



# The Royal Society of Queensland

PO Box 6021, St Lucia, Queensland 4067, Australia

General enquiries [rsocqld@gmail.com](mailto:rsocqld@gmail.com)

President [president@royalsocietyqld.org.au](mailto:president@royalsocietyqld.org.au)

ABN 64 658 824 035

12 August 2021

## Members' Newsletter 2021 No. 10

Important news affecting all members follows. Please open this Newsletter and ensure that you don't miss anything of interest.

### AgForce attacks the Society directly

AgForce, Queensland's peak body for broadacre agriculture and collaborator in the Rangelands Policy Dialogue, has recently indulged in a round of attacks on mainstream science in the pages of *Queensland Country Life*, where it benefits from a regular column.

The initial article in this series was on 1 July. The paper published my response a couple of weeks later, only to see AgForce write again with an intemperate attack on the Society and on me personally. Copies of the articles are appended.

The newspaper is published in print every Thursday, with the online version appearing a few days later. Is there a member who would like to monitor the print and online editions and bring to my attention any future articles that would seem to warrant a response on behalf of Queensland scientists?

I would welcome feedback from members on what should be the Society's strategy in dealing with AgForce's alignment with the critics of environmental science.

### "Stewardship of Country" proceedings published



Some eight presentations from the three webinars hosted by the [Royal Societies of Australia](#) in February–March 2021 have been published as Volume 133(1) of the [Proceedings of the Royal Society of Victoria](#).

One of the papers is by our member Dr Nelson Quinn.

#### Abstract

The Royal Societies of Australia webinar series recognises that we need a new approach to our land and seascape stewardship if we are to recover from past degradation and prosper in the future. We have to work with history – the Aboriginal foundation, our modern production

systems and our laws and institutions. We can succeed if we adopt a custodial approach to land and sea – ‘caring for country’ – as our highest priority, so we safeguard the effective functioning of our ecosystems. We will need changes to our laws and institutions, and active intervention in our land and seascapes with public support, as we transform our society to reflect this new model of stewardship. There are many things we can do now as part of this transition, as individuals, governments, businesses, educators and land and sea managers.

For other material on the stewardship of rural country see [Rural Policy Background Reading](#).

## Economist required

One of our members has written a paper on “modern monetary theory”. To bring the paper up to peer-reviewable standard, it requires someone with an understanding of alternative theories of macro-economics to add some context, in other words, to place MMT in a modern canvas of economic perspectives and to answer potential critics. An understanding of rural policy would be an advantage.

Would any member who has an economics background or has a macro-economist within their professional or family networks like to put their name forward?

## QSN Newsletter anniversary



Under the diligent oversight of its Editor, Col Lynam, on 1 August the Newsletter of the Queensland Science Network reached its first anniversary, with six editions completed and one on the way.

The purpose of the Newsletter is primarily to showcase the work of the 26 member bodies of the Network, but it also aspires to bring items of general science interest to the attention of members of those bodies as well as the members of the Society, thus potentially reaching several thousand readers.

Col is aiming in due course to increase the frequency to monthly. Snippets are always welcome: Write to [. newsletter@scienceqld.org.au](mailto:newsletter@scienceqld.org.au) .

There is also a facility on the QSN website for the general public to subscribe. Please distribute a reference to the QSN Newsletter to your friends and family and invite them to subscribe directly.

## DOI references on the way

At the request of our honorary Editor A/Prof Julien Louys, the Society now subscribes to CrossRef, the entity that allocates DOI references to scholarly articles. As previously announced, from volume 129, all articles will include a DOI reference.

Further, we are now pleased to advise that Nicole Kearney, Manager, Biodiversity Heritage Library Australia, based at Museums Victoria, has offered to apply DOI references to all articles in our archive of *Proceedings* dating back to 1884. This has been possible because of funding from CSIRO and other national sources.

The Biodiversity Heritage Library is an entity of the Smithsonian Institution and already holds a complete set of our digitised *Proceedings*. We are delighted to continue the collaboration through this important advance in tracing previous research.

