

Inquiry into the impact of climate change on Queensland agricultural production

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Queensland Government submission into the Inquiry into the impacts of climate change on Queensland's agricultural production

Department of Agriculture and Fisheries on behalf of the Queensland Government

INTRODUCTION

The Department of Agriculture and Fisheries (DAF), on behalf of the Queensland Government, appreciates the opportunity to brief the State Development and Regional Industries Committee on current and planned programs, policies and initiatives to assist the agricultural sector to manage and address the impacts of climate variability and climate change on agricultural production.

Queensland's agriculture sector manages the risks and disruption associated with extreme climate variability, market uncertainty, and geopolitical landscapes. To ensure the sector remains sustainable and competitive to feed and clothe a growing world population, adaptation measures, greenhouse gas (GHG) emissions reduction efforts, natural and social capital valuations, and a clear pipeline of digital and technological solutions is required.

In 2021, the Queensland agriculture and land sector contributed 21.66 million tonnes¹ of carbon dioxide equivalent (MtCO₂e), approximately 15 per cent of the state's total emissions. Agriculture's major emissions sources include methane management from ruminant animals such as cattle, sheep and goats; manure management, nitrous oxide from applied fertiliser use; and land use emissions, predominantly from grazing lands. Energy and fuel use can also be a major source of emissions for some commodities, for example horticulture.

Both the Federal and Queensland Governments have committed to zero net emissions economies by 2050, with interim targets of 43 per cent and 30 per cent below 2005 levels by 2030 respectively. Agriculture is recognised as a hard to abate sector, with the highest emissions sources such as enteric methane and nitrous oxide emissions caused by inherent biological processes within the production system.

Investment into the development and adoption of low-emissions technologies will be essential to accelerate progress towards Queensland's emission reduction targets and ensure the long-term viability and global competitiveness of Queensland food, fibre and foliage production. Queensland is doing its part through the Queensland Government's Climate Action Plan 2020-2030² (the QCAP) which was released in 2021. The QCAP commits Queensland to zero net emissions by 2050 in line with leading global economies. It sets out the priority sectors for emissions reduction action over the next decade, including the agriculture sector.

CONTEXT

Queensland's agribusiness and food sector contributes significantly to the state's economy. Of Queensland's 100 million hectares of leasehold estate, approximately 94 per cent of leases within the land portfolio are for primary production purposes. It has a key role in providing safe, sustainable food to an increasing world population and emerging roles in energy generation and greenhouse gas abatement. Queensland's primary industry commodities were estimated to be \$23.44 billion in 2022–2023, and account for approximately 10 per cent of Queensland's overseas exports by value. The industry employs more than 374,000 people across the agribusiness supply chain and exports to

over 130 countries worldwide. Even though Queensland's population is less than 0.1 per cent of the world's population and 1 per cent of the world's total land area, we produce 0.4 per cent of the world's food supply and nearly 1 per cent of the world's agriculture exports³.

Key findings from the *Australia: State of the Environment Report 2021*⁴ reflect the impacts of climate change on Aboriginal peoples and Torres Strait Islander peoples in Queensland and across the nation. In particular, the report acknowledges that indigenous knowledge and sustainable cultural practices are key to environmental management and that indigenous voices must be heard, and barriers to exercising stewardship of Country must be removed if governments are to continue to deliver environmental, cultural, social and economic outcomes of benefits to indigenous peoples and Australians more broadly.

Australia has one of the world's most variable climates. Climate change impacts present challenges across the community and economic sectors but are more intensely felt in regions where productivity and profitability are closely linked to natural resources such as agricultural communities. The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) estimates that changes in seasonal conditions from 2001 to 2020 have reduced annual average Australian farm profits by 23 per cent or around \$29,200 per farm⁵. While farm productivity would have been higher without climate change, the deployment of adaptation strategies and adoption of new technologies has led to improvements in farm performance, with national production forecast to grow to a record \$90 billion in 2022-23⁶. Further innovation is required to adapt and transform the agri-system to ensure it remains sustainable in the face of locked-in climate change impacts.

Accurately modelling emissions for the agricultural sector is difficult as it depends on getting good industry and on-farm activity data. The Department of Environment and Science (DES) is developing a new emissions modelling, projections and analysis capability which will allow Queensland to estimate current emissions with more accuracy and create our own projections of future emissions that better reflect our needs. The models will continue to evolve and be refined as industry, policy, data, and economic circumstances change. It is expected that DES emissions capability will be at the cutting edge of emissions modelling practices in the coming years.

