Submission

Improving Aotearoa New Zealand's environmental reporting system: Consultation document
25 March 2022

About the McGuinness Institute
The McGuinness Institute was founded in 2004 as a non-partisan think tank working towards a sustainable future for Aotearoa New Zealand. Project 2058 is the Institute's flagship project focusing on Aotearoa New Zealand's long-term future. Because of our observation that foresight drives strategy, strategy requires reporting, and reporting shapes foresight, the Institute developed three interlinking policy projects: *ForesightNZ*, *StrategyNZ* and *ReportingNZ*. Each of these tools must align if we want Aotearoa New Zealand to develop durable, robust and forward-looking public policies. The policy projects frame and feed into the Institute's research projects, which address a range of significant issues facing Aotearoa New Zealand. The six research projects are: *CivicsNZ*, *ClimateChangeNZ*, *OneOceanNZ, PandemicNZ, PublicScienceNZ*, *TacklingPovertyNZ* and *TalentNZ*.

About the cover
The photo is taken on the outskirts of Haast township while driving to Wellington on 17 March 2022.

INTRODUCTION

The cover photo illustrates the interconnectedness between saltwater and freshwater, between mountains and pasture and between sky and earth. Rainbows are fascinating because they illustrate what we can see but cannot find – they are the perfect example of an optical illusion. Environmental reporting is another type of illusion. To elaborate, the illusion lies in our assumption that we are able to report accurately on the complexities and linkages that shape and drive the quality of our environment.

There also exists a range of explicit and implicit factors that shape the way we report on the environment. *Explicit* factors are those that get reported on (i.e., specific environmental metrics, such as; emissions, water quality, temperature, etc) and usually receive greater attention and weight than the *implicit* factors (being the systematic settings and legislation that underpin environmental reporting). This is of concern as the implicit factors, which are frequently overlooked, are those that ultimately impact the environmental outcomes.

The idea of being able to report well on the environment is a fallacy – like the gold at the end of the rainbow. So too is effective and timely reporting on the wider ecosystem in which we live, work and play. However, that is not an excuse to give up, in fact, our lives and those of future generations depends on us stridently and courageously pushing forward. This point simply reinforces how critically important a whole-of-systems approach is when dealing with the role of the environmental reporting system. Thank you for seeking consultation on this important topic of study.

Given the Institute's current time constraints, the approach is to focus on the opportunities and objectives (being questions 1-3), rather than answering the specific questions in the consultation document (see Appendix 1).

BACKGROUND

In 2014, the Institute provided the select committee with an in-depth written submission, followed by an oral submission responding to the 2014 Environmental Reporting Bill (the oral submission is attached to this submission as Appendix 2). The written submission is 13 pages long and can be found on the Institute's website here.

It was a piece of legalisation the Institute deemed important, but was, as a general rule, driven more by ideology than logic. The oral and written submissions aimed to illustrate the Institute's concerns and identify some potential solutions. It is fair to say that the Institute was not very effective in bringing about any change to the original Bill. The issues that concerned the Institute include:

1. There was no direct line of accountability (having MfE and Statistics New Zealand both as lead agencies meant there was no clarity over who was responsible for what). See excerpt from the 2014 submission.

> **6 Synthesis reports**
> (1) The Secretary ~~and the Government Statistician~~ must ~~jointly~~ produce and publish reports on New Zealand's environment as a whole.
> (2) In subsection (1), **New Zealand's environment as a whole** includes the domains referred to in section 9.

2. The environmental reporting system, designed in 2014, was at risk of being isolated and disconnected from other forms of reporting. The Institute suggested links be strengthened through designing the reporting system with National Policy Statements in mind.

