

**The
Aotearoa
Circle**

Mā te Kaitiakitanga
ko te Tōnuitanga
Prosperity Through
Guardianship

Modern Genetic Technology Phase II - Actions Pathway

Contents



Foreword

Aotearoa New Zealand is on the cusp of making significant decisions about how it treats modern genetic technologies. As the New Zealand Government explores options for updating current legislation, there are a wide range of views to consider. For many in Aotearoa, genetic technologies are seen as a potential tool in the fight against climate change and the battle to protect nature. For others, they are a Pandora’s box, and their use would risk destroying our reputation with overseas consumers of our food and fibre products.

The Aotearoa Circle seeks to act as a “neutral sandpit” in areas such as this. Our role is to bring together experts and key stakeholders from across the spectrum to inform decision makers in positions of national influence. Applying this approach we seek to enable the restoration of our natural capital for future generations.

In the course of our previous work in the food and agriculture sectors, questions about the potential use of modern genetic technologies have arisen. These questions prompted the work which led to our first biotechnology report [Modern Genetic Technology: Applications in Aotearoa Food and Fibre Production](#).

Report findings (done with PwC and a wide range of New Zealand experts from across the sectors with an interest in these technologies) were intended not to tell regulators what they should do, but to suggest what New Zealand could do when it comes to our approach to regulating modern genetic technologies.

This report is a natural sequel to that work and distils the thinking of key experts in this arena, regarding other actions a regulator might need to consider, to arrive at the best possible outcome for Aotearoa New Zealand when undertaking regulatory changes regarding modern genetic technologies.

The experts and stakeholders who contributed to this new work have skin in the game. They are representatives from agri-sector businesses; research institutes; those with commercial genetics interests; organics representatives; Government representatives; leaders from industry good bodies and various thought leaders from the community.

The results of their considerations are captured in detail in the following pages, but in short, their view is best summarised as “Proceed. But with caution.” This could be characterised as the distilled view of the majority, but minority views must still be recognised and there were those who told us they still do not want New Zealand to open itself any further to biotechnology. Tempering that however, much has changed since New Zealand first started considering how to approach these questions. As one participant said, “we have 24 more years of experience now than we did last time we had these conversations... so, [we can learn from international experience and] our conversations can be more based on what has actually happened than what might happen.”

Overall, there is a willingness to explore the potential of modern genetic technologies for Aotearoa New Zealand, but no matter how enthusiastic the participant was in this process, the view was always that we have just one chance to get this right.

How do we do that? It is hoped that the information in this report will be a useful part of that. We see it as a tool for a range of stakeholders from interested corporates to regulatory authorities and decision makers across portfolios ranging from climate change and the environment, to trade, agriculture and science.

We wish to thank the people who took part in the thoughtful and wide-ranging conversations and the work it took to bring this report to life.



Vicki Watson
Chief Executive

Project funding provided by AGMARDT



Executive Summary

As part of The Aotearoa Circle’s work exploring how to enable the restoration of New Zealand’s natural capital, we have been working with experts from across the public and private sectors with an interest in future decisions about regulatory settings regarding modern genetic technologies.

This report summarises recent surveys and workshops completed with dozens of representatives from across industries and community organisations with an interest in future modern genetic technology decisions. That work was completed before the announcement on 13 August that the current Government will introduce legislation before the end of 2024 to end the ban on gene technology outside laboratory settings. However, the findings of this report are very relevant to the process the Government has announced, because it outlines priority actions New Zealand will need to ensure best outcomes from any regulatory change.

The clear feedback from the participants in this work was that the regulator will need to take into account the following socio-economic factors as a matter of priority:

- Market access and trade
- Environmental impacts
- Education and awareness
- Cultural values

Many of the stakeholders also took part in one of two workshops to establish priority actions associated with those factors, that would help ensure best possible outcomes from any changes to New Zealand’s regulation of modern genetic technologies. After the workshops, the views of the participants were distilled into the findings in this report. Details of those actions, which have been crafted for application before, during and after the development of new regulation, are presented on the following pages. The findings of this report are not presented as a consensus view, but are distillation of the wide range of viewpoints heard in the process.



Summary of findings

Participants in our phase two feedback processes noted that Aotearoa New Zealand has one chance to get this right. Once modern genetic technologies are adopted outside of a lab setting, we cannot (easily) put the genie back in the bottle in terms of potential environmental, cultural and reputational harms.