Click on the following link to see how the system works:

<https://doi.org/10.5962/bhl.part.14399>

## Alan Lauder's saltbush insights rewarded

At the recent National Landcare Conference, the Farming Champion was Amarula Dorpers, a sheep stud run by Justin and Lorroi Kirkby at Gravesend near Moree in northern NSW. The National Landcare Awards are described on:

<https://nationallandcareconference.org.au/national-landcare-award-winners-2021/> . ABC News takes up the story:

Since buying the farm 16 years ago, the couple has revegetated the degraded property of rundown cropping blocks – with scarce ground cover and poor nutritional grasses – to revitalise the land to 100 per cent biodiverse grasslands.

Justin Kirkby said while regenerative farming was now becoming common practice, early on, their changing methods raised a few eyebrows.

“Over the last few years, we’ve planted 130,000 to 140,000 Saltbush plants and last guess around 7,000 to 8,000 trees, and that’s just purely to try and change the landscape back to what it used to be. With 20 per cent of the property now revegetated with native trees specific to the region, the farm’s carbon footprint has decreased.”

Society member Alan Lauder has been advocating the use of saltbush since 1995. He has responded to this latest news: “With my system of establishment, it takes just under six days to plant enough saltbush to rest the area where 1,000 sheep graze, for a time of four weeks after rain. Ripping the soil in advance of planting takes one day. In the scheme of things, very little work for a long-term resting tool to ensure plenty of carbon flows into paddocks after rain.”

More information on Alan’s “Carbon stocks and flows” page on the Society’s website:

<https://www.royalsocietyqld.org/carbon-stocks-and-flows/> , notably ch. 21 of Alan’s book.

## Australasian Groundwater Conference will move to 2022

Due to the evolving Coronavirus (COVID-19) situation, the Organising Committee of the Australasian Groundwater Conference 2021 have made the difficult decision to postpone the Conference until 2022.

The new dates of the Conference will be 21–23 November 2022 and it will still be held at the Perth Convention Exhibition Centre.

“While we have a fantastic program planned, the COVID-19 situation across Australia remains a health risk for our members. We consulted with the hydrogeology community and the feedback was that, although a virtual or hybrid conferences is possible, International Association of Hydrologists members strongly value the opportunity to meet and network face-to-face. Therefore, the conference will continue to be held as an in-person event.” All registrations will be automatically transferred to the 2022 Conference.

Conference Managers [register.agc2021@arinex.com.au](mailto:register.agc2021@arinex.com.au)

Abstract submissions will remain open

Abstract submissions for the AGC 2022 program will remain open and we will communicate a new submission deadline in 2022. Abstract topics will continue to be:

- Groundwater management
- Groundwater modelling
- Groundwater monitoring and measurement
- Social and Indigenous hydrogeology
- Groundwater in mining
- Groundwater in the environment
- Groundwater hydrochemistry
- Other.

## Long contracts without review

Our Secretary, James Hansen writes:

In registering to attend a meeting on Drought Resilience on Monday 8 August, my thoughts turned to the absurdity of excessively long government contracts whereas business contracts commercially are often only five years or less with an option of renewal.

By comparison, we have Regional Forest Agreements (RFA) for 20 years with no intermediate review or oversight. Likewise, waste management with contracts for landfill from 20 to 80 years, with virtually no supervision, unless there are public complaints about noise, dust, air or water pollution (as in the PFAS scandal involving military bases) and little or no regulation to prevent contamination of groundwater or downstream run-off. Groundwater extraction for coal companies may be for the life of the mine, even though it can deprive neighbouring properties of essential supplies as well as contaminating aquifers and downstream waterways, especially when tailings ponds overflow or are flooded. Also, there was the case, in the last round of catastrophic bushfires, of the fire brigade at Stanthorpe being unable to access sufficient groundwater to fight fires threatening the township while a (foreign-owned) company had a 100 year lease with unlimited extraction rights for commercial bottling and sale on the Gold Coast.

