

GIVEN CLIMATE CHANGE, WHAT NEXT FOR THE RANGELANDS?

Presidential Address 2019

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The Rangelands Policy Dialogue held on 1, 2 July 2019 was a signature event for the year. The event was co-organised by the Society along with AgForce, the peak representative body for broadacre agriculture, and NRM Regions Queensland, the peak body for the 12 natural resource management (NRM) groups. In this address I would like to present some reflections about the Dialogue and about the future of the Rangelands (broadly defined as the unimproved pastures of inland Queensland), additional to the formal Rangelands Declaration which arose from the conference. I also offer some personal thoughts on the role of the Society as a catalyst for debates of this kind. This opinion piece does not purport to reflect the views of the >120 participants or the Council of the Society.

SOME REFLECTIONS ON PROCESS

Attendance at the Dialogue was by invitation. The purpose of this was not to exclude any interested parties, but to ensure that all the sectors involved in managing the pastoral lands were represented. (That objective was largely achieved except for the Indigenous perspective. Also, there was no intention to cover the community services sector.) It was not difficult to reach a consensus amongst the diverse participants on a vision for the Rangelands. All parties shared a desire that the pastoral lands be held under the custodianship of land managers who can be sustainably profitable and environmentally sustainable. Attendees from all sectors acknowledged a stake in the welfare of the Rangelands and expressed a desire to upgrade the status and capacity of pastoralists in caring for the land as well as producing food and fibre.

A couple of participants mentioned that it was the first time they had attended a discussion on rural policy that crossed the boundaries between sectoral viewpoints. This was gratifying, although some of the older grey-hairs will recall round-table meetings between scientists, policy officers and practitioners in the 1990s, notably in regard to the Mulga Lands and Desert Uplands. However, the comment is probably an accurate reflection on the absence of contemporary

cross-sectoral forums at which solutions to shared challenges can be devised.

A related observation is that there doesn't seem to be any publicly recognisable locus of creative policy formulation focused on rural Queensland, beyond the public service. From the outside, it seems that the Queensland Public Service is preoccupied in clearing the business of the day with little time for reflective thinking about how to meet the challenges of the future.

Deliberative forums are needed not just to clinically analyse condition and trends, challenges and solutions, but to build trust. Several ham-fisted exercises in regulatory change, closing down of focused pastoral management research, withdrawal of rural extension officers and parsimonious funding for the NRM regional bodies have played out down the years into a collapse in trust for the Queensland Government. Government cannot possibly fulfil its role as agent of the public interest unless it enjoys the people's confidence.

Trust takes time to accumulate, not least in conservative rural communities, which may require many years of successful interaction to overcome wariness of knowledge-bearing outsiders. On the other hand, trust can evaporate overnight with a single newspaper headline or broken contract.

The Rangelands Declaration, crystallising a broad consensus of the participants and advocating extensive ongoing consultation, was published on 20 August and is appended here. The Declaration identified a need for new multilateral forums to bring practical knowledge, policy expertise and science together and to build trust. Critically, there was a broadly shared view that the impetus may need to come from outside the public service – “independent of government, but inclusive of it”. This is a momentous conclusion. It expresses scepticism that central government nowadays has the capacity to lead Rangelands communities to a different future.

From whom, exactly, is the external impetus to come? One pulse of impetus will surely come with publication of a Special Issue of the Society's *Proceedings*,

a peer-reviewed compilation of papers presented at the Dialogue, being edited as I write by two senior scientist-members, Paul Sattler and Dr Ross Hynes. But more than that will be needed to maintain the momentum that the Dialogue and the Declaration have established.

SOME REFLECTIONS ON THE ROLE OF THE SOCIETY

In any field, and certainly in rural affairs, there are many expertise-based and membership-based bodies with immense knowledge of the field. But there are not many in any field who can claim all four of content-rich *expertise*, *policy analytical skills*, *independence* of sectoral interest and *freedom from the shackles of economism*. The Society, with its members and its Queensland Science Network, can indeed muster those four capacities, but has traditionally seen its role as presenting knowledge to the world without taking on the more operational toil of building that knowledge into legislation, policy or street-level outreach.

