Exit interview: Inside Juliet Gerrard’s chaotic six years as NZ’s top scientist

**By**

Jamie Morton NZ Herald

30 Jun, 2024 05:00 AM12 mins to read

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Dame Professor Juliet Gerrard is stepping down after six years as the Prime Minister's chief science adviser. Photo / Greg Bowker

**She’s served as New Zealand’s chief scientist through a deadly eruption, a global pandemic and seemingly endless upheaval in our science sector. As Dame Professor Juliet Gerrard clocks off, she shares her parting thoughts with science reporter Jamie Morton.**

Here’s one thing you probably didn’t know about New Zealand’s top scientist: Dame Professor Juliet Gerrard never applied for the job, or knew she was being considered for it.

When her cellphone began ringing one day in 2018 – the “No Caller ID” on her screen turned out to be the Department of the Prime Minister and Cabinet asking for an interview – she nearly ignored it.

“I was confused when I got the phone call because there were no applications at that stage,” said Gerrard, a University of Auckland-based academic at the time.

“I gathered they’d done a ring-around and got some names, but nobody told me mine had been put forward … so it was a complete surprise.”



She figured the interview process would lead to nothing more than an interesting experience, only to be told the role was hers.

“I was 50 per cent excited, 50 per cent terrified.”

Here’s another fun fact about the UK-born biochemist: She celebrates big wins by playing Cindi Lauper’s 1983 bopper “Girls Just Want to Have Fun”.



Don’t most people just pop open a bottle of bubbly?

“[Cindi Lauper] doesn’t rule out the bubbly,” she shoots back, “but yeah.”

‘No one is an expert on everything’

New Zealand Prime Ministers didn’t always have chief science advisers.

Dame Professor Juliet Gerrard with Dame Jacinda Ardern, who she served as chief science adviser for more than four years.

That changed when John Key, who wanted science at the heart of government decision-making, appointed Professor Sir Peter Gluckman to the new role in 2009.

We might think of the job as some all-knowing, Merlin-like wizard who can rattle off an answer to any question the PM has. In reality it's just about being an evidence broker.

"Obviously, no one is an expert on everything," Gerrard told the Herald. "so a large part of the role is connecting to experts and helping to distill key information into easily-communicated ideas."

You advise on what's known, what's not, and you never base that advice on your own opinion. You might help inform policy: but you never try to prescribe it.

Gerrard's introduction to the role was a whirlwind of meetings on both sides of the science-policy divide, before sitting down for an informal chat with Jacinda Ardern, just back from parental leave.

"We were throwing ideas around, both in terms of topics and how we were going to work … so it was a nice way to ease into the role."

Their first pick - rethinking the way New Zealand approached plastics - suited the environment-focused agenda of Ardern's coalition Government and Gerrard's desire to tackle big issues collaboratively.

Ardern had another curious topic for Gerrard to dive into: 5G.

Well before its national rollout, the cellular network had become something of a magnet for misinformation, with conspiracies about deep-state mind control and radiation.


The roll-out of New Zealand's 5G network proved a magnet for misinformation. Photo / Warren Buckland

One fearful Auckland woman had already built a $30,000 wall to shield her home from a cell tower.

The concise report Gerrard turned in tackled some rather odd questions: could 5G disrupt bees, or be used as a bio-weapon?

It proved her first foray into hot-button subjects that have ranged from nitrates, fluoride and commercial fishing to gangs and legalising cannabis.

“It was also my first taste of the anti-science backlash that we would become familiar with later,” she said.

“There wasn’t much in the mainstream, but I remember a worried friend sending me a meme that they had seen on the internet which had my headshot overlaid with ‘New Zealand’s most hated woman’, or something similar.”

Science in crisis

At 2.11pm, on December 9, 2019, Gerrard was at Government House attending the launch of a documentary focused on her plastics work.

Some 470km away, Whakaari/White Island suddenly exploded in a violent eruption that ultimately left 24 people dead and 25 injured.