These contracts often have clauses requiring compensation to the company if the contract is suspended, curtailed or terminated. Resilience is compromised by these activities.

## *The Race Between Education and Catastrophe*

Member Dr Donnell Davis, Immediate Past President - Queensland Division, United Nations Association of Australia, has completed her Doctorate of Professional Studies at the University of Southern Queensland. We congratulate her.

Abstract

History is a race between education and catastrophe' (Gurría, 2013). This is the essence of the climate-change dilemma in human settlements today. How can cities act effectively to live with climate change?

After a century, the world is bracing for a perfect storm with burgeoning populations drifting to the cities, resulting in anthropogenic greenhouse gases multiplying exponentially. Rapid urban development breaks down natural systems that sequester greenhouse gases, making cities unhealthy, unbalanced, and undesirable (Blakely & Carbonell, 2012). It is reported that 'more people are killed from poor urban design and climate-change than terrorism' (Birkeland, 2008), which is an immense ethical problem.

My focus is on creating resilient Climate-Sensitive-Cities®. This approach to tackling the urgency of climate change in cities is five-fold:

1. It audits vulnerability and coping capacity.
2. It addresses audit gaps by investing in accelerated learning for professions and communities to build capacity for resilience.
3. It appreciates that every individual can make a unique contribution to interdisciplinary capacity-building for addressing climate education through their own organisations and regions.
4. It realises that accelerated learning for the long-term investment in individuals within organisations includes collaborative coaching and partnering.
5. It recognises that optimism for a preferred future can be achieved in a world full of perverse incentives.

Although there are many perspectives and prescribed actions from each discipline, my approach is founded on meta-scanning, with principle-based options that emerge from broad lessons from international and local successes. The crucial part of my work is to convert research into desirable actions in a way that demonstrates learning for better climate governance. The results of my endeavours include influence of policy and practices in fourteen countries and through professional bodies across disciplines. My contribution to transformational guidelines for international climate action transparency is recognised widely.

This thesis comprises an exploration of philosophies, revisiting values, seeking answers to four research questions, a new lens with three perspectives, and project design to ensure higher fidelity with my statement of intent. My Doctorate establishes a framework that enables individuals to lead the way in climate-change practices. I intend to be a living example of such frameworks.

The thesis concludes with new definitions for Climate-Sensitive-Cities® and Accelerated Learning. It also overlays triple loop policy development with the Climate Policy in Practice Cycle® as a means for funding and evaluating action. Finally, a manual for Master Classes delivered across fourteen countries works with a transformational change trajectory that articulates the journey from passive bystanding, to advocacy, to tipping points, to coping with success.

Independent evaluations accelerate the uptake of these skills in governments, communities, professions, and most importantly, individuals. We need to learn, question old thinking, and relearn in order to adapt and live with the many facets of climate-change. Based on this rationale, I have structured my Doctorate to advance a deeper understanding of the technical, intellectual, and interpersonal skills required of an effective Sustainability Commissioner.

Alvin Toffler stated ‘the illiterate of the 21st Century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn’ (ISLS, 2013). This is how we win the race of education over catastrophe.

The full text is available online, 16 MB <https://eprints.usq.edu.au/36848/>.

## “Maintaining regional Queensland’s natural capital”

In 2016 member Dr Alistair Melzer organised a thoroughly interesting workshop at the University of Queensland by bringing together the Society and Central Queensland University.

Recently, our member Col Lynam drew to attention that the hot link to the proceedings of this one-day workshop, on the website of the Sustainable Queensland Forum, had broken. Col’s

sleuthing has been successful in uncovering a copy and this is now lodged on the Society's website:

<https://www.royalsocietyqld.org/news-events/all-events/?eventdate=2016>

## From my reading...

Geoff Edwards writes: An article cited in the latest newsletter of the



grabbed my attention.