To foster multilateral policy analysis it is necessary to do more than simply publish science, more than explain the implications of the science, and to even go beyond advocating for a policy position based upon the science. Coordinating policy analysis has traditionally been the function of government. To propel the Society into such a role would be a significant departure from its recent tradition, not least because it would require an ongoing commitment of time and treasure over a time-scale of years. For a membership-based organisation which at present is in negative cash flow, this would require external funding, which would inherently place its independence at risk. It would also be a step change in its self-identity.

However, to my knowledge no one has questioned the legitimacy of the Society's role to date in this initiative. Also, taking up policy leadership would not be inconsistent with the role proudly adopted in 1859 when the Society's predecessor, the Queensland Philosophical Society, was established. The first paper it published was on asphyxia, the second on ventilation of buildings. Other early papers covered public sanitation and the water supply for Brisbane. More recently, as our illustrious Life Member Emeritus Professor Ray Specht explained in the Members' Newsletter of August 2018, the Society was involved in the selection of the site for the Mount Coot-tha Botanic Gardens:

In 1969, ... Brisbane Lord Mayor Clem Jones wished to establish the second Botanic Gardens to further the education of the general public ... The

suggestion to locate the second Botanic Gardens on the Bunya Phyllites below Mt Coot-tha upset the keen rose and camellia societies who wished to locate the new Botanic Gardens on the rich soils at Long Pocket, a site frequently submerged during the Brisbane River floods.

Botanists Selwyn Everist, Len Webb and I, who had been appointed to Clem Jones's Mt Coot-tha Gardens Planning Committee, stressed that most of the home gardens in the Greater Brisbane Area were on Bunya Phyllites. The new Gardens must demonstrate many different ways in which home gardens could be developed:— cactus gardens, scent gardens, rose gardens, ferneries, Japanese gardens, camellia gardens, native flora gardens, 'fossil' gardens, water gardens, and the list continued. Orchard plots of various fruit trees and vegetable gardens would introduce children to the source of these foods. Patches of lawns of different species – that could be walked across – were a valuable teaching experience.

This charming anecdote exemplifies the importance of having a scientific foundation for land-use decisions.

If the Society is to play a prominent role in contemporary policy formulation, some public servants might be discouraged from involvement in the Society's scientific activities and this would weaken its intellectual profile and its collective analytical capacity. Aware of these sensibilities, the organisers of the Rangelands Policy Dialogue announced in advance that public servants were not expected to participate in the final session, when the Declaration was being drafted. The writing team was, however, able to draw upon the senior-level policy experience of several Society members who are retired public servants.

As I was continually reminded during the Dialogue of the capacities of the Society members involved, I became re-convinced that if this initiative is to maintain its momentum and its credibility, then the Society must continue to play the leading role. This is not just professional hubris or pride in the venerable history of the Society; it is based on a recognition that any new regime for managing the pastoral lands must rest on a foundation of scientific knowledge. Those with practical experience, personal opinions and commercial interests of course must be involved in crafting solutions, but an understanding of science and scientific method allows policy to escape the limitations of opinion and interest.

Expressed in other words, Queensland lacks a *theory* or *model* to guide the adjustment that is becoming painfully necessary; and any theory must rely upon knowledge workers, with their sensitivity to the local and global currents of motivating forces.

So much for ‘process’; what are we to make of the ‘content’ of the deliberations?

SOME REFLECTIONS ON ECONOMIC VIABILITY

What future is there for the Rangelands and how are the people who choose to live there going to transition to a sustainable future? How serious is the widely reported economic distress? After two and a half decades of involvement in Rangelands policy, I still do not have a clear impression of the extent of unprofitability. It is very difficult to form valid conclusions when family accounts are (necessarily) private and enterprises are managed between families; and in any case with high variation from year to year and district to district. The best we can probably do is to look at the graphs of rising debt and conclude that unpaid debt is a symptom of unprofitability. This of course hides success stories of which many were mentioned during the Dialogue; and it downplays the value of optimistic individuals who are proceeding to innovate, to make the best of circumstances and to serve as role models for farmers in their own spheres. The problem with these success stories is that they don’t necessarily scale up to the rest of the Rangelands.