With a focus on ensuring we get the best outcomes from any regulatory reform, our participants identified the following socio-economic factors as the most important to consider:

- Market access and trade
- Environmental impacts
- Education and awareness
- Cultural values

The following table summarises the high-level actions our expert participants believe are necessary at each stage of the regulatory reform process. The overarching theme is that communication is key at every step. More detail can be found in the section [‘detailed findings’](#).

Recommended actions before regulatory reform	Recommended actions during regulatory reform	Recommended actions after regulatory reform
Bring together suitable expertise in a panel format to assist with regulatory design.	Undertake robust regulatory design that addresses key concerns, particularly with respect to market access and trade and the environment, and effectively manages risks and opportunities.	Allocate resources to all entities working in this space to assist them to maintain market access.
Led by the panel, investigate and collate required information to educate the New Zealand public on modern genetic technologies and what regulatory reform might mean.	Undertake effective engagement with the public of New Zealand to enable informed participation in the consultation phase of regulatory design.	Actively and thoroughly manage and monitor potential environmental risks and impacts and respond as and where required.
Open informed two-way dialogue with New Zealanders regarding the options for regulatory reform, seeking feedback from primary producers and other key stakeholders such as Māori, and working to understand market access and trade implications.		Continue to engage with the public of New Zealand, including Māori, business and community members, so that they are well-informed about the new regulations. Also support market access, with information campaigns aiming to protect and continue trade at every level.

Background

Modern genetic technologies may offer Aotearoa New Zealand new opportunities to address the challenges of our deteriorating natural capital and our need to combat climate change and adapt to its impacts.

They may have the potential to unlock greater productivity in food production, combat pest species and reduce carbon and methane emissions. However, with these opportunities, comes risk. These risks include (but are not limited to) unintended consequences identified as environmental impacts, potential reputational and economic impacts (for a country that is dependent on primary sector exports) and cultural harms. In May 2024, The Aotearoa Circle published its report [Modern Genetic Technology: Applications in Aotearoa Food and Fibre Production](#). This report was the culmination of phase one of The Circle's biotechnology workstream.

That work was focused on supporting decision makers in their understanding of the potential environmental impacts and benefits of genetic technology. It also looked at the potential trade-offs inherent in different regulatory approaches. It's stated aim was to "lay the foundation to guide decision makers in shaping a future that balances innovation with responsible practices, ensuring the long-term wellbeing of New Zealand's environment and society."

It did three specific things:

- Compared three regulatory frameworks to understand where New Zealand fits into the broader global picture
- Looked at the socio-economic factors in need of consideration in using genetic technologies in food and fibre production
- Considered three specific case studies in plants, in detail, and animal case studies generically.

The report drew on the expertise of representatives from research institutes, entities with commercial genetics interests, Māori researchers, government representatives, industry good bodies and thought leaders. A total of 38 different organisations were represented. PwC acted as secretariat.

The report looked at what Aotearoa New Zealand could do with modern genetic technologies; it did not suggest what we should do.

In terms of what Aotearoa New Zealand could do, any changes in our regulatory framework will need to consider the full range of potential impacts. Our phase one report outlined nine socio-economic factors that a regulator would ideally consider if changes to New Zealand legislation were desired. These included (in no particular order) community values; competitive advantage; consumer response; cultural values; equity; innovation and IP protection; market access and trade; retailers and NGO accreditations; and social licence to operate.

Several of these factors rely on public understanding. Legislative change will also benefit from broad public support.

Currently, support from the New Zealand public for these technologies is tepid and understanding is low. Two recent surveys of the New Zealand public provide useful results.

