

Introduction

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Pastoralists from Queensland rangelands along with scientists and concerned citizens held a two-day dialogue in Brisbane in July 2019. This dialogue was initiated by The Royal Society of Queensland in response primarily to the worsening drought, concerns about pastoralists' well-being, and the considered potentially irreversible degradation of the rangelands. It was co-hosted by The Royal Society of Queensland, NRM Regions Queensland and AgForce Queensland.

The objective was to provide a forum for a constructive discussion with key stakeholders. Issues concerning the prolonged drought, together with actions that may alleviate the grim situation and serious future climatic outlook given a climate-changing world and an evolving carbon economy, were raised. Figure 1 highlights the current drought severity, duration and extent, combined with increased temperatures. Positive aspects, including ideas, innovations and success stories from other sectors were also presented and could shine a beacon for current leaders to consider and potentially emulate.

About 120 attendees had the opportunity to converse, listen, clarify and discuss issues on a range of topics which included updates on natural resources, climate, economics, industry analysis, tourism, conservation of biodiversity, and perspectives from mayors and others on changing demographics and community needs. Policy issues dealing with NRM planning, stewardship and duty-of-care responsibilities for sustainable

management were raised, together with the economic constraints that exist. These issues have been collated into these *Proceedings*.

Why this time? Why this group? These are relevant questions which can assist the reader to place this meeting in a proper context. As of July 2019, the current drought had already been endured for more than four years (Figure 1A). It was not forecast as breaking soon and was testing communities, towns, and the most senior pastoralists who had been through severe hardships before. However, nothing like the current situation had been experienced previously in their lifetimes, and it was stated that:

- feed was almost non-existent;
- finances were diminishing; and
- hope for a positive future was waning.

A future reality was described as one where considerations of rebuilding herds and flocks, even under ideal pristine pasture and water conditions, were beyond the scope of many because of the average age of most pastoralists and the lag time to bring back reasonable returns. The prominent consideration resounding from pastoralists was: "Is it worth it?" Pastoralists consider there now exists a trend of diminishing returns that did not look likely to reverse any time soon. Furthermore, hopes of the current generation for a younger replacement generation were seen as fading because the trend was seen as becoming an untenable burden, and any notion of an estate

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and retirement plan for children that incorporated pastoralism was considered as being abandoned.

Early focus of the dialogue was on identifying:

- What lessons can be learned from this drought now to redeem the situation and help avoid potential future despair when confronted with forthcoming droughts?
- How could targeted support be urgently provided as a safety net for a beleaguered but critically important sector of our community?

The discussion centred on the immediate emphasis of addressing the ‘here and now’, which was more urgent and important than any future situation. However, the need to consider underlying problems also surfaced.

The needs of pastoralists vary as a consequence of the cumulative factors and elements that provide a picture of vulnerability (Table 1). After some reflection and analysis, it became apparent that the elements of sustainability are leaning towards a more permanent state of greater vulnerability. These issues are a synthesis of factors and not easy to untangle and point to a simple remedy. However, given such a background, the only conclusion that can be drawn to date is that our rangeland managers and communities are extremely vulnerable to the impacts of the current drought. Any climate change scenario that exacerbates climate variability makes future sustainability of natural resources and communities even more difficult. It became obvious from

feedback that the whole system is in crisis and seen to be, potentially, in a state of collapse.

Furthermore, there is simply no easy fix and there is no quick fix. There needs to be critical analysis of the future scenarios of resource condition and trend, in order to achieve sustainable communities. This analysis must be driven by science and unfettered by politics.

Presuming we have *managed and planned for climate variability* as best we can so far means *we know what is coming and have prepared meticulously to counter it*. The majority of pastoralists are saying clearly in this instance that their preparations were shown to be, at best, inadequate. Since these preparations have not been sufficient, it follows that planning is either poor or we are in ‘new territory’ that has not been experienced to date and is beyond the scope of our current policy and management capabilities and capacity. Whichever of the above options is considered reasonable, at the very least, developing thorough climate risk management strategies at farm level and at industry level must *ipso facto* have an expanded role. Therefore, the key questions which underpinned discussions and need answering are:

- 1. Is climate change a mere inconvenience to Queensland’s rangelands?***
- 2. How can carbon farming in Queensland rangelands be framed so as to offer only positive economic benefits and not risk exposure to potential payments?***

* These are not intended to be just rhetorical questions. I have argued my position and provided my answer in part to both these issues in previous companion papers/conferences, which are:

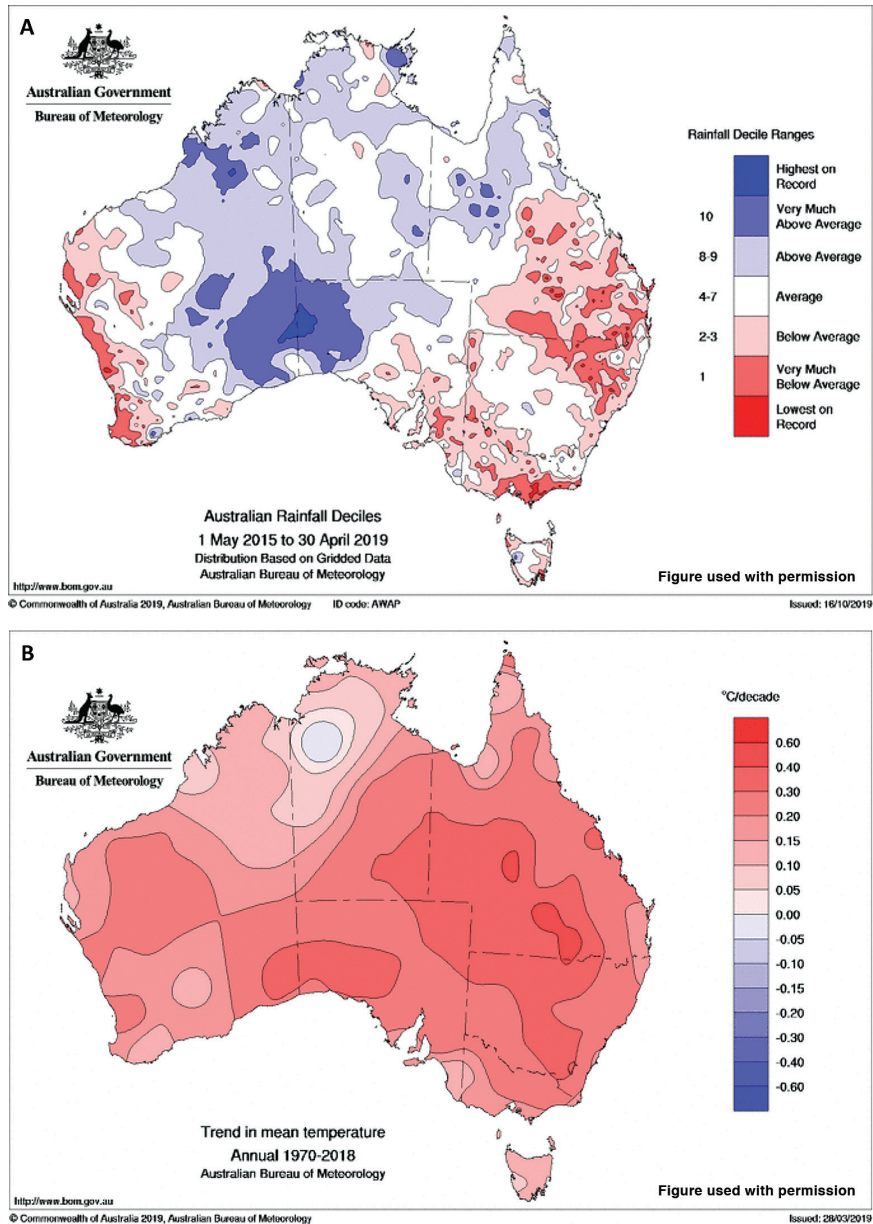
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Figure 1. A) Recent rainfall deciles. B) Mean temperature trends in Australia. (Used with permission)



Framing the above two questions for discussion along the lines of climate risk management is paramount because it encompasses: (i) attitudes to risk; (ii) the current situation; and (iii) ‘individual’ and ‘corporate’ knowledge and skill levels. Furthermore, if options to adapt/

mitigate go beyond justifying satisfactory cost-benefit returns, they raise the question: at what point does an industry concede ‘retreat’ is the best option? How this can be structured to ensure dignity and respect for people, and a relatively intact resource base which is able to recalibrate,

is a challenge. Risk management enables this. Leaving it to current conventional market forces alone does not. Climate change, if false, is of no importance, and if true, is of critical importance. The only thing it cannot be is moderately important. It therefore commands a considered response. The Future Drought Fund and proposed Plan announced in October 2019 by the Federal Government has a focus on improving resilience of communities, production and the resource base. Therefore, it must address the above legitimate but uncomfortable key issues that were raised in this dialogue because: (i) they require a dignified answer instead of being rebuffed or just ignored; (ii) the longer they remain unanswered, the longer the historical cycle of drought dysfunction is perpetuated; and (iii)

only when these two questions are answered can there be a chance to break the cycle of ‘circular argument’ that prevails regarding climate variability/cyclical change vs. human-induced climate change at this time, and light a pathway to another future where Queensland rangeland pastoralists are not just servants to the conditions that prevail, but have some positive role and certainty in managing their own destiny. Many graziers already manage their own destiny well, and their industry in general desires assistance to do this more effectively. They therefore desire policies that support their ability to manage for drought and adapt to a changing climate better, which generally means flexibly. They also desire policies that are equitable and supportive, rather than hinder resilience-building.

Table 1. Factors affecting lower and higher vulnerability which determine how primary industries can operate sustainably in the Queensland rangelands pastoral industry (illustrative purposes only).

Factors	Vulnerability Dynamic		
	Lower vulnerability	Moderate vulnerability	Higher vulnerability
Financial	>2% Return on Investment (ROI) + investments		<1% Return on Investment (ROI) + no investments
Social	Social time available and active participation in such activities		No participation in social activities
Human	Solid family support		Little or weak or no family support
Physical	Capital assets maintained, in good working order and fit for purpose		Poorly maintained/ignored capital assets
Natural	‘Good’ condition soils, pasture/vegetation, biodiversity, water (quality and quantity)		‘Degraded/diminished’ soils, pasture/vegetation, water, biodiversity

Note: Not all factors and elements are equal. Of significantly higher value are: good health; educational capacity; financial position; social support; strong resource base. Conversely, factors and elements that contribute to greater vulnerability are: older age and poorer health; higher debt loads; poorer historical ROI; etc. Those in a strong position have lower vulnerability (the green-shaded zone); those in a weak position have higher vulnerability (the red-shaded zone). Historically, pastoralists consider they were able to be comfortably located in the aggregated ‘green zone’; whereas now, they consider their capacity to cope has been inadequate and they are now operating in the ‘red zone’. They are saying loud and clear that it is not a position with which they are comfortable and nor are they necessarily there as a result of their own making.

Author Profile

Dr David Alan George is Adjunct Associate Professor, Australian Rivers Institute, Griffith University (formerly Senior Natural Resources Management Specialist with the Climate Change Practice at The World Bank). He has developed, delivered and evaluated applied climate courses in the primary industries sector and established national accreditation of climate risk management strategies.