3. Many people confuse the role of data. *Data* on its own does not create information; data becomes information only when it forms patterns (or not). In addition, *information* on its own does not create knowledge; information only becomes knowledge when there is enough of it to illustrate how the system works. Hence *knowledge* is not simply dependent on quality and timely data or relevant information – true knowledge evolves from understanding how a system operates dynamically (e.g. how it responds to new

stimuli). Knowledge often comes from observing a system over a long period of time and is passed on from one generation to another. Figure 1 (overleaf) illustrates the relationship between data, information and knowledge. In current terms, we have a lot of data, some information, but very little knowledge about the environment. Hence the environment reporting system should focus on improving the quality (accessibility, comparability and reliability) and timeliness of the data. It is crucial to identify, collect, sort and chronicle data for current and future generations – so that we can benchmark progress or what does not work.

Figure 1: The relationship between data, information and strategic knowledge

Strategic Knowledge
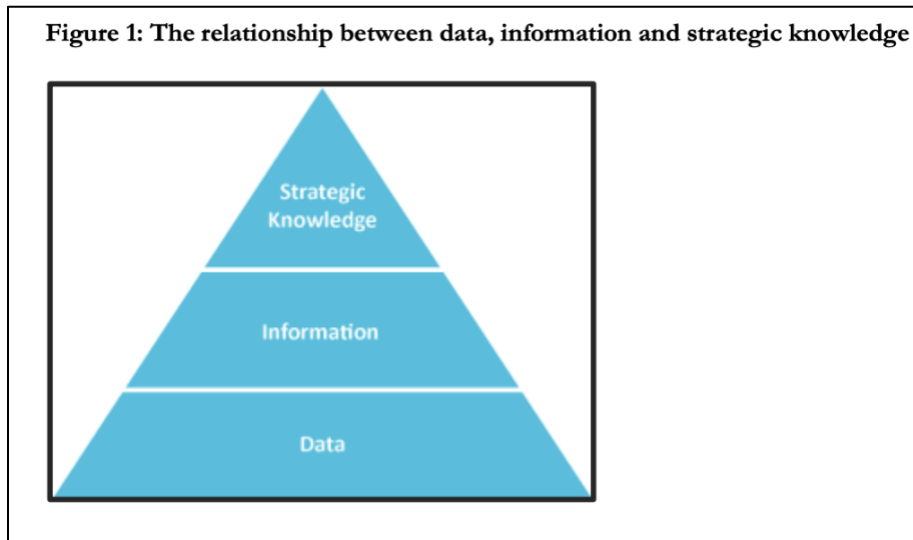
Information

Data

4. The domains mixed up data, information and knowledge. The Institute's argument was that there were only four domains, not the five that were advocated (see Figures 2 and 3 from the original submission below). See excerpt from the 2014 submission:

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9 Domain reports

The ~~Secretary and the~~ Government Statistician must ~~jointly~~ produce and publish reports on the following:

(a) the air domain:

~~(a) the atmosphere and climate domain:~~

(b) the freshwater domain:

(c) the land domain:

(d) the saltwater ~~marine~~ domain.

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5. The Institute suggested a set of principles should drive reporting. See excerpt from the 2014 submission:

12 Overview of process for producing environmental reports

~~The process for producing an environmental report involves the following steps:~~

(a) ==The following principles must guide the production of an environmental report;==

        ==(i) strategic focus and future orientation==
        ==(ii) connectivity of information==
        ==(iii) stakeholder relationships==
        ==(iv) materiality==
        ==(v) conciseness==
        ==(vi)reliability and completeness==
        ==(vii)consistency and comparability==

==~~the topics to be reported on are prescribed by regulations made under section 18, after the Minister for the Environment and the Minister of Statistics are satisfied~~==

~~that~~ ==~~the topics meet the requirements of section 18(2); and~~==

(b) the statistics to measure those topics are selected in accordance with section 13(2); and

(c) the procedures and methods to be used in providing those statistics in an environmental report are selected in accordance with section 13(4).