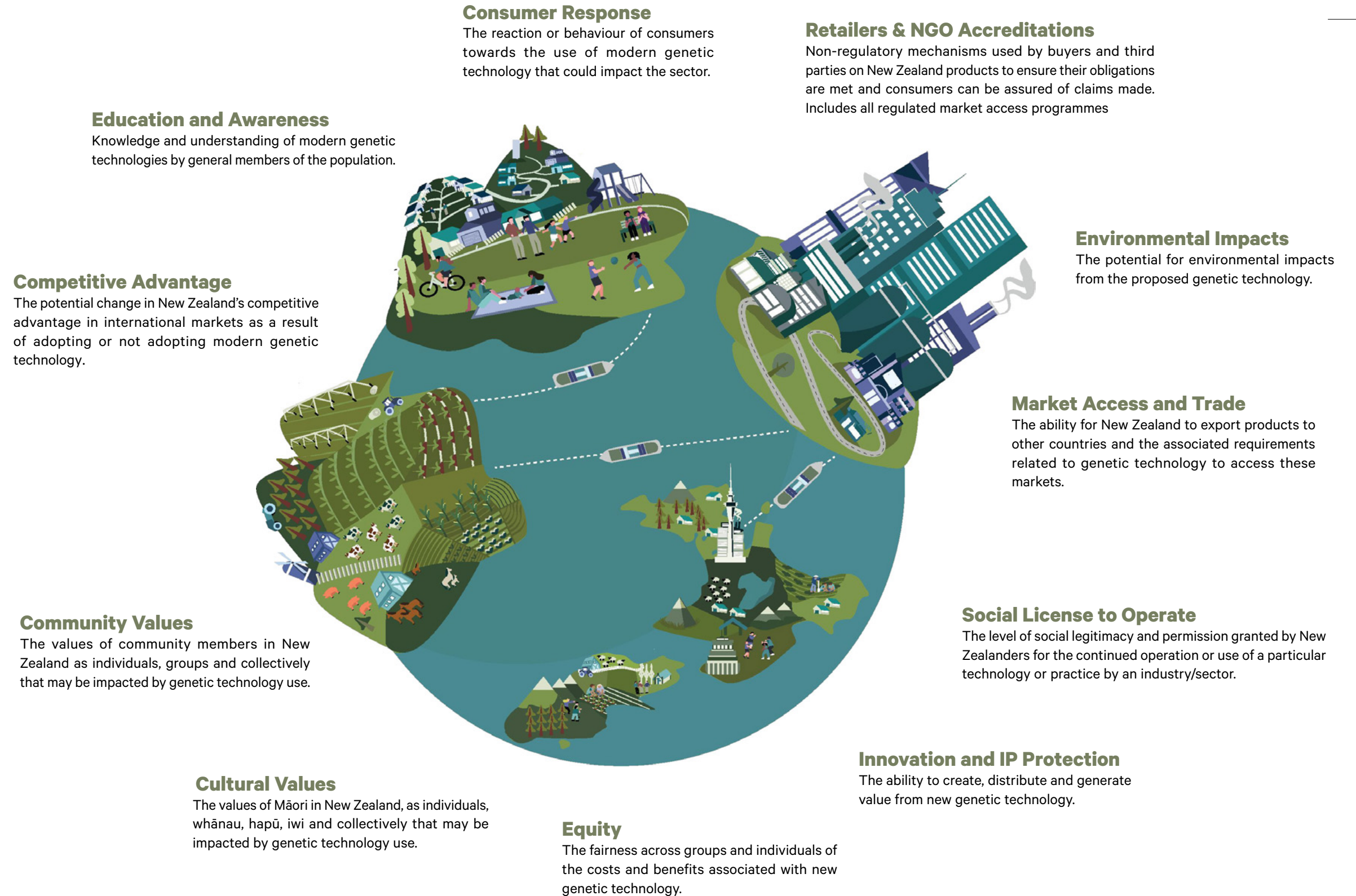
[The Public Perceptions of Genetic Technologies](#) report in June, showed that public support for using genetic technology in growing food was "approximately split into thirds: 34% support, 31% oppose and 34% were unsure."

[The Research First survey](#), published in Spring 2024 edition, attempted to differentiate between GE and GM technologies but its own results showed that "most people are using GM and GE interchangeably [which] underlined just how much more education is needed"

Our first report showed that New Zealand is currently at the conservative end of the regulatory spectrum. We know from the recent surveys above, that public understanding of, and support for, the technology is limited. Any change in the regulatory framework will benefit from a clear pathway of next steps. The aim of this report is to draw on the knowledge of various expert stakeholders, to outline critical actions that could result in the best possible decisions regarding New Zealand's regulatory framework, and how it is applied.



The Possible Socio-economic Impacts from Changing Genetic Technology Regulation are Diverse and Global as identified in the phase one report.



Phase two approach

This report was designed to draw on expert stakeholders from a range of sectors including agri-sector businesses (including conventional and organic), Māori researchers, research institutes, representatives of commercial genetics interests, industry good bodies and thought leaders.

In our Phase One work, we reached out to a wide range of organisations, seeking their input and participation. This meant for Phase Two, because our first report had been made public, an even wider range of voices were aware and therefore engaged. This enabled us to canvas a wide- range of parties, given that this report is intended to inform actions which might be taken by a regulator.

Because of the sensitive nature of this work, all participants were offered the chance to contribute anonymously, and all took this opportunity.

