

## **Inquiry into the impact of climate change on Queensland agricultural production**

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# STATE DEVELOPMENT AND REGIONAL INDUSTRIES COMMITTEE INQUIRY INTO THE IMPACT OF CLIMATE CHANGE ON QUEENSLAND AGRICULTURAL PRODUCTION

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### Response to Terms of Reference

#### a. The impacts of climate change and climate variability on Queensland agricultural production and the existing and potential future risks of climate change on the sector.

As a university focussed in recent years on drought and its impacts across the whole state through the federally-funded [Southern Queensland and Northern NSW Future Drought Fund Innovation Hub](#), the state-funded [Queensland Drought Mitigation Centre](#), and through the state-funded [Rural Economies Centre of Excellence](#) (working in the Resilience Queensland Disaster recovery framework) we have noted varied but significant losses in the value of production too numerous to list here. We note that the real impact of drought (or any climate event) should be measured by its impact on the rural and regional communities. We are particularly interested in how state and federal governments direct investment into preparing rural and regional communities; and how those investment decisions are prioritised and interact with those communities. Have they been consulted meaningfully and have their voices been heard?

Indirect impacts also need to be taken into account such as the impact of the energy transition. We have found many cases where in other sectors such as energy - for example the rise of renewable projects under a state-based Decarbonisation and Renewable energy target that this is not always the case and that social licence is quickly becoming an issue. There is a real sense, especially in remote regions that carbon sequestration or renewable energy projects are beyond local community stakeholders reach and they often complain of not been fully informed or consulted. An alarmist view of rural and regional Queensland becoming a “carbon-sink” for large, multinational emitters is not unrealistic – 87 of the 320 contracted vegetation-based emissions reduction projects listed on the National emissions reduction fund occur are found in Western Queensland but the proportion by size of land area contacted in this region is much larger. The upcoming changes to rules around these projects are not fully understood by anyone including experts.

#### b. Opportunities for the Queensland Government to create and support resilience, adaptation and mitigation measures in preparing the agricultural sector for future climate change.

### Observations

An opportunity exists for the Queensland Government to facilitate higher levels of resilience to climate variability within the state’s agricultural sector and within regional and rural communities by adopting more holistic and coordinated approaches to building resilience. At present, the focus appears to be on productivity enhancements that build on-farm resilience to weather variability. This, of course, is entirely appropriate, but overlooks the opportunity to contribute to the creation of stronger businesses that are more resilient to a broader range of threats of which climate variability is just one. By adopting a broader focus of building resilience that encompasses all business risks and providing support to help businesses to become holistically-resilient, farm enterprises, value chain actors and businesses in regional and rural communities can be more sustainable, more profitable and therefore more resilient to all risks including those related to climate variability. The following points support this opportunity:

- The OECD (2009) defines the risk in farming as uncertainties in the farmers’ actions and production decision resulting from the complexities of physical and economic systems. Risks may include production risk (i.e. changing production conditions associated with changing weather conditions resulting in fluctuating yields), market risks (i.e. changing market conditions associated with changing prices or business cycles), and regulatory or institutional risk (i.e. changes in agricultural policies, food safety and environmental regulations). It makes sense to help all stakeholders to consider all risks and be supported in building resilience against all risks; not limited to drought.
- Governments globally are increasingly changing their focus from providing support to farmers during and after droughts to building resilience for drought. The Queensland and Australian governments have adopted this approach and is to be commended for so doing. The time may be right to now broaden the current drought-

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oriented approach to building stronger resilience to all risks by adopting holistic and integrated approaches to risk management and business planning. This is a significant step forward and will need to be sufficiently planned and resourced if it is to succeed.

