



AGRICULTURE AND LAND SECTORAL PLAN

Submission to the Department of Agriculture,
Fisheries and Forestry

January 2024

About us

Australian Grape and Wine Incorporated (Australian Grape & Wine) is Australia's national association of winegrape growers and wine producers, recognised under the *Wine Australia Act 2013*. We work closely with the Government to develop and implement policy that is in the best interests of over 2,000 wineries and 6,000 winegrape growers across Australia.

Protecting the reputation of Australian wine is a key enabler for domestic and international market sustainability and growth. Our vision for the Australian grape and wine industry, as stated in the sector's ESG Investment Plan,¹ is to be globally recognised as the leader in evidence-based grape and wine business sustainability, and from this leadership to gain competitive advantage in our export markets. In partnership with the Australian Government we can play a key role in promoting a sustainable grape and wine sector by assisting businesses to be adaptive and resilient to the environmental, economic and social risks they face, many of which will be influenced by climate change.

We commend the Australian Government for recognising the need for this Agriculture and Land Sectoral Plan. We support the Government's commitment to the Paris Agreement targets and its associated emission reduction goals. This commitment is integral to our global reputation and our export prosperity.

Climate Change and Wine

As both a contributor to carbon emissions, and a sector that is highly affected by climate change, viticulture is very vulnerable to global policies relating to its mitigation. Viticulture is particularly susceptible to warming due to the interplay between climate and grape varietal expression and quality. Many winegrape varieties have a relatively narrow climate niche for optimum production. With the entire growing cycle happening earlier, and now in warmer months, we suffer compounding of the effects. Harvest compression, unseasonal damaging storm events, increased frost risk due to earlier bud burst, periods of drought and temperature extremes all take their toll. Geopolitical uncertainty and rising operating costs have further impacted economic stability in viticulture. In today's landscape, we experience these challenges alongside top-down demands on sustainability that cost time and money. The margin squeeze facing growers is coming from all directions. Despite this, we acknowledge we have a role to play in Australia's net zero aspirations and will continue to support our sector to adopt climate change adaption and mitigation practices. We hope to do so with the support of enabling public policies along with adequate funding incentives for our grape and wine businesses, suppliers and researchers.

Through the plan, it needs to be acknowledged that climate change mitigation has a significant public benefit, and that dealing with emissions will progress slowly without incentives. There is strong justification to recognise and address the associated cost of climate action to the agriculture community in terms of the investments required, the cost of measurement and reporting and the market access risks. This submission discusses the existing market-related costs associated with climate change, the incentives for change in terms of accessibility and value (or lack thereof) and presents some suggested solutions that will hasten climate change action.

¹ Wine Australia (2022) ESG Investment Plan available at <https://www.wineaustralia.com/getmedia/c0097f58-7b92-4763-88ef-57ee499c85b7/Wine-Aust-ESG-Investment-Plan.pdf>

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Summary of solutions

- The plan should include an analysis of the co-benefits and trade-offs associated with its proposals and all government policies should consider climate change and other environmental impacts.
- The plan must consider how we deal with existing agricultural waste streams for which solutions do not yet exist while we move towards more circular production systems.
- Australia's commitment to reach net zero should be achieved in a way that increases farmers' profitability and productivity, not reduces it. This will require:
 - State Government resourcing and preparedness to invest in recovery from natural disasters and climate change adaptation;
 - Government support for industry adjustment that drives sustainability and emission reduction outcomes;
 - A commitment by industry to measure and report on environmental performance;
 - Leadership and coordination from the bottom up to drive consistency and efficiency in meeting sustainability requirements;
 - Grants for businesses to prepare for approved sustainability certification programs that include emissions reporting;
 - A sense of urgency to improve the value proposition of carbon farming and reporting for grape growers through a roll out by the Clean Energy regulator of the Integrated Farm Method;
 - Within the Governments Climate Active Scheme, a practical methodology for grape growers to use increases in carbon sequestered in their vineyard soils and trees as an inset against their own emissions, rather than having to purchase carbon offset credits;
 - Government policy to support expansion of market-based incentives with consideration for co-benefits and ongoing maintenance of existing carbon sinks;
 - Grants to industries to improve data systems, capacity building and extension activities;
 - Development of industry-led data policies;
 - A review of all new and existing public policies to ensure that they are conducive to, or at least not at odds with, emissions abatement.
- Government has a further role in providing support for R&D such as through:
 - Retaining existing R&D Tax Incentive (R&DTI) and the *Primary Industries Levies and Charges Disbursement Rules 2023* that provides for matched funding for R&D;
 - Additional funding pools in R&D so that we are in line with other jurisdictions.

