024

How to have your say

You can make a submission by writing to us, answering the above consultation questions. You may submit your response online, or by email or post.

For more information about this work, or making a submission, please contact the Climate Change Office.

Online:	www.recfit.tas.gov.au/consultation
Email:	climatechange@recfit.tas.gov.au
Post:	Climate Change Office Renewables, Climate and Future Industries Tasmania Department of State Growth GPO Box 536, HOBART TAS 7001
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If you are making a written submission, please include the name and contact details of the person or organisation making the submission. All submissions are welcome and valued.

Publication

Submissions will be published on the Renewables, Climate and Future Industries Tasmania (ReCFIT) website (www.recfit.tas.gov.au). Your name or the name of the organisation making the submission will be made public. Personal contact details will not be published. Please tell us if you want to keep your submission private. Defamatory or offensive material will not be published.

Draft Plan summary

Priority area	Future opportunities
1. Improving the data, information and knowledge needed to drive change	• Consider opportunities to support existing trusted experts and advisors to increase their capacity and capability to support farmers to take action on climate change. • Explore options to help farmers measure, report and monitor on-farm emissions and climate risks, and identify steps to reduce them, aligning with work underway at a national level. • Develop resources that meet user needs to support primary producers and other agribusinesses to make informed decisions about managing climate risks and opportunities. • Work with partners to develop new and improved ways of providing producers with user-friendly information about climate change. • Undertake modelling to better understand Tasmania's agriculture emissions at both a whole-of-industry and commodity level. • Support further research and development into agricultural emissions reduction opportunities, climate change impacts and adaptation measures. • Consider climate change as part of Tasmania's annual agri-food scorecard.
2. Supporting the uptake of practices and technologies that will reduce emissions and increase carbon storage	• Explore options to provide financial support to agribusinesses to reduce emissions. • Consider developing strategies to guide work by the government, business and industry to better understand and address the risks, barriers and co-benefits of carbon farming and blue carbon initiatives in Tasmania. • Work with partners to support the reduction and recycling of waste from primary production and processing in Tasmania and develop an organic waste action plan to reduce organic waste in line with Tasmania's organic waste targets. • Continue to work with partners to support farmers to increase tree plantings on their properties. • Work with partners to identify and develop recommendations for addressing regulatory and policy barriers to action. • Identify opportunities to work with the Australian Government, Clean Energy Regulator and proponents to contribute to the development of Australian Carbon Credit Unit (ACCU) methods for the agriculture sector.
3. Supporting the sector in the transition to a low emissions economy	• Work with partners to explore additional ways to promote and enhance Tasmania's reputation for high quality and environmentally sustainable produce. • Explore options to recognise and champion businesses and community groups which take innovative, best practice action on climate change. • Continue to work with the State Planning Office to ensure Tasmania's planning policies, regional land use strategies and regulations consider the role of land use planning in emissions reduction and resilience while also considering other environmental, economic and social outcomes. • Collaborate with government and industry partners to support the consideration of the impacts of climate change on current and future skills and workforce needs, and explore opportunities to address these issues. • Identify and collate existing organic waste data to guide planning and strategic investment.

Priority area	Future opportunities
4. Building resilience to the impacts of climate change	• Support community-level action through the recently-launched Community Climate Change Action Grants Program. • Explore options to support producers to plan for climate risks, for example to develop adaptation action plans. • Explore options to provide financial support to agribusinesses to increase their resilience to the impacts of climate change. • Build capacity to consider climate change through the development of a whole-of-government framework to embed climate change in decision making. • Collaborate with key partners across state, national and local government, and the private sector to increase emergency preparedness, response and recovery.
5. Driving action through partnerships and collaboration	• Explore options to establish a group or partner with existing networks to lead work in Tasmania to reduce agriculture emissions, build resilience and promote action to the broader agriculture sector. • Establish a regular forum to showcase the work underway across Tasmania to reduce emissions and build resilience, provide information about emerging opportunities and risks, and encourage networking and information sharing across sectors. • Explore opportunities to support Aboriginal land management practices on Tasmanian farms and other opportunities for Aboriginal engagement, in line with national work. • Consider options to partner with additional industry bodies or producer groups to develop emissions reduction and resilience programs tailored to their members. • Continue to work with the Australian Government to progress national priorities to reduce emissions from agriculture and ensure the best outcomes for Tasmania, for example through the $30 million commitment to accelerate on-ground action to reduce agriculture and land emissions across the country.

Introduction

Tasmania's *Climate Change (State Action) Act 2008* (the Act) sets out how the government must take action on climate change. Under the Act, Tasmania's emissions reduction target is to achieve net zero greenhouse gas emissions, or lower, in Tasmania from 30 June 2030. To help achieve this goal, the Act requires the government to develop five-yearly sector-based Emissions Reduction and Resilience Plans (Plans) in consultation with business and industry. The Plans will support a practical and balanced approach for our key sectors to reduce greenhouse gas emissions and build resilience to climate change.

The Plans must support greenhouse gas emissions reduction, the transition to a low emissions economy, and resilience to climate-related risks. The legislation also requires that the objects of the Act are taken into account during the development of the Plans. The objects of the Act include supporting emissions reduction, adaptation, and a consultative, partnership approach to action on climate change.

Plans must be developed for the following sectors:

- energy

- transport

- industrial processes and product use (IPPU)

- agriculture

- land use, land use change and forestry (LULUCF)

- waste

- any other sector or sub-sector determined by the Minister (the government has committed to develop a Plan for government operations).

A whole-of-economy roadmap outlining the links and cross-cutting issues between all sectoral plans and Tasmania's first statewide climate change risk assessment will also be developed.