The narrative of unprofitability is contradicted by the steady rise in the quantum of funds held in farm management deposits, a tax management instrument by which farmers bank surpluses in good years to offset the poor seasons. Funds held in June 2018 were almost double those held in June 2013.¹ The different trajectories of the two metrics is perhaps an indicator that farmers are segmented between profitable and distressed cohorts.

Participants heard evidence that return on land capital in the pastoral zone is typically low or zero, and this would suggest that a sizeable quantum of the Rangelands debt is unpayable. Even mainstream economics will concede that debt unserviced by reliable cash flow weighs down an enterprise, suffocates innovation, wears out its people and presages eventual bankruptcy. To answer that a debt-laden enterprise can then be taken over by a fresh face is no solution,

unless it can be shown that a pathway exists for overcoming previous unprofitability through improved management.

The Dialogue heard economic evidence that macro-economic policy settings are not congenial to the family enterprise. We could not pursue that theme very far, because the Dialogue was focused on policy settings under control of the Queensland Government. Macro-economic policy settings such as foreign investment, competition policy, financial regulation and credit policy are under control of the Commonwealth. They deserve forensic analysis and for this reason alone justify taking the Dialogue to a national canvas in collaboration with like-minded bodies.

SOME REFLECTIONS ON ELEPHANTS

I perceived three elephants in the room. The first is the climate trends and carbon management. We heard that north-western Queensland has the most variable climate on the planet; and that the variability is increasing. This knowledge casts a shadow over all attempts to render enterprises in their current configuration profitable and sustainable. If even intermediate projections of climate change come to pass, pastoralism in its present configuration won’t be continuing. In January–February this year, some 600,000 head of cattle in north Queensland perished due to flooding and exposure. There are no indications that the heavy rainfall was simply a once-in-a-hundred-year event, not to be repeated for 99 years. In Naomi Klein’s memorable words about climate trends, “This changes everything.”

Those who downplay the seriousness of climate change take advantage of humans’ natural optimism and eagerness to believe that things won’t turn out as badly as projected. In fact, the Intergovernmental Panel on Climate Change (IPCC) was constituted of representatives of government, not science, in order to avoid unnecessary alarmism. Recent statistics indicate that climate is changing faster than the upper bounds forecast by the IPCC; and further, that quite possibly, several tipping points have already been breached. Perhaps the IPCC has not been alarmist enough!

“Given climate change, what next?” The Rangelands Policy Dialogue did not answer the question. I sensed a consensus in the auditorium that business-as-usual could not continue, but as to the remedy,

¹ <https://www.anao.gov.au/work/performance-audit/farm-management-deposits-scheme>
<https://www.theguardian.com/world/2014/mar/25/australian-farmers-hold-321bn-in-farm-management-deposits>

participants would probably divide into those who would put their faith in incremental changes; and those who believe that a complete transformation in policy settings and tenure arrangements to manage the Rangelands landscapes will be necessary, or unavoidable.

One participant mentioned on the side that, whereas traditionally in times of drought and particularly poor returns, station wives would encourage their husbands to continue striving, to remain optimistic that good rains and better prices were ahead; nowadays it is the women who want to leave. If this observation is even partly valid, for just a few droughted districts, then the consequences for Rangelands policy are massive. It would be further evidence that the resilience of Rangelands communities is crumbling, as if rows of boarded-up shops in country towns are not evidence enough.