Juliet Gerrard, pictured at an Auckland function on December 8, 2019 - one day before the Whakaari / White Island disaster - with sailor Grant Dalton, Jacinda Ardern and Sustainable Coastlines co-founder Camden Howitt. Photo / Jason Oxenham

Gerrard was called to the first crisis meetings, where she acted as translator between volcanologists and officials co-ordinating the response effort.

It was the “most extreme example”, she later told an interviewer, of having to rapidly learn a scientific discipline different to her own.

“I was often simplifying what I was hearing, but I kept an expert with me so that, if I’d over-simplified it to the point that it was no longer correct, then he could pick me up on that.”

When an SAS-led body recovery team landed on the island just a few days after the disaster, Gerrard was following the operation tensely.

“Obviously, we hadn’t made the decision [to go], but as a group of scientists, we’d provided some key information that enabled the decision to be made.”

The potential for the volcano to erupt again during that three-hour mission – the chances of further fatality was estimated at about 6% - made for a “nerve-wracking” wait.

Soon after came the earliest reports from China of a new coronavirus.

As it happened, the prospect of pandemic had come up when she'd met with a group working under her UK counterpart, Sir Patrick Vallance, just months before.

"I asked them what their number-one fear was, in terms of having to provide scientific advice in a crisis: they said a respiratory virus pandemic," she said.

"That's when I really thought in earnest about what could happen if we had a pandemic, yet I hadn't expected one to pop up quite so soon."

As Covid-19 swept the globe, Gerrard's days became blurs of endless phone calls, emails and Zoom meetings.

While her Ministry of Health offsider, Dr Ian Town, was tapping a steady stream of information from global health officials, Gerrard was plugged into her international science advice networks.

"In those earliest days, we were putting out almost daily summaries, and updating them with what we knew, what we didn't, how confident we were in everything … and we'd just send those through to anybody who wanted them," she said.

"We were just working and sleeping at that stage."

All that evidence proved crucial as officials made one unprecedented decision after another.

Then Prime Minister Jacinda Ardern and her chief science adviser Juliet Gerrard receive

their first Covid-19 vaccinations from nurse Nicole Andrews at Auckland's Manurewa Vaccination centre in June 2021. Photo / Alex Burton

Had the call to go into national lockdown been delayed just another three weeks, modellers later found, it could've scotched our chances of elimination and avoiding the death tolls harder-hit countries endured.

"I have spent some time overseas this year, and it struck me how positive the people I met were about our response," she said.

"The early response in particular undoubtedly saved a lot of lives, and I am proud to have helped with that."

For Gerrard, the months-long marathon didn't end until New Zealand was declared Covid-free in June 2020.

"Looking back on it, it seems very surreal, like it was a movie ... but at the time, I didn't have a chance to reflect at all – I was just getting on with it."

How did she avoid crashing?

"I'm lucky. I had a lot of support, and I thrive on stress, so I wasn't as badly affected as a lot of people were."

Misinformation and misogyny

As Covid-19 raged, Gerrard and other experts observed another worrying epidemic: the global rise of misinformation.

While 2022's summer occupation of Parliament grounds reached its violent climax, disinformation researchers tracked an explosion in social media activity – much of it stemming from just a dozen accounts.

The dramatic final day of Parliament's 23-day occupation, on March 2, 2022. Photo / Mark Mitchell

At the time, Gerrard told the Herald that New Zealand had long enjoyed high trust in government and science, but that we'd nonetheless need to work hard against a "rising global tide" of misinformation.

There's little sign that tide has ebbed.

It's a "worrying trend", she says, and solutions aren't easy to find.

Recent work out of her office suggested that schooling our young about media and information literacy could help them navigate what it called a "polluted landscape".

"But we still have a lot to learn and the problem is increasingly urgent."

Results from one recent Ipsos poll, for instance, found more than half of respondents agreed that "experts in this country don't understand the lives of people like me".

Too often, scientists have become the targets of vitriol: something dramatically shown by last year's documentary film Ms. Information, tracking the experience of infectious diseases expert Associate Professor Siouxsie Wiles.

"I've definitely been on the receiving end of some, but not to anywhere near the same extent as Siouxsie, maybe because my public profile was much smaller," Gerrard said.