Delivery and timeframes

Under the Act, the Plan for the agriculture sector is to be prepared by November 2024. The Minister for Energy and Renewables, as minister responsible for climate change, is to consult with each relevant portfolio Minister, and with business and industry representatives, to develop the Plans. The Minister is also required to publicly consult on each draft Plan.

The Plans are to be tabled in Parliament and updated at least every five years.

This work is being led by the Climate Change Office in ReCFIT in collaboration with relevant portfolio agencies.

Why sector-based emissions reduction and resilience planning?

The latest data[1] show that Tasmania recorded net zero greenhouse gas emissions for the first time in 2014 and has maintained its net zero status in the nine reported years since. Our emissions profile is largely due to the carbon sink in our managed forest estate and our longstanding investment in renewable electricity generation.

However, our emissions profile is not guaranteed into the future. Emissions are influenced by a range of factors such as population growth, major bushfire events, changes in consumer demand, market forces and technological advancements. We know we must do more to maintain our net zero status by reducing emissions in all our sectors, while also increasing the carbon stored in our forests.[2]

The *AR6 Synthesis Report: Climate Change 2023* by the Intergovernmental Panel on Climate Change (IPCC)[3] confirms that humans are causing global warming and makes it clear that we need to act now. Global temperatures are now 1.1˚C above pre-industrial levels and are likely to reach 1.5˚C above pre-industrial levels in the early 2030s. In Tasmania, the environmental, economic and social impacts of climate change are already affecting our businesses, industries, communities, built environment and our natural values. It is important that we adapt effectively to a changing climate and build strong, resilient communities, while continuing to reduce our emissions.

A consistent theme from consultation on the government's action on climate change is that partnership between government and industry is the preferred approach to support emissions reduction and build resilience in Tasmanian businesses and industries.

Purpose of this draft Plan

This draft Plan has been developed to support the public to provide feedback on priority areas and future opportunities for the agriculture sector, including aquaculture and fisheries. These priorities and opportunities have been identified through targeted consultation with business and industry. The proposed priority areas and future opportunities are outlined in the section "Priority areas for reducing emissions and building the resilience of Tasmania's agriculture sector".

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[1] Tasmania's latest reported greenhouse gas emissions were released in April 2024 as part of the Australian Government's *National Greenhouse Accounts 2021* and *State and Territory Greenhouse Gas Inventories 2022*. The Australian Government reporting framework is consistent with UNFCCC and Paris Agreement reporting rules. National inventory reporting runs two years behind the current date, and represents the most recent official data in Australia on annual emissions.

[2] Point Advisory and Indufor 2021, *2021 Update of Tasmania's Emissions Pathway Review – technical report* (prepared for the Tasmanian Climate Change Office) www.recfit.tas.gov.au/__data/assets/pdf_file/0009/492093/Tasmanian_Emissions_Pathway_Review_-_Technical_Report.pdf

[3] IPCC 2023, *Climate Change 2023: Synthesis Report - Summary for Policymakers,* www.ipcc.ch/report/ar6/syr/

Funding for the sectoral Plans

The feedback from consultation on all plans will help us identify the priority actions to deliver with the available funding, as well as future funding priorities to inform budget and planning processes over the five-year life of the plans.

The agriculture Plan will build on significant recent and continued investment in the state's agriculture sector. In 2024, over $30 million in new funding has been committed by the Tasmanian Government to new and expanded programs to support the sector, including:

- a support package for farmers and communities impacted by drought in the Bass Strait Islands and mainland Tasmania that includes financial support, and mental health, business advisory and animal welfare services
- working with TasFarmers and landholders to develop a compensation framework for farmers impacted by renewable energy projects
- $5 million investment in biosecurity and additional investment in irrigation
- increasing investment in the Strategic Industry Partnership Program to provide targeted grants to agricultural organisations, and promote collaboration and capacity building
- investment in a range of programs to develop Tasmania's agricultural workforce and for Tasmania's three regional NRMs
- providing $900,000 to expand the Landcare Action Grants program.

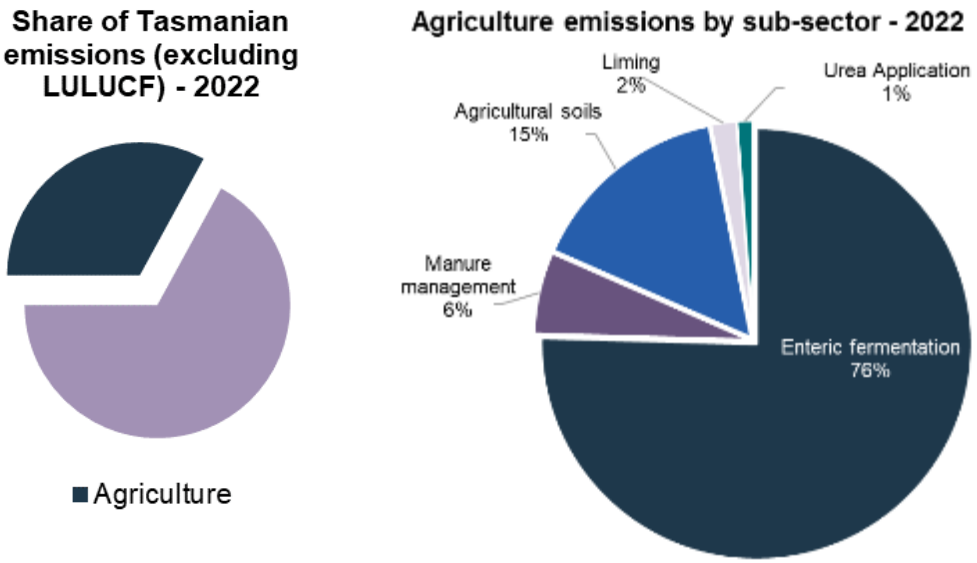
The Tasmanian Government will also seek to maximise the opportunities for Tasmania through relevant Australian Government initiatives, including the development of national sectoral decarbonisation plans.