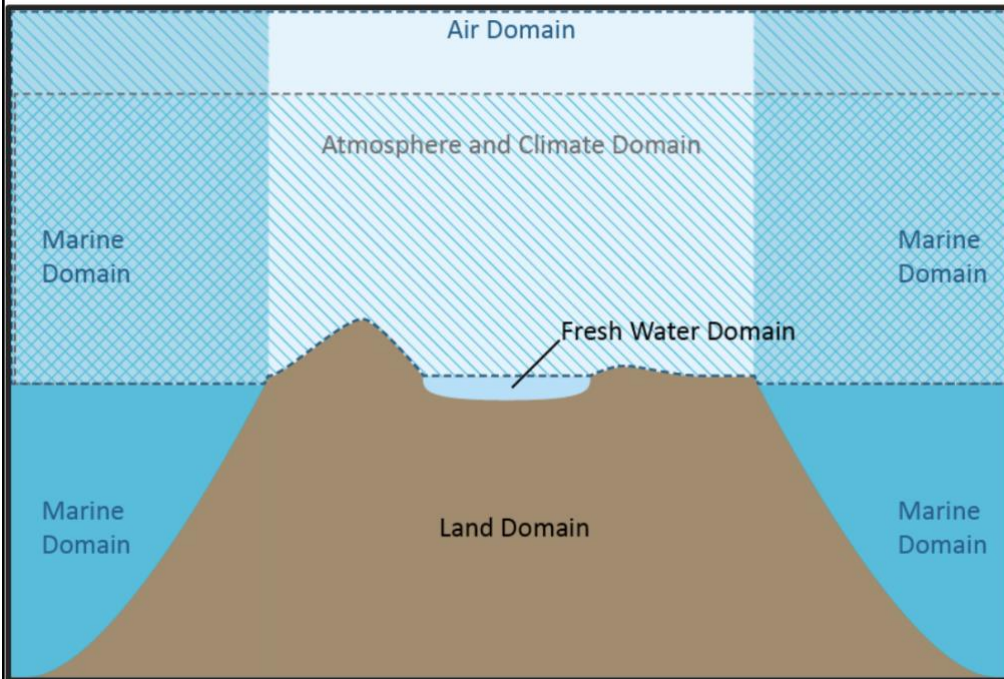**Figure 2: The five proposed domains outlined in the current Bill**

Air Domain

Atmosphere and Climate Domain

Marine Domain

Marine Domain

Fresh Water Domain

Marine Domain

Land Domain

Marine Domain

Figure 3: The four domains suggested by the Institute (taking a whole systems approach without any overlaps)

