Submission

Submission for the Consultation on the proposed National Environmental Standard for Plantation Forestry

11 August 2015

Stuart Miller
Spatial, Forestry and Land Management
Ministry for Primary Industries
PO Box 2526
Wellington 6140

Dear Stuart,

Please accept the following letter and attachments as the McGuinness Institute's submission for the consultation on the proposed National Environmental Standard for Plantation Forestry.

Chief Executive Wendy McGuinness would appreciate the opportunity to be heard in support of this submission.

Kind regards,

Hannah Steiner
Project Manager
McGuinness Institute

Attached:

- *The History of Genetic Modification in New Zealand* (April 2008)
- *The Review of the Forty-nine Recommendations of the Royal Commission on Genetic Modification* (April 2008)
- *Report 16: Full Report – An Overview of Genetic Modification in New Zealand 1973-2013: The first forty years* (September 2013)
- *Report 16: Appendices – An Overview of Genetic Modification in New Zealand 1973-2013: The first forty years* (September 2013)

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About the McGuinness Institute

The McGuinness Institute (formerly the Sustainable Future Institute) was founded in 2004. The Institute is a non-partisan think tank working towards a sustainable future, contributing strategic foresight through evidence-based research and policy analysis. *Project 2058* is the Institute's flagship project which includes a research programme that aims to explore New Zealand's long-term future. In preparing this submission the Institute draws largely on the McGuinness Institute's overarching project, *Project 2058*, and in particular our work on *Project Genetic Modification*. The following is a list of research publications produced for *Project Genetic Modification*:

- September 2013: *Report 16: Full Report – An Overview of Genetic Modification in New Zealand 1973-2013: The first forty years*
- September 2013: *Report 16: Appendices – An Overview of Genetic Modification in New Zealand 1973-2013: The first forty years*
- July 2010: *In Focus: Genetically Modified Forages – an update on the current status of genetically modified forages in New Zealand*
- May 2010: *In Focus: Transgenic Livestock Programme – an update on the current status of AgResearch's transgenic livestock programme*
- October 2008: *Think Piece 6: An opinion piece on the strategic direction of Genetic Modification in New Zealand, timed to provide additional information on applications by AgResearch*
- April 2008: *The Review of the Forty-nine Recommendations of the Royal Commission on Genetic Modification*
- April 2008: *The History of Genetic Modification in New Zealand*

About the Chief Executive

Wendy McGuinness wrote the report *Implementation of Accrual Accounting in Government Departments* for the Treasury in 1988. She founded McGuinness & Associates, a consultancy firm providing services to the public sector during the transition from cash to accrual accounting. From 2003–2004 she was Chair of the NZICA Sustainable Development Reporting Committee and became a fellow chartered accountant (FCA) in 2009. In 2004 she established the Institute in order to contribute to a more integrated discussion on New Zealand's long-term future.

Introduction

In September 2013 the McGuinness Institute published *Report 16: An Overview of Genetic Modification in New Zealand 1973-2013: The first forty years*, which was an update of two reports released in 2008 – *The History of Genetic Modification in New Zealand* and *The Review of the Forty-nine Recommendations of the Royal Commission on Genetic Modification.* The Institute felt it was timely to produce an updated report to contribute to and encourage broader narrative around the genetic modification debate in New Zealand, and to reflect on 40 years of policy in this area.

The 2013 report found that New Zealand is no further ahead strategically on public policy regarding outdoor Genetically Modified Organisms (GMOs) than it was when the Commissioners of the Royal Commission on Genetic Modification reported their findings alongside their 49 recommendations in 2001 (MI, 2013a: 3).

It is the belief of the Institute that the current regulatory framework in New Zealand is not fit for the testing and possible release of genetically modified organisms. For example, the 2008 Report, *The Review of the Forty-nine Recommendations of the Royal Commission on Genetic Modification* found that only 20 of the 49 recommendations were fully implemented and 17 of the recommendations were not implemented at all (SFI, 2008: 3).

It is also our view that Crown research institutes (CRIs) do not necessarily have an understanding of commercial realities. For example, in 2013 we found that of the 57 outdoor experiments undertaken since New Zealand's first GM outdoor experiment in 1988, 70 per cent have been undertaken by government-funded institutions (MI, 2013a: 69). To date, these experiments have required significant public investment but have yielded no known commercial benefits for New Zealand. The benefits promised over the years have not materialised and subsequently it makes economic and environmental sense for New Zealand to position itself as a GM-free food and fibre producer, particularly as significant consumer resistance to GM food still exists globally. For examples see pages 89-92 in our 2013 report. A more recent example of resistance to GM foods is in the USA where 18 states have recently introduced bills that require all GM foods to be labelled as GM foods become increasingly available on American store shelves (Sifferlin, 2015).

