Appendix

2025 Survey of New Zealand Scientists & Technologists

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This appendix provides the content of the Qualtrics survey. Due to the nature of Qualtrics some question numbers are presented out of order, and some question numbers have not been used.

2025 Survey of New Zealand Scientists and Technologists Information for participants

Kia ora. You are invited to participate in a research study exploring the views, characteristics, careers and demographics of scientists and technologists who work in New Zealand. This study is being conducted by Dr Michael Edmonds from the University of Canterbury | Te Whare Wānanga o Waitaha. Other research team members include Dr Troy Baisden and Dr Lucy Stewart from the New Zealand Association of Scientists (NZAS).

What is the purpose of this research? In 2008 a survey of New Zealand scientists and technologists was carried out by the New Zealand Association of Scientists. The aim of the survey was fourfold a) to serve as a voice for the science community, b) to provide a source of information for the inform science policy, c) provide a source of performance measures of government science policy, and d) provide information to enhance public understanding of science and technology. The current research uses a refreshed survey to reexamine the current science and technology environment in New Zealand, to see what changes have occurred relative to the 2008 survey. For example, how have the demographics of those engaging in science (gender, ethnicity, background, fields of research, type of role and employer) changed since 2008? How have the attitudes and beliefs of those engaging in science changed regarding topics such as climate change, use of nuclear power, genetically modified organisms, stem cell research, public understanding of science, and science funding models?

Why have you received this invitation? You are being invited to participate in this research because you belong to a science or technology related organisation who we have asked to circulate survey information to their members, or other participants have shared a link to the survey with you. We are interested in hearing from anyone who has training in science, technology, engineering, mathematics, social science, or health (undergraduate or postgraduate degrees) and who works (or worked) in scientific or technology roles including research, management, education, policy, advisory and/or other related roles. Your participation is voluntary (your choice). If you decide not to participate, there are no consequences. Your decision will not affect your relationship with me, the University of Canterbury or any member of the research team. You may be invited to complete this survey more than once via the different professional networks you are involved in - you only need to complete it once.

What is involved in participating? If you choose to take part in this research, please complete the online survey that follows this information page. The survey involves answering 49 questions covering general information regarding your qualifications, employment, demographic details and your opinions and views on a range of topics. Completing the survey should take around 30 to 40 minutes.

Are there any potential benefits from taking part in this research? We do not expect any direct benefits to you personally from completing this survey. However, the information gathered will provide the New Zealand Association of Scientists and the wider scientific community with information on the science environment in New Zealand and will help with presenting an informed voice for the science community, provide information that can contribute to and help measure the outcomes of science policy in New Zealand, and provide information which can enhance public understanding of science and technology.

Are there any potential risks involved in this research? We are not aware of any risks to participants in this research.

What if you change your mind during or after the study? You are free to withdraw at any time. To do this, simply close your browser window or the application (App) the survey is presented on. Any information you have entered up to that point will be deleted from the data set.

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What will happen to the information you provide? All data will be anonymous IF you do not include an ORCID ID number or any identifying comments in your responses. If you do provide any identifying information the responses will be treated confidentially. All data will be stored on the University of Canterbury's computer network in password-protected files. All data will be kept indefinitely so that it can be used to compare to future surveys. Dr Michael Edmonds will be responsible for making sure that only members of the research team use your data for the purposes mentioned in this information sheet. In the future, new research team members may be added to continue this research which may include it being used for future thesis research. Any theses produced will be available through the UC library. All outcomes of this research, including theses, will maintain confidentiality and make sure participants are not identifiable.

Will the results of the study be published? The results of this research will be likely be published in the New Zealand Science Review, a publication of the New Zealand Association of Scientists, or in a similar journal. Results may also be presented during conferences or seminars to wider professional and academic communities. You will not be identifiable in any publication. I will send a summary of the research to you at the end of the study, if you request this. If you provide an email address for this purpose, it will not be linked with your survey responses.

