

Research, Science, and Technology Policy

The Green Party will support the values from te ao Māori as relevant ethical guidelines for the conduct of science and biotechnology in Aotearoa New Zealand. We will reform the structure and funding of science research. We strongly support a commitment to technology that enables us to work together more effectively and do more with less for longer.

Vision

Science and research are nurtured, empowering us to expand our horizons and create opportunities for ethical progress.

Values and Principles

Decisions relating to research, science, and technology (RS&T) must be consistent with the following values and principles:

- *Honour Te Tiriti o Waitangi*: Māori leadership and mātauranga Māori are vital and enrich the pursuit of knowledge in Aotearoa. Mātauranga Māori is valued and protected as living knowledge that belongs to its iwi and hapu.
- *Ecological Wisdom*: Ecosystems and scientific knowledge are interwoven, enhancing, and invigorating each other.
- *Social Responsibility*: The research and scientific community must be actively supported, transparent, and responsive to Aotearoa's needs. It must provide direction on critical issues in a way that equitably uplifts the wellbeing of all.
- *Appropriate Decision-Making*: Transdisciplinary and evidence-based practices guide research, science, and technology, which support decision-making to be precautionary and informed.
- *Non-Violence*: Research and scientific advancements must be grounded in strong ethical principles that uphold wellbeing and minimise harm of participants and communities.
- *Exploration*: Science and research nurture learning and curiosity, not profit. They should critique society and our entrenched beliefs. They must provide our best evidence-based and reputable insights to important questions and problems.
- *Openness*: Communities benefit when they are able to responsibly access, use, and learn from research, science, and technology. The public should be able to freely access and understand research, and its results, in a way that respects their origin.

Strategic Priorities

The Green Party's strategic goals include:

“All people will be empowered to shape the systems that affect them through community engagement enabled by good evidence, co-design, and adequate resourcing.”

Actions in this policy that will help achieve this include:

- Develop a funding strategy that treats investment into RST as long-term essential infrastructure and ensures that funding levels are reliable, tailored to the research context, and above the average OECD spend relative to GDP. (1.1.1)
- Improve equity, diversity, and participation in the research environment and build understanding of how stigmatisation, bias, and colonisation limit research outcomes. (2.2)
- Providing pathways for communities to participate in research, such as citizen science, incubation labs, community-led research, and representation in governance groups. (3.1.3)
- Empowering and appropriately resourcing kaupapa Māori research | rangahau, for publications, monitoring, and advice. (4.1.1)
- Supporting research conducted in Aotearoa New Zealand to be open access and open source, while enabling protections for privacy and data sovereignty. (5.2.1)
- Establishing an independent body to monitor and advise on technological trends, domestically and internationally, and enable appropriate regulation in a timely manner. (6.2.2)

Connected Policies

This policy is connected to many others, including priorities for research to support informed decision-making and technologies to support a transition to a sustainable economy. Tertiary [Education](#) institutions play a large role in research. [Digital](#) technologies are covered in a separate policy.

Policy Positions

1. Funding and research environment

Issues

Due to Aotearoa New Zealand’s size, isolation, and chronic underinvestment in research, science, and technology (RST), it can be difficult to secure funding to advance innovative research and scientific programmes. Investment models often prioritise projects that deliver commercial application and profits over those that may better advance knowledge and community good. What funding is available is usually short-term, insecure, and contestable. This can disadvantage independent or early-career researchers, create unstable employment, favour specific types of research, limit knowledge generation, and impede productivity and cooperation.

Actions

- 1.1. Ensure the research, science, and technology sector is structured and funded in a way that enables fit-for-purpose and world-leading cooperative research, including by:

- 1.1.1. Develop a funding strategy that treats investment into RST as long-term essential infrastructure, and ensures that funding levels are reliable, tailored to the research context, and above the average OECD spend relative to GDP;
 - 1.1.2. Develop a national research strategy, through collaboration with research sectors, that is future-focused and sets priority research areas that will help provide solutions to the systemic issues we face and contribute to transitioning to a more just economy that works to benefit people and the planet;
 - 1.1.3. Provide flexibility in how research and science institutions receive and use funding, giving more control of funding to experts within their respective fields over external bodies; and
 - 1.1.4. Implementing other sector reform recommendations from the Science System Advisory Groups.
- 1.2. Ensure Aotearoa New Zealand's research environment attracts and retains people, especially early career researchers, including by:
- 1.2.1. Enabling overseas visas and pathways to residency for researchers to relocate to New Zealand with their family;
 - 1.2.2. Providing opportunities for research fellowships and stable income careers outside of academia, such as connecting people to commercial bodies, and creating positions for social and scientific research within public institutions; and
 - 1.2.3. Expanding tenure arrangements for researchers.
- 1.3. Enable different types of research and disciplines to promote a diverse and innovative research environment, with appropriate funding models and institutions that nurture them, including by:
- 1.3.1. Ensuring research that falls outside the traditional "hard sciences", such as the humanities, and social sciences, are valued and properly considered for competitive funding grants;
 - 1.3.2. Ensuring that research that takes on a stewardship function, such as monitoring and developing data banks that inform policy and other research, has reliable access to non-competitive funding; and
 - 1.3.3. Ensuring that, for research that focuses on blue-sky thinking, curiosity, and knowledge generation, there are suitable environments to foster it and funding models that don't require commercial benefit as justification.
 - 1.3.4. Diversifying research funding to provide opportunities and build capacity for a greater range of research and development organisations, such as wānanga, iwi, hapū, and community organisations.