Our 2013 report provided 12 recommendations for a way forward, one of which was to allow local authorities to regulate GMOs themselves (Recommendation 6 on pages 84-85 of our 2013 report). The Institute is of the opinion that we must proceed with caution and continue to carefully weigh up the benefits, costs and risks if we are to continue to be seen as a premium global food producer. It is hoped that these recommendations and the attached reports are taken into consideration during consultation for the Proposed National Environmental Standard for Plantation Forestry. The 12 recommendations from this report have been copied below:

Recommendation 1: Investment programmes should be evaluated as a matter of good practice

Investment programmes developed by the government (including CRIs) that are particularly risky, contentious, involve joint ventures and/or represent a significant investment of public funds, must be regularly assessed. The Institute would like to see significant improvements in procedural transparency. Integrated reports must be published regularly, identifying the aim of the project, primary goals, key stakeholders (including relationships such as joint ventures/partnerships), recognised and perceived benefits (in particular, clarity over who owns the benefits of the investment programme), costs (in particular, the size of the public's investment) and a full assessment of all known and potential risks (including investment, financial, legal liability and environmental risks). Any review of the HSNO

legislation should consider whether the current arrangement allows a true analysis of benefits (see also the discussion in Section 7.2.12 on pages 92 and 93 of our 2013 report). If government is going to continue to invest significant amounts of money in a framework for CRIs to undertake outdoor GM experiments, it must provide assurance that the benefits are adequately scrutinised in terms of the benefits that will accrue to New Zealand, that costs are borne by the applicant (not the public) and that risks are well-managed. Further, we believe a register of all government funds, including grants and capital, should be made transparent to the public to ensure companies are not double dipping and to ensure the focus remains on the public's return from investment (MI, 2013a: 72-73).

Recommendation 2: Risk management requires a whole-of-government approach

This might take the form of an integrated standard developed by the SSC, to be applied across the entire public sector that aims to emphasise transparency and build linkages between regulatory institutions and departmental science advisors. There is currently a risk that science advisors are seen as risk management experts. Risk management is far more than identifying and weighing scientific risk; it is critical that an integrated and transparent approach to decision-making must drive public policy. (MI, 2013a: 75)

Recommendation 3: Compliance costs should be fully recovered from applicants

There should be a reassessment of the EPA's pricing principles, placing the responsibility for the full costs of processing an application on the applicant. Further, applications that are viewed as beneficial to New Zealand should be able to apply for funding by a government institution that has the mandate to make such a judgement – such as MBIE – rather than the EPA, separating the government investment decisions from the EPA approved decisions. In addition, more effective reporting in this area is likely to create better decisions regarding application fees and strategic options. (MI, 2013a: 76)

Recommendation 4: Legal liability should be reviewed as coexistence with zero contamination is not possible and definitions of new organisms have become increasingly unclear

Given the concerns of stakeholders in New Zealand and the limitations of coexistence, New Zealand should undertake a full review of current legal liability, with particular focus on the potential for incorporation of financial fitness, ensuring companies undertaking GMO releases are capable of paying the costs resulting from any contamination. Since a GMO release would inevitability deliver contamination of some level to both traditional and, in particular, organic food producers (a point that the science was unclear on during the Royal Commission hearings), it is timely to consider firstly whether GMOs should ever be released into the outdoors in New Zealand, and secondly whether the liability system in New Zealand is able to deal with contamination from emerging technologies. (MI, 2013a: 80)

Recommendation 5: Data management requires urgent attention

A review must be undertaken of the way information relating to GMO experiments is handled to ensure continuity across the GMO governance system so that data is timely, comprehensive and useful. We have provided seven examples of where the system is not working effectively, but we suspect there would be many further opportunities to improve the process and develop a system that draws all key institutional parties together. We suspect this review would best be led by MfE, with assistance from the EPA, MBIE and MPI (see Figure 2 on page 66 of our 2013 report). (MI, 2013a: 82)

Recommendation 6: Allow local authorities to regulate GMOs or amend the HSNO framework accordingly

The government should not prevent local bodies from using the RMA to regulate GMOs. If it does so, it indicates a bias toward GM producers at the expense of non-GMO food producers; communities should have both the right and the responsibility to make decisions over land use. Further, the fact that some of these authorities deem a plan change to be necessary indicates that the current approach should be

revisited; policy analysts should not be focusing on trying to entrench past ideologies but look at why regions might wish to brand themselves as GM-free food producers – what are the benefits that are driving their behaviour, and might this be a useful perspective for the country to consider?

One option would be to amend the HSNO regulatory framework to prohibit field tests and outdoor developments of GMOs, with defined exemptions. This would mean that applications under HSNO would be considered on the assumption that the application will be declined unless the applicant can prove that the benefits will justify the exemption.

