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appendix 2

Outcomes of Consultation: Submissions from Interested Persons

Section contents

3.3 Strategic issues

Introduction

Thirty-nine submitters made substantial comment on strategic issues as a component of the three Warrant items (items (1), (k) and (m)) dealing with strategy.

Comments under this Warrant item (k) identified strategic issues with wide-ranging theoretical and conceptual perspectives. Comments covered such issues as: the need for a framework based on principles; the importance of balanced solutions, justice and fairness in decision-making; clarity for future direction; and responsibility towards future generations. Implications for various populations such as future generations, Maori and sufferers of genetic-based diseases were also noted. Other matters raised included health and safety considerations and potential impacts on the environment and biodiversity.

Submitters' comments from the other Warrant items dealing with strategic matters also traversed strategic 'issues' and have been included in this section. For the purpose of this analysis, strategic 'issues' are broadly defined as the considerations raised in the course of selecting a particular pathway (strategic 'option') to achieve a certain result (strategic 'outcome').

Key themes

Throughout the comments on all three Warrant items dealing with strategic matters, strategic issues generally grouped around four themes:

- acceptability
- choice
- risk management
- opportunities.

The matters raised under these four general types of strategic issues are outlined below and a more detailed discussion follows.

Acceptability

The core issues grouped under this heading focused on whether particular policies, actions and other outcomes were acceptable to certain groups of people,

or to various industry sectors. Examples cited by submitters raised questions such as:

- Would this course of action be acceptable to the New Zealand public at large?
- Would it satisfy the demands and requirements of particular populations such as industry groupings, organic farmers, sufferers of genetic-based illnesses?
- Is it ethically acceptable?
- Would it affect the integrity or cultural values of any particular group?

Choice

The main issues raised affecting choice centred on whether certain pathways affected our choice to pursue other alternatives. The strategic perspective of choice was not so much what the choices were, but whether choice remained if a certain pathway were adopted. In effect, do certain pathways close off other choices?

For example, issues raised by submitters raised such questions as:

- How would a decision to disallow genetically modified products such as insulin affect diabetics? What other choices would they have?
- How would such a decision affect medical researchers actively engaged in pursuing diagnostic and palliative care solutions? What choices would it constrain?

Risk management

The strategic issues raised in this area were about how risks could best be managed. The strategic perspective on risk was therefore a question not so much of what risks there were, but of how any risks associated with a particular strategic pathway or option could be effectively managed. For example, strategic issues raised included:

- Could we effectively manage the risks of a 'mixed' production system allowing both genetically modified crops and organic produce?

Opportunities

Strategic issues raised in relation to opportunities centred around the extent to which particular pathways would allow maximisation of opportunities. The main strategic questions in this area concerned whether particular courses of action were maximising opportunities, or reducing and closing off certain other opportunities. Opportunities to be maximised included such business goals as

innovation and productive capacity. Questions raised in comments from submitters included:

- What export opportunities would be missed if New Zealand failed to allow genetically modified animals?
- What opportunities would be lost if New Zealand failed to use genetic modification technology for pest control?
- What opportunities would be lost to New Zealand from organic farming if commercial production of genetically modified organisms were allowed?
- What applications of genetic modification were irreversible?

The following sections identify and summarise specific submitters' comments in relation to acceptability, choice, risk management and opportunity.

Acceptability

The need for "acceptable" solutions with widespread public support was the most-mentioned strategic issue. Decision-making grounded in a predetermined framework and informed by public debate was a frequent call. Several submitters emphasised the need for a system that ensured widespread public acceptance with fair, just and participatory decisions. Submitters also mentioned acceptable "cultural" and acceptable "environmental" strategies.

Submitters who emphasised the need for just and equitable solutions that had widespread public support, included Interchurch Commission on Genetic Engineering [IP49], which spoke of the need for "justice and equity to ensure that all will benefit from any applications of GM technology".