Adam Graycar: "The Publication Game Leads to Trivial Pursuits" was published two years ago but has not lost any relevance. <https://socialsciences.org.au/publications/the-publication-game-leads-to-trivial-pursuits-2/>.

Prof Graycar argues that the pressure upon scholars to publish only in top-ranked journals is wrong-headed. The elite journals are likely to reject parochial material and instead to "prize methodological sophistication and very high analytical ability above all else. Method triumphs over content. What this leads to is the dissection of trivia with an ever-sharper knife."

We have previously reported that one of our eminent members was told by her faculty not to publish in the *Proceedings of The Royal Society of Queensland* because it was not ranked sufficiently highly. Wrong-headed indeed.

Would any academic or postgrad student who has similar experience to share or feels strongly about the subject like to [contact me](#) with a view to penning a column to match Prof Graycar's?

## Research Fund Round 4 still open

Guidelines for applicants for the fourth round of the Society's Research Fund are available on the website <https://www.royalsocietyqld.org/research/>.

A total of \$5000 is available, for one, two or three applicants. Our Council member Col Lynam has generously agreed to be the Research Fund Coordinator and will administer the round. The \$5000 is comprised of the residual unspent from last year, augmented by fresh donations.

Applications close on 31 August.

## Senior ecologist vacancy

*Advertisement*

Society Member and former Newsletter Editor Dr Anne-Marie Smit has relocated to Port Macquarie as Environmental Business Manager & Principal Scientist for:



Anne-Marie has a vacancy for a Senior Ecologist in her team. The position has been advertised on Seek, Job Advert <https://www.seek.com.au/job/52581270> . The link is for the Port Macquarie location but Anne-Marie advises that there is some flexibility to negotiate location.

Please contact her on 04 2216 1594 for further information.

## **Repairing the environmental deficit in the land management sector: Public and market driven solutions compared**

Member Dr Philippa England with member Dr Nelson Quinn is organising a one-day workshop:

**3 September 2021 from 9 am – 4 pm AEST**

A panel of experts will discuss the role of markets, certification schemes and governments in emerging models of land management that embrace environmental stewardship. This interactive hybrid (online/in person) workshop will be suitable for land managers, academics, public servants and anyone with an interest in the provision of environmental improvement activities in the land management sector. Your participation is free but registration is essential.

You can find out more about the workshop and register your interest at:

<https://www.griffith.edu.au/law-futures-centre/events/repairing-environmental-deficit>

### Workshop themes and objectives

Over the past 200 years, Australians have adopted western agricultural models that have substantially changed our ancient and unique environment. Biodiversity loss, soil degradation, acidification and other impacts jeopardise the resilience of the natural environment and, in the long term, reduce the productivity of agriculture – so it's a lose-lose situation for everyone. In the past, Australian governments have helped to drive this decline and there seems little faith in their ability to alter that trajectory. Arising out of this conundrum, markets for environmental services have emerged as a new opportunity for promoting sustainable land management. These markets commodify discrete environmental values thereby hoping to create a pathway to commercial funding for environmental stewardship. Effective environmental markets may provide an alternative or a complement to other public funding initiatives. But is their promise as good as the reality? And what is the role of regulation, governance and public funding in a land sector re-invigorated by an increasing supply of commercial funding for environmental stewardship? With particular reference to the land management sector in Australia, this workshop will:

1. Examine the strengths and weaknesses of some existing market based schemes for environmental services;
2. Explore the opportunities and challenges for proposed new schemes;
3. Compare policy developments for enhanced environmental management in Australia with that in other jurisdictions;
4. Debate the relative roles of public and private entities in an era of hybridised funding for environmental improvements in the land management sector.



## The most sobering report card yet on climate change

The Intergovernmental Panel on Climate Change has released its sixth assessment report. This is a benchmark report that ought to place policy on a new trajectory. A summary article in *The Conversation* warrants reading by all members to inform themselves of the dire situation in which Australia finds itself.

