

# Minutes of 57<sup>th</sup> Annual Fellows' Forum of Royal Society Te Apārangi

The meeting was held on Thursday, 27 April 2023 at Royal Society Te Apārangi, and via Zoom

**Present:** Charlotte Macdonald (AEC Chair), Geoff Chase (AEC Deputy Chair), Brent Clothier (President), David Schiel (AEC Domain Convenor Biological and Environmental Sciences), Shaun Hendy (AEC Domain Convenor Physical Earth and Mathematical Sciences), Cather Simpson (AEC Domain Convenor Technology Applied Sciences and Engineering), Denise Wilson (AEC Convenor Māori Knowledge and Development), Peter Barrett, Kelvin Berryman, Graham Bowmaker, Elizabeth Broadbent, John Caradus, Andrew Cleland, Tony Conner, Fred Davey, Valery Feigin, Richard Furneaux, Gail Gillon, John Harper, Andrew Hill, Margaret Hyland, Wendy Larner, Jim Mann, Rich McDowell, Emily Parker, Keith Petrie, David Skegg, Linda Smith, Margaret Tennant, John Townend, Peter Tyler, Jason Tylanakis, Graeme Wake, Graham Weir, David Whitehead, David Williams, David V Williams, Janet Wilmshurst.

**Apologies:** Susy Frankel (AEC Domain Convenor Humanities), Jane Harding (AEC Domain Convenor Health and Medical Sciences), Robyn Longhurst (AEC Domain Convenor Social and Behavioural Sciences), Angus Macfarlane (Convenor Māori knowledge and development), Cliff Abraham, Philip Barnes, Barbara Barratt, Richard Beasley, Richard Blaikie, Andrew Barrie, Brian Boyd, Sally Brooker, Barbara Brookes, Deidre Brown, Rowland Burdon, John Butcher, Stuart Corson, James Crampton, William Davidson, Michael Dragunow, Nigel French, Peter Gluckman, Merryn Gott, Debbie Hay, Robin Kearns, Carolyn King, Robyn Longhurst, David Lowe, Ken Markham, Bruce Melville, Alison Mercer, Andrew Mercer, Roger Morris, Charmian O'Connor, Julian Paton, Elaine Reese, Martin Reyners, Barry Scott, Geoffrey Stedman, Murray Thomson, John Townend.

**In attendance:** James Henry, Paul Atkins, Marc Rands

## 1. Welcome

Professor Macdonald welcomed Fellows to the Forum, and Denise Wilson gave a karakia.

## 2. Valedictories

Geoff Chase announced the deaths since the last Annual Forum of the following Fellows and Honorary Fellows:

- **Dr Alan Beu FRSNZ** (GNS Science) 1942-2023. Dr Alan Beu was a world expert on Cenozoic fossil and living molluscs of New Zealand and the Pacific area.
- **Emeritus Professor Paul Cloke Hon FRSNZ** (University of Exeter) 1953-2022. Emeritus Professor Paul Cloke was an internationally respected and leading figure in geography and foundation Editor of the Journal of Rural Studies.
- **Sir Graeme Davies Hon FRSNZ** (University of London) 1937-2022. Sir Graeme John Davies was a New Zealand engineer and Vice-Chancellor of three universities: the University of Liverpool, the University of Glasgow and the University of London.
- **Dr Jim Ellis FRSNZ** (Department of Scientific and Industrial Research (DSIR)) 1929-2023. Dr Jim Ellis was a former Director-General of DSIR, who's research involved the chemistry applied to geological systems, particularly geothermal systems and volcanic gases.

- **Professor Ian Hodgkinson FRSNZ** (University of Otago) 1939-2022. Professor Ian Hodgkinson was known for his contributions to the field of thin film optics and resonators.
- **Emeritus Professor Kenneth McNatty FRSNZ** (Victoria University of Wellington) 1944-2023. Emeritus Professor Ken McNatty was a world leader in the field of ovarian biology and oocyte-secreted growth factors.
- **Emeritus Professor Ian Pool FRSNZ** (University of Waikato) 1936-2022. Emeritus Professor Ian Pool was the founder of Aotearoa New Zealand demography, establishing knowledge about the peopling of Aotearoa.
- **Dr Eddie Robertson FRSNZ** (Department of Scientific and Industrial Research (DSIR)) 1919-2022. Dr Eddie Robertson was the first director of the geophysics division of DSIR and chaired the Ross Dependency Research Committee.
- **Dr Grattan Roughan FRSNZ** (Plant and Food Research) 1937-2022. Dr Grattan Roughan made fundamental contributions to plant lipid science that now form the core of our understanding of fatty acid metabolism in photosynthetic organisms.
- **Emeritus Professor Des Taylor FRSNZ** (University of Canterbury) 1941-2022. Emeritus Professor Des Taylor was a celebrated world leader in digital wireless communications, with a primary focus on the development of modulation and coding techniques.