IMPACT OF CLIMATE CHANGE ON AGRICULTURE

A comprehensive analysis of the impacts of climate change on the agriculture sector can be found in the ACIL Allen report *Understanding Climate Change and Current Approaches*⁷ commissioned by Agriculture Victoria on behalf of the Agriculture Senior Officials Committee in 2018. An additional summary of impacts can be found in the recently released National Statement on Climate Change and Agriculture⁸.

DRIVERS AND INDUSTRY RESPONSES

Many industry organisations have stepped up to the low emissions challenge. The Australian red meat sector has a target to be carbon neutral by 2030 and has invested millions of industry levy funds towards research, development, and leadership capability to achieve this goal. Australian Pork Ltd has also committed to be carbon positive and zero waste by 2025. Others, such as sugarcane, cotton, and poultry, have invested in lifecycle analyses to better understand where real emissions reduction is possible within the production system and supply chain.

DAF and Cotton Australia are undertaking a project to identify how the cotton industry creates, preserves, or erodes social and environmental value over time. By quantifying changes in natural and social capital the project aims to enhance decision-making for industry stakeholders, improve

social licence, and expand market access. Additionally, the project aims to be a test case to share learnings in this rapidly developing space across the broader agriculture sector.

Parallel to the proactive response by government and industry, clear market signals are driving decarbonisation and adaptation agendas across the food and fibre supply chain. Global food and manufacturing companies, as well as Australia's leading retail chains, have made commitments to reduce their carbon emissions. To achieve this, they are setting emissions reduction requirements for suppliers all along their supply chain, eventually reaching agricultural producers. For agriculture producers to meet these reductions will require the retention of credits from vegetation and soil carbon projects within the agricultural business (known as insetting) rather than selling them on the open market and transferring ownership to a third party (known as offsetting).

The Taskforce on Climate-Related Financial Disclosures⁹ and developing Taskforce on Nature-related Financial Disclosures¹⁰ have driven global change impacting on Australian markets, with investors and financial institutions now demanding evidence and reporting of climate and natural capital credentials within their investment portfolios.

To help prepare Australian agriculture for emerging international and domestic emissions and sustainability requirements, the National Farmers' Federation, with funding from the Australian Government, is designing an Australian Agricultural Sustainability Framework¹¹ (AASF) which will be the first country-specific tool to articulate sustainability for whole-of-sector. The AASF is based on environmental, social and governance (ESG) criteria, and has 17 principles of sustainability addressing key areas including good governance, greenhouse gases, water, biodiversity, human rights and livelihoods, and animal welfare. The Climate-positive Brisbane 2032 Olympic and Paralympic Games will be an excellent opportunity for agribusinesses to showcase their sustainable food and fibre.

AGRICULTURE ADAPTATION

Queensland's climate is changing, and adaptation action is essential for the continued prosperity of Queensland's agriculture sector. Climate adaptation for agriculture centres on continuous improvement in the capacity of farmers to deal with a changing climate, and ensuring the necessary tools are available for informed decision making and adaptation activities. Collaboration between all levels of government, industry and community will be needed for successful outcomes. The Queensland Climate Adaptation Strategy 2017-2030¹² (QCAS) guides Queensland's climate adaptation efforts and puts partnerships and collaboration at the centre of adaptation planning.

Funded under the QCAS, the Agriculture Sector Adaptation Plan (AgSAP) was released in 2017 and provides an overview of the main risks and opportunities for Queensland's agriculture industries from climate hazards. Its development was led by the Queensland Farmers Federation (QFF) and AgForce with significant industry engagement to ensure the plan met the needs of stakeholders. Some of the major concerns by agricultural industry members expressed in the workshop included a warming, drying climate which leads to increased drought, reduced water security and increased heat stress. Other concerns included pest pressure and biosecurity risks, increased electricity costs and climatic variability.

The Queensland Drought Policy recognises the need to support farming businesses, families and communities to prepare for and manage droughts, climate variability and climate change, and define appropriate in-drought assistance when an event is severe.