Who can I contact if I have any questions or concerns? If you have any questions about the research, please contact: Dr Michael Edmonds michael.edmonds@canterbury.ac.nz. This study has been reviewed and approved by the University of Canterbury Human Research Ethics Committee (HREC) Project reference 2025/33/LR-PS. If you have concerns or complaints about this research, please contact the Chair of the HREC at human-ethics@canterbury.ac.nz.

What happens next? If you would like a PDF version of this information sheet, please email Dr Michael Edmonds at the email address above. Please read the following statement of consent and start the survey below.

Statement of consent. I have read the study information and understand what is involved in participating. By completing the survey and submitting my responses, I consent to participate.

Section 1 - Career & Training

Q1. Which of the following areas of research best describes the field of your highest qualification?

- ○ Agricultural & soil sciences
- ○ Biological sciences
- ○ Chemical sciences
- ○ Engineering sciences & applied sciences/technologies
- ○ Earth & environmental sciences/natural resources
- ○ Medical/health sciences
- ○ Mathematics/computer sciences
- ○ Physical sciences
- ○ Social & behavioural sciences
- ○ Other, please specify

Q2. Which of the following best describes the research field you currently work in? (If you are not currently working, the field you most recently worked in).

- ○ Agricultural & soil sciences
- ○ Biological sciences
- ○ Chemical sciences
- ○ Engineering sciences & applied sciences/technologies
- ○ Earth & environmental sciences/natural resources
- ○ Medical/health sciences
- ○ Mathematics/computer sciences
- ○ Physical sciences
- ○ Social & behavioural sciences
- ○ Other, please specify

Q3. What is your highest scientific qualification?

- Doctorate (PhD)
- Masters
- BSc/BA (honours)
- BSc/BA
- BEng
- BEngTech
- Other

Q4. What year did you complete your highest scientific qualification?

Q5. Which of the following best describes your current work status?

- Employed for 35 or more hours a week
- Employed for 20 to 34 hours a week
- Employed for between 1 to 19 hours a week
- Retired
- Unemployed and looking for work
- Unemployed and not looking for work
- Other, please specify

Q6. What year did you retire?

Q7. Which of the following categories best describes your current primary employer? (If you are retired or currently unemployed please indicate the category that best describes your most recent employer).

- Crown Research Institute
- Industry
- Museum
- Polytechnic
- Self employed
- Start up company
- University
- Other, please specify

Q8. Which best describes your current primary role?

- Permanent/continuing position
- Temporary/fixed term position
- Casual position
- Other. please specify

Q9. What is your annual personal income?

- Less than $40,000
- 40,000 to $59,999
- 60,000 to $79,999
- 80,000 to $99,999
- 100,000 to $119,999
- 120,000 to $139,999
- 140,000 to $159,999
- 160,000 to $179,999
- 180,000 to $199,999
- More than $199,999

Section 2: Demographic Information

Q10. What is your current age?

- Under 25
- 25 to 29
- 30 to 34
- 35 to 39
- 40 to 44
- 45 to 49
- 50 to 54
- 55 to 59
- 60 to 64
- 65 to 69
- Over 69

Q11. What gender do you identify as?

- Male
- Female
- Other, please specify
- Prefer not to say

Q12. What is your ethnicity? (select as many as you consider appropriate)

- Asian
- European/Pākehā
- Māori
- Middle Eastern/Latin American/African
- Pacific Peoples
- Other, please specify

Q13. Do you know the name(s) of your iwi/tribe(s)?

- No
- Yes

Q14. Please provide the name(s) of your iwi/tribe(s)

Q15. Which of the following describes your citizen status?

- New Zealand citizen
- Resident non-citizen
- On temporary work permit
- Other, please specify

Q16. Do you identify as a member of the LGBTQIA/Rainbow community?

- Yes
- No
- Prefer not to say

Q17. What high school(s) did you attend (and in which city)?

Q41. Using the scale below, rate your level of agreement with how each of the following statements describes you.

Strongly disagree	Disagree	Slightly disagree	Neither disagree or agree	Slightly agree	Agree	Strongly agree

- I am a talkative, communicative person.
- I like to cooperate with other people.
- I consider myself to be inventive and creative.
- I come up with new and original ideas.
- I am helpful and assist other people.
- I do things in an efficient way.
- I am a social and extroverted person.
- I am a reliable worker.
- I often feel tense.
- I get nervous easily.