Obituaries have been, or will be lodged on the Royal Society website as they are provided. There was a one-minute silence in honour of Fellows who had died during the year.

### 3. Report of Academy and remarks from Chair of Academy, Professor Charlotte Macdonald FRSNZ

Tēnā koutou katoa. Good morning everyone and welcome to the 57th Annual Fellows' Forum of the Royal Society Te Apārangi.

It is my pleasure, as Chair of the AEC to welcome you to the Forum. As you can see from programme for today, we have changed order of things this year – bringing the Forum to beginning of the day. We have done this as we have found in recent years that once the New Fellows have been inducted and given their presentations, they tend to disperse before the final events of the day – the Forum, and reception where external guests invited to meet the New Fellows. While doing it this way means they are not part of the Forum (there was no perfect scheduling solution), we are hoping some will stay to be part of the end of day reception. A word on Apologies – AEC members: Susy Frankel (HUMS), Jane Harding (Health and Med Sciences), Angus Macfarlane (Māori Knowledge and Development), Robyn Longhurst (Social and Behavioural Sciences).

A brief report on the year's events. Through another covid and climate disrupted year the work of the Academy and the AEC has continued. The round of Fellowship nomination and election has proceeded, and we will shortly welcome this year's New Fellows. The Fellowship Selection Committee met on 15-16 February 2023. We were navigating Cyclone Gabrielle in terms of travel, along with power and internet connections. The meeting was held in hybrid mode (as was the case in 2022 when parliamentary occupation posed local hazard). Maintaining an adequate representation of expertise across the Committee remains a key priority, and one that can be challenging to attain. I would like to thank all the Domain convenors, domain panel members and those who sat on the Fellowship Selection Committee for their work in this important task.

The annual round of medals and awards also took place over the year, culminating in three highly successful Honours celebrations in November: in Kirikiriroa Hamilton, Otepoti, Dunedin and in Whanganui-a-Tara

Wellington. I was able to attend two of the three ceremonies – in Otepoti Dunedin and here in Whanganui a Tara Wellington. I would note two aspects of the ceremonies. In Dunedin the announcement of the Rutherford Medal to Richie Poulton and team responsible for ‘The Dunedin Study’ (longitudinal study back to 1972) provoked a standing ovation. Tremendous to see. In Wellington Minister of Research, Science and Innovation, Ayesha Verrall was guest of honour and took the opportunity to announce the new ‘Open Access’ policy for Aotearoa New Zealand. Significant that it was this occasion where that news appeared. This year’s round of nominations for awards and medals has now closed, and work of panels is beginning. The Honours events will be held in distributed format again in November 2023 – details will be announced closer to the time.

The Green Paper, the next step in Te Ara Paerangi – Future Pathways – was released in October - November 2022. This marks the next stage in the current government’s planning for the research sector. As the summer and early 2023 has brought a shift in the wider policy context it is unclear how much further the Green Paper might advance. The Budget due on 18 May, may provide signals on some aspects of the Paper. The Academy, and the AEC, continues to keep a close interest here. As Chair of the AEC, I have attended meetings with the Minister of Research, Science and Innovation with the President of the Society and the Chief Executive. These have been informal in nature and designed to exchange matters of common interest. Advancing the overall interests of the sector, and being a conduit of exchange is the purpose and value in the meetings. There have been 3 meetings of this kind in late 2022 and early 2023. Minister Verrall will also represent the Prime Minister at the Prime Minister’s Science Prize on 1 May (Monday).