In the 2021-22 Budget, Queensland announced programs that better support farm businesses to be more resilient and prepare for drought with old programs that did not encourage preparedness to be phased out. These new programs are no longer contingent on being drought declared and are fully focused on improving the drought preparedness and planning skills of primary producers including the Farm Business Resilience Program (FBRP preparedness workshops), Drought Preparedness Grants of up to \$50,000 for on-farm capital investments that improve drought preparedness and a suite of concessional loans that help producers prepare for, manage and respond to droughts. The FBRP facilitated the preparation of 400 new farm business resilience plans in 2022-2023.

To support landholders experiencing drought, the Queensland Vegetation Management Framework provides a self-assessable, accepted development clearing code to harvest mulga as fodder for livestock. Being a finite resource, mulga must be harvested in a way which encourages regrowth and regeneration. This provision is not dependent on a property being drought declared.

The Queensland Government has been working with the Federal Government to develop and complete water infrastructure projects which contribute to greater resilience to the impacts of climate change. Since 2015, the Queensland Government has committed more than \$5.2 billion towards new water infrastructure and extending the life and capacity of existing infrastructure. The impacts of climate change are a factor for consideration in terms of both the effects on water demand (due to changing rainfall patterns, higher evaporation, greater crop water demands) as well as on water availability (due to changing flow event patterns, and increased losses from storages and watercourses).

The Department of Regional Development, Manufacturing and Water is conducting regional water assessments in four of Queensland's most significant food bowl areas, which were identified as having the best potential to achieve greater regional economic development through investment in water. These assessments utilise hydrological modelling that projects climate change risks.

Queensland's water planning framework considers climate change projections when reviewing and replacing water plans. This is supported by the requirement to manage water according to the principles of ecologically sustainable development under the *Water Act 2000*, as well as explicitly accounting for climate change impacts to water availability in the general outcomes of water plans. Currently, four water plans have general outcomes that state water must be "allocated and managed in a way that promotes improved understanding of the impact of climate change on water availability". Fifteen water plans are due to be reviewed over the next five years which will be an opportunity to assess the impacts of climate change on catchments through hydrological modelling.

The Drought and Climate Adaptation Program¹³ (DCAP) brings together the best climate scientists, government and non-government agencies, producers and industry leaders to work on cutting-edge research projects and partnerships which improve drought resilience and capacity to manage climate variability. Some tools, projects and programs under the DCAP are:

- Northern Australian Climate Program (NACP)¹⁴ which is a partnership between the Queensland Government, Meat and Livestock Australia Donor Company and the University of Southern Queensland, focused on helping the grazing industry better manage drought and changing climate risks
- GrazingFutures project¹⁵ supporting profitable, and climate resilient livestock operations in Queensland
- The Queensland Drought Mitigation Centre¹⁶ which produces reliable, seasonal climate forecasting for agriculture in Queensland and across northern Australia.

The Long Paddock¹⁷ is a Queensland Government initiative, starting in 1995, providing climate and program information to the grazing, cropping and horticulture community, and pasture information to the grazing community. The Long Paddock receives over 17,000 visits per month (on average) and offers a plethora of information, datasets and tools on a range of climate variables in ready-to-use formats for modelling development and decision-making.

The Queensland Government, through the Queensland Rural and Industry Development Authority, also makes available sustainability loans to support investment in the latest infrastructure to create viable farming businesses including activities that improve farming system sustainability, natural resource sustainability and financial sustainability.

MITIGATION EFFORTS

On 21 March 2023, the Minister for Agricultural Industry Development and Minister for Rural Communities released the Queensland Low Emissions Agriculture Roadmap 2022-2032¹⁸ (the roadmap) in partnership with QFF and AgForce Queensland. The roadmap will assist Queensland agribusinesses and the broader supply chain to lower their greenhouse gas emissions without impacting the supply of food and fibre through five focus pathways – livestock emissions; cropping and horticulture emissions; on-farm energy opportunities; carbon farming and landscape management; and regions and supply chains.

An implementation plan is currently being co-designed and co-developed with industry representatives and will highlight the linkages between agriculture and other key government and industry low emissions strategies such as the Queensland Energy and Jobs Plan, Land Restoration Fund (LRF), and AASF.

