

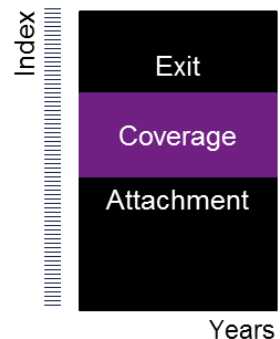
# Managing the impact of adverse and extreme weather using Parametric Solutions

## Adverse and Extreme Weather in Queensland

Adverse and extreme weather in Queensland is frequent and widespread ranging from droughts, extreme heat and excess rainfall to catastrophic floods and cyclones. For many crops, weather accounts for > 60% of yield variations, affecting germination, growth and ripening, yield and quality as well as plant susceptibility to pests and disease. If the weather is unkind, the crops and those whose livelihoods depend on them, suffer.

## Parametric Solutions

The availability of multiperil or peril specific crop insurance is limited in Australia and is rarely purchased by growers, so most farmers remain uninsured against the financial impact of adverse weather. Parametric solutions provide an alternative, more cost effective mechanism for managing the financial impact of weather uncertainty. These solutions respond to movements in a weather denominated index, for example temperature, precipitation or wind-speed with claims being triggered if the value of the index during the contract period moves above (or below) an agreed index point. The claim amount is calculated according to a pre-agreed scale of payment, not by reference to actual loss or damage. The coverage is transparent and flexible and there is no protracted, expensive or intrusive loss adjustment process. Claims are typically settled within 14 days of the final index value being reported.



## Structuring a Solution

The Willis Towers Watson parametric team will work with you to evaluate your specific weather related risks and the impact that weather uncertainty has on your business. Together we will seek to understand your goals, risk appetite and budget. We will analyse appropriate weather data and develop bespoke indices that best reflect your exposures. We will work with you to develop an agreeable solution and then negotiate the best terms available from insurers in Australia and globally to meet your needs. Willis Towers Watson provides a full service from risk consulting, data analysis and programme structuring to policy negotiation and placement. In the event that the policy is triggered we also manage the claims' process.

## Why Willis Towers Watson Parametric Solutions Team

Willis Towers Watson is an award winning broker of parametric solutions with a dedicated team of experts located globally across our network. We have extensive experience in structuring and placing parametric solutions covering many industries and geographies.

### About Willis Towers Watson

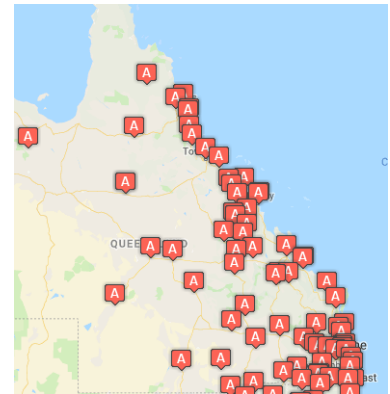
Willis Towers Watson (NASDAQ: WLTW) is a leading global advisory, broking and solutions company that helps clients around the world turn risk into a path for growth. With roots dating to 1828, Willis Towers Watson has 45,000 employees serving more than 140 countries and markets. We design and deliver solutions that manage risk, optimise benefits, cultivate talent, and expand the power of capital to protect and strengthen institutions and individuals. Our unique perspective allows us to see the critical intersections between talent, assets and ideas – the dynamic formula that drives business performance. Together, we unlock potential. Learn more at [willistowerswatson.com](http://willistowerswatson.com).

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## Case studies

Willis Towers Watson in conjunction with the Queensland Farmers Federation and the University of Southern Queensland have developed a number of pilot parametric products for the agriculture sector in Queensland. These include:

- **Annual drought protection**, which responds if the total annual rainfall at an agreed location falls below an agreed threshold
- **Excess harvest rain protection**, which responds if the total rainfall at an agreed location during the harvest period exceeds an agreed threshold
- **Heat day protection**, which responds if the annual number of days for which the maximum temperature exceeds 35 degrees Celsius exceeds an agreed threshold

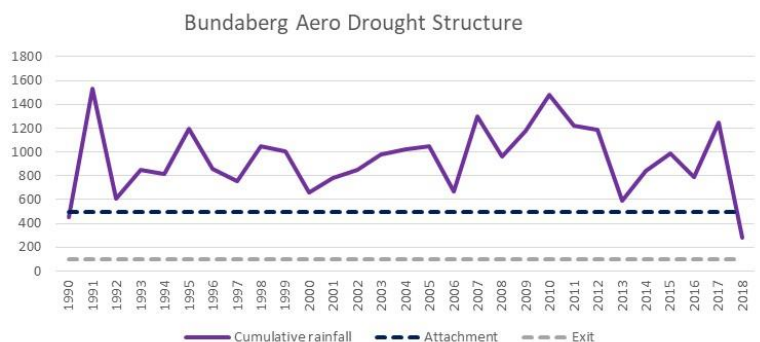


The location, covered months and thresholds can be tailored to the specific exposures of the farm and the crop.

## Drought protection example

The following policy is designed to pay in the event of extreme drought, such as the 2018 drought.

Parameters of Policy	
Location:	Bundaberg Aero
Index:	Annual rainfall (mm)
Attachment:	500mm
Exit:	100mm
Payout:	AUD 250 per missing mm
Policy limit:	AUD 100,000
Premium:	AUD 5,000 (approx)



In 2018 the total mm of rainfall at Bundaberg Aero was 276.8, making it the driest year for over 20 years. The above structure would have paid out AUD 55,800 in 2018 and would have made a valuable contribution to any loss of revenue or additional costs incurred by the farm. Importantly, the claim payment would have been received very quickly after the end of the policy period without the need for on farm loss adjustment.

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