A year ago the Academy faced considerable debate over matters set off by the Mataranga Māori and science issue. The special forum held on 13 April 2022, and measures since then to encourage better communication within RSTA channels, have addressed many of the concerns aired. It is worth noting that the views aired by Fellows ranged very broadly. The months in which the controversy was most heated was also one which saw a wider and unusually vitriolic and violent polarisation in public debate and action in Aotearoa New Zealand as a whole (the occupation at Parliament Grounds and surrounds, the tenor of public ‘debate’ especially that conducted online). RSTA was not immune from the broader context. The Chief Executive and President will speak more to the wider discussions concerning the Society’s development of a new strategic plan. A further specific measure taken in the wake of the controversy is revision of the RSTA’s complaints procedure. The revision has been discussed at Council and will be proposed for final approval at the Council’s meeting in June. Key changes are to the options available at first receipt of complaints, and the composition of panels to investigate complaints. It is to be noted that the RSTA is required to have a complaints procedure under its Act (as is common with most cognate organisations), and that complaints can be laid by any person/persons. The changes are largely about ensuring the process remains fit for purpose, is timely, and ambiguities are removed

For the Society’s expert advice, Tahu Kukutai FRSNZ is assisting with data sovereignty work; Robert Beaglehole FRSNZ on vaping. And other Fellows involved in previous Expert Advice reports have continued to speak and be consulted on those works (e.g. Fair Futures).

On the AEC composition, I would like to express my most sincere thanks to all members of the AEC who bring sagacity, expertise and wisdom to the work they undertake. Thank you to Geoff Chase, Susy Frankel, Jane Harding, Shaun Hendy, Robyn Longhurst, Angus MacFarlane, David Schiel, Cather Simpson, Denise Wilson (co-opted member). There are some changes that have taken place since last year, and there are more that will occur in the coming months. Tony Conner, our longstanding Deputy, completed his term on 3 June 2022. Geoff Chase has very ably stepped into those shoes. On 30 June, the terms of Susy Frankel (HUMS), David Schiel (Biol and Environmental Sciences), Angus Macfarlane (Māori Knowledge and Development) and my own term as Chair will conclude. Susy Frankel has offered to stand again and has been elected unopposed. We will await the outcome of the BES election. Angus Macfarlane’s place will be filled by Denise Wilson and we are in the process of filling the co-opted place.

I would like to take this opportunity to make a special tribute to Angus Hikairo Macfarlane (who cannot be with us today) who has given huge service to the RSTA and especially to the Academy over the last 4 years. Angus took on the large and not easy job of leading Māori Knowledge and Development including the Waitangi 2040 Initiative, running training sessions in person and online for panels, and bringing to all he did the great knowledge, graciousness, wisdom and power of persuasion. He has always been enormously generous and warm in all he brought and gave in many fora under the Te Apārangi mantle. It is a special burden, and perhaps, privilege to represent ‘all Māori’ interests in any single space. Not an easy one to carry. I would like to propose that the Forum offer a special vote of thanks to Angus for his work that we can convey to him from this meeting.

*Angus Hikairo Macfarlane: E te Ahurei, a Te Apārangi, e te rangatira, ka nui ngā mihi ki a koe.*

The term of Convenor of the AEC will also become vacant at end of June, with my completion of a 3-year term. At the AEC meeting yesterday, a process to find a successor was finalised. The rules of the RSTA (at 4.5.1) set this out in general terms, but not in specifics. The process will be as follows: a call for nominations for Chair of AEC be made to AEC members. An election would be held by confidential ballot closing on 23 May, and the newly elected Chair of AEC will be confirmed at the May AEC meeting. Those eligible to vote in the election are current members of AE and members of the Society Council who are also Fellows.

In terms of wider issues, larger issues that surround us all as we come together in April 2023 are the ever more pressing demands of climate change – or climate crisis. And we will shortly hear an update on the most recent round of government consultation. Also, the advent of artificial intelligence in the form of ChatGTP and similar text and visual tools. We will discuss this shortly. But I think this is something we are all already dealing with, and will continue to do so. It seems a very important thing for Academy members to engage with, given its both great potential and great risks.

Finally, my thanks to the hard working and ever efficient Academy Executive Officer, Dr Marc Rands, for his work through the year, and in today’s event.

No reira, tēnā koutou, tēnā koutou, tēnā ratou katoa.