Snapshot of Tasmania's agriculture sector

Greenhouse gas emissions

Agriculture, aquaculture and fisheries are major contributors to the Tasmanian economy and communities. Farmers are important land managers, and are responsible for significant carbon stores in soils and vegetation. However, the emissions from livestock, manure management and the application of soil conditioners and fertilisers make agriculture Tasmania's largest emitting sector, currently making up one third of our total emissions, excluding the Land Use, Land Use Change and Forestry (LULUCF) sector.

There are also many agriculture-related emissions accounted for in other sectors, including those related to transport, energy use, waste management, production of finfish and crustaceans, and land clearing.



Source: Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2024, State and Territory Greenhouse Gas Inventories 2022

Climate change impacts

There is an increasing expectation, in domestic markets and from global trading partners, for producers to report on and take steps to reduce emissions. Trading partners such as the European Union are introducing carbon import tariffs, and along supply chains, food manufacturers and retailers are setting emissions reduction and other sustainability-related targets. Among consumers, the demand for food that is produced in environmentally and socially responsible ways is growing, and sustainably certified products can attract premium prices. These changes bring challenges and risks for Tasmania's agriculture sector, but also opportunities to benefit from Tasmania's clean, green brand, increase productivity, reduce costs and explore new revenue streams.

Farmers on the Bass Strait Islands and mainland Tasmania are being impacted by unseasonably dry and drought conditions in 2024. Under a changing climate, events such as these are projected to become more frequent and intense. Changing rainfall patterns, as well as increased risk of bushfires, storms and floods, and rising land and water temperature, present a major risk to both land-based and marine primary production. Risks include food and water shortages for animals and other farm uses, changes in the abundance and distribution of fish stocks, increased prices of agricultural inputs, and damage to land, crops and infrastructure. Climate change will also impact our strong biosecurity, which historically we have benefited from as an island state.

These are significant risks for farmers but also for Tasmania as a whole, and can lead to reduced food production, loss of employment, and flow on impacts to our industries, communities and trade. There are also impacts on the mental health of effected farmers and communities.

Developing a Plan for the agriculture sector

EARLY 2024

Targeted consultation with government, business and industry

We undertook consultation with relevant government, business and industry representatives in February – May 2024, including two workshops and one-on-one meetings.

MID-2024

Public consultation on the draft plan

The feedback from consultation with government, business and industry has informed the development of this *Emissions Reduction and Resilience Plan – Agriculture: Consultation Draft* (draft Plan).

NOVEMBER 2024

Development and release of the final plan

We will analyse all submissions received and undertake further targeted consultation as required to develop the final Plan. The final Plan is due to be prepared by November 2024 as required under the Act.

Key themes from consultation with government, business and industry

In early 2024 we consulted relevant government, business and industry stakeholders, including holding two workshops. Participants told us what they are doing to reduce emissions and build resilience in the agriculture sector, the barriers and opportunities for further action, and how the government could support the sector to take action on climate change. Key themes from consultation included:

- providing independent, trusted information to farmers about climate change risks and opportunities and supporting information sharing between producers
- improve data measurement, reporting and verification of emissions, sequestration and natural capital
- investment in research and development, including fostering industry innovation and R&D
- recognise and contribute to a positive narrative about the role of Tasmania's producers in land management and carbon storage
- ensure regulatory and policy frameworks provide certainty and remove barriers
- a fair framework for managing the costs of the transition to industry
- initiatives to accelerate the adoption of emissions reduction technologies and practices, and reward early adopters (for example livestock feed supplements, low emissions aquaculture feed, biochar, regenerative agriculture, increasing tree plantings and changes to fertiliser use)
- focus on measures that will be sustainable long-term for producers, for example those that reduce costs, increase productivity or can generate income
- work with industry to deliver pilot programs and support development of industry or farm-level emissions reduction and adaptation plans
- measures to increase the social and psychological resilience of regional communities under a changing climate
- efficient use and protection of water resources.

Scope of the Plan for the agriculture sector

The sectors identified for the development of Plans are based on the sectors identified in the United Nations Framework Convention on Climate Change (UNFCCC) greenhouse gas reporting framework.

The agriculture Plan will consider the emissions directly accounted for in the agriculture sector under the UNFCCC framework, and will also consider other agriculture-related emissions where relevant. These emissions will also be considered as part of the other relevant Plans, for example in transport, energy and LULUCF.

The agriculture Plan includes aquaculture and fisheries. Where relevant, all future opportunities apply to both land-based and marine farming.

The Plan will also consider the transition of Tasmania's agriculture sector to a low emissions economy, and how we can build resilience to the impacts of climate change on land-based and marine farming.

Tasmania's emissions from agriculture under the UNFCCC Reporting Framework	Other agriculture-related emissions
• Enteric fermentation (the digestion of plant material by cattle, sheep, swine and other livestock, a process which releases methane). • Manure management (the decomposition of the organic matter contained in manure releases methane). • Agricultural soils (processes including application of nitrogen fertilisers, animal waste, sewage sludge and crop residues add nitrogen compounds to the soil, which undergo a range of chemical transformations and release nitrous oxide). • Field burning of agricultural residues (directly and indirectly releasing methane, nitrous oxide and other greenhouse gases). • Application of lime products or urea to soils (leading to chemical reactions which release carbon dioxide).	• Use of fuels for transport purposes on farms, fisheries, aquaculture facilities and along supply chains is accounted for in the transport sector. • Use of electricity and fuels to power machinery on farms and aquaculture facilities, and in the processing of produce, is accounted for in the energy sector. • The emissions produced by agricultural waste that ends up in landfill are accounted for in the waste sector. • Nitrous oxide emissions from the production of finfish and crustaceans in aquaculture systems located in coastal wetlands are accounted for in the LULUCF sector. • Carbon emissions from land clearing are accounted for in the LULUCF sector. • Carbon sequestration in soils, trees and crops is accounted for in the LULUCF sector.