The need for public education and informed debate was a frequently mentioned issue. For example, New Zealand Catholic Bishops' Conference [IP38] called for a public education and consultation process so that "an informed community can participate fully in discussion, confident in their knowledge of both the scientific facts and the ethical issues". Parliamentary Commissioner for the Environment [IP70] stressed the need for development of policy frameworks to "facilitate understanding about genetic science and engage in constructive debate". It saw a need for a "more coordinated approach" with a "purposeful framework" for dealing with genetic modification issues. Institute of Molecular Biosciences, Massey University [IP15] expressed similar views. Noting that knowledge and information' were the "key strategic issues", it maintained that in its experience the wider community appreciated the knowledge and benefits that had already accrued from the use of genetic modification technology but that the public wanted "authoritative assurance that the new GM products will be safe". Genesis

Research and Development [IP11] thought that "as a society, New Zealand needs to continue to have open and informed discussions about the issues and the concerns arising from using GMOs". It recommended that: "Appropriate forums must be created where information can be made available in a format that will allow the public to understand the basic technology, so that informed decisions can be made."

Reinforcing the need for public support in New Zealand's use of genetic modification technology, SAFE (Save Animals from Exploitation) [IP85] stressed that "the ethical position of the general public is vitally important" and "should be a major factor in the Commission's recommendations". This view was echoed in the position adopted by University of Canterbury [IP7], which argued for a "pragmatic approach" so that extreme positions were avoided. Noting that low-risk genetic modification work had "great potential to benefit society", the University said that some high-risk work was "beyond the bounds accepted by society".

Safeguards to enhance acceptability and reduce perceived risks were frequently advocated. For example, Greenpeace New Zealand [IP82] stressed the need for a "strategic vision" to provide the "necessary critical framework within which the appropriateness of new technologies … should be assessed". Environment and Conservation Organisations of New Zealand [IP102] argued for an approach to assessing the safety and possible use of genetic modification "to be explored in as wide a context as possible" that would include "ethical, cultural, social and economic risks and benefits as well as looking at the science involved …". New Zealand Wool Board [IP30] argued that "it may be necessary to put in place an interim management regime while values, ethics, risks and benefits are being dealt with". Bio Dynamic Farming and Gardening Association [IP61] emphasised that "genetic modifiers" had a "moral responsibility" to ensure that they also generated ways to reduce the uncertainty created by genetic modification technology to "acceptable levels".

Other submitters stressed the importance of clearly articulated public policy that provided certainty for the public. For example, Aventis CropScience [IP14] reinforced the importance of "clear policy directives from Government", noting that "public confidence results from sound regulatory policy". Anglican Church in Aotearoa New Zealand and Polynesia [IP42] commented that, in terms of "justice and equity", there was a need "to establish monitoring and regulatory mechanisms which will moderate the excesses of corporate enthusiasm and ensure the sovereignty of this Treaty nation".

Some submitters brought together the various strategic elements of acceptability, choice, risk management and opportunity. For example, Landcare Research [IP12] in its recommendation for a 'conceptual framework' for analysis of risks and benefits had 'four moral principles' at its core. The guiding principles for such a framework included such issues as "autonomy" (freedom of use and choice), "justice and fairness" (such as in the distribution of risks, benefits and costs), "beneficence" (good in matters such as health, environment and consumers), and "non-maleficence" (no harm in matters such as ecological impacts or food safety).

Submitters also addressed specific cultural and environmental strategic issues in terms of acceptability.

Cultural acceptability

Protection of the rights and the genetic heritage of indigenous peoples were among the culturally acceptable strategic issues noted. Physicians and Scientists for Responsible Genetic New Zealand (PSRG) [IP107] emphasised "protection of diversity of cultural perspective … especially that of indigenous peoples". Maori Congress [IP103] maintained that "protection of Maori concerns" was "paramount" and needed to be "actively promoted". WAI 262 claimants [IP89] stressed that Maori must "fully understand and appreciate the consequences of the modification of whakapapa" and that they must "say no to such modification until the consequences are proven to be of benefit".