Whilst we recognise there are global influences at play, we also need to think local and ensure policies are relevant and reflective of our local Australian environments.

Our Challenges

The current operating environment for viticulturists is challenging. With geopolitical issues impacting the demand for Australian wine, we have found ourselves in a situation of significant over-supply. As a result, the profitability of grape production is seriously challenged, especially within the warm to hot, irrigated regions.

Meanwhile, sustainability credentials have fast become a ticket to play and growers are telling us that associated demands of their supply chains are costing them considerably. Whilst meeting these demands is an accepted obligation for gaining access to export markets, the heavily top-down approach has led to a proliferation of different requirements. Associated reporting inefficiencies flow through to growers who directly or indirectly supply into these markets.

Through the International Organisation of Vine and Wine, the Australian wine industry maintains effective relations with many international wine industries who we work with to pursue harmonised standards and regulations for wine. More recently a global collaboration of producers, suppliers, distributors, and retailers has emerged called the Sustainable Wine Roundtable. This organisation is creating a global reference standard for advancing sustainability across the wine value chain. This will likely have a requirement for carbon reduction plans and encourages third party certification.

Emissions Management

Our Emissions Reduction Roadmap demonstrates the Australian wine sector's shared commitment to decarbonisation in line with Australian Grape & Wine's emissions policy.²³ Based on science and industry data, modelling suggests that a 42 per cent reduction in emissions can be achieved by 2030. Through the roadmap there will be a range of tools to support grape and wine producers on this journey. We remain hopeful that we can also achieve net zero emissions across all scopes by 2050. However much of the technology required to decarbonise does not yet exist so we remain cautiously optimistic. Further work is required to better understand offsetting and insetting opportunities.

The wine sector reports emissions data through the Sustainable Winegrowing Australia program. This information helps us to estimate the industry's progress towards meeting carbon emissions goals. The annual impact report generated from data collected through the program currently tracks uptake of best practice across the spectrum of sustainability.

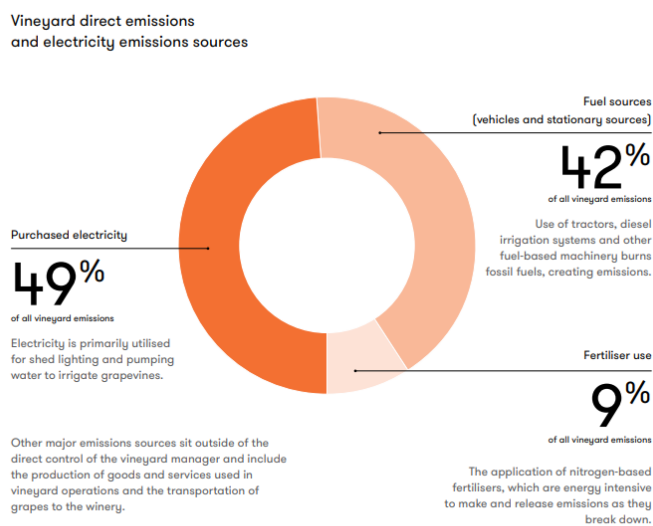
Carbon dioxide is absorbed by grapevines in permanent parts of the vine and during the annual growth cycle and can also be intensified in vineyard soils. Carbon sequestered in the annual growth cycle is later released as part of the biogenic carbon cycle through heterotrophic and autotrophic respiration, or stored as soil organic carbon and living biomass, some of which is harvested and later released as fermentation emissions. Carbon-containing waste streams include vine prunings, juice lees and grape marc. Carbon stores in the vineyard can be increased using practices such as applying nutrients, treating acidity or sodicity, re-establishing or rejuvenating mid row and/or under canopy pastures and cover crops or introduction of livestock.⁴ In particular, the planting of native, locally

² Wine Australia (2023) [Emissions Reduction Roadmap](#) p18

³ Australian Grape & Wine [Emissions Management Policy](#)

⁴ Madgett (2019) [Can grapegrowers become the heroes of climate change? - Winetitles](#)

adapted plants as groundcover offers positive carbon storage outcomes along with multiple ecosystem benefits including improved water holding capacity and resilience to extreme weather events. The success of our EcoVineyard program, thanks to funding contributions from both Wine Australia and the National Landcare Small Farms Small Grants program, has seen these practices adopted by more and more vineyard owners across Australia.