2. Research Ethics

Issues

Research which does not meet appropriate ethical standards can violate confidentiality, consent, wellbeing, tikanga, and rights. Marginalisation can occur if science is not responsive to the needs and vulnerabilities of communities impacted or being researched. Institutional ethics frameworks

can be too slow to respond to continuously evolving landscapes or insufficiently adaptable to different types of research.

Actions

- 2.1. Ensure research in or on a community helps empower that community and is flexible to their interests, tikanga, and priorities, including by:
 - 2.1.1. Supporting research to be developed with the consent and leadership of directly affected people/communities, including iwi and hapū Māori, and be guided by an analysis of impacts; and
 - 2.1.2. Supporting researchers to maintain ongoing transparent relationships and actively work with the communities they are researching.
- 2.2. Improve equity, diversity, and participation in the research environment and build understanding of how stigmatisation, bias, and colonisation limit research outcomes, including by:
 - 2.2.1. Requiring research organisations receiving government funding to promote the participation of diverse communities through their hiring and community engagement practices; and
 - 2.2.2. Implementing anti-discriminatory data practices, and mandate their use by businesses and organisations.
- 2.3. Support publicly funded research to better consider and integrate Māori values, knowledge, and needs, including by:
 - 2.3.1. Requiring Vision Mātauranga statements.
- 2.4. Enable research and science to guide government policy and be a critic and conscience of society, including by:
 - 2.4.1. Providing protection for researchers and scientists reliant on Government funding to advise and criticise Government policy without fear of political or institutional retaliation;
 - 2.4.2. Enabling research groups and experts representing marginalised communities to hold the Government to account when its actions have a negative impact on those communities; and
 - 2.4.3. Supporting researchers and scientists to share their knowledge and research with the general public in ways that are easy to understand and engaging (science and research communication).
- 2.5. Ensure that animal testing only occurs rarely, transparently, and has tangible benefits to people or animals, including by:
 - 2.5.1. Requiring all research that intends to use animal testing to follow the principles of replacement, reduction, and refinement; and
 - 2.5.2. Ensuring animal ethics committees are transparent and effective.

3. Community and research

Issues

Research can be conducted in a way that does not uphold its social license, enable people and communities to positively participate, and that harms the relationship between researchers and the public. This limits the ability of research to be improved by contributions from different perspectives, develop buy-in from the public, and serve different communities well.

Actions

- 3.1. Support diverse communities, research methodologies, and environments (such as kaupapa Māori research | rangahau) to participate in science and research, including by:
 - 3.1.1. Supporting programmes that enable transdisciplinary research projects and involve the connected communities across the entire project;
 - 3.1.2. Using appropriate and tailored methods for community engagement, including young people and marginalised groups; and
 - 3.1.3. Providing pathways for communities to participate in research, such as citizen science, incubation labs, and community-led research, and representation in governance groups.
- 3.2. Resource and nurture the capability for local and regional governments, iwi, and hapū to undertake and communicate research, including by:
 - 3.2.1. Building local research and advisory teams to equitably inform policy to address local issues; and
 - 3.2.2. Investing in community infrastructure for research and learning, including local libraries and databases.

4. Validity of Māori knowledge

Issues

Mātauranga Māori is not always recognised as legitimate or valuable when compared to mainstream knowledge. This limits the progression of science, invalidates centuries of knowledge built from collective experiences, favours individualistic mindsets, and does not allow for a diversity of culturally relevant systems.

Actions

- 4.1. Uphold Māori as kaitiaki of mātauranga Māori, including by:
 - 4.1.1. Empowering and appropriately resourcing kaupapa Māori research | rangahau, for publications, monitoring, and advice;
 - 4.1.2. Facilitating effective engagement and mutually beneficial relationships between the sector and Māori;
 - 4.1.3. Building capability of non-Māori research groups and institutes to engage with mātauranga Māori and tikanga; and
 - 4.1.4. Ensuring research that engages with taonga with kaitiakitanga relationships has permission and upholds any conditions from the relevant iwi/hapū.

5. Copyright, patents, trademarks

Issues

Intellectual property laws favour those with the resources to enforce ownership rights against the public good. Meanwhile, creators and researchers are not properly recognised or remunerated for their creations and contributions.