Relationship between agriculture and other sectors

Due to the nature of the agriculture sector and the UNFCCC reporting framework, there is overlap between agriculture and other sectors. The framework also means that for some agricultural industries, such as aquaculture, the majority of emissions are accounted for in other sectors. We recognise the importance of taking a holistic, systems-based approach to developing the Plans. These industries will be considered in the agriculture Plan but are also being considered in the other relevant Plans where appropriate.

There are particularly strong links between the agriculture and LULUCF sectors. These Plans are being developed concurrently to ensure all issues are considered across both Plans, and to support more efficient consultation with stakeholders.

The future opportunities identified in all sector-based Plans will be combined and inform the development of Tasmania's next climate change action plan, including the identification of priorities and gaps not addressed through the development of the sector-based Plans.

Priority areas

How have the priority areas and future opportunities in this draft Plan been identified?

We prepared a State of Play Report (Report), informed by our targeted consultation with government, business and industry. The Report summarises the agriculture sector in Tasmania, its emissions, impacts of climate change on the sector, opportunities, challenges and barriers to reduce emissions and build resilience, and relevant policies and actions at the local, national and international level. The Report is available on the ReCFIT website at:
recfit.tas.gov.au/policies_strategies_plans/emissions_reduction

In addition to consultation with business and industry and the State of Play Report, the priority areas and future opportunities have been informed by:

- alignment with existing Tasmanian Government policies and programs, including the *Agrivision 2050* policy, *Tasmanian Salmon Industry Plan 2023* and the development of Regional Drought Resilience Plans in partnership with the Australian Government
- our legislated target to ensure Tasmania's greenhouse gas emissions are net zero, or lower, from 2030
- the other objects of the Act, including adaptation, contribution to international, national and local government action, and supporting a consultative partnership approach to action on climate change
- feedback from consultation on Tasmania's Climate Change Action Plan 2023-25 (Action Plan)
- the 2021 Tasmanian Emissions Pathway Review
- the principles of sustainable development and social equity, transparency and reporting, science-based approach, integrated decision making, risk management, community engagement, and complementarity (as outlined in the Action Plan)
- analysis of additional resources, including the Tasmanian Agri-Food ScoreCard, reports by industry and research institutions, industry targets and initiatives, and policies and initiatives being implemented in other jurisdictions.

The future opportunities under each priority area have been identified to address any gaps in current activity and help to reduce the barriers to action on climate change in the agriculture sector in Tasmania. The opportunities are intended to complement and build on the work already underway by international, national and local governments, business and industry, and the community.

Priority areas

Through targeted consultation, research and analysis, we have identified key priorities and future opportunities to reduce emissions and build resilience in Tasmania's agriculture, aquaculture and fisheries.

Consultation highlighted that there is no single solution to reducing emissions and building resilience in the agricultural sector. A flexible approach is required to meet the diverse needs of the sector and ensure we can make the most of opportunities presented by emerging technologies.

We have grouped the key themes into five priority areas for action:

1. Improving the data, information and knowledge needed to drive change.
2. Supporting the uptake of practices and technologies that will reduce emissions and increase carbon storage.
3. Supporting the sector in the transition to a lower emissions economy.
4. Building resilience to the impacts of climate change.
5. Driving action through partnerships and collaboration.

The future opportunities in this draft Plan are intended to guide public consultation to help us identify the priority actions to include in the final Plan.

Consultation questions

To help us develop the final agriculture Plan, we want to hear your thoughts about the priorities and future opportunities outlined on the following pages.

1. What future opportunities (outlined in this draft Plan) do you think will have the most impact?
2. Are there any priorities or future opportunities missing from this draft Plan?
3. How can we collaborate to reduce emissions and build resilience in the agriculture sector?

1 Improving the data, information and knowledge needed to drive change

Helping farmers to 'know their number' and understand on-farm emissions is an important first step in reducing emissions, by ensuring measures are appropriately targeted. Monitoring on-farm emissions over time will ensure we have accurate information about whether any measures have been effective, and provides evidence and learnings for other producers. Measuring and reporting emissions and other natural capital metrics will also support producers to remain competitive in the global transition to net zero and comply with evolving reporting requirements.

There are some well-established opportunities for the agriculture sector to reduce emissions and build resilience. However, further research, development and extension activities are required to support the adoption of new and emerging technologies and practices in Tasmania.

Data and information about Tasmania's future climate scenarios is also essential to enable effective adaptation action.

It is important that information is available to producers and agri-businesses in ways that they can easily access and use, so they can make informed decisions about the changes they need to make in their business. Providing consistent, effective and accessible information, including through education, information sharing and demonstration activities, is a key part of this priority area.

The future opportunities in this priority area are designed to build on the work already underway across the state and nationally, and address any gaps, to improve our understanding of emissions reduction and resilience opportunities in the agriculture sector and ensure producers have access to the information they need.