- By preparing for all risks, farm and value chain enterprises will be stronger, more sustainable, more financial and this in turn builds resilience to all threats including drought. Whilst we have worked specifically in drought across the State, we have found that in some regions there is a need to focus more broadly than just drought and building economically stronger, sustainable, resilient farming enterprises and value chain partners, resilience to drought will be enhanced. Additional benefits include increased employment and stronger rural and regional communities. Droughts like other climate phenomena have unique impacts and therefore elicit some specificity in their responses but there are some key overlaps in certain response areas.
- Contemporary Queensland farmers adopt risk management strategies because agriculture is inherently risky in the areas of production, marketing, financial, human capital and environmental. Diversification is a proven risk mitigation strategy - climate adaptation services (e.g. "Carbon farming") have been mooted as one of these strategies, however this topic has proven to date to be complex and it is not viable for many sectors of Queensland agriculture.
- Diversification is already an important part of many Queensland farming enterprises. Examples include multiple income streams from cropping and animal production. Agritourism is another form of diversification available to farmers who live in locations accessible by tourists. Value-adding of primary production into ingredients for industrial processors and food service or retail products for consumers is another. Diversifying markets is another. Even the generation of off-farm income during times of low production is a form of farm economic diversification. Other forms exist, but the subject of diversification as a risk management strategy in a Queensland context is not well researched or promoted. Investigating and promoting diversification as a resilience-building strategy, and providing support to ensure those who wish to consider diversification do so in an integrated and coordinated manner, represents a significant opportunity for the Queensland Government to facilitate a stronger agricultural industry.
- Climate variability is a business risk that impacts all regional and rural communities. The impact on farmers is obvious but the flow-on impact on the rural and regional communities that support agriculture must not be overlooked. It is therefore essential that contemporary, holistic and integrated approaches to building resilience are adopted, and that all stakeholders including farmers, the value chains that provide inputs for farming and into which agricultural production enters to reach markets, and regional and rural businesses and communities are all engaged in and supported so they can prepare for all contingencies including drought variability resulting from climate change.
- Support currently available to Queensland farmers appears to be focused on building on-farm resilience to drought. For example:
  - The Farm Business Resilience Program (FBRP) "helps farmers and graziers build a sustainable business by planning today for tomorrow's drought and climate risks." This program allows farmers to participate in training to prepare business plans, undertake strategic planning and identify risks and ultimately to prepare a Farm Business Resilience Plan.
  - A Farm Business Resilience Plan allows farmers to apply for a range of drought assistance scheme grants or loans from Department of Agriculture and Fisheries (DAF)/ Queensland Rural and Industry Development Authority (QRIDA).
  - Financial assistance packages provided by QRIDA/DAF can be used for (for example):
    - water infrastructure including pipes, water tanks, water troughs, new dam construction, drilling a new working bore, water conservation infrastructure and water pumps
    - storage, mixing and feeding out equipment for grain, fodder, molasses and other supplements
    - grain storage and equipment that improves the ability of the business to manage drought

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- reasonable freight components to purchase and install equipment or infrastructure
  - consumables including fuel for own machinery used in relation to the drought preparedness project and
  - contractor costs or non-salaried employees' costs directly associated with implementing the drought preparedness project.
- To be eligible for a Drought Preparedness Grant, the projects need to:
- involve the purchase and installation of new permanent capital infrastructure
  - improve the ability of the primary production business to prepare for continue to operate in, or recover from, drought conditions
  - be a drought preparedness activity listed in your resilience plan for the primary production business and
  - not have already commenced the project before the assistance is approved. (Deposits however may be paid for the purchase of materials or engaging contractors up to 90 days before the approval of assistance).
- It is acknowledged that the Farm Business Resilience Program and other programs that facilitate business planning by farmers should allow holistic plans to be developed and implemented. However, we posit that many of these are very short-term forms of business planning designed primarily to develop documents that support larger loans or grants. They are often largely self-administered by farmers who are the experts about the practical aspects of running their farm enterprises but, respectfully, have limited training in or knowledge of the entire suite of methods and data that are required to fully identify, evaluate and prioritise the risks and opportunities with which an enterprise is confronted, and then to guide implementation of holistic change processes that may be appropriate.
  - In addition to the previous statement, many farm enterprises in rural and regional locations and regional and rural communities also lack the infrastructure and potential skills to allow implementation of innovative outward/forward-facing plans that will contribute to stronger businesses and communities. This is an area that needs to be considered and closely monitored by the Queensland Government to ensure appropriate support is provided as and where required to allow businesses that wish to build capacity are enabled to do so.
  - A last and potentially important observation is that many agencies, both state and federal, are “competing” with their own agendas in the Environment, Social and Governance (ESG) space and are impacting Queensland agriculture and their communities. Even on the narrower topic of drought the jurisdictional and regulatory framework can be confusing with over 50 state and federal funding and policy mechanisms observed by our research team since commencing our Regional Drought Resilience Planning.