The nation leading LRF has invested in projects across 17 local government areas across regional Queensland, supporting farmers, First Nations communities and landholders to drive sustainable business and land management outcomes. Over its first two investment rounds, as at 30 June 2023, the LRF has committed \$99.2 million for 23 projects to deliver strong outcomes for the community and the environment. These projects will deliver around 1.8 million Australian Carbon Credit Units over the next 16 years, equivalent to around 1.8 million tonnes of carbon dioxide sequestered or avoided over 18,600 hectares of land categorised as Category X under the *Vegetation Management Act 1999*. Queensland has been formally recognised as Australia's "carbon industry leader and innovator" by the Carbon Market Institute's Carbon Farming Scorecard Report for the past two years. Further, the Natural Resources Recovery Program provides funding of \$10 million per year to projects aimed at improving landscape resilience and ability to respond to natural disasters and climate change.

Recent national policy developments, including the revised Safeguard Mechanism, could accelerate the carbon farming industry in Queensland. While this may provide for alternative income opportunities for some landholders, the rollout of these policies will need to be monitored for impacts on the amount of land available for food and fibre production, and barriers to achieving carbon neutrality due to carbon sequestration credits being removed from the sector to offset industrial emissions. State land under the Land Act is available for carbon sequestration projects and methods, and lessees may apply to amend their leases to include renewable energy production as an additional use.

The pilot program Steak n' Wood¹⁹ is a collaborative project between DAF and Meat and Livestock Australia which will quantify the productivity and ecosystem services of silvopastoral systems as a potential pathway for emissions reduction in livestock grazing enterprises. The data gathered from

this project will be used in the carbon accounting framework to provide accurate GHG emissions baseline data for producers and reduce emissions by balancing beef and timber production.

The Method to Market²⁰ pilot program seeks to overcome the technical and economic barriers to grazer participation in ecosystem services markets such as carbon, biodiversity and water quality credits whilst producing livestock. Practical pathways to reduce emissions across 26 grazing properties have been identified in south-west and Central Queensland. The program also operates the Carbon Neutral Grazer Network which shares the latest practical tools, scientific insights and advice to over 600 members to maximise their beef production while managing climate change.

Aboriginal peoples and Torres Strait Islander peoples bring with them more than 65,000+ years of environmental knowledge, and their input to ecosystem accounting strategies, frameworks and decisions are vital to climate change mitigation. This is supported by the Queensland Land Court's decision in Waratah which recognises that GHG emissions are exacerbating climate change and limiting human rights, including the cultural rights of First Nations peoples.

The Queensland Government is committed to embarking on a Path to Treaty with First Nations peoples and will explore opportunities to strengthen the relationship between Aboriginal peoples, Torres Strait Islander peoples and Queensland's agricultural sector through joint sessions between the First Nations Economic Committee and peak agencies such as QFF and AgForce.

While currently there is no strategic, coordinated approach to including Aboriginal peoples and Torres Strait Islander peoples in ecosystems accounting, some activities are happening. Organisations like Accounting for Nature are working with the Gudarjil and Butchulla Traditional Owner Groups to create a cultural condition framework that incorporates traditional ecological knowledge into their framework, broadening western science environmental indicators.

NATURAL DISASTER PREPAREDNESS AND RESPONSE

The Queensland Reconstruction Authority (QRA) leads disaster recovery and resilience policy in Queensland and has released the Queensland Strategy for Disaster Resilience 2022-2027²¹ (QSDR). Resilience, climate risk management and climate adaptation have been aligned in the QSDR as more can be achieved by combining efforts in these areas. The QSDR recognises that heat waves pose emergent and long-term risks to temperature sensitive industries such as agriculture and has committed to a number of actions to help communities and landholders manage and protect natural resources, including agricultural land.

At present, QRA is coordinating \$7.2 billion in funding across 76 local government areas in response to 32 events since the 2019-20 disaster season. A number of programs under the Disaster Recovery Funding Arrangements (DRFA) assist primary producers such as Disaster Assistance Loans of up to \$250,000 to eligible primary producers and freight subsidies of up to \$5,000 to assist with the transport of livestock, fodder or water for livestock, building, fencing equipment or machinery.

The Queensland Vegetation Management Framework includes provisions allowing landholders to clear to undertake necessary activities to protect life and property if threatened by, or in the event of natural disasters.

CLIMATE SCIENCE EXPERTISE

The sheer diversity of Queensland's agriculture sector presents challenges for providing the kinds of specific information on climate hazards to support risk assessments and adaptation decisions by agricultural businesses.