Air Domain

Fresh Water Domain

Land Domain

Salt Water Domain
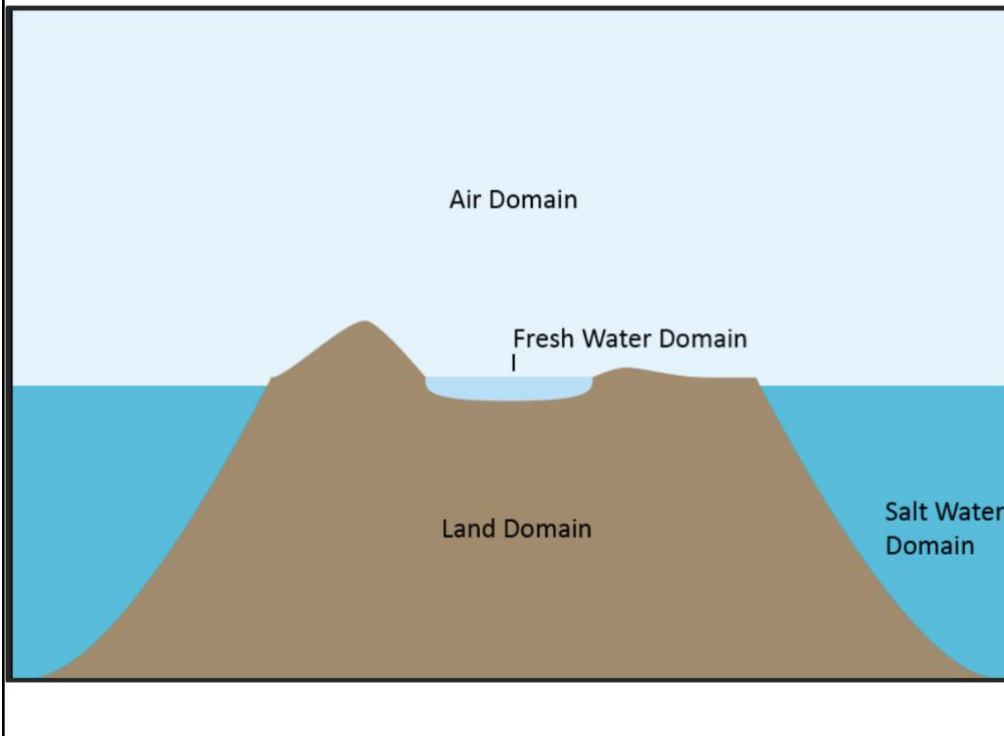
CONCLUSION
We are living in a fast-paced and complex world.
The level of review that has been undertaken regarding who has used the data and information provided by existing reports generated under the Environmental Reporting Act 2015 is not clear. However, it would seem important to know, with some confidence, who is using the existing reports and for what purpose/s. It is equally important to know what data and information is repeated elsewhere and what is simply not of use. Furthermore, it is timely to undertake a review seeing as it has been eight years since the Bill was drafted.

Timeliness is a key characteristic.
Given the data is likely to change quickly, the Institute's view is that regular and basic reporting is essential. The Institute does not support making these reports less regular. Instead the Institute's preference would be that more basic reports are produced that focus on *data* and only provide *information* on trends and extreme events/changes when appropriate. In other words, leave the *knowledge* for other reports. Urgent transition toward the development and implementation of real time data collection and reporting systems is crucial (see Chilean aquaculture example here). This will enable the country to respond quickly to changes; what futurists call forward engagement. To illustrate this, the Institute refers to the change in water temperatures in the Marlborough Sounds. See *Working Paper 2021/14 – The Role of Water Temperature in Climate Change Policy – A New Zealand King Salmon Case Study*, here (November 2021). In particular see Figure 1 from this paper below, change is happening very fast.