<https://theconversation.com/this-is-the-most-sobering-report-card-yet-on-climate-change-and-earths-future-heres-what-you-need-to-know-165395>

A more detailed guide to IPCC 6 is available on:

<https://www.carbonbrief.org/in-depth-qa-the-ipccs-sixth-assessment-report-on-climate-science>

Secretary James Hansen has commented: For those who want to argue, with the benefit of hindsight, what would you say, if you were on the deck of the Titanic, and someone said to you: 'Don't worry. It's unsinkable!?' No new thermal coal mines and immediate steps to close existing ones as fast as wind and solar plus hydro and batteries can replace them?

## Australia's future in space: An emerging agenda for the social sciences

Space continues to be a new frontier for humankind, presenting significant opportunities for social scientists to apply their expertise. From sensemaking, to indigenous astronomy, sustainability, industry, diplomacy and defence, this series of webinars examines the role for Social Scientists in space. This is a timely series, given Australia's ambitions to contribute to international efforts to return to the Moon in 2024, and as many space faring nations look beyond, to Mars.

The 9-webinar series is convened through the Academy of the Social Sciences in Australia [Workshops Program](#) and brings together experts and practitioners to discuss the implications and opportunities for the Social Sciences, and is open to Academy Fellows and the public.

The first two webinars will take place on Tuesday 17 August. Register below, and find further details and the full program on the [Academy's website](#).

## Members' doing science: opti-MY-WISE life®

Dr Wendy Laupu has offered the following summary of her latest work on the linkage between diet and mental health. Dr Laupu's doctoral studies embraced nutritional psychiatry.

The mental health system in Australia follows a medical model in which the brain is viewed as an organ of the central nervous system. This is in stark contrast to the psycho-analytical model devised by Jung and Freud and used extensively by psychology. Nutritional psychiatry is a field that rises above both by providing answers to a long running debate around the role of diet in mental disorders.

Interestingly, the World Health Organisation (2018) has published the prevalence of mental disorders as 10.7%, with only 0.9% being drug-related. There have been several landmark contributors who have informed scientific endeavour.



As early as 1895 Emil Kraepelin documented eating patterns - skipping meals and erratic eating (Noll, 2007). He considered mental disorders to be a form of metabolic disorder. After attempting to enhance thyroid metabolism by testing desiccated thyroid gland (the forerunner to thyroid hormones), with mixed success, Kraepelin diversified from this approach.

Fast-forward a century and it has been well established that diets of people with depression, bipolar disorder and schizophrenia lack essential nutrients for the brain to properly function (Laupu, 2018, Rao et al, 2008). Work on the gut-brain barrier and restrictive eating patterns are reinforcing this view. Low energy and lipid metabolism is a hallmark of mental disorders involving mood, anxiety and psychosis. Moreover, micronutrient supplementation including the nutrients required for the brain, appears to reverse early indices of depression, anxiety and stress in an ADHD population (Rucklidge et al, 2012). Encouraging traditional and healthier food choices have been hypothesised to prevent depression (Opie et al, 2017). The sticking point in this argument is the progressive nature of changes to the brain from imaging studies (Thompson et al, 2001). The progressive nature of brain damage means that vitamin and nutrient supplementation or diet do not reverse psychosis. As proof of concept, New Zealand mental asylums used diet and exercise to treat patients. In Christchurch there was a documented discharge rate of just 8.8% who were alcoholics and epileptics (McKillop in Young, 1925-1936).

Food and oxygen are required by the brain for energy and lipid metabolism. A medical history of traumatic head injury or a hypoxic episode indicates increased susceptibility to developing a mood disorder (Zhao et al, 2017). A plethora of evidence is linking childhood concussion (Gornall et al, 2021) and sporting concussion to latent mental health problems (Gouttebauge & Kerkhoffs, 2021). Increased depression and anxiety are reported across multiple populations of people who have survived COVID-19 (Mazza et al, 2020, Choi et al, 2020, Hyland et al, 2020). PET imaging studies have indicated that coronavirus is causing diffuse white matter changes (Egbert et al, 2020). Residual inflammation appears to be a hallmark of long-haul COVID-19 linked to cognitive damage and mood (Yong, 2020).

