

Inquiry into the impact of climate change on Queensland agricultural production

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Options for Climate Risk Insurance in Queensland Agriculture

For the past five years WTW has collaborated with project partners, University of Southern Queensland, Queensland Farmers Federation and CSIRO, to design and implement weather-index based and catastrophe management insurance products that address the pressing need of more targeted and affordable crop covers for farmers.

To ensure we are across global developments, our established Brisbane agricultural team works closely with WTW's internationally recognised Weather and Agricultural Alternative Risk Transfer specialists in London.

The following paper summarises the key findings and recommendations from our joint research:

Key Findings:

Current Situation

- Queensland is exposed to more natural disasters than any other state in Australia, with flood, drought and tropical cyclone being key drivers of economic loss in the state.
- Climate change is exacerbating the situation with the cost of natural disasters projected to rise by 300% by 2050. In the immediate term it leads to greater volatility and uncertainty of weather.
- The agriculture sector in Queensland is disproportionately affected by weather volatility, natural disasters and climate change leading to significant economic losses for farmers. Agricultural production includes annual field/broadacre cropping, intensive horticulture, perennial/tree crops and livestock.
- The great majority of Queensland's farmers remain uninsured and exposed to climate risk because traditional multi-peril insurance options are considered prohibitively expensive.
- They often rely on ad hoc post disaster grants and loans provided by state and federal governments.
- To the extent that the public sector provides concessionary ad hoc support, the private sector is crowded and fails to deliver disciplined ex ante protection.
- The cost of these disaster payments was over \$300million in 2021/22 season.

Impact on Farmers

- Key risks identified by farmers include lack of rain before planting, during the growing season, and excess rainfall during harvest,
 - but also cyclone, hail and other natural perils may cause severe damage.
- Adaptation through management may reduce the risk or the impact, but not all climate risks can be managed away.
- The key barrier to the uptake of crop insurance is the high perceived cost. The premium cost reflects the challenging production risk landscape in Australia.
- In countries where there is a high uptake of crop insurance (USA, India, EU), governments provide financial incentives to the farmers to do so.

Alternatives to Multi-Peril Crop Insurance (MPCI)

- MPCI is expensive because of the broad nature of the cover and the need for costly on-farm loss adjustment.
- Parametric solutions focus on the key weather risk(s) of concern (drought, excess rainfall, tropical cyclone) and settle simply and promptly based upon external data. These factors result in lower premiums compared with MPCI.

Other alternatives include solutions which respond to soil moisture information from satellites or modelled yield.

Policy Recommendations and Government Support:

The Government can help to build a more resilient agriculture sector in Queensland by encouraging the uptake of crop insurance by farmers in Queensland. This can be achieved through:

- Supporting the development of alternatives to MPCI through investment in research and development, and awareness and capacity building.
- Providing partial insurance subsidies/tax benefit (e.g., removing stamp duties) to reduce cost of insurance to the farmers.
- Investment in data and weather station infrastructure which is so critical to the development of parametric insurance products, for example on farm weather stations.
- Provide the initial capital to support a Discretionary Mutual Fund through which crop insurance can be provided to farmers at a lower cost.

Potential Public Benefits:

- Effective policy decisions and self-supporting low-cost products can decrease premiums and deliver attractive and affordable insurance products for farmers.
- *Ex ante* disaster risk management is more efficient than ex post in the long-term and provides agreed liquidity in the event of disaster when there are many competing calls on public funds.
- Viable agricultural insurance would positively impact the risk profiling of rural lending.
- More extensive uptake of climate risk insurance would reduce government exposure.