The Climate is Changing

Climate scientists understand with a high degree of certainty the relationship between atmospheric greenhouse gas concentrations and climate change. While the impacts will be unique to regions, there are some core impacts that businesses will face[1]:

- Average temperatures will continue to increase in all seasons (very high confidence).
- More hot days and warm spells are projected (very high confidence). Fewer frosts are projected (high confidence). For example the average number of days per year over and 30oC and 40oC respectively are likely to increase by 50% between now and 2030.
- Increased evapotranspiration (removal of water from an area with plants) (high confidence).
- Increased intensity of extreme daily rainfall events is projected (high confidence).
- Mean sea level will continue to rise and height of extreme sea-level events will also increase (very high confidence).
- A harsher fire-weather climate is projected (high confidence).

Planning for New Normals

The impact of climate change on the increasing severity and intensity of extreme weather events is often featured in the headlines, but the slow incremental nature of the changes means that business can often miss cues where adaptation thresholds are passed without understanding the implications.

An extreme weather event today may be tolerable by itself, but when the existing extremes become the new normal it may result in an intolerable level of risk. What was once an occasional extreme becomes business as usual: increasing operational costs beyond forecasts and resulting in the need for increasingly unplanned capital investment.

Studies have shown however that every $1 spent on early adaptation can result in $5 of avoided losses[2] – highlighting the importance of methodically understanding the impacts, prioritising the risks and developing meaningful adaption strategies. A conceptual process to achieve such 'climate resilience' is illustrated below.

Climate Variable	Change to Climate Variables	Impact	Identify and Assess Risk	Adaptation Strategy
• Identify the relevant variables e.g. temperature, rainfall, floodlevel, storminess etc	• Determine the possible change in variables in the relevant regions e.g. 50% increase in the # of days over 40ºC at distribution centres	• Quantify possible impacts e.g. higher electricity demand, disruptions in supply chain etc	• Review controls, likelihoods, consequences, and level of risk. • Screen for minor risks • Rank and evaluate material risks	• Identify options for risk mitigation/ adaptation. • Develop plans • Implement

The outcome from such a process could have potentially significant implications for investment, asset management, supply chain and product development strategies.

[1] Projections from Webb, L.B. and Hennessy, K. 2015, Projections for selected Australian cities, CSIRO and Bureau of Meteorology, Australia.
[2] KPMG 2014 Risk Apportionment in the Insurance Sector Prepared for Suncorp Group, Australia