Environmental acceptability

The uniqueness of New Zealand's biodiversity was a critical concern of several submitters who argued that this was a major strategic consideration. However, submitters were divided on whether this unique biodiversity was better ensured by the use or by the avoidance of genetic modification technology. Landcare Research [IP12] argued that "the protection of New Zealand's biodiversity is a national imperative and an international obligation" and suggested that such protection could be most readily achieved by giving conservation managers "a full management toolbox that includes GM technology".

Supporting the need to retain New Zealand's biodiversity through acceptable practices, PSRG [IP107] described the "protection of the biosphere against the adverse effects of genetic engineering" as a key strategic issue. Royal Forest and Bird Protection Society [IP79] argued similarly that "the key strategic issue is that of the New Zealand Biodiversity Strategy" and that "protection of New Zealand's unique wildlife is of international importance". Royal Forest and Bird Protection Society, Nelson/Tasman Branch [IP43] listed as a key concern the "consideration of effects over the whole ecosystem".

Friends of the Earth [IP78] sought to contribute "to the integrity of the ecosphere" by recommending "the institution of sound ecological principles as [a] basis for resource management and related national and international policy". Public Questions Committee (Methodist, Presbyterian, Churches of Christ, Quaker) [IP93] argued that "the integrity of the biosphere is a sacred heritage which we are ethically obliged not to harm" and that future generations "have a right to celebrate its … diversity intact".

Choice

The main strategic issues referenced by submitters as affecting choice centred on whether choice to follow certain strategic pathways affected our pursuit of other alternatives. In effect, did one person's choice concerning genetic modification affect someone else's range of choices? For example, New Zealand Life Sciences Network [IP24] queried whether New Zealand fulfilled its "fiduciary duty to future generations if we knowingly reduce our options to address the looming issues of the future at the very time when those issues are becoming increasingly better defined?"

Most considerations raised by submitters involving choice concerned the general right to exercise choice. Submitters offering specific comments on the exercise of choice most frequently provided examples of health issues (especially genetically modified foods) and organic farming.

Choice and food

Comments emphasising the right to choose in relation to food products included:

- the rights of individuals "to distance themselves from GM if conscience precludes the use of the technology or its products … particularly in relation to genetically modified foods" (New Zealand Catholic Bishops' Conference [IP38])
- the need for "respect for autonomy so that consumers will have a choice, particularly in the areas of GM foods" (Interchurch Commission on Genetic Engineering [IP49])

Choice and organics

Several submitters highlighted options for choice in relation to New Zealand's "clean green" image. Opinion was clearly demarcated between those who felt that

New Zealand could accommodate both organic agricultural systems and genetically modified plants and those who felt that the two production systems were incompatible.

Representative of comments that genetically modified production reduced choice to use organic production methods were the following:

- "The choice is stark" between "a knowledge-based, prosperous, safe and sustainable future paid for by producing and selling to the high value and exponentially expanding eco-tourism and certified organic, 'clean and green' IPM and GE-free markets of the world" or "a GE-contaminated, commodity producing economy" (Canterbury Commercial Organics Group [IP65]).
- "Genetic Engineering is no use to Organic agriculture and the environments that surround it. The introduction of GE … would effectively destroy decades of hard work … and the positive economic opportunity awaiting our country in developing sound sustainable Organic agriculture, produce, environments and related knowledge" (Organic Federation New Zealand [IP81]).
- "… genetic engineering and organic food production are incompatible" [Soil and Health Association of New Zealand [IP97]).
- "The introduction of GM crops and animals has the potential to compromise [organic] systems to the extent that produce will not meet the requirements [for certification] as organic thereby depriving New Zealand of a competitive advantage and individual farmers of their preferred choice of production method" (Commonsense Organics [IP66]).
- "Commercial production of GM food in New Zealand could impact negatively on the export of kiwifruit to Europe in particular, but also to Japan and Southern Asia. Adverse consumer opinion and retail trade action could lead to non tariff barriers to market access." This would jeopardise the kiwifruit export industry including "$400m of export earnings" (ZESPRI International [IP46]).