Current action

- Providing a $4 million grant to TasFarmers and partners to deliver a three-year commercial scale trial of low emissions feed supplements, providing comprehensive data on the impacts of the supplements, and informing the development of tools and resources for producers.
- Preparing Tasmania's first statewide climate change risk assessment, that will identify and prioritise a range of climate-related risks and opportunities to support governments, businesses and industries across the state to make informed decisions.
- Updating Tasmania's fine-scale climate projections to provide the most up-to-date future climate information to Tasmanians and play an important role in the development of climate change adaptation initiatives.
- Updating Tasmania's Enterprise Suitability Maps to show how crops could be grown productively in the future under different climate scenarios.
- Delivering the Water Catchment Yield Science Update to update Tasmania's hydrological models to inform water management.
- Investing $1.6 million into research that will help farmers to understand what influences irrigation efficiency and to adopt practices that minimise environmental impacts.
- Supporting TIA and IMAS to deliver world-class research, development, extension and education for agriculture and fisheries.
- Providing funding to the Centre for Marine Socioecology at UTAS to support the Range Extension Database and Mapping Project (Redmap) for another decade to track marine species redistributions under a changing climate.
- Providing funding for agriculture research, development and extension through the Agricultural Innovation Fund and Agricultural Development Fund.

- Funding Private Forests Tasmania (PFT) to deliver the Stems for CO2 program, which will provide data on carbon sequestration from trees and develop resources to communicate the benefits of tree plantings for farmers and other land holders.
- Private Forests Tasmania has also established the Tree Alliance Knowledge Hub[4] to provide landowners with information about the benefits of integrating trees into their operations, and tools and resources to help simplify the planning process.

At a national level, the Australian Government has committed to:

- partner in the Zero Net Emissions Agriculture Cooperative Research Centre (ZNE-Ag CRC)
- accelerate on-ground action to reduce agriculture and land emissions through the delivery of information, resources and extension activities
- improve greenhouse gas accounting at the farm level, through the development of voluntary emissions reporting standards for the sector, and at the national inventory level by enhancing methods and data collection processes.

Future opportunities

Consider opportunities to support existing trusted experts and advisors to increase their capacity and capability to support farmers to reduce emissions, manage transition risks and opportunities, and build resilience to the impacts of climate change.

Explore options to help farmers measure, report and monitor on-farm emissions and climate risks, and identify steps to reduce them, aligning with work underway at a national level. For example, this could include initiatives such as an on-farm emissions reduction and resilience assessment program, or working with industry bodies to deliver tailored programs for their members.

Develop resources that meet user needs to support primary producers and other agribusinesses to make informed decisions about managing climate risks and opportunities. Resources will include user-friendly information about the findings of the statewide climate change risk assessment and the updated fine-scale climate projections.

Work with partners to develop new and improved ways of providing producers with user-friendly information about climate change. For example, this could include information about emissions measuring and reporting, emissions reduction opportunities, carbon farming, climate risks, funding opportunities from all levels of government, case studies and relevant events.

Undertake modelling to better understand Tasmania's agriculture emissions at both a whole-of-industry and commodity level.

Support further research and development into agricultural emissions reduction opportunities, climate change impacts and adaptation measures. For example, initiatives could include research and development for measures to increase soil health and reduce fertiliser use, low emissions aquaculture feed or the impacts of marine heatwaves on fisheries.

Consider climate change as part of Tasmania's annual agri-food scorecard. For example, the scorecard could include case studies and information about the sector's emissions as reported by the Australian Government, and could evolve over time as more information and data becomes available.

[4] treealliance.com.au/

2 Supporting the uptake of practices and technologies that will reduce emissions and increase carbon storage

There is no one-size-fits-all approach to emissions reduction in agriculture, aquaculture and fisheries. Each agri-business has unique circumstances, needs, and capacity to adopt emissions reduction technologies and practices. It is important that the opportunities adopted are sustainable for farmers in the long-term.

While many of the emissions reduction and resilience opportunities have the potential to increase productivity, reduce costs and provide a range of other co-benefits in the long-term, they require initial capital investment that can be a barrier to their adoption. In some instances, it may be more efficient and effective for producers to adopt a range of smaller, lower cost measures across their systems.

The opportunity to generate Australian Carbon Credit Units (ACCUs) may help overcome these barriers. However, participation in carbon markets is a long-term business decision, and there can be risks associated. It is important that farmers have access to independent, trusted advice, as addressed in priority area 3. In addition, particularly for many of Tasmania's smaller farming businesses, projects are often too small to justify the associated administration and audit costs with registering under the ACCU Scheme.

The future opportunities in this priority area are aimed at assisting producers to overcome financial and other barriers to emissions reduction activities, to complement the measures to improve data and information through priority area 1. They consider direct agriculture emissions under the UNFCCC framework, and agriculture-related emissions in other sectors.

Existing and emerging opportunities to reduce agriculture emissions and increase sequestration

- Measures to reduce emissions from livestock, such as methane-inhibiting feed supplements, use of pastures which produce less methane when digested by livestock, earlier breeding and slaughter of animals, and selective breeding.
- Methods to reduce emissions from manure management, including biogas capture and use of urease inhibitors.
- Precision agriculture to reduce fertiliser, fuels and electricity use.
- Reducing or changing fertiliser use, including use of biochar or increased integration of legumes into crops and pastures.
- Using lower emissions aquaculture feed or selective breeding in the salmon industry.
- Using agricultural waste to generate bioenergy to displace the use of fossil fuels on farm or in other industries.
- Increasing tree plantings on properties and reforestation of land that has been cleared.
- Reducing the clearing of forest land.
- Increasing carbon sequestration in coastal and ocean ecosystems ('blue carbon'), for example through seagrass restoration.
- Increasing the carbon stored in soils through changed farm management practices.
- Upgrading emissions-intensive equipment and vehicles for electric, hydrogen or more energy efficient alternatives, and ensuring machinery and vehicles are well-maintained and used in the most efficient ways.