Source: Wine Australia Emissions Reduction Roadmap

Over 90% of Scope 1 and 2 vineyard emissions are from the fuel required for vineyard equipment and irrigation.⁵ Opportunities to reduce emissions include the use of biodiesel and renewable fuels or electrification of diesel-powered vineyard equipment and irrigation systems. Some of the most exciting opportunities for reducing emissions involve dramatically reducing vineyard tractor passes for spray applications through integrated pest management that combines ecological principles with new technologies like DNA-free editing for disease resistance.

In terms of overall emissions, excluding abatement, the vineyard currently comprises only 10% of the emissions in a bottle of wine.⁶ With Scope 3 emissions accounting for 80% of wine sector emissions, decarbonisation efforts of growers will be dwarfed without commitment from the entire value chain. This same risk applies to any agriculture sector that process, package and export. The Emissions Reduction Roadmap provides advice for grapegrowers and winemakers to not only address their own emissions but to engage with their suppliers, and emphasises a collective effort in emissions reduction.

⁵ Ibid.

⁶ Ibid.

Our concerns

Tackling climate change requires an integrated approach

Without addressing other sustainable development goals relevant to Australian agriculture, we are at risk of carbon tunnel vision, to the potential detriment of biodiversity, water, human capital, and the social dynamics of a sustainable agriculture/viticulture sector. This is particularly important in the agriculture sector where there are multiple competing environmental and social considerations. A good example is cover crops. While they may enhance carbon stores, they can compete with vines for access to water.⁷ Grape and wine businesses manage these trade-offs through our sustainability program, Sustainable Winegrowing Australia, which encourages a holistic approach.

As discussed above, vineyard operators have the potential to significantly reduce emissions through minimising tractor passes. A vineyard managed using preventative agrichemical controls and/or with disease resistant vines might require only two tractor passes prior to harvest compared to a typical vineyard reliant on organic chemicals such as sulphur which typically require 6 - 8 fungicide spray passes. Our ability to breed grapevines that are disease resistant has the potential to be a major contributor. Already, winegrape varieties have been bred in Australia to be resistant to the major mildew diseases. However there exists a significant barrier in that winemakers are no longer permitted to use the name of the variety on the resulting wines as the vines contain small traces of DNA from an alternative (non-*Vitis vinifera*) grapevine species. Technological advances offer promising opportunities such as DNA-free gene editing which could overcome this barrier and revolutionise vineyards, offering emissions avoidance as a co-benefit. Definitions of genetically modified organisms (GMOs) are currently under review with Food Standards Australia New Zealand. We see a high likelihood of adoption of winegrape clones derived from DNA-free editing being adopted, should the process be excluded from the GMO definition, and accepted in the community.

Other barriers to adopting practices that reduce spray passes include the misconceptions about the danger of systemic agrichemicals (used safely), along with the prohibitive cost of bringing in new chemistries into Australia and the sluggish pace that new technologies from other nations reach our shores. The plan should recognise the need to increase accessibility of both existing and emerging technologies, ensure policies about access are evidence-based and that the general public are well-educated to trust our farmers. When potential solutions are out of favour with the general community for no good reason and government policy succumbs to these community concerns over science-based evidence, we will see our efforts stall.

The climate change activities of other sectors can put agriculture and the natural resources we rely on at risk. In the rush to decarbonise, governments must respect the importance of Australian agriculture by avoiding land use conflicts such as activities that put our water resources at risk or developments that impact the social amenity and tourism appeal of regions.

Solution: The plan should include an analysis of the co-benefits and trade-offs associated with its proposals and all government policies should consider climate change and other environmental impacts.