Actions

- 5.1. Ensure the commercialisation of research provides public access, equitable distribution of benefits, and recognition of people's labour and contributions, including by:
 - 5.1.1. Enabling researchers and inventors to control the means of producing and sharing their work, including through improving direct access to business and marketing expertise;
 - 5.1.2. Ensuring equitable benefits for researched communities whose data is used to develop or sell commercial products or services; and
 - 5.1.3. Retaining shares in market products stemming from publicly funded research and reinvesting profits into the research community.
- 5.2. Enable people to have free and unrestricted access to research and publications, including by:
 - 5.2.1. Supporting research conducted in Aotearoa New Zealand to be open access and open source, while enabling protections for privacy and data sovereignty; and
 - 5.2.2. Providing free, bulk access to research journals and publications to all New Zealanders.
- 5.3. Recognise the inherent worth of the genome, its taonga nature as a part of whakapapa, and its intrinsic connection to an individual, including by:
 - 5.3.1. Prohibiting the patenting and proprietary ownership of any organism's genome;
 - 5.3.2. Establishing inalienable legal ownership of the human genome and genomic data by the individual or whānau it originates from; and
 - 5.3.3. Establishing strong privacy laws for the access, handling, and storage of human genomic data.

6. Regulation of Technologies

Issues

Emerging technologies, and new developments to established technology, present new opportunities, benefits, and risks. However, effective regulation of technology needs to manage unknown, or uncertain, risks and benefits, rapid changes that cause established regulation to become out of sync with the latest evidence or products available, the influence of capital and competing interests, politicisation, and uncertain social licences. There is also an increasing number of physical technologies that consume an excessive amount of finite materials and energy, and when adopted regulation fails to account for the externalised costs and resource usage imposed by them. Not engaging with new technology and developments however, limits our ability to tackle the polycrisis we face, realise and equitably distribute their potential benefits, and effectively minimise their potential harm.

Actions

- 6.1. Ensure that technology regulation is guided by the following principles:
 - 6.1.1. Responsible: Guides to improve the wellbeing of society and the environment, bring tangible benefits to the broader community, and is not driven by commercial outcomes;
 - 6.1.2. Effective: Enables technology to solve issues and achieve benefits that justify its use;
 - 6.1.3. Just: Supports equity, distribution of benefits, and accountability for negative outcomes, and minimises risks of harm and coercion;
 - 6.1.4. Balanced: Recognises both potential benefits and risks of both intervening and not intervening, whilst following a precautionary¹ approach;
 - 6.1.5. Responsive: Adapts to changing and wide-ranging circumstances quickly, and aids our ability to address issues in a timely manner;
 - 6.1.6. Evidence-based: Reflects up-to-date and evolving understandings of the technology and its impacts, and produces effective solutions; and
 - 6.1.7. Acceptable: Upholds a community and Tiriti-based ethical social licence.
- 6.2. Ensure the regulation and oversight of emerging technologies² are robust and uphold the above principles, including by:
 - 6.2.1. Identifying barriers to the adoption and equitable distribution of technology, identifying areas of underinvestment in technology, and seeking equitable and socially responsible adoption and distribution;
 - 6.2.2. Establishing an independent body to monitor and advise on technological trends, domestically and internationally, and enable appropriate regulation in a timely manner;
 - 6.2.3. Ensuring regulation accounts for monitoring compliance and has avenues to improve efficacy; and
 - 6.2.4. Activating participatory democracy when undergoing public consultation.
- 6.3. Ensure that technology regulators understand and are responsive to the range of perspectives and attitudes to different technologies within and between communities, including by:
 - 6.3.1. Establishing advisory boards comprised of tangata whenua, experts, and people with connected lived experience; and
 - 6.3.2. Supporting the rangatiratanga of hapū and iwi to act on their own tikanga and enable a flexible regulatory system that recognises that there are different perspectives and values across te ao Māori.

¹ *Precautionary principle*: the absence of known risk is not evidence of no risk

² *Emerging technologies*: New or evolving innovations with transformative potential and plausible risks to the health of people, other species, or ecosystems, often characterised by rapid development and societal impact. Includes recent developments in genetic engineering (e.g. CRISPR), precision fermentation, cloning, and artificial intelligence (e.g generative AI).

- 6.4. Enable an evidence-based approach to technology, including by:
 - 6.4.1. Publishing detailed evaluations of new technologies that identify the benefits and impacts of implementation.
- 6.5. Enable the growth and development of technologies that minimise our dependence on limited or unsustainable resources and support a just transition to a circular economy, including by:
 - 6.5.1. Using only appropriate, evidence-based technologies to enhance our short and medium-term resilience to, and mitigation of, environmental crises, and create jobs as part of a just transition;
 - 6.5.2. Refining the standards for energy rating labels, and equivalent schemes, to take into consideration environmental impact in context of New Zealand's ecosystems, energy systems, and environmental standards; and
 - 6.5.3. Introducing waste diversion and environmental efficiency requirements, and associated reporting obligations, for the manufacturers, producers, and retailers of technology.
- 6.6. Enable the growth and development of technologies that reduce social disparity, and ensure the benefits of technology is distributed equitably, including by:
 - 6.6.1. Resourcing the collection of insightful, high-quality information about our population and environment, using appropriate methodologies such as the Census; and
 - 6.6.2. Investing in and using technologies that enhance equitable participation in society, including through ensuring easy access to accessibility aids.