Current action

The Tasmanian Government has a range of programs to reduce the barriers to adoption of the above opportunities, including:

- The $250,000 Carbon Farming Advice Rebate Pilot Program provides primary producers with rebates to offset the cost of obtaining expert advice on carbon farming projects.
- The Agrigrowth Loan Scheme provides low-interest loans to farms and agri-food businesses to support projects that advance the AgriVision 2050 target.
- The Landcare Action Grants Program, delivered in partnership with TasFarmers and Landcare Tasmania, provides grants for practical on-ground works for sustainable agriculture and rivercare activities, including carbon farming initiatives.
- The Low Emissions Livestock Grant Program is supporting a commercial-scale trial of feed supplements to reduce emissions from livestock in approximately 24,000 cattle across Tasmania.
- The Stems for CO2 program provides grants for landholders to assist with the upfront costs of integrating trees into their agricultural enterprise.
- The Bioenergy Vision for Tasmania aims to create an environment that supports bioenergy adoption in Tasmania, including consideration of the potential for circular economy solutions for agricultural waste.

Future opportunities

Explore options to provide financial support to agribusinesses to reduce emissions. For example, support pilots of electric, hydrogen or biofuels in machinery and vehicles, and circular economy solutions such as using agricultural wastes to develop bioenergy, bioplastics and biochar.

Consider developing strategies for the adoption of carbon farming and blue carbon in Tasmania. This could guide work by the government, business and industry to better understand risks, barriers and co-benefits, develop knowledge and skills and maximise the benefits for Tasmanian producers, while balancing other land use priorities.

Work with partners to support the reduction and recycling of waste from primary production and processing in Tasmania through the *Waste and Resource Recovery Strategy 2023-26* and the development of an organic waste action plan for government, business, industry and the community to reduce organic waste in line with Tasmania's organic waste targets

Continue to work with partners to support farmers to increase tree plantings on their properties, for example through the development of tools and resources.

Work with partners to identify and develop recommendations for addressing regulatory and policy barriers to action.

Identify opportunities to work with the Australian Government, Clean Energy Regulator and proponents to contribute to the development of ACCU methods for the agriculture sector.

3 Supporting the sector in the transition to a lower emissions economy

There is an increasing expectation on the agriculture sector, in domestic markets and from global trading partners, to report on and take steps to reduce emissions. Trading partners such as the European Union are introducing carbon import tariffs, and along supply chains, food manufacturers and retailers are setting emissions reduction and other sustainability-related targets. Among consumers, the demand for food that is produced in environmentally and socially responsible ways is growing, and sustainably certified products can attract premium prices.

The Australian Government is introducing changes that parts of the agriculture sector will need to comply with, such as climate-related financial disclosure requirements which will commence from 1 January 2025[5].

Producers also increasingly need to demonstrate that their property and practices are environmentally sustainable to access financing and insurance.

An important way for farmers to prepare for these changes is to measure their emissions, as well as other sustainability-related metrics. The future opportunities in priority areas 1 and 2, aimed at supporting producers to measure, report and reduce their emissions, will play an important part in the transition to a low emissions economy.

There are also opportunities for the government to support the sector to maintain and make the most of its reputation for high quality, environmentally sustainable produce, and to support the agricultural workforce to build its capacity and capability to adapt to these changes.

In the transition to a lower emissions economy, ongoing tensions between land uses will be affected. It is important to consider the need for sustainable food production, especially in the context of a changing climate, together with the need to increase renewable energy generation, increase carbon sequestration and protect Tasmania's unique biodiversity values.

The opportunities in this priority area will support producers to maintain and make the most of Tasmania's reputation for high-quality, 'clean and green' agricultural products, and enable strategic land use planning across the state.

Current action

- The $250,000 Carbon Farming Advice Rebate Pilot Program provides primary producers with rebates of up to $10,000 to offset the cost of obtaining expert advice on carbon farming projects tailored to their enterprise.
- The Farm Business Resilience Program, supported by the Australian Government, subsidises learning and development opportunities for farmers, farm managers and employees with a focus on improving strategic farm management capabilities.
- The government is working with TasFarmers and landholders to develop a compensation framework for farmers impacted by renewable energy projects.
- The government is funding a range of programs to grow and develop Tasmania's agricultural workforce by promoting agricultural careers, providing targeted skills development opportunities, and supporting the workforce to access appropriate on-site housing.

[5] For more information see Australian Treasury's *Climate-related financial disclosure: exposure draft legislation* released in January 2024, available at treasury.gov.au/consultation/c2024-466491

- The government is committed to improving strategic land use planning in the state, including through the rollout of the statewide Tasmanian Planning Scheme, introduction of Tasmanian Planning Policies, an improved regional land use planning framework and comprehensive reviews of the three regional land use strategies. The reforms take into account the *State Policy on the Protection of Agricultural Land 2009* which aims to enable the sustainable development of agriculture by minimising:
    - conflict with or interference from other land uses
    - activities on agricultural land that would prevent the land being returned to agricultural use.

Future opportunities

Work with partners to explore additional ways to promote and enhance Tasmania's reputation for high quality and environmentally sustainable produce.

Explore options to establish ways to recognise and champion businesses and community groups which take innovative, best practice action on climate change.

Continue to work with the State Planning Office to ensure Tasmania's planning policies, regional land use strategies and regulations consider the role of land use planning in emissions reduction and resilience while also considering other environmental, economic and social outcomes.

Collaborate with government and industry partners to support the consideration of the impacts of climate change on current and future skills and workforce needs, and explore opportunities to address these issues.

Identify and collate existing organic waste data to guide planning and strategic investment. For example, these data could inform planning for projects requiring biomass feedstocks, including from agriculture wastes and forestry residues.

4 Building resilience to the impacts of climate change

Farmers on the Bass Strait Islands and mainland Tasmania are being impacted by unseasonably dry conditions in 2024. Under a changing climate, events such as these are projected to become more frequent and intense.