Section 3: Work, Research and Funding

Q18. Using the scale below, indicate approximately how much your role involves the following tasks:

Never	Some of the time	About half of the time	Most of the time	All of the time

- Administration & compliance
- Policy analysis & development
- Professional practice/consulting
- Research as an investigator
- Research management
- Studying
- Teaching
- Technical support
- Technology development
- Other, please specify

Q19. Do you have an ORCID ID number?

- Yes
- No

Q20. Please list your ORCID number below (If you do not wish to include your ORCID number please enter 0)

Q21. From which of the following funding sources have you received funding in the past five years? Please select as many answers as are relevant.

- Bioresource Processing Alliance (BPA)
- Callaghan Innovation
- Catalyst funding
- Centre(s) of Research Excellence (CoREs)
- Commercial contract(s)
- Consultancy fees
- Crown Research Institute(s)
- Endeavour Smart Idea(s)
- Endeavour Programme(s)
- Government department(s)
- Health Research Council (HRC)
- Horizon Europe
- James Cook Fellowship
- Lotteries grant(s)
- Marsden Fund
- National Science Challenges

- New Zealand philanthropic organisation(s)
- New Zealand Product Accelerator (NZPA)
- Ngā Puanga Pūtaiao Fellowship
- Performance Based Research Fund
- Private Investor (e.g., Angel Investor)
- R & D tax incentive
- Rutherford Discovery Fellowship
- Sustainable Food & Fibres Future
- University/charity/NGO funded PhD scholarship
- Other source(s), please specify

Q23. What is the annual research and development budget, including salaries, that you are responsible for?

- No budget
- Less than $100,000
- Between 100,000 and $500,000
- Between $500,000 to $1,000,000
- More than $1,000,000

Q24. Please list any professional organisations that you are a member of (include both New Zealand and overseas organisations).

Q25. Have you been appointed to a board of directors during the past five years?

- Yes
- No

Section 4: Your Experiences & Opinions

Q26. Using the scale below, rate how important the following factors were in your becoming a science/technology/engineering professional

Not at all important	Slightly important	Moderately important	Very important	Extremely important

- Desire to achieve a comfortable lifestyle.
- Desire to contribute to the improvement and advancement of humanity.
- Desire to follow in the footsteps of great thinkers.
- Expectation of a sense of accomplishment.
- Influence of an older scientist/technologist/engineer.
- Influence of a school teacher.
- Expectations of other persons.
- Intrigue with the search for truth and an understanding of the natural world.
- My chosen area of expertise was easy for me to learn.
- I found my chosen area of expertise intrinsically enjoyable.
- Potential to become famous for my research.
- Potential to become wealthy.
- Other, please specify.

Q27. Please name any books, TV series or films which influenced you to become a science/technology professional.

Q28. Using the scale below, rate your level of concern regarding the following issues.

Not concerned at all	Slightly concerned	Moderately concerned	Very concerned	Extremely concerned

- Lack of public understanding of science & technology.
- Interruptions in research funding.
- Over-politicisation of research.
- Decline in student interest in science & technology.
- Bureaucratic accountability, management and red tape.
- Emphasis on funding applied research over basic research.
- Fraudulent development of data and it's use by scientists.
- Lack of funding for humanities and social science research.
- Other (comment)

Q29. Using the scale below, rate your level of agreement with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree	I do not feel sufficiently informed to comment

- The development of potentially dangerous technologies should be decided, primarily, within the scientific and engineering community.
- I support the use of genetic modification (GM) outside of laboratories.
- Increasing levels of human induced atmospheric carbon dioxide is the main cause of climate change.
- New Zealand should reconsider its prohibition of nuclear power sources.
- Embryonic stem cell research should not be carried out in New Zealand.
- Newspaper and television reporting on science issues in New Zealand is accurate and unbiased.
- In my professional capacity, I feel responsible first to science and the creation of new products and knowledge, and then to the concerns of citizens.
- Scientific research should be freely and publicly available, not behind paywalls.
- The promotion of diversity, equity and inclusion (DEI) has had a positive effect on the advancement of scientific research.