The climate hazards for each commodity can be very different; for example, the specific climate hazards for an industry or individual business could be drought frequency for livestock grazing and extreme events like intense storms leading to livestock and/or crop losses. For some fruit trees, the hazard can be inadequate chilling hours below a certain threshold at a particular time of year required to trigger flowering and fruit development, or high temperatures just before harvest reducing fruit quality.

To respond to this challenge, DES has taken the approach of providing climate projections information for a wide selection of variables in a variety of formats that can be tailored for specific commodities or applications by third parties. DES is an active participant in the National Partnership for Climate Projections led by the Australian Government that provides a framework for collaboration on the development of climate projections data and services with the Bureau of Meteorology, CSIRO and other state and territory governments.

DES collaborates with the University of Queensland to deliver dynamically downscaled, high-resolution climate projections under the Queensland Future Climate Science Program. The projections data includes 42 different climate metrics, including a number of particular interests to the agriculture sector, such as extreme temperatures, extreme rainfall, evaporation, and the duration and frequency of different levels of drought.

Most global climate models provide future climate projections for gridded areas approximately 100km by 200km. Through the downscaling process, DES provides climate projections data on a 10km-by-10km square grid for the entire Queensland state. Work is underway to update the high-resolution climate projections data for Queensland using the latest generation of global climate models developed under the international Coupled Model Intercomparison Project phase 6.

The high-resolution climate projections data for Queensland are publicly available via the Queensland Future Climate Dashboard²². The Dashboard is a critical resource in providing all Queenslanders, including multiple local and Queensland Government departments with access to high quality, trusted climate change projections in multiple formats to plan for future changes in physical climate risks. DES has also established a new Climate Science Knowledge Broker service to help Queenslanders find, interpret and apply climate projections information in climate risk assessments and adaptation decision-making.

DES is an active member in the cross-jurisdictional Community of Practice for Climate Science that was established under the Interjurisdictional Chief Environmental Scientists to provide a mechanism for states and territories to collaborate on matters relating to climate science and climate services.

BIOSECURITY RESPONSE

The impacts of climate change will touch every aspect of Queensland's biosecurity system directly or indirectly. This is because it changes: (1) where pests and diseases are likely to come from; (2) which trade or environmental pathways they might use to enter new areas; and (3) how and where they might spread when they get to Queensland given changes in climatic suitability. In short, climate change will create hyper-uncertainty in terms of where to monitor or look for signs of emerging pests and diseases. Nearly all aspects of climate affect different pests and diseases (temperature, carbon dioxide balances, rainfall, fires, cyclones etc) but the effect will be different depending on species or other biological features. However, in general we can expect to see a southward shift for pests, unexpected weed spread and some increase in serious animal diseases as a result of climate change.

To support Queensland's agriculture and environment sectors manage these risks, DAF has invested in leveraging the expertise and reach of partners across Queensland and Australia's biosecurity systems to build prevention, preparedness, response and recovery capabilities.

The Queensland Biosecurity Strategy²³ represents a key mechanism to raise awareness about biosecurity risks, threats, and opportunities as well as coordinate effort to protect Queensland and align our work with broader approaches at the national level. This strategy has a future-focus and emphasises evidence building to promote vigilance and informed decision making.

Biosecurity Queensland is also directly involved in state-wide and national forums, committees and decision-making bodies to build Queensland's and Australia's biosecurity capabilities. The Queensland Government has co-invested in a proof-of-concept cloud-based modelling platform called Biosecurity Commons²⁴ which visually models the interaction of climate change, the effect on hosts and the spread of pests and diseases. The Biosecurity Queensland Ministerial Advisory Council also represents an important mechanism for building capacity and capability across Queensland's biosecurity system.

FORESTRY CONSIDERATIONS

Queensland is the largest producer of cypress pine timber in Australia. It is used for framing, flooring, panelling and landscaping applications. It is susceptible to climate change impacts such as drought and wildfire which will increasingly compromise the supply of this resource.

Increased use of low value woody resources in engineered wood products and increased durability of wood products can improve sequestration outcomes in forestry production systems. The Centre for Future Timber Structures²⁵ (the Centre) was established in 2015, formed as a collaborative research centre between The University of Queensland and DAF. Under the Centre, DAF as part of an interdisciplinary partnership has advanced the use of timber in construction of low to mid-rise buildings, thereby reducing the use of high embodied energy products and reducing the overall emissions across the timber and construction industries.

Industry engagement in development of the new Australian Research Council Future Timber Hub²⁶ which starts in 2023-24 will ensure continued contribution of low-carbon innovation, circular economy and climate adaptation initiatives.