### Recommendations

- Recommendations to the Queensland Government to help farming enterprises, value chain actors (upstream and downstream) and regional communities contribute to a holistic and coordinated ‘state of resilience’ which can respond quickly after any and all threats including drought:
  - Broaden the term ‘resilience’ to incorporate all stakeholders (rather than just farming enterprises) and all aspects of innovation (not just on-farm productivity investments) that can be employed by businesses to build resilience against all threats (not just drought).
  - Adopt holistic state-wide and regionally-based integrated and coordinated approaches to identifying risks and building resilience within the Queensland agricultural industry. Invite all stakeholders to participate including farmers, value chain actors that supply farmers, value chain actors that facilitate the processing and transportation of agricultural production to markets, businesses located in or servicing the needs of rural and remote communities, rural and regional communities, advisors, government agencies, membership organisations and others as appropriate, to become involved and participate. This will increase the likelihood

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that coordinated regionally-based plans will be developed that can be implemented in a timely manner because all relevant stakeholders have been involved in their development.

- In regional and rural research work we have regularly utilised a “regional facilitator” in order to achieve a more authentic, place-based view. This alleviates the concern of an often “over-engaged” and jaded regional community stakeholder group. We would recommend this approach in any engagement based around a topic as complex as sustainability and emissions reduction; and be mindful of the multiple dimensions (people, community, natural and built environment, and economic) that regions are impacted by.
- A constant and complex question that highlights this “governance” and place-based versus top down approach to drought preparedness is “Who owns (read who is responsible and accountable) the drought plans?” has yet to be answered by either state or federal agencies.
- Support research that defines business risks and identifies opportunities for risk mitigation within Queensland agriculture so that the broader definition of resilience is evidence-based and applicable to Queensland agriculture.
- Ensure the business planning models provided to farmers adopt an outwards-looking and market-orientated to complement the on-farm evaluations and initiatives that are being very well supported at present, and ensure that the advisors who support farmers to develop their business plans are resourced and trained to facilitate.
- Monitor the needs of businesses in rural and regional Queensland as they develop holistic plans to build capacity and resilience and ensure their needs for infrastructure, housing, employees, training and other needs and recommendations made during planning processes are listened to and acted upon as part of the Government’s regional development activities.
- As economic diversification is an important component of building strength in farming enterprises, the value chains in which they participate, and the regional communities in which they operate it is recommended that diversification be treated as an important component of building drought resilience:
  - Support research that defines diversification and how it might best be applied within the Queensland agricultural industry as a means of contributing to industry resilience by building stronger farming enterprises and value chains.
  - Use the research to develop training programs as part of an overall strategy to increase awareness of and how best to implement diversification within the Queensland agricultural industry.
  - Use the findings of the research on diversification to develop and implement programs to increase awareness and competency of government and private advisors to the Queensland agricultural industry to deliver those programs.
  - Working with indigenous and first nations stakeholders has improved on a number of fronts but remains an area that is both complex and divided. It appears to have worked best with “place-based” ownership and approaches.
- Creating coordinated and integrated resilience in rural and regional locations requires input and participation of all stakeholders including value chain actors (upstream and downstream), businesses in rural and regional locations, Government, membership groups, advisors and others who rely on and/or support businesses and communities in regional and rural Queensland. Without the input of all stakeholders, plans will not be adequately coordinated, therefore we recommend a unified approach be adopted.