Q30. Using the scale below, rate your level of agreement with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree	I do not feel sufficiently informed to comment

- It is in the public interest to discourage the dissemination of the views of scientists who do not agree with reigning orthodoxies in scientific issues.
- New Zealand should be the primary beneficiary of scientific advances funded by New Zealand taxpayers.
- It is the government's role to broadly define what research should be carried out, thereby providing scientists with a 'research agenda'.
- When the government sets research agenda, it is responding more to political priorities than it is to the potential for scientific advances.
- Overall, Performance-Based Research Funding (PBRF) monies have been fairly allocated to those university scientists most likely to perform excellent research.
- The New Zealand public agencies that fund or invest in RS&T do enough to support the retention and development of research capability needed by existing sectors and industries.
- Government science strategy development is open and inclusive of a large segment of New Zealand scientists and technologists.
- During the past five years technical and other staff support for my scientific research has been satisfactory.
- I am able to submit my research results for publication without prior approval from my employer.

Q31. Using the scale below, rate your level of agreement with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree	I do not feel sufficiently informed to comment

- Special efforts should be made to attract women into science, maths and engineering studies.
- Special efforts should be made to attract Māori into science, maths and engineering studies.
- I would recommend a career in science to young people.
- I would recommend a career in engineering to young people.
- My education and training have prepared me for productive work outside of research.
- I think access to state-of-the-art equipment is better now that it was five years ago.
- During the last five years I have experienced increased pressure to direct my research toward commercial outcomes.

Q32. Using the scale below, rate your level of agreement with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree	I do not feel sufficiently informed to comment

- During the past five years I have participated in or directly witnessed at least one effective research collaboration between social scientists and physical scientists.
- Over the past five years the opportunities for cross institutional collaborative research have greatly improved.
- During the past two years my job satisfaction has risen.
- All things considered, science in New Zealand is headed in the right direction.
- Excluding general mistakes that can be charitably dismissed (but not condoned), I have direct personal knowledge of fraud (e.g. falsifying data, misreporting results, plagiarism) on the part of a professional scientist during the past five years
- I feel that my job is reasonably secure for the next two years.

Q33. Using the scale below, rate your level of agreement with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree	I do not feel sufficiently informed to comment

- The great majority of bids for government research funding are of such similar quality and value that a lottery approach to funding would deliver a better result.
- When the government funds basic/fundamental research, the government should not expect a specific payoff because no scientist can guarantee a result in advance of doing the research.
- Even if it brings no immediate results, scientific research that advances the frontiers of knowledge is necessary and should be supported by the New Zealand government.
- Government science strategy is open and inclusive of a large segment of New Zealand scientists.
- It is important that Mātauranga Māori is part of the New Zealand science system.
- Scientific discovery is more a serendipitous result of insight and circumstance that it is of textbook methodological treatment of a subject area.
- Scientific advances are more likely to emerge from team research than from the insights of an individual.
- I am sufficiently informed on Government funding body priorities to allow me to submit coherent bids for research funding.
- Artificial Intelligence's (AI's) potential negative impacts outweigh its potential positive impacts.

Q34. Using the scale below, rate how important you think the following factors are in contributing to a strong, motivated and productive science and technology work force in New Zealand.

Not at all important	Slightly important	Moderately important	Very important	Extremely important

- A national science strategy to which scientists contribute.
- A transparent decision-making system based on evidence and guidelines.
- Opportunities for career advancement in science and technology
- A climate in which scientists feel valued and trusted.
- Employment security.
- A productive work environment.

Q35. During the last five years I have been solicited for advice or evidence by a government agency to inform policy making.

- Yes
- No

Q36. During the last five years I have been asked for advice or research support by industry.

- Yes
- No

Q37. Using the scale below, rate your level of agreement with the following statements.