"A lot of it was in places I don't see, and have no wish to see, but I saw enough to sense that it was sometimes gendered.

“I think that is a sad but inevitable part of taking on a high-profile role as a woman.”

Post-Covid, Gerrard admitted she’d had to change some settings on her social media accounts to avoid them being swamped with hostile feedback.

But it hadn’t altogether stopped her using social platforms, which she said had been an overall positive experience.

“I am still surprised when I meet people who know what we’ve been up to in quite a lot of detail, because they follow these accounts.”

Challenges ahead

Gerrard’s own interest in science was kindled by a certain chemistry teacher, Mr Parrot, back at her old secondary school in seaside Grimsby.

Dame Professor Juliet Gerrard had a career as a biochemist before stepping into the role of Prime Minister's chief science adviser. Photo / Greg Bowker.

“He just made everything really interesting: he didn’t drill facts into people, but did experiments and just waited for people to ask questions, and to work out what was going on.”

It was a learning style that stayed with her as she went on to study chemistry at Oxford University in the 1980s – and one she’s tried to foster in her own students.

While girls curious about science today have more role models than she did, there's still much work to do in a sector that's long been likened to an old boys club.

Kiwi women today remain sorely under-represented at the highest tiers of science, engineering, technology and mathematics – even in fields that are female-dominated.

"I think that the challenge for Māori and Pacific researchers is steeper, despite some efforts over the past few years to increase participation."

It'd been heartening, she added, to see incentives, like grants to take caregivers to conferences, that were helping to break down old barriers.

As for the state of New Zealand's under-pressure science system, Gerrard said she was "acutely aware" of its challenges.

The past few years have seen hundreds of science jobs cut amid ongoing financial turmoil within our universities; and dozens more are now proposed to go at Niwa.

Sector commentators have hit out at the sudden loss of hundreds of millions of dollars of funding through the now-ending National Science Challenges – and the scrapping of a massive reboot that was supposed to have followed the decade-long programme.

Just this month, Gerrard's counterpart at the Department of Conservation, renowned DNA expert Dr Mike Bunce, finished up after his science adviser role was deleted in a cost-cutting restructure.

Gerrard has often steered clear of commenting about the science system – something her office doesn't advise on – but told the Herald it'd been "very disappointing" to see the loss of the challenges, and the foreshadowing of more cuts in future budgets.

"I'd love to see the latest iteration of the review of the science system completed swiftly, with clear decisions made to enable strategic direction and investment," she said.

"We need to set a direction for the science system that lasts longer than political cycles to enable us to move past the last few years of uncertainty, improve morale, and strengthen the system, so that it can support New Zealand's challenges and opportunities."

What did she see as the most pressing science issues facing Kiwis in 2024?

"There are so many to choose from, but top of mind are adaptation to climate change, resilience to natural hazards, drinking water safety and artificial intelligence."

All would have important consequences for us in the near to medium term, she said, and needed a sound scientific evidence base.

"We also need to bolster our capability in certain disciplines to support a pipeline of new, innovative, high-tech businesses."

Outgoing chief science adviser Dame Professor Juliet Gerrard plans on leaving "plenty of clean air" for her still-to-be-announced successor. Photo / Greg Bowker

She was also encouraged to see the new Government single out as a focus area gene editing – a technology for which she and other scientists argue is long overdue a regulatory overhaul.

“I think that the conversation has moved quite a long way and is more nuanced now, which is great.”

As for Gerrard’s next steps, after she leaves this week, there aren’t any plans to start a think-tank, or to head back into biochemistry.

Her university has granted her some research and study leave to reflect on the past few years, and there are handful of advisory roles she’s picked up, alongside her seat on Te Papa’s board.

After a planned holiday “a long way from Wellington”, there’ll also be more time for the mum-of-two to spend with family and friends.

For whoevever succeeds her in the top job – naturally a point of intense speculation in the science community – Gerrard says she won’t be taking up any of the limelight.

“I plan on leaving plenty of clean air.”

She does, however, have some not-so-scientific advice for that person: build networks with other researchers.

“Invest in and nurture those relationships, because you never know what the next issue you will be asked to address will be.”