IMPACTS OF CLIMATE CHANGE ON FISHERIES RESOURCES

Climate change impacts are also being seen in our commercial fishing industry; however the impacts are harder to detect easily and our understanding is less quantified. While seasonal freshwater flows are critical for the sustaining freshwater and estuarine fish populations, the presence of severe droughts and extreme flood events induced by climate variability can be counter-productive by impeding and killing large numbers of fish.

Recent research has shown that changes in water temperature and water chemistry due to climate change are impacting fish stocks, particularly in the distribution and productivity of several key commercial species, with scallops, snapper and spanner crabs most severely impacted. A 2021 collaborative research project between the DAF and The University of Queensland found a reduction in the survival of juvenile snapper when water temperatures in the preceding spawning season (June to July in the year prior) were high²⁷. It is likely that increased temperatures are having a negative influence on either egg production in spawning adults, larval survival, or both. The results from this work will guide the sustainable management of these species in Queensland waters.

AGRICULTURAL RESEARCH, DEVELOPMENT AND EXTENSION (RD&E)

Agri-Science Queensland (ASQ) is the research, development and extension arm of DAF and focuses on livestock, aquaculture, cropping, horticulture, forestry, timber, and food processing industries. In 2022-23, DAF managed an RD&E investment of over \$150 million and collaborated with approximately 175 different organisations within Australia, and a further 31 organisations across 16 different countries throughout the world.

DAF will use its network of smart farms as demonstration sites to investigate and showcase climate solutions and provide a hub for sector-wide outreach and local engagement. Examples include developing more temperature resilient crop varieties, investigating alternative energy solutions with a focus on horticulture as a way of reducing Scope 2 emissions, and demonstrating new growing methodologies through the use of protected cropping structures.

Some of the research projects underway include:

- developing new tools to reduce greenhouse gas emissions from livestock enterprises through the development of a novel bioactive delivery system for active dosing of animals to suppress enteric methane²⁸
- working with sugar producers to identify opportunities for establishing landscape remediation using bioreactors to capture leaching nitrogen into the Great Barrier Reef
- producing ammonia, on an industrial scale from hydrogen sourced from renewable energy, rather than fossil fuels for use by the cotton industry.

A Cooperative Research Centre for Zero Net Emissions Agriculture²⁹ (CRC) proposal is being developed in partnership with government and research organisations across Australia as part of the Australian Government's CRC round 24 application process. The CRC aims to catalyse industry, community and government action to increase climate positive outcomes for Queensland with programs including:

- low emissions plant solutions
- methane-free sheep and cattle
- whole-farm and mixed enterprise systems analysis
- delivering value from net zero agriculture.

The CRC proposal has advanced to Stage 2 of the assessment process, with a final decision expected in October 2023.

An AgTech Roadmap is being developed in Queensland which will break down technology adoption barriers to help ensure agribusinesses remain at the forefront of the digital revolution, ready to capitalise on any low emissions, natural capital and sustainability opportunities. An ecosystem of innovators, investors and producers will help solve our future challenges.

The Queensland AgTech web portal³⁰ provides a single location for key information and resources to help agribusinesses and the food sector to connect with government and industry and explore innovative solutions.

AgTech Finder³¹ is a free online directory that can help agribusinesses find AgTech suppliers beneficial to their agricultural operations in a way that can improve their resilience, adaptation, and mitigation of climate change. Examples of AgTech companies in Queensland that use data and may be used to monitor and address the impacts of climate change include SwarmFarm Robotics, Lyro Robotics, InFarm, Ceres Tag and Data Farming.

CONCLUSION

Queensland's farmers and related supply chains are amongst the most innovative in the world. They have a long history of adapting and changing in response to changing conditions. The Queensland Government will continue to help them to adapt and change and mitigate the effects of climate change as well as support industries' ambitions to net zero through sector strategies and action plans.

Failure to transition to net-zero risks the agriculture and food industries' potential to grow, maintain and increase access to key global markets, meet shareholder demands, and maintain social licence and consumer support. Without a collaborative and cross-sectoral approach over the next decade, the transition to net-zero will be vastly more difficult. The above-mentioned Queensland Government programs and key industry partnerships form the base of the Government's focus to work with the agriculture sector to overcome and manage the impacts of climate variability and climate change.

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