In practice, prohibiting only GM outdoor experiments and field tests and outdoor developments, rather than an outright ban on GM research would add a crucial extra step in the approval process. It would also serve as an opportunity for both local and central government to clarify exactly what they believe to be the purpose of allowing GMO outdoor developments and field tests in a considered and transparent manner. This would not be a fundamental change, but a change that more closely aligns with the Royal Commission's recommendation that the government take a precautionary approach to genetic modification while preserving optionality. (MI, 2013a: 84-85)

Recommendation 7: Before the conditional release of any GMO, a field test should first be undertaken

A field test enables a much higher level of scientific rigour and due diligence to be applied both within and on the border of the contained area, rather than the more ad hoc approach advocated under the 2008 segregation and tracing regulations that relate only to conditional release. This is an important consideration as New Zealand has (i) little experience with field tests of GM crops (other than Scion's trees) and (ii) we do not have a large number of independent scientists to undertake peer review of controls and assess long-term impacts. Hence New Zealand is not well placed to undertake the necessary assessment and measurement of the effects of GM crops, in particular grasses, as we have no expertise in this area (see discussion on GM ryegrass in Section 6.1.1 on page 52 of our 2013 report). (MI, 2013a: 86)

Recommendation 8: Reviews should be tactical and regular

Tactical reviews are critical to the underlying operation of a system and must be undertaken on an ad hoc basis. In this system, the most urgent is a review of controls on outdoor experiments and any breaches of those controls – a breach of a control could mean that there is nothing between an experimental GMO and the natural environment. These reviews should be undertaken by a group of scientific experts.

Secondly, regular assessments of those monitoring and reporting on the controls must also be undertaken. Do those undertaking assurance understand the controls, and are they completing reviews to the standard the public expect? We have seen no evidence that these reviews are happening, and in view of the number of outdoor breaches that have occurred we suggest more work is needed to provide a high level of assurance to policy analysts and the public alike. Regular assessments should be undertaken to ensure the system works effectively, particularly considering the level of institutional change that has

occurred in recent years (see Figure 2 on page 66 of our 2013 report) and concerns over the reporting of data and information noted in Section 7.2.5 on pages 80-82 of our 2013 report. (MI, 2013a: 87)

Recommendation 9: Memoranda of Understanding should be urgently reviewed and updated

Nineteen Memoranda of Understanding (MOUs) exist between the EPA and third parties, the oldest dating from 1998. Of these 19 types of MOUs, nine are more than five years old (see Appendix 16 of our 2013 report for more detail). All MOUs should be reassessed to ensure they have been actioned appropriately and stand as complete, accurate and relevant records of the understanding between the two parties. We recommend that all MOUs regarding the operation of the regulatory system between significant parties also be re-signed as of 2013, and are easily accessible on the EPA website.
(MI, 2013a: 87)

Recommendation 10: Strategy should be revisited

The Institute considers all four levels of strategy should be revisited. Although we would like to see a national strategy, we also support seeing the biotechnology strategy, GM strategy and outdoor GMOs strategy being revisited and published. This last point, relating to outdoor GMOs, is discussed further in Section 7.3, 'Reflections' on pages 93-97 of our 2013 report. Reassessing the 2003 New Zealand Biotechnology Strategy might prove insightful, possibly with a view to preparing a strategy with an action plan for 2013–2023. (MI, 2013a: 89)

Recommendation 11: A high-level foresight unit should be established

A foresight unit should be established to identify new and emerging issues on the horizon before they become significant and difficult to manage. Importantly, the foresight unit should operate separately from the management function of these new and emerging issues. This will ensure that the foresight team remain open to new opportunities and the policy team does not fall into the common trap of seeking out information to support a particular hypothesis or ideology. The Institute, in collaboration with others (see footnote 56 on page 89 of our 2013 report) is in the process of preparing a discussion paper on where this foresight unit might best fit within central government. (MI, 2013a: 92)

Recommendation 12: Decouple hazardous substances from new organisms, creating separate legislation for both

New Zealand needs to make strategic decisions around GM technology, developing strategy based on calculated risks, optionality and strategic foresight. We consider the regulation of new organisms alongside hazardous substances to be increasingly challenging, and that they would be better decoupled.

Further, we consider the assessment of benefits in the HSNO legislation problematic, as only a narrow view of benefits is required by the HSNO legislation; the benefit of the application is only considered in terms of what the experiment will produce once it has been completed (in contrast to the risks that exist beyond the length of the application). This has led to previous ERMA decisions noting that significant scientific knowledge will be created without any classification of the probability or magnitude of those benefits in terms of the public good; nor any clarity over who will gain those benefits as distinct of those that will bear the risks. See discussion in Section 7.2.1 on pages 68-73 of our 2013 report. (MI, 2013a: 93)

References

McGuinness Institute (MI) (2013a, September). *Report 16: Full Report – An overview of Genetic Modification in New Zealand 1973-2013: The first forty years.* Wellington: MI

McGuinness Institute (MI) (2013b, September). *Report 16: Appendices – An overview of Genetic Modification in New Zealand 1973-2013: The first forty years.* Wellington: MI

Sifferlin, A. (2015, June 25). Meet the New Lab-Made Foods. *Time*. Retrieved July 10, 2015 from: http://time.com/3935316/lab-made-foods/

Sustainable Future Institute (SFI) (2008, April). *The Review of the Forty-nine Recommendations of the Royal Commission on Genetic Modification.* Wellington: SFI