Figure 1: Mean sea surface temperature (SST) levels

February 2003   February 2021
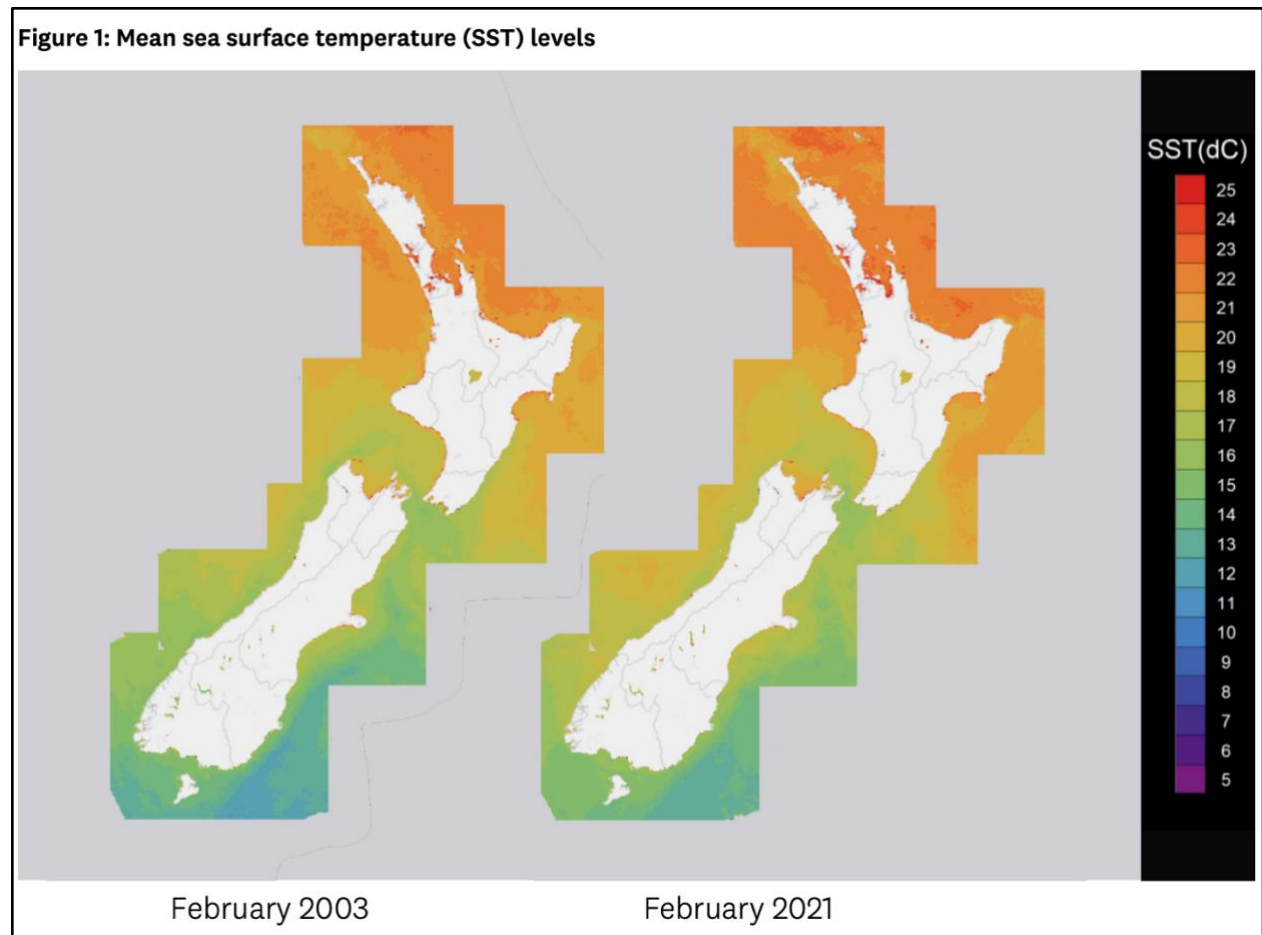
A taxonomy gap exists.
Following on from research into the change in water temperatures in the Cook Strait (see Working Paper 2021/14 above), it became apparent that Aotearoa New Zealand needs a taxonomy for oceans. See *Working Paper 2021/15 – Looking for a taxonomy for Aotearoa New Zealand's oceans,* here (November 2021). This is something that could, and should, naturally emerge and drive the environmental reporting system. You might like to consider adding this into the legislation. Similarly, due to the strict criteria and assumptions that underpin Tier 1 statistics (independently verifiable data), the Institute is concerned that it is the reporting of the trends (rather than the quality of the data) that is important. Arguably, there needs to be more emphasis on the difference between Tier 2 (reasonably good quality) and Tier 3 (poor quality) data.

The legislation is one part of the wider reporting system.
The environmental reporting system exists within a complicated system, which includes many different pieces of legislation (such as the RMA), policy instruments and public policy organisations. The Institute has recently completed a submission on MBIE's *Te Ara Paerangi – Future Pathways Green Paper* (see here). Many of the Institute's observations from that submission relate to this submission. The Institute suggests you may like to review both the invitation to comment paper and the Institute's submission. All research organisations should know and seek out the reports produced under the Environmental Reporting Act 2015. For example, what has been the response from the people administering and delivering on the National Science Challenges. For example, do they provide data for the reports? Or, do they use the data? Or both?