Changing rainfall patterns, as well as increased risk of bushfires, storms and floods, and rising temperatures, present a major risk to land-based agricultural practices. As Tasmania's waters get warmer and more acidic, sea levels rise and extreme weather events become more frequent and intense, marine-based aquaculture and fisheries will also be impacted.

Increased temperatures across the state will also result in changes to Tasmania's biosecurity. It is likely that a range of species will find the future climate in Tasmania and its waters more suitable than current conditions.

These are significant risks for farmers but also Tasmania as a whole, and can lead to reduced food production, loss of employment, and flow on impacts to our industries, communities and trade. These risks can also include adverse impacts on the mental health of effected farmers and communities.

The management of the risks and opportunities under a changing climate will vary across Tasmania's diverse agriculture sector. It is important that we develop long-term resilience to these changes in our farms and rural communities, rather than only providing assistance in the aftermath of extreme events.

Tasmania's primary producers have a long history of adapting to climate variability and are well placed to make the most of existing knowledge and practices to increase their resilience to a changing climate.

The future opportunities below are designed to make the most of existing knowledge and experience and address any gaps in current action at a regional, state and national level. Many of the future opportunities in priority area 1 will also support governments, businesses and industry to make informed decisions about climate change adaptation.

Current action

To support Tasmania's agriculture, aquaculture and fisheries industries to adapt and build resilience to a changing climate, the Tasmanian government is:

- Providing support for farmers and communities impacted by drought in the Bass Strait Islands and mainland Tasmania, including financial support, and mental health, business advisory and animal welfare services.
- Partnering with the Australian Government through the Future Drought Fund to deliver the Regional Drought Resilience Program. Three regional plans will be developed to support Tasmanian communities to be better prepared for and resilient to the impacts of drought and climate variability events.
- Providing a modern water management framework through the Rural Water Use Strategy, including consideration of sustainable water management in the face of a changing climate.
- Investing in irrigation in partnership with the Australian Government, to improve water security and enable farm enterprises to adapt to changing rainfall patterns.
- Developing a Marine Heatwave Response Plan to guide government, community and industry action to reduce the impact of marine heatwaves on plants, animals and the environment.
- Taking into account the impacts of climate change in the state's biosecurity import risk analysis process.
- Developing and updating harvest strategies to allow commercial and recreational fisheries to adjust regulations in real time to adapt to changes in the environment.
- Supporting research and programs to reduce the impacts of range-extended urchins on Tasmania's marine ecosystems caused by warming waters on Tasmania's east coast.

- Supporting community-level action through the recently-launched Community Climate Change Action Grant Program.

Future opportunities

Explore options to support producers to plan for climate risks, for example to develop adaptation action plans.

Explore options to provide financial support to agribusinesses to increase their resilience to the impacts of climate change.

Build capacity to consider climate change through the development of a whole-of-government framework to embed climate change in decision making. This framework can play a role in supporting proactive planning and enabling government decision makers and broader teams to better support primary industries to adapt through policies and programs.

Collaborate with key partners across state, national and local government and the private sector to increase emergency preparedness, response and recovery.

5 Driving action through partnerships and collaboration

To accelerate the adoption of emissions reduction and resilience measures in the agriculture sector, action is needed from business, industry and governments at all levels.

It is important that all groups are working together to align actions, ensure they complement each other without duplicating effort, and have mechanisms in place to share information and learnings.

There are already a large number of collaborative groups and initiatives for agriculture, aquaculture and fisheries. For example, the Zero Net Emissions Agriculture Cooperative Research Centre (CRC) was established in 2024 and is Australia's largest CRC to date, involving over 70 partners from industry groups, governments (including the Tasmanian Government), universities (including TIA), Indigenous organisations and many small- to medium-sized businesses and grower groups. The CRC aims to demonstrate how emissions reduction technologies can work together in farming systems and create pathways to low-emissions agriculture in Australia.

There are further opportunities to increase coordination between existing groups and support them to consider climate change as part of their work programs. There are also opportunities to support primary producers to collaborate with other industries to drive innovation.

The future opportunities below will enable increased collaboration between governments, business and industry to drive action in the sector. Many of the future opportunities in other priority areas also include a collaborative partnership approach.

Current action

Other partnerships and collaborative initiatives at the regional and state level in Tasmania include:

- The government partners with TIA and IMAS to support the delivery of world-class research and development for agriculture and marine resources.
- The TAS Farm Innovation Hub aims to increase collaboration across organisations working in research, development, adoption, extension and commercialisation, as part of building drought and climate preparedness, and brings together over 30 partners and collaborators.
- The Tasmanian Agricultural Productivity Group brings together primary producers, the food and non-food agricultural manufacturing sector, plantation forestry, agribusiness, and government, to address issues in the agriculture sector.
- Tasmania's three regional NRMs work together towards a single vision for natural resource management in the state and play a key role in delivering Australian Government initiatives for Tasmanian farms.
- The Fisheries Research and Development Corporation (FRDC) Tasmania Research Advisory Committee is an expertise-based committee responsible for facilitating the identification and delivery of efficient and effective research for Tasmanian fisheries.
- The government is a partner in the Blue Economy CRC, which brings together partners from ten countries with expertise in aquaculture, marine renewable energy, maritime engineering, environmental assessments and policy and regulation. The Blue Economy CRC drives industry-focused research and training to support transitioning ocean industries for Australia.
- The government is partnering with Tasmania's wine and dairy industries to support industry-led initiatives to reduce emissions and build resilience.

Nationally, agriculture and climate change ministers from all Australian jurisdictions are progressing a collaborative nationwide agenda to reduce emissions and build resilience in the agriculture sector, including through:

- the development of the national agriculture and land decarbonisation plan
- the 2023 *National Statement on Climate Change and Agriculture*
- the development of a First Nations Statement on Agriculture, Forestry and Fisheries by early 2025, to drive greater economic inclusion for First Nations Australians in these industries.