Across the two phases of work, we involved expert stakeholders in five ways:

- The phase one workstream (participants from 38
- organisations)
- A launch webinar for the phase one report (178 attendees)
- A post-webinar poll (86 respondents)
- A pre-phase two workshop poll (20 respondents)
- Phase two workshop (35 participants from 27 organisations, 16 private organisations, 9 public and 2 NGO)

It should be noted that in the workshop process, a wide range of views were expressed. These ranged from a desire to keep the regulatory status quo, to a wish to see New Zealand move rapidly toward embracing new developments in modern genetic technology. Through our workshop process, we welcomed differing views – we were not attempting to reach a consensus. Therefore, the views reflected in this report are a distillation of the feedback we heard, not an agreed or shared viewpoint of the group as a whole.

We would further note that a wide range of stakeholders were approached to invite their participation in this process, but not all those approached accepted the invitation. The viewpoints summarised here reflect only the views of those who actually chose to take part.

Pre-Workshop Polling

We undertook two polls before our workshops. The first was a post-webinar poll. There were 86 anonymous respondents made up of webinar attendees and other interested parties. The purpose of this poll was to identify how respondents ranked the nine socio-economic factors, plus environmental impacts and education and awareness, in order of importance, as well as which of those they considered the single most important factor. These factors are displayed in the image above and are listed in detail in [Appendix A](#). Environmental factors and education and awareness were added in to be reflected in the choices offered for consideration. The results of this poll were considered informative but not directive.

The second pre-workshop poll asked workshop invitees to consider the importance of the eleven factors in three different time periods: in the design phase for any new regulation (“before regulatory reform”), during the parliamentary process of drafting and submissions around the adoption of new regulation (“during regulatory reform”) and then when any new regulation is being implemented (“after regulatory reform”).

Twenty of the 35 workshop participants completed the poll ahead of the workshop. The factors considered of top four importance across all three time periods were environmental impacts, education and awareness, cultural values and market access and trade. The only exception was within the ‘during regulatory design’ stage, where competitive advantage was considered more important than education and awareness. Given any actions designed to address competitive advantage would be similar to those designed to address market access and trade, it was decided to focus on the top four.

We do not present these polls as offering statistically significant results. They were used as a starting point to inform discussion in the workshops and in the case of the second poll, to provide structure to the workshops to enable discussion around the issues of:

- market access and trade plus competitive advantage,
- environmental considerations,
- education and awareness,
- cultural values

The first three factors listed above consistently appeared near the top of rankings in either poll. Māori cultural values was in the top four in the pre-workshop poll. Tables showing the results of the polls can be found in [Appendix B](#).

Workshop Methodology

Two online workshops, informed by the polls, were held on the 4th and 9th July 2024. The aim of these workshops was to get substantive, qualitative feedback from a wide range of experts and stakeholders in the conversation about modern genetic technology in Aotearoa. It is this feedback that informs the actions presented in this report.

Workshop attendees came from the public, NGO and private sector. All participants took part on an anonymous basis, but we can provide the following detail about the organisations they represent:

- nine public sector organisations
- sixteen from the private sector including major primary sector commodity producers, technology companies and industry good companies
- two NGOs

To ensure findings were robust and conversations were free and frank, it was agreed that no attribution of any of the findings would be made to any of the individual representatives.

Round table opinion statements were made on how participants defined the **current state of play regarding modern genetic technologies in New Zealand**. The workshops split into four breakout groups focusing on a socio-economic factor each.

During the breakout groups, participants first defined the objective for their respective socio-economic factors, across each of the three time horizons. Once this was complete, they defined up to three actions that could be undertaken to deliver on the objectives.