#### **4. Report by the Chief Executive, Paul Atkins**

I would like to welcome and thank participants to today’s Forum. Charlotte said most of it, but I would like to dive deeper in to one or two things. 2022 was an interesting year, emerging from a difficult period influenced by a pandemic and the constraints that came with it. We have now been able to do things and run events in person, such as the Research Honours Aotearoa events, which were a true celebration of excellence and an opportunity for me to get to know a large group of people.

Last year we inducted new fellows face to face and we will do so again this year. I have been able to join the Science Teacher Leadership Programme for its activities around the country; the Powering Potential programme empowering secondary school students; and the Taiao Aronui professional development leadership programme in pū taiao science and Mātauranga Māori with teacher leaders in Rotorua, piloted over the last couple of years; as well as the ECR He Pito Mata conference last week, which included a special meeting for Māori and Pacifica ECR researchers.

Following the extraordinary meeting with Fellows last year, we have been conducting an open dialogue on the future role of the Society and how we can add value to our country. There has been an online consultation mechanism with over 400 contributions. We have also taken key themes and tested them in face to face

workshops in centres including Auckland, Hamilton, Wellington, Dunedin, Christchurch and Palmerston North. Two further meetings are still to come - one for Members and one as a wananga with Māori Fellows. From these consultations there have been a number of emerging themes:

- Very clear support for critical role of the Society in New Zealand and that the Society should be trusted, support excellence, and be independent.
- There were discussions of culture and values, and the importance of demonstrating the behaviours we espouse. Partnership and biculturalism, were highlighted, along with other cultures, in a multicultural Society, and a commitment to diversity within our organisation. As part of this, was the importance of inclusivity and the need to be bold.
- To the broader membership we have asked questions about what value they would like to see from us. Early career researchers have been highlighted as of great importance.
- In terms of contribution, the Society's relevance and impact were a theme and the need for our public profile to be higher. The importance of the Society's value to Government should be significant and we should continue to inform their thinking.
- Our independence was important – even if we work with government, we should be independent.
- And the global connectivity of our work. Last year I visited academies in the UK and the International Science Council in Paris to help build these relationships.

The process from here is to conclude these conversations and draft the content of the feedback and the words that might form the Society's statement of strategic intent.

I will conclude by going back to the ECR conference last week. We had 400 people at the conference in Te Papa and 120 ECRs from Māori and Pacifica. The energy in the rooms was palpable and enthusiasm was unmissable. There was an exciting commitment to be part of the New Zealand research system and to put their energy into that system. But what next? We can bring groups together, but to what end? We will be engaging with ECR Forum on that question.

I finish with feedback from the Society's Projects and Communications Advisor, Enrique Kitiseni, who organised the conference:

*‘The feedback from ECR participants was overwhelming positive and emotional. One of the attendees shared “He Pito Mata has given me hope during a period of hopelessness. It has nourished my curiosity and allowed me to meet some of the brightest minds in this country.”*

I will leave you with that.

## 5. Report by the President, Dr Brent Clothier FRSNZ

Tēnā katou katoa. Ko Brent Clothier tōku ingoa. I am President of the Royal Society Te Apārangi. Nau mai haere mai whānau to our whare, and to those on Zoom.

I want to look back from today's bookend that will be provided by the welcome to our new Fellows to the complementary bookend that invigorates and grows our science and knowledge system – our young researchers.

To quote Simon & Garfunkel in their album “Bookends” ... “Time it was, and what a time it was”. Indeed, what a time I have had over the last six months with the younger members of Te Apārangi. Towards the end of last year I visited three high schools to present GOLD CREST Awards to 7 Year 13 students from Onslow College, Epsom Girls Grammar and Glendowie College. Some inspiration endeavours we carried out by the students from understanding emotional intelligence to unmanned ocean surveillance vessels. We are in the process of

developing new programmes to replace CREST that will continue to challenge students and expand their knowledge of scientific techniques, language, analysis methods and building research capability.

Soon after the CREST Awards, I attended the final day of Powering Potential. Powering Potential is funded by the Free Masons of New Zealand. At the end of last year there were over 60 Year 12 and 13 students who attended this event in our whare. This is for students who have a passion for science, technology, and social science. They were formed into nine teams to address and find solutions for some of today's big science questions or social issues. Each team had someone from Te Apārangi's Early Career Researchers Forum Committee to act as a provocateur and facilitator. The enthusiasm of the taura was amazing, and the quirky nature of their team presentations was entertaining. The two day projects ranged from "Super-Spreaders" to "Kelp Crusaders".