In a nutshell, my approach has been anthocyanin supplementation for cellular brain health. I initially tested an extract (the pericarp) of mangosteen fruit, which unfortunately was not molecularly stable and therefore not a viable option. Having resolved this issue, the opti-MY-WISE life® Brain Well-Being supplement bio-accumulates in brain tissue for health and well-being. It:

- 📄 promotes healthy neurotransmission for cognition
- 📄 enhances mitochondria energy production for clear thinking
- 📄 reduces free radicals that damage tissue, lipids, proteins, and DNA for memory.

Available online at <https://www.optimywiselife.com> AUST L 321550.

It should come as no surprise that the linkage between mental disorders and chronic pain is the poor health of nerve cells. Recent analysis of biomarkers indicates an absence of specific antioxidant enzymes linked to neurotransmission and inflammation (Gunn et al, 2020) to support supplementation. This work supports the removal of opioids as a treatment option for chronic pain.

The opti-MY-WISE life® Chronic Pain supplement has structural and functional activity in nerve cells, antioxidant action and detoxification activity in the liver to support reduced pharmaceutical toxicity evidenced by low side-effect profiles:

- 📄 promotes healthy neurotransmission that otherwise sensitises, transmits chronic pain
- 📄 enhances mitochondria energy production that otherwise enables chronic pain to persist
- 📄 reduces free radicals that damage tissues for inflammatory, and nerve pain.

Available online at <https://www.optimywiselife.com> AUST L 321550.

REFERENCES

Choi EP, Hui BP, Wan EY. Jan. 2020. Depression and anxiety in Hong Kong during COVID-19. *International Journal of Environmental Research and Public Health*. 2020 Jan;17(10):3740.

Egbert AR, Cankurtaran S, Karpiak S. Brain abnormalities in COVID-19 acute/subacute phase: a rapid systematic review. *Brain, behaviour, and immunity*. 2020 Jul 17.

Gornall A, Takagi M, Morawakage T, Liu X, Anderson V. Mental health after paediatric concussion: a systematic review and meta-analysis. *British journal of sports medicine*. 2021 Apr 8.

Gunn J, Hill MM, Cotten BM, Deer TR. An analysis of biomarkers in patients with chronic pain. *Pain physician*. 2020 Jan 1;23(1): E41-9.

Gouttebauge V, Kerkhoffs GM. Sports career-related concussion, and mental health symptoms in former elite athletes. *Neurochirurgie*. 2021 May 1;67(3):280-2.

Hyland P, Shevlin M, McBride O, Murphy J, Karatzias T, Bentall RP, Martinez A, Vallières F. Anxiety, and depression in the Republic of Ireland during the COVID-19 pandemic. *Acta Psychiatrica Scandinavica*. 2020 Sep;142(3):249-56.

Laupu W. Recommendations to Help Prevent Mental Disorders and Limit Stigma. *British Journal of Medical and Health Research*. 2018;5(9).

Mazza MG, De Lorenzo R, Conte C, Poletti S, Vai B, Bollettini I, Melloni EM, Furlan R, Ciceri F, Rovere-Querini P, Benedetti F. Anxiety, and depression in COVID-19 survivors: Role of inflammatory and clinical predictors. *Brain, behaviour, and immunity*. 2020 Oct 1; 89:594-600.

Noll R. Kraepelin's lost biological psychiatry? Autointoxication, organotherapy and surgery for dementia praecox. *History of Psychiatry*. 2007 Sep;18(3):301-20.

Ritchie H, Roser M. Mental Health. World Health Organisation. Apr 2018. Accessed at <https://ourworldindata.org/mental-health> [online resource]

Yong SJ. 2020. Long-haul COVID-19: putative pathophysiology, risk factors, and treatments.



Best wishes to all members.

Ross Hynes  
President  
0428 721 918