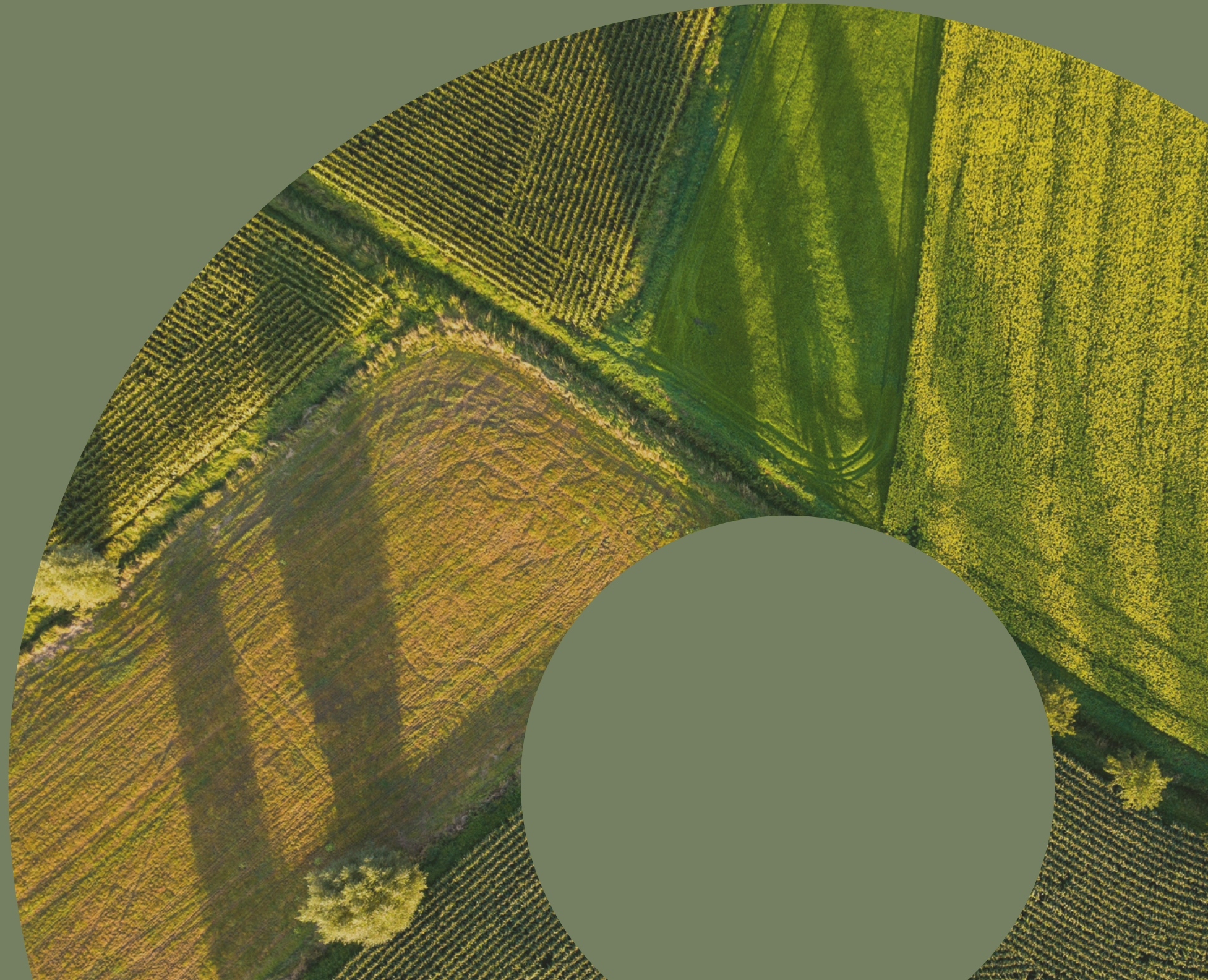
Breakout groups were for informative discussion – consensus building was not a requirement. Participants populated worksheets (group or individual). After the breakout sessions, participants were asked what they considered to be the **number one priority action that must be taken forward**.

After the workshop, participants returned the worksheets to The Circle for analysis and distillation. This was then reviewed by Circle partners who participated in the workshops. The final draft of this report was then provided to all participants in the workshops and drop-in sessions were setup for participants to join and communicate any final changes they wanted to see.

Detailed findings

The actions laid out in the following tables are a distillation of the feedback from 35 expert participants from the 27 stakeholder organisations who took part in our workshop. All actions are intended to deliver on the top socio-economic factors which the regulator would need to consider in the design of any new regulatory regime.

Please note all quotes supplied are a mixture of individual and group feedback taken from workshop discussions.



Actions before regulatory reform

Before regulatory reform is undertaken, participants in the workshops emphasised the importance of understanding market access and trade implications of any regulatory change. They also recommended working to have a well-informed public capable of making decisions and engaging with their representatives effectively. They noted that New Zealand’s awareness of this topic lags the rest of the world, and therefore, New Zealanders should be brought along on this journey with the sector. They also stressed the importance of targeting the broader community while ensuring respectful and sufficient consultation with Māori.

Key thoughts from participants included that we need to “understand the potential economic impacts of any regulatory change - from status quo to full deregulation” and “protect our trading relationships – ensure an informed discussion takes place before regulatory change [is made].”

Regarding education and awareness, participants said that we are in a different position now than when Aotearoa New Zealand first began discussing biotechnology. “We have 24 more years of experience now than we did last time we had these conversations... so, our conversations can be more based on what has actually happened [more] than what might happen.”