⁷ Penfold, C. and Collins, C (2012) [Cover crops and Water Use](#)

Problematic Waste Streams

Barriers to reducing or re-using waste remain a problem and the discussion paper highlights a lack of available information, and that there are very few local solutions. In the viticulture sector, waste streams such as copper chromium arsenate (CCA) timber posts and irrigation dripline have the potential to cause environmental harm when left stockpiled in vineyards. However, transporting these types of products to centralised locations for processing comes at a cost and contributes to emissions. Furthermore, some regions lack disposal sites. We are collaborating with State Governments and local councils as well as other businesses to investigate alternative end-of-life opportunities for these products, at the same time as seeking investment into circular solutions. Indeed, some of the potential solutions could be carbon-positive. A well-co-ordinated investment approach that is both cross-sectoral and with Government support would be appropriate, given the significant public benefits. This could expedite the solutions we need through waste stewardship plans, waste processing sites and technologies, at the same time as generating regional employment initiatives linked to solutions.

Solution: The plan must consider how we deal with existing agricultural waste streams for which solutions do not yet exist while we move towards circular production systems.

The Value Proposition

The Minister has expressed confidence that Australia's commitment to reaching net zero will be achieved 'in a way that actually increases farmers' profitability and productivity, not reduces it.'⁸ Under status quo, this seems unlikely.

Increasing agricultural risk due to unseasonal events and natural disasters is an expected outcome of climate change. The suggestion that 'the worst impacts of climate change could, in the absence of adaptation, up to halve average farm profits by 2050' means that in the medium to long term, the viability of thousands of businesses is under considerable threat. State governments must be resourced and prepared to invest more in recovery from natural disasters and adaptation to climate hazards, so that businesses can cope, recover and continue to thrive following climate change-related events outside of their control.

In the shorter term, we should start to think about the waste and emissions coming from unprofitable businesses, and particularly agricultural sectors that are growing food or fibre without a market. This is at odds with the Government's stated intention to improve on the sustainability levels of Australian farming. Businesses 'in the red' also find it more challenging to be green. Industry adjustment due to structural imbalance is a pivotal part of any sustainability outcome. In our pre-budget submission, we will propose a competitive grants package for businesses seeking to reverse a lack of profitability. Should such a fund be initiated it could support business and industry restructures for greater return on energy and water use and/or optimisation of land use to promote food security, carbon sequestration and appropriate waste management.

Businesses across the sector are already suffering pressures from all directions including the effects of climate change, inflation, cyber security and increasing red tape. This is now accompanied by onerous climate and sustainability-related policies of both Governments and large businesses, with actions often falling at the feet of growers. This not only causes margin erosion but threatens access to both capital and insurance in an already tough environment. With the new requirements for sustainability and climate-related disclosures, reporting requirements are an additional impost on struggling businesses and are only set to grow.

⁸ Interview with Rhiannon Elston, Sky News Regional (November 2023)

High levels of concentration in food and wine retail mean that demands on producers are often determined using a top-down approach, and we are seeing a proliferation of inconsistent market requirements. Acquiring and maintaining certifications required by markets is expensive, typically borne entirely by the producer and disproportionately costly for smaller operators (the average vineyard size in Australia is under 30 hectares). Growers are unable to pass on these new costs and any value added from sustainability tends to be distributed downstream of the supply chain.

Better leadership and coordination from the bottom up, and in the short-term, is critical in driving consistency and efficiency. Australian Grape & Wine receives frequent enquiries about whether we can seek Government support for businesses to prepare for Sustainable Winegrowing Australia certification. This type of support could be extended to other any sector with a suitably robust sustainability certification program with an emissions reporting requirement. The plan should acknowledge the public benefit attached to certification programs in providing consumers with the information that they need to make informed decisions.

If the additional cost burden on producers is not compensated for, it will impact livelihoods. Poor environmental or economic policies can devastate regional communities and add to the mental health crisis we already face in agriculture.

Carbon Markets

Viticulturists have for decades appreciated the benefits of soil carbon. Practices that remove carbon from the atmosphere by building soil health are not new for many vineyard owners. While we support the concept of a carbon market, carbon farming to date has not been taken up by winegrape growers (a current project in South Australia aims to register the first vineyards under the Emissions Reduction Fund). Most carbon offset projects have involved the regeneration or protection of native forests on grazing lands in semi-arid regions. Contributing factors include low carbon prices, permanence obligations and lack of trust and awareness. A full list of barriers and potential solutions are cited in an AgriFutures Australia report.⁹ Growers can increase their soil carbon levels through new activities such as mid-row cover crops, treating acidity, sodicity or nutrient deficiency related constraints, or spreading mulch or compost. However, the latter two cannot be included in carbon accounting unless obtained from within the vineyard itself or made from a designated waste stream.¹⁰ To date, it seems that carbon farming projects in vineyards are unlikely to be financially viable given the experimental evidence showing uncertain net profits.¹¹ However, this could change in the advent that the Clean Energy Regulator recognise a model for estimating soil carbon dynamics in vineyard soils under different management regimes, or a more cost-effective soil carbon measurement method that combines physical soil measurements with localised remote sensing or machine learning.