Submitters who felt that organics and genetically modified production systems could coexist included submitters with the following views:

- "Organic production is compatible with GMs as other nations have shown in a robust regulatory framework … General concerns about GMOs will become less over time and such concerns, unless based on scientific evidence, should not restrict genetic modification utilisation" (Association of Crown Research Institutes [IP22]).
- "New Zealand can maintain both organic production and the production of GM crops … competitive advantage lies in the rapid adoption of

biotechnology … Consumer resistance to GM foods will disappear …" (New Zealand Arable-Food Industry Council [IP56]).

Choice and medical care

Submitters representing patient groups of those who had genetically based conditions were unanimous in their call for the right to exercise choice as regards therapeutic care. Typical of these comments were the following:

- Say "yes" to genetic modification technology "because we can manage concerns and safety issues and at the same time gain great benefits in the health of our population, and take advantage of the technology for employment and economic growth" (Lysosomal Diseases New Zealand [IP99]).
- "… patients should have access to a choice of therapeutic products. Patient information and informed consent underpin real choice. If real choice and informed consent exist then ethical and cultural risks are minimised and environmental, social and economic benefits are maximised" (Diabetes Youth New Zealand [IP60]).
- "… people suffering haemophilia and other genetic bleeding disorders, should have access to choice in therapeutic products … limiting access to recombinant therapeutic products is unthinkable" (Haemophilia Foundation of New Zealand [IP48]).
- "Freedom of choice is important when making decisions in life or death situations — Cystic Fibrosis sufferers must be allowed to have access to genetically modified products if that is what they choose" (Cystic Fibrosis Association of New Zealand [IP39]).

Risk management

Several submitters saw the way in which New Zealand managed the risks associated with use of genetic modification technology as an important strategic issue. Submitters suggested a variety of ways in which risks could be most effectively managed. Most submitters advocated robust regulatory frameworks and assessment procedures.

Submitters who felt that risks of using genetic modification technology were manageable generally favoured the institution of robust regulatory frameworks and assessment procedures. Comment representative of this position included:

- … the risks are manageable, in particular through a regulatory framework that relies on comprehensive assessment and transparency in its functions" (Carter Holt Harvey /Fletcher Challenge Forests [IP17]).

- "The issues surrounding biotechnology are based around … potential risk and flow-on consequences of that risk becoming a reality. … Risk management and a robust regulatory framework … should minimise the negative consequences of biotechnological research and development" (Federation of Maori Authorities [IP69]).
- "A robust regulatory environment that promotes safe research and development is necessary" (Wrightson [IP3]).

Submitters with concerns about the risks associated with genetic modification technology also saw risk management as a key strategic issue. Several suggested adoption of the precautionary principle or argued for new approaches to managing risk. Comments representative of these viewpoints included:

- New Zealand should "apply the precautionary principle to Genetic Engineering technology and ban all trials and releases of GE crops until it can be proven that they are safe" (Northland Conservation Board [IP68]).
- "… consideration [of uncertainties] must include the widest possible survey of scientific and societal experience of new departures and new processes. … We do not manage the risks of any technology by relying on knowledge of the manufacturing process. … Empirical investigation is imperative. … New designs require new tests" (Bio Dynamic Farming and Gardening Association [IP61]).

Opportunities

A smaller number of submitters specifically noted opportunities from the use or from the avoidance of genetic modification technology as a key strategic issue when commenting on Warrant items in relation to strategic 'options', 'issues' and 'outcomes'. Most discussion of opportunities to be gained or lost was raised by submitters in discussion of other Warrant items, in particular Warrant item (i). Therefore much of the detailed comment on strategic issues as opportunities lost or gained is recorded in the section "Opportunities for use or avoidance". In commenting on strategy, submitters mostly saw opportunities in terms of benefits in productive capacity and development of a knowledge-based society.