Carbon credits cannot be the saviour. Even on a large scale they won't by themselves build healthy rural communities. First, they require precise and reliable measurement of the carbon being sequestered. In effect this limits them to measurable stocks of carbon such as that embodied in tree trunks. Yet it is not carbon stocks that energise a landscape; it is transitory, labile flows of carbon such as in gaseous form through the soil and through plants, as our member Alan Lauder has lucidly explained in a number of publications. These flows are measurable with sophisticated instruments, but not with the convenience, security and transparency required as a basis for trading. Another way of saying this is that carbon credits are scraps of paper recording promises and are disconnected from biophysical reality. We already know that the markets for food and fibre commodities and for real estate are disconnected from the cost of production; I can't see any happy ending for a regime that relies upon yet another disconnected market. This one could well be conducted in yen or euros by intermediaries with no loyalty to Australia's landholders and no time-horizon longer than the interval required to turn a profit on the exchange.

Scientific evidence indicates that reforestation is the only promising method of sequestering carbon on a scale sufficient to make a conceivable difference to the emissions trajectory; and even then it may not succeed. Pastoralists now yearning for the right to clear native vegetation should understand that the trees are worth more growing or standing than they are flattened. The pioneering era in which native vegetation was seen as an impediment to pastoral production is over.

The second elephant in the room is the decline

and, in some cases, the looming collapse of the ecological systems which constitute a healthy landscape. It is not necessary to posit climate change and, in particular, unnecessary to conclude that climate change is anthropogenic: there are many other causes. Soil erosion. Pigs and goats. Leucaena. Prickly Acacia. Feral cats. Buffel Grass. Fires, the absence of fires, unseasonal fires, repeated fires, controlled burning. Vegetation clearing. Myrtle Rust. Overgrazing by domestic stock and macropods to the extent/degree that perennials die. Fragmentation of remnants. Loss of roadside and stock route corridors. Pollution from abandoned mines. Glyphosate. Lippia. Biodiversity loss. Any environmental scientist could make up a longer list within minutes, but the resources committed to these scourges do not remotely conform to any scientific assessment of urgency.

A third elephant, not to my knowledge raised publicly, is the lack of appeal of the inland lifestyle if predictions of hotter or drier weather under climate change turn out to be valid. We cannot conjure up the stoicism and tolerance of hardship of the early pioneers and their families: with modern conveniences now a part of life for nearly everybody of working age, those days have passed into history. Nor will it be sufficient to offer secure, career employment: land managers will need families willing to accompany them. If seemingly endless drought and racks of above-40° days don't discourage families from living and working on the properties, then the dust storms will. Building a workforce willing to repopulate the inland won't be the least of the challenges.

TENTATIVE CONCLUSIONS

Four tentative conclusions are offered. First, for the Rangelands to be viably managed they need a large increase in human population. The landscape needs labour to manage it. We heard evidence that one million acres in the Wyandra district is under purchase for carbon credits. Vacating these estates will wreak immense damage to the economies and social fabric of Cunnamulla and Charleville, let alone the damage inflicted by uncontrolled pests. Of course, towns everywhere are subject to change, sometimes thriving, sometimes declining. But the people scattered through the pastoral stations depend upon the towns as much as the towns depend upon the businesses operating in their hinterland.

Second, markets cannot reimburse landholders reliably for the costs of managing these landscapes, especially in a period of climate uncertainty. Graziers

are largely price-takers, and the international or national markets in which most of their produce is traded are uninterested in their welfare or the welfare of the land. No amount of trade negotiations, shadow pricing or clean-and-green certification can compensate satisfactorily for the inherent lack of a direct pathway at present for remunerating graziers for the cost of managing their properties.

Third, stewardship payments have considerable potential, being reimbursement for producing a range of goods and services that are not now monetised. They would bring the dignity and sense of purpose that welfare payments, drought aid and other forms of subsidy deny. Some form of public intermediary would be necessary, as would an accreditation system to ensure that the payments would be for proactive restorative action and not simply for abiding by legal restrictions or observing conservative stocking rates. Also necessary would be a profound shift in culture so that landholding families, who for generations have conceived of themselves as producers of commodities, could describe themselves as custodians of a multi-functional landscape producing a range of goods and services, some marketed and some not.