Broaden and strengthen understanding of environmental limits.
There is a critical relationship between our 'expectations for the quality of our environment' and our 'expectations of the environmental reporting system'. If we believe the current level of degradation is not acceptable, then the environmental reporting system needs a great deal more work – in other words "what we measure, we manage". The Institute considers that the status quo, the current quality of the environment, is unacceptable and to date, we have failed to be good stewards of the environment. In this regard, the Institute strongly advocates a whole-systems approach, including an integrated approach towards better understanding ecosystems, risk management, tipping points and carrying capacities.

Legislation should be flexible and responsive.
Lastly, the Institute's view is that any legislation should include the purpose, principles, a review clause, and leave the detailed rules and detailed penalties to regulation or delegation to an entity. This way the practices can change without requiring a change in the law.

Thank you again for the opportunity to share the Institute's thoughts. This is important work and the Institute is only too happy to further discuss the thinking and research behind this submission.

Appendix 1: Consultation questions

The opportunities and objectives
1. Would you add any issues to this list? Why?
2. Which of these issues are the most important to fix? Why?
3. Are these objectives the most effective for improving environmental reporting? If not, what should the objectives be, and why?

Proposal 1: Clarify the purpose of environmental reporting
4. Do you agree with the proposal to expand the purpose of the ERA to include the reasons why we need environmental reporting? Please explain your answer.
5. The initial preferred option for this proposal sets out four points. Are these a suitable basis for a purpose statement? What changes, if any, do you consider are needed to focus, expand, or improve them?
6. What should the purpose include, to reflect te ao Māori values and perspectives?
7. In your view, have we overlooked any costs, benefits, risks, or opportunities? Please describe these and any mitigations.

Proposal 2: Mandate a government response to synthesis reports
8. Do you agree with the proposal to require the Minister for the Environment and other relevant Ministers to release a staged response to synthesis reports? Please give your reasons.
9. If you disagree, should anyone be required to make a formal response? Who, and why?
10. Should the ERA specify the layout and style of a government response? If yes, what should the response include?
11. If the Government is required by the ERA to respond to a synthesis report's findings, is anything more needed? If so, what?
12. In what way could a formal response adequately address the needs of te ao Māori?
13. Do you consider a response is necessary for all environmental reports or commentaries specified in the ERA (that is, not just synthesis reports)? If yes, why?
14. In your view, have we overlooked any costs, benefits, risks, or opportunities? Please describe these and any mitigations.

Proposal 3: Add drivers and outlooks to the reporting framework
15. Do you agree with the proposal to add drivers and/or outlooks to the reporting framework? Please give reasons.
16. What benefits or drawbacks do you see in including drivers or outlooks?
17. If the expanded DPSIR (plus outlooks) framework is not suitable for reporting, what other reporting framework should be adopted, and why?
18. What drivers and outlooks can be included to reflect the perspective of te ao Māori?
19. In your view, have we overlooked any costs, benefits, risks or opportunities? Please describe these and any mitigations.

Proposal 4: Adjust roles and responsibilities
20. Do you agree with the proposal to adjust the roles and responsibilities of the Secretary for the Environment and the Government Statistician? Why?
21. Should the ERA state that the Secretary for the Environment and the Government Statistician may/must invite Māori to take part in preparing environmental reports? Why?
22. Do you consider there are broader roles and responsibilities for Māori under the ERA?
23. Do other agencies have roles and responsibilities related to environmental reporting that in future should be specified in the ERA?
24. In your view, have we overlooked any costs, benefits, risks or opportunities? Please describe these and any mitigations.

Proposal 5: Mandate a standing advisory panel
25. Do you foresee any problems with the proposal to make it a statutory requirement to establish a standing advisory panel under the ERA? Please describe.
26. What range of perspectives do you think the standing advisory panel needs to include?
27. What responsibilities should the standing advisory panel have?
28. In your view, have we overlooked any costs, benefits, risks or opportunities? Please describe these and any mitigations