Then last week I attended He Pito Mata, the "Growing Shoots" forum of our Early Career Researchers at Te Papa. This was the second He Pito Mata, and it attracted over 300 ECRs. We rapidly reached capacity and it was over-subscribed ... again. The ECR Forum of Te Apārangi organised the event, supported by the kaimahi from Te Apārangi. The Forum was opened by our Minister, the Honorable Dr Ayesha Verrall. She set the scene for the Forum. There was a buzz of enthusiasm and energy around the Forum over the two whole days. Our knowledge system is laden with emerging talent. Our role as Te Apārangi, our Academy, and wide role of society in general and our RS&I systems is to foster fertilise these growing shoots of He Pito Mata. This means we, as Te Apārangi must take a long-term view to support the growth in in our RS&I system.

So we now arrive at the other bookend – our Academy, and you Ngā Ahurei. At our Extra-Ordinary Meeting last April, Charlotte, Paul, and I along with the kaimahi of Te Apārangi promised to address the issues that the Fellowship raised. We are doing that. The consultancy Martin Jenkins is facilitating this process for us, and many of you have been part of that consultation process. There have also been Zoom calls with stakeholders and international agencies, along with an on-line questionnaire which attracted over 400 responses from across our broad membership. We have held face-2-face meetings with Fellows and members in Auckland, Hamilton, Palmerston North, Wellington, Christchurch, and Dunedin. We have heard many comments and good suggestions. Martin Jenkins will be synthesising these and providing us a report from which we will develop a long-term strategy that will outlive my Presidency, and likely the term of the current CE. Thank you for your input and comments into this, and I'll look forward to reporting back to you on developments.

I conclude by noting that on Tuesday, Paul & I leave for Europe where we will connect with Academies in London and Edinburgh. Then we will be attending a meeting of global Academies with the International Science Council in Paris. So we will be able to discuss with our peer Academies the issues, opportunities and strategies for global Academies and our RS&I systems. We will report on this in the next Fellows' newsletter.

Nau mai, haere mai. Nō reira, tēnā koutou, tēnā koutou, tēnā tātou katoa

## 6. General discussion

Key points from the discussion included:

### Early Career Researchers

- The desire to capture the energy from the He Pito Mata ECR Conference, and the ECR's interest in connecting with the Young Academy network globally. It was noted that the Society's ECR conferences had prompted ECR groups setting up in other research organisations.
- Thought should also be given to Mid-Career researchers and their needs.

### **Academy information**

- A request was made to get information on the composition of the Fellowship, in terms of age, electoral college, and diversity.

### **Latest Climate Change Consultation: what can we bring to this round?**

- David Schiel gave an outline of the Ministry of Foreign Affairs and Trade's Public Consultation on Aotearoa New Zealand's International Climate Negotiations, and invited Fellows to contribute to the on-line consultation.
- It was highlighted that the Society needed to be more visible and take leads on important national issues.
- There was a need for expert advice on land use change to address climate adaptation and climate emissions, although the impacts on small rural communities of these changes could be high.
- It was noted that plans were often outpaced by catastrophic events, but the process of producing plans was invaluable to thinking about and preparing for different possible future scenarios.
- The Society could think about how it could be set up to provide advice on a faster turnaround.
- The challenges of navigating the government departmental set up for providing expert advice was highlighted, noting the need to turn up with the right report at the right time. The Society could be pro-active in identifying where there were policy research gaps that needed addressing.

### **How might research communities navigate the dangers and potential of AI?**

- Forum members tried out asking ChatGPT questions on-line. It was noted that AI was enabling the generation of misinformation at a much higher rate, and supporting the notion that there is a simple right answer to any problem.
- It was noted that in publishing, some journals were stipulating that AI cant be an author on a paper, but there were still questions over whether it could support reviewers efforts in looking over the draft, or draft an abstract, or identify suitable experts to review a paper.
- There were issues over data sovereignty for New Zealand specific information, and what recognition the information sources needed.

In closing, Charlotte thanked everyone for attending in person, and on-line, as well as Marc Rands for his support to the Academy in his role as Academy Executive Officer.