Actions before regulatory reform

Recommended Action	Detailed actions required to deliver on objective	Accountable entity
Bring together suitable expertise in a panel format to assist with regulatory design	Identify and assemble a panel of trusted knowledge brokers who have a stake in the future regulatory treatment of modern genetic technologies in Aotearoa New Zealand; or, Reframe any existing advisory groups, through a robust and transparent process.	Ministry of Business, Innovation and Employment Collaboration from science community, NGOs and private sector
Led by the panel, identify and collate required information to educate the New Zealand public on modern genetic technologies and what regulatory reform might mean	<p>Investigations should include:</p> <ul style="list-style-type: none">• Understanding international approaches to environmental assessment processes, controls, and any impacts experienced as a result of a more liberal regulatory framework.• Categorising the various GMO/GE technologies and how they may be adopted, resulting in alignment with key international markets and a taxonomy of terms supporting Māori and non-Māori education and awareness.• Consider by market, and by sector, what these implications could mean for NZ businesses in terms of global and domestic market access, along with other risks/benefits associated with any change. This includes the potential loss of investment in non-GM or organic properties to date.• Provide real life examples of modern genetic technology use, as well as newly emerged opportunities to use these technologies to address threats to climate and nature.• Understand the preferences of significant international consumers of New Zealand food and fibre. Offer insights into the trade-offs between environmental benefits and market risks from modern genetic technologies. <p>Analyse the potential consequences for primary producers and Māori, and the rights and opportunities they currently benefit from. Consider those who will seek to maintain GE-free status as well as those seeking to adopt modern genetic technologies.</p> <p>Insights should Include the potential risks for primary producers seeking GE-free opportunities including market access risks and potential cost impost from certification and compliance imposed by governments, banks, insurance companies etc</p>	Regulatory agency accountable for the legislation Other relevant government/ government agencies with support from industry groups
Open informed two-way dialogue with New Zealanders regarding the options for regulatory reform, seeking feedback from primary producers and other key stakeholders such as Māori and working to understand market access and trade implications.	<p>The two-way dialogue approach should:</p> <ul style="list-style-type: none">• Ensure the information shared with the public is available in a digestible and easily accessible format to enable engagement with key groups including but not limited to Māori, schools, councils, businesses, and other community groups.• Ensure the process is suitably resourced with experts included in the process, who have both knowledge and independence.• Undertake sufficient consultation with Māori and demonstrate consideration of Māori rights and interests as outlined in the Treaty of Waitangi, Wai262 claim etc. Include Māori Business and iwi leaders in the engagement process.• Actively seek feedback from stakeholders in the primary sector.	Regulatory agency accountable for the legislation Other relevant government/ government agencies with support from industry groups

Actions during regulatory reform

Phase two participants emphasised that the right regulatory framework should maintain access to markets by ensuring we have reliable ways of protecting producers who rely on their GE-free or organic status. Well-designed regulation should enhance the environment by maximising positive impacts and minimising negative ones. This involves developing evidence-based risk assessment processes for applications, enabling all types of producers (GE or GE-free) to coexist, without incurring business losses or facing additional financial and regulatory burdens, both domestically and globally. To achieve this, participants emphasised the importance of an open and fair engagement process with the public and an appropriate co-design process that includes Māori representation and consideration of their values.

Feedback from participants included that we should protect our New Zealand market access by understanding “the current and future perceptions of customers and consumers to ensure we protect our premium pure New Zealand positioning [and] develop effective communications... that can be used with customers, consumers and governments.”

Actions during regulatory reform

Recommended action	Detailed actions required to deliver on objective	Accountable entity
Undertake robust regulatory design that addresses key concerns, particularly with respect to market access and trade and the environment, and effectively manages risks and opportunities.	Ensure a single government entity (with appropriate Māori input) has a clear lead role with respect to oversight, responsibility, and accountability for modern genetic technology regulatory design approaches.	Ministry of Business, Innovation and Employment with support and input from industry, experts, and Māori.
	Ensure it is well resourced and has sufficient expertise and is effectively linked to regulators in relevant overseas jurisdictions, including our major trading partners such as Australia.	
	Conduct a full risk assessment for non-GE producers and use the information to design adequate protections to ensure those producers can continue to comply with their certification and export requirements.	Ministry of Business, Innovation and Employment with support and input from industry, experts, and Māori.
	<p>As part of any new regulation, design an evidence-based risk assessment and decision-making process to maintain best practices and protect New Zealand, New Zealanders, and our international credibility. Key requirements should include, but not be limited to, the following:</p> <ul style="list-style-type: none">• Robust collection and assessment of risk information, available locally and globally.• Quantifying the known positive and negative environmental impacts, and risk assess any unknown positive and negative impacts.• Include cultural values in the risk assessment, build on established processes (ie Nga Kaihautu – EPA).• Input/consultation on applications by affected persons – and processes for assessment of their concerns. <p>To ensure the system and processes address key impacts, this should be informed by a subject matter expert panel who conduct consultation with key trading partners to relevant overseas market access requirements and other trade agreements, as well as producers and supporting bodies in New Zealand. This panel may include, replicate, or be the same as, the panel formed before regulatory reform as described above.</p>	Ministry of Business, Innovation and Employment with support and input from industry, experts, and Māori.
	To ensure relative distribution of risks and benefits, an accountability framework should be incorporated into the design. This framework would be informed by the risk assessment for non-GE producers. It would establish distribution of liability for any risks between public (if mostly public benefit) vs private (if mostly private benefit) as well as address relative risks and benefits, not just total risks and benefits.	Ministry of Business, Innovation and Employment with support and input from industry, experts, and Māori.