We would welcome investigation into any innovative ideas that could generate alternative regulated and voluntary market-based incentives beyond soil carbon. This could include new methods or complimentary markets that offer additional ecosystem services such as Carbon + Biodiversity. Combined with greater investment in extension such as through the Government's excellent initiative in the Carbon Farming Outreach Program, this could start to move the dial. The discussion paper recognises the value of building industry capacity and of peer-to-peer learning. We concur with this. With that in mind, we need to take a sector approach for maximum effect and the offering must

⁹ AgriFutures (2019) [Improving Carbon Markets to Increase Farmer Participation](#)

¹⁰ White, Robert. (2019). What are the realistic expectations for making money out of carbon credits in vineyards?. 666. 38-40.

¹¹ White R. and Davidson B. (2016b) The costs and benefits of approved methods for sequestering carbon in soil through the Australian government's Emissions Reduction Fund. Environment and Natural Resources Research 6, 99–109. doi:10.5539/enrr.v6n1p99

include economic or environmental co-benefits. We also need to break down the confusion, lack of trust and complexity associated with the Australian Carbon Credit Unit (ACCU) Scheme and learn to communicate to our audiences in simple terms.

The 'additionality' concept

The concept of additionality and how it is defined is problematic. This approach is widely criticised as it is perceived as an ambiguous and inequitable means for issuing ACCUs. Not only can it be difficult to determine what business as usual would have been, but land managers who managed carbon in the land for many years are excluded from rewards. This policy could see progressive producers suffer competitive disadvantage from their less progressive peers. A policy that requires a determination of additionality when calculating a nation's total emissions reduction, is obviously required for global reporting standards. However, need it be the sole driver of rewards? An alternative would be to offer rewards to those who exceed a common regional baseline, avoiding the exclusion of practitioners already operating above par. This would support ongoing conservation of soil carbon or biodiversity that is already in good shape.

Measurement and Reporting

Tracking and accounting of performance is a precursor to efficient emissions management. There is a need to increase ease of access, efficiency and interoperability of data across the entire sustainability spectrum. This will support better use of data, seamless reporting, market access, traceability and practice change at the same time as optimising productivity.

Reporting inefficiencies disproportionately impact smaller businesses. Accepted methods for calculating and reporting emissions as well as carbon sequestration, should consider impacts on smaller businesses within supply chains, with a sensible approach to the trade-off between accuracy and efficiency. We need improved automation of data capture, along with reporting requirements scaled to size and risk, acknowledging that very few producers in viticulture are users of farm or business management platforms.

There is room for improvement in our systems. We will greatly benefit from trusted and efficient data storage ecosystems and the ability to safely and efficiently exchange data across the value chain. We need to develop data ownership and governance policies and ensure that distribution of value goes to where the data is collected. We acknowledge the Government's investment in the Australian Agriculture Sustainability Framework as well as the traceability grants program and believe this should be built upon with further investment in cross-sectoral and industry specific data projects. The National Farmers Federation Data Code is a good start towards growing farmer confidence in how their data is managed. We see a further role for peak bodies such as ours to develop policies unique to our industry and support skills development and capacity building to maximise the potential gains from emerging digital farming technologies.

The discussion paper highlights that there are technologies, practices and other measures that can reduce emissions and increase carbon stores and it questions the options to support adoption. Without financially viable trusted solutions with a relatively short pay back, adoption will inevitably be slow. Whilst there is some merit in market-based approaches over direct Government investment, at present, the market-based incentives for change are not in balance with the costs, and very few are applicable to the size and type of property typically owned by winegrape producers. In the medium term, some emissions reduction will occur as old assets are retired and replaced with more energy-efficient technology. In the shorter term we need to ensure these new technologies reach our shores.

We need to remove barriers such as lack of data standards and poor connectivity, and consider subsidies to make equipment upgrades and precision viticulture more affordable for first movers.