Strongly disagree	Disagree	Slightly disagree	Neither disagree or agree	Slightly agree	Agree	Strongly agree	I do not feel sufficiently informed to comment

- Overall, the New Zealand Government's response to Covid was appropriate.
- Overall, the New Zealand Government's response to Covid was informed by science.
- Masks were an appropriate tool to use in responding to the Covid pandemic.
- I support the use of vaccines in response to the Covid pandemic.
- I support mandatory vaccinations in response to the Covid pandemic.

Q38. Using the scale below, to rate your level of agreement with the following statements.

Strongly disagree	Disagree	Slightly disagree	Neither disagree or agree	Slightly agree	Agree	Strongly agree	Not applicable to my role

- The general public appear to be less trusting of science and technology than they were a decade ago.
- It is becoming more difficult to distinguish between what is fact and what is dis- and mis-information.
- It is important for scientists to share their research with the public.
- Scientists should be politically neutral and not engage in political debates.
- My organisation supports me to engage with the general public regarding my scientific expertise.
- My organisation rewards me when I engage with the general public regarding my scientific expertise.
- I feel safe presenting my work to the general public.
- I am able to speak freely on public policy issues within my area of expertise without prior approval from my employer.

Q39. Identify all of the ways you have shared science & technology information with the general public in the past year.

- I don't share such information with the general public
- Blogging
- Bluesky
- Instagram
- Organisation website
- Personal website
- Public talks
- School talks
- TikTok
- Youtube
- Other, please specify

Q40. Using the scale below, rate your level of agreement with the following statements.

Strongly disagree	Disagree	Slightly disagree	Neither disagree or agree	Slightly agree	Agree	Strongly agree	I do not feel sufficiently informed to comment

- Overall, I think the Government's proposed changes to the science research sector in New Zealand in 2025 will benefit science and technology research in New Zealand.
- I support the Government's plan to merge Crown Research Institutes into four Public Research Organisations.
- I support the disestablishment of Callaghan Innovation.
- I support the Government's Gene Technology Bill which will allow more gene research to take place in New Zealand.
- The current Government makes decisions based on scientific evidence.
- I support the removal of Humanities and Social Science funding from the Marsden Fund.
- I support the expectation that 50% of funded Marsden proposals must demonstrate potential for economic impacts.
- Overall, the National Science Challenges were well designed and administered.
- The end of the National Science Challenges has left some valuable areas of research without support.

Section 5: Experience with Grants & Funding

Q42. Have you submitted a funding application to the Health Research Council in the last five years?

- Yes
- No

Q43. Using the scale below, rate your level of agreement with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

- The HRC award process works well.
- Reviews are affected by cronyism, old boys' networks and insider politics.
- Original, non-mainstream ideas are unlikely to be funded.
- Reviews are perfunctory and provide little useful information.
- Reviews are not given sufficient weight in award decisions.
- Reviews are conflicting.
- Original ideas are leaked or stolen.
- I have no major concerns.

Q44. Have you submitted a grant application for an MBIE Endeavour programme or Smart Idea in the past five years?

- Yes
- No

Q45. Using the scale below, rate your level of agreement with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

- The Endeavour programme/Smart Idea award process works well.
- Reviews are affected by cronyism, old boys' networks and insider politics.
- Original, non-mainstream ideas are unlikely to be funded.
- Reviews are perfunctory and provide little useful information.
- Reviews are not given sufficient weight in award decisions.
- Reviews are conflicting.
- Original ideas are leaked or stolen.
- I have no major concerns.

Q46. Have you submitted a grant application for a Marsden grant in the past five years?

- Yes
- No

Q47. Using the scale below, rate your level of agreement with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree

- The Marsden grant process works well.
- Reviews are affected by cronyism, old boys' networks and insider politics.
- Original, non-mainstream ideas are unlikely to be funded.
- Reviews are perfunctory and provide little useful information.
- Reviews are not given sufficient weight in award decisions.
- Reviews are conflicting.
- Original ideas are leaked or stolen.
- I have no major concerns.

Q48. If there are any other funding sources you would like to comment on, please use the text box below.

Section 6: Other Comments

If there are any additional comments you would like to make about the science and technology environment in New Zealand please add them below.