During regulatory reform continued

Recommended action	Detailed actions required to deliver on objective	Accountable entity
Undertake effective engagement with the public of New Zealand to enable informed participation in the consultation phase of regulatory design	<p>Inform the public of the proposed regulatory response and be informed by the public through external information sharing and engagement processes. Use all outputs from stakeholder engagement to tune the regulatory dials to the most appropriate level of risk acceptance for the long-term prosperity of Aotearoa, its people and environments</p> <p>Ensure:</p> <ul style="list-style-type: none">• The process provides a framework for appropriate engagement for Māori (e.g. addresses access and benefit sharing when dealing with taonga species).• Engagement is undertaken with the right mix of groups and individual experts to inform the design process and that balanced views are sought.• Transparency via ongoing and genuine engagement with stakeholders, partners and public throughout the design process.• All producers are included in the process, such that different regulatory regimes can be tested, and the implementation realities understood. <p>This could include select committee processes to have informed debate on how a new system would work.</p>	Ministry of Business, Innovation and Employment with support and input from industry, experts, and Māori.

Actions after regulatory reform

If regulatory reform were to occur, participants in the phase two process said it is vital that well-funded systems and processes are in place to protect market participants who rely on their GE-free status. Participants also see the need for public education to be ongoing. If the public is well-informed about the new regulations, we increase the chances of a smooth transition and avoid misinformation and the potential loss of customers. Part of the work of retaining customers will be protecting the viability of non-GE/organic standards, to secure market access for all products.

Participants said “Consultation with industry and other stakeholders [is essential] throughout – more [consultation] is needed with those impacted most.”

They also asked “If the process [of regulatory reform] in reality is executed at a high speed, who can help with disseminating information about the process and the opportunity to contribute? Research organisations? Industry bodies?”

After regulatory reform

Recommended action	Detailed actions required to deliver on objective	Accountable entity
Allocate resources to all entities working in this space to assist them with maintaining market access	Resource the decision-making body appropriately to ensure it can work across government, and with the private sector such that it: <ul style="list-style-type: none">Delivers effectively on its duties of assessment, decision-making, engagement, and monitoring.Has the necessary systems, processes, infrastructure, and equitable funding pathways in place to maintain market access for all producers.Effectively manages obligations under free-trade agreements, upholding non-GE expectations, and addressing contamination issues to secure market access for products.	Regulatory agency accountable for the legislation Other relevant government/ government agencies with support from industry groups
Actively and thoroughly manage and monitor potential environmental risks and impacts, and respond as and where required	Manage environmental risks and impacts effectively by: <ul style="list-style-type: none">Enforcing monitoring programs to identify in-situ impacts and transboundary/contamination issues, with flexibility to adjust regulatory dials if required, based on findings.Conducting regular reviews and gather feedback from stakeholders to continuously improve controls over the application of modern genetic technologies.Monitoring the impact of regulatory changes on the entire supply chain, from producers to consumers, and implement strategies to mitigate negative effects.	Regulatory agency accountable for the legislation Other relevant government/ government agencies with support from industry groups
Continue to engage with the public of New Zealand, including Māori, business and community members, so that they are informed about the new regulation. Also support market access, with information campaigns aiming to protect and continue trade at every level	Develop and implement a comprehensive communication strategy to provide ongoing education and support to all stakeholders. This would: <ul style="list-style-type: none">Ensure effective implementation of a clear function to work with Māori, including their participation in applications and assessments, and in any monitoring processes to consider cultural impacts and benefits. This includes participatory engagement and cultural advisors informing decision-makers.Ensure all applications, decisions, and monitoring findings are communicated publicly to enable continual learning and awareness raising. Actively communicate to those who may be potentially indirectly affected, to have confidence in the system via online updates on a specific website.Keep the public well-informed about terminology, results, and opportunities related to genetic technologies, ensuring New Zealanders are up to date and can contribute to the process. This includes targeting the broader community and ensuring respectful consultation with Māori on gene technologies.Inform the public and special interest groups about how any new legislation will align with existing rules and regulations, for example, around biosecurity.Enable compliance with new regulations, including informing New Zealanders about regulatory changes and their implications, addressing risks and concerns, and promoting New Zealand’s commitment to organic standards and GE-free products to international markets.Clarify the responsibilities of the government and industry in maintaining market access, with the industry taking the lead on brand marketing and assurance processes.	Regulatory agency accountable for the legislation Other relevant government/ government agencies with support from industry groups