There is a need for grants to tackle climate change that are more accessible to businesses. While grants such as the Future Drought Fund and other climate action programs are highly valued, the activities we seek investment in do not always fit the criteria. Furthermore, individual businesses lack easy-to-access financial incentives to support action on climate change. Grape and wine businesses report that complexity of application and reporting requirements is a deterrent. California's Healthy Soils Program is a good example of funding made easy.¹² This program contains a carbon calculator for potential rewarding of small grants. Input requirements are minimal (eg. crop type, proposed practice change and location) and there is associated support for soil testing. Alternatively, or in addition, support could be delivered through direct rebates or tax breaks such as instant asset-write offs or accelerated depreciation to encourage investment in more efficient technologies and equipment. We also need to expedite the development and adoption of technological solutions for reducing our dependency on non-renewable fuel and energy, coupled with incentives for early adopters to shorten pay back periods of any new investments. Policies that are blockers for climate change action should be assessed. The inconsistent approach to biodiesel in fuel tax credit calculations is one such example, as is the inability to use increases in carbon sequestered in vineyard soils and trees as an inset within the Governments Climate Active Scheme.

The discussion paper questions the existing workforce's capability to tackle the task ahead. Like many other agricultural sectors, grape business owners are ageing, fatigued and working long hours. A recent demographic study conducted in Riverina, found the median age in that region to be 55. Most growers reported stress, worry and low mood.¹³ Not only is the next generation of skilled workers a concern, but we already face a shortage of workforce skills, including subject matter experts with sector specific knowledge, or other providers of trustworthy advice. As growers tend to seek advice from within the sector, greater levels of support for extension must go to industries. Such support should be outcomes-focused and encompass upskilling, demonstration sites and peer to peer learning.

Recommendations:

That Australia's commitment to reach net zero will be achieved in a way that increases farmers' profitability and productivity, not reduces it. This will require:

- State Government resourcing and preparedness to invest in recovery from natural disasters and climate change adaptation;
- Government support for industry adjustment that drives sustainability and emission reduction outcomes;
- A commitment by industry to measure and report on environmental performance;
- Leadership and coordination from the bottom up to generate consistency and efficiency of meeting sustainability requirements;
- Grants for businesses to prepare for approved sustainability certification programs that include emissions reporting;
- A sense of urgency to improve the value proposition of carbon farming and reporting for grape growers through a roll out by the Clean Energy regulator of the Integrated Farm Method;

¹² <https://www.cdfa.ca.gov/oefi/healthysouls/>

¹³ https://researchoutput.csu.edu.au/ws/portalfiles/portal/342057052/Project_CSU2201_FINAL_REPORT.pdf

- Government policy to support expansion of market-based incentives with consideration for co-benefits and ongoing maintenance of existing carbon sinks;
- Within the Governments Climate Active Scheme, a practical methodology for grape growers to use increases in carbon sequestered in their vineyard soils and trees as an inset against their own emissions, rather than having to currently purchase carbon offset credits;
- Grants to industries to improve data systems, capacity building and extension activities;
- Development of industry led data policies;
- A review of all new and existing public policies to ensure that they are conducive to, or at least not at odds with, emissions abatement.

Government has a further role in providing support for R&D

At COP 28, sustainable agriculture was acknowledged as a part of responding appropriately to climate change. The commitment signed by 130 countries, including the Australian Government, has opened the door for agriculture to play a greater role in mitigation and adaptation strategies to meet the goals of the Paris Agreement.

Importantly, the signed commitment includes a pledge of support for agricultural sectors by 'scaling-up adaptation and resilience activities and responses in order to reduce the vulnerability of all [farming, fishing, and other food sectors] to the impacts of climate change, including through financial and technical support for solutions, capacity building, infrastructure, and innovations, including early warning systems, that promote sustainable food security, production and nutrition, while conserving, protecting and restoring nature'.

There is a commitment of signatories to orient policies and public support related to agriculture and food systems to promote activities which increase incomes, reduce greenhouse gas emissions, and bolster resilience, productivity, livelihoods, nutrition, water efficiency and human, animal and ecosystem health while reducing food loss and waste, and ecosystem loss and degradation; and to continue to scale-up and enhance access to all forms of finance from the public, philanthropic and private sectors - including through blended instruments, public-private partnerships and other aligned efforts - to adapt and transform agriculture and food systems to respond to climate change.