The benefits could accrue not just in financial terms but also in terms of restoration – in reducing emissions, decreasing soil erosion and reinvigorating river systems.

This shift would require a completely restructured regime for remunerating the land managers, deriving from a range of sources. The contemporary lack of adequate public funding of environmental and human infrastructure in the Rangelands, including agricultural colleges, national parks, research stations, Landcare and extension services, does not encourage optimism

that a brand-new recipient of public funding will have an easy birth.

Finally – and I stress that this is a personal impression – I doubt whether a land tenure system based largely upon family ownership or leasehold of discrete tracts of land will survive. Certainly, the stations in better condition with low debt load and more reliable rainfall may have a bright future, especially if they can diversify some income streams. I suspect that the properties that are worn down will need to be retrieved by the state or a community land trust to allow restoration and to justify the investment of public money. Pastoral production simply isn't profitable enough to fund the restoration necessary. Much of the complexity involved in administering Landcare grants, drought aid, carbon payments and other forms of subsidy derives from having to justify the expenditure of public money on private enterprises. Those obstacles disappear if the land is owned by the state or a community cooperative. Public ownership would allow the employment of station managers and rangers, offering secure tenure and career employment.

Changes in tenure and management of this gravity would require substantial adjustment, but could be tackled incrementally, that is, property by property as families choose to leave. I emphasise that participation in any such a program must be entirely voluntary.

A precondition to any successful program of restoration of the Rangelands is extensive multilateral dialogue amongst those who share an affection for our Rangelands and who share a determination to build a healthy landscape with healthy rural communities underpinned by policy settings conducive to that vision. I urge the Society and its network of scientists and naturalists to join that mission with relish.

Declaration for the future of our Rangelands

Brisbane Dialogue, 2019: a conversation on Queensland's rural future and implications across the Australian outback.

In the face of...

- A deep and enduring attachment to Queensland's outback country, its rural communities, and the iconic ecosystems on which they depend;
- Ongoing decline in these communities due to unrelenting economic pressures, a legacy of unfortunate planning and legislation, and the lack of bold, forward-looking policy choices;
- The compounding effects of a highly variable climate that is expected to become hotter and increasingly variable, with more severe episodes of flood and drought, and persistent ecosystem stress; and
- The resulting vulnerability of production systems to frequent disruption, a widespread decline in land condition, and the tragic loss of biodiversity throughout the ecosystems that sustain us; then

We, as Queenslanders, need to...

- Accept there are pressing issues in our Rangelands and an urgency to bring urban and rural communities into serious and constructive conversation;
- Celebrate our common agreement on the biological, cultural, and economic necessity of a flourishing, populous, and life-affirming outback, while minimising attachment to outdated ideologies that only serve to separate people from one another;
- Affirm that landscape management properly rests in the hands of people acting with modern knowledge and Indigenous wisdom, and that they are the trusted custodians of sustainable utilisation, conservation, and regeneration;
- Recognise that more investment is required to build the ecological health of our country, including arrangements that deliver stewardship and natural capital payments; therefore,

We, the undersigned, commit to...

- Cultivating an enduring and respectful rapport between land managers and the public, enabling fulfilment of mutual rights and obligations;
- Supporting a Rangelands reform agenda that includes:
 - ◆ Reviewing and revitalising institutional arrangements to deliver strengthened regional participation in land use planning, regulation, and conflict resolution;
 - ◆ Programs to enable the informed and ethical use of data to ensure all people can participate in shaping the Rangelands future in a constructive manner, particularly in the area of natural capital accounting;
 - ◆ Cooperative ownership of a biennial State of the Rangelands Report presenting social, biophysical, cultural, and economic indicators of condition and trend;
- Establishing a Rangelands Consultative Council, independent of government, but inclusive of it, to improve our institutional capacity for developing and delivering improved governance arrangements and practical management solutions across the Rangelands, for the benefit of the country, its rural communities, and for Australia's current and future generations.

20 August, 2019