Appendices



Appendix A

From our Phase One modern genetic technologies project, the following socio-economic factors were found to be critical to consider in regulatory reform. The first report did not attempt to analyse which of these were of highest priority, nor how they should be considered.

Education and Awareness

Knowledge and understanding of modern genetic technologies by general members of the population.

Consumer Response

The reaction or behaviour of consumers towards the use of modern genetic technology that could impact the sector.

Competitive Advantage

The potential change in New Zealand’s competitive advantage in international markets as a result of adopting (or not adopting) modern genetic technology

Community Values

The values of community members in New Zealand as individuals, groups and collectively that may be impacted by genetic technology use.

Cultural Values

The values of Māori in New Zealand, as individuals, whānau, hapū, iwi and collectively that may be impacted by genetic technology use.

Equity

The fairness across groups and individuals of the costs and benefits associated with new genetic technology

Retailers and NGO Accreditations

Non-regulatory mechanisms used by buyers and third parties on New Zealand products to ensure their obligations are met and consumers can be assured of claims.

Market Access and Trade

The ability for New Zealand to export products to other countries and the associated requirements related to genetic technology to access these markets.

Social License to Operate

The level of social legitimacy and permission granted by New Zealanders for the continued operation or use of a particular technology or practice by an industry/sector.

Innovation and IP Protection

The ability to create, distribute and generate value from new genetic technology

Environmental Impacts

The potential for environmental impacts from the proposed genetic technology



Appendix B

This table lists the results from the post-webinar and pre-workshop polls. It includes the percentage of respondents to the webinar poll, who considered the importance of each factor in considering changes to regulation.

It also includes the percentage of respondents who nominated these individual factors to be the “single most important” of the 11 when considering making changes to regulations.

This data is not presented as having any statistical significance (n=86). There were 178 webinar attendees, of which 86 completed this poll.

Key
First
Second
Third
Fourth

	Importance of each factor in considering changes to regulation				
	Very Important	Important	Neutral	Unimportant	Single Most Important Factor
Environmental Impacts	67%	26%	7%	0%	31%
Education & Awareness	62%	29%	8%	1%	25%
Market Access & Trade	60%	33%	7%	0%	6%
Competitive Advantage	58%	35%	6%	1%	10%
Consumer Response	52%	42%	3%	2%	14%
Social License to Operate	45%	43%	12%	0%	5%
Cultural Values	41%	35%	22%	2%	1%
Innovation & IP Protection	38%	43%	19%	0%	2%
Community Values	34%	42%	23%	1%	0%
Equity	33%	41%	23%	3%	5%
Retailers & NGO Accreditations	26%	56%	16%	2%	0%

This table presents the percentage of respondents to the pre-workshop poll that considered each of the factors to be of ‘top 3’ importance across the three time periods, and an average of those results. This data is not presented as having any statistical significance (n=20). While there were 35 participants in the workshop, 20 of the 55 who were invited, responded to this poll.

Key	
First	
Second	
Third	
Fourth	

	Before Regulatory Changes	During Regulatory Changes	After Regulatory Changes	Average across all time periods
Environmental Impacts	45%	65%	55%	55%
Market Access & Trade	55%	40%	45%	47%
Cultural Values	35%	40%	30%	35%
Education & Awareness	35%	35%	35%	35%
Competitive Advantage	30%	40%	20%	30%
Social Licence to Operate	30%	30%	20%	27%
Consumer Response	35%	5%	20%	20%
Innovation & IP Protection	10%	15%	30%	18%
Community Values	10%	15%	25%	17%
Equity	5%	15%	10%	10%
Retailers & NGO Accreditations	10%	0%	10%	7%