Future opportunities

Explore options to establish a group, or partner with existing networks, to lead work in Tasmania to reduce agriculture emissions, build resilience and promote action to the broader agriculture sector.

Establish a regular forum to showcase the work underway across Tasmania to reduce emissions and build resilience, provide information about emerging opportunities and risks, and encourage networking and information sharing across sectors.

Explore options to support Aboriginal land management practices on Tasmanian farms and other options for Aboriginal engagement, in line with national work.

Consider options to partner with additional industry bodies or producer groups to develop emissions reduction and resilience programs tailored to their members.

Continue to work with the Australian Government to progress national priorities to reduce emissions from agriculture and ensure the best outcomes for Tasmania, for example through the $30 million commitment to accelerate on-ground action to reduce agriculture and land emissions across the country.

What happens next?

Implementation

After the final Plan for the agriculture sector is published, we will continue to engage with key partners and the community on the development and implementation of future opportunities as required.

We will keep stakeholders and the community informed through the Climate Change Office website, newsletter and social media.

We encourage you to sign up for our newsletter through our website: recfit.tas.gov.au/cc_newsletter and follow the Climate Change Office on Facebook to stay informed about opportunities to participate in relevant programs.

Reporting

We will prepare an annual climate change activity statement, showing the status of each sectoral Plan and progress on future opportunities, and the status of initiatives in the climate change action plan.

We will also prepare an annual greenhouse gas emissions report detailing Tasmania's emissions for each sector.

These reports will be prepared each year and will be tabled in Parliament, as required under the Act.

As outlined in this draft Plan, we intend to work on improving our data capability to determine the impact of different measures in this Plan, and other relevant strategies, on Tasmania's agriculture sector emissions.

Review

The Tasmanian Government is committed to a co-ordinated, whole-of-government response to climate change. Together with the Action Plan and the delivery of Tasmania's first statewide climate change risk assessment, the development of the sector-based Plans is a strategic priority for the government that will be delivered in consultation with business, industry and portfolio Ministers.

However, we recognise that there is significant overlap between agriculture and other sectors, and that there are parts of Tasmania's communities, businesses and industries that may not be comprehensively covered by the sector-based Plans.

We will prepare and publish a report outlining the links between all sectoral plans and the climate change risk assessment. The report will also identify future focus areas to inform policies and programs, including Tasmania's next climate change action plan.

The Plans are to be updated at least every five years.

Glossary and acronyms

Term	Description
ACCU	Australian Carbon Credit Unit, which are a tradable financial product earned through eligible emissions reduction projects.
Biochar	A form of charcoal made from the pyrolysis of biomass (heating at high temperatures in low oxygen conditions).
Blue carbon	Blue carbon is the carbon sequestered in vegetated coastal ecosystems. In Tasmania, this includes seagrass and tidal marshes.
CO_2-e	Carbon dioxide equivalent. This is a standard unit to measure greenhouse warming potential of gases. Each different greenhouse gas is represented in terms of the amount of CO_2 that would create the same amount of warming.
DAFF	Australian Government Department of Agriculture, Forestry and Fisheries
DCCEEW	Australian Government Department of Climate Change, Energy, the Environment and Water
Emissions	Unless otherwise stated, "emissions" refers to net greenhouse gas emissions, which means the greenhouse gases that are emitted from activities minus the carbon stored.
Enteric fermentation	The digestive process in ruminant animals such as cattle, sheep and goats is known as enteric fermentation. Plant material consumed by these animals is broken down by bacteria in their gut, a process which creates carbon dioxide and methane. These gases are released through the animals' breath and burps.
GWP	Global warming potential. Global warming potentials (GWPs) are values that allow direct comparison of the impact of different greenhouse gases in the atmosphere by comparing how much energy one tonne of a gas will absorb compared to one tonne of carbon dioxide.
IMAS	The Institute for Marine and Antarctic Studies (IMAS), within UTAS, undertakes fisheries research to support the long-term sustainable harvest of wild marine resources, and aquaculture research aimed at delivering significant increases in production while minimising environmental impacts.
IPCC	Intergovernmental Panel on Climate Change, an independent body that assesses the scientific, technical and socioeconomic information relevant for the understanding of the risk of human-induced climate change. This includes developing guidelines for national greenhouse gas inventories which are used under the UNFCCC.
IPPU	Industrial Processes and Product Use.
kt	Kilotonnes. A kilotonne is equivalent to 1,000 tonnes or 1 million kilograms.
LULUCF	Land Use, Land Use Change and Forestry.
Methane	A type of greenhouse gas, which contributes approximately 28 times more atmospheric warming than carbon dioxide.
Mt	Megatonnes. A megatonne is equivalent to 1,000 kilotonnes or 1 million tonnes.

Term	Description
Nitrous oxide	A type of greenhouse gas, which contributes approximately 265 times more atmospheric warming than carbon dioxide.
NRE Tas	Department of Natural Resources and Environment Tasmania
NRM	Natural Resource Management, the integrated management of natural resources including land, water, soil, plants and animals. Organisations that manage natural resources are referred to as NRMs.
Precision agriculture	Precision agriculture involves adopting targeted techniques and technologies to farm in a data-driven way that increases efficiency and productivity, and is less labour-intensive.
ReCFIT	Renewables, Climate and Future Industries Tasmania
STGGI	State and Territory Greenhouse Gas Inventories
t	Tonnes (1,000 kilograms).
TIA	Tasmanian Institute of Agriculture, a specialist institute within the University of Tasmania.
UNFCCC	United Nations Framework Convention on Climate Change
UTAS	University of Tasmania
ZNE CRC	Zero Net Emissions from Agriculture Cooperative Research Centre

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