In Australia, climate mitigation and adaptation actions are considered to lag behind those of other OECD countries, especially those in Europe.¹⁴ Furthermore, when it comes to accessing incentives, there are multiple barriers as has been discussed. The sentiment from stakeholders outlined in the discussion paper, that investment needs to increase, is one we share. We agree with the discussion paper that investment in R&D needs to occur across governments, industry and academia, including through the agricultural Rural Research and Development Corporations (RDC) system, the Cooperative Research Centres (CRCs) and private enterprise. However, in the context of tackling climate change, there is significant public benefit and, in many cases, very little private benefit and/or extended pay back periods associated with new technologies. Greater levels of public investment in outcomes-based research is needed and justified. Without greater Government support, landholders will bear an inequitable burden. Therefore, it is critical that we retain existing Government support for R&D through both the

¹⁴ Iyer-Raniga, U. and A. Gajanayake (2023), 'Australia', in Fauziah Zen and Usha Iyer-Raniga (eds.), Financing Infrastructure for Climate-Change Adaptation in Developing East Asia. ERIA Research Project Report FY2023 No. 05, Jakarta: ERIA, pp.128-150.https://www.eria.org/uploads/media/Research-Project-Report/RPR-2023-05/11_Chapter-7-Australia..pdf

R&D tax incentive and the Primary Industries Disbursement legislation, as well as additional funding pools for R&D targeted to climate change mitigation and sustainability, ensuring we are in line with other jurisdictions.

Wine Australia's ESG Investment plan highlights the need for regional support for businesses to build ESG capacity and for resources to assist business prioritise and implement practice improvement. The plan recognises the need for targeted adoption programs offering the latest information and advice. Our commitment includes driving climate change mitigation in line with our Emissions Reduction Roadmap in parallel with building resilience to climate change. With winegrape growing being particularly susceptible to climate change, Wine Australia (as the grape and wine RDC) has invested significant levy and Government funds on climate resilience for at least two decades. These include vineyard management strategies to delay ripening, manage heatwaves, compensate for low winter rainfall, manage smoke taint risk and predict extreme weather events. RD&E for strategic adaptation delivered the Wine Climate Atlas and is currently focusing on grapevine variety trials across diverse climates and rootstock and scion breeding for improved stress tolerance and disease resistance. Participation in cross-sectoral programs such as Rural R&D for Profit, Climate Research Strategy for Primary Industries, the RDCs Climate Initiative, Agriculture Innovation Australia and the OneBasin CRC have allowed leveraging of limited funding and tackling of problems common to other agricultural sectors. A more recent focus on climate mitigation delivered the Emissions Reduction Roadmap, which provides a blueprint and practical tools and advice for the Australian grape and wine sector to reduce its greenhouse gas emissions.

Solutions: Government has a further role in providing support for R&D such as through:

- Retaining existing R&D Tax Incentive (R&DTI) and the *Primary Industries Levies and Charges Disbursement Rules 2023* that provides for matched funding for R&D;
- Additional funding pools in R&D so that we are in line with other jurisdictions.

A local approach

A one size fits all approach will not be the right solution for all of the objectives in an Agricultural and Land Sectoral Plan. Investments and solutions need to be targeted both locally and to industry organisations. There has been tremendous value in initiatives such as the Agricultural Trade and Market Access Cooperation (ATMAC) program, the Market Price Transparency grants and the Traceability grants which collectively funded many productive industry specific projects. Grants such as the National Landcare Small Farm Grants that support small businesses have also provided excellent local benefits, contributing to carbon abatement.

Finally, Australia needs to walk to the beat of our own drum. Many of the policies being developed in certain Northern hemisphere jurisdictions do not make sense in the Australian setting. For example, by following the lead from Europe we are at risk of further loss of access to important agrichemicals that provide pest and disease protection or weed control. Without them we face additional vineyard passes to compensate for less effective pest and disease control options and for mechanical weed control, increased water-use due to competition for water and/or loss of carbon as a result of the alternative solutions such as tillage. The trade-offs in the Australian environment are not the same as elsewhere.

Solution: Whilst we recognise there are global influences at play, we also need to think local and ensure policies are relevant and reflective of our local Australian environments.

We would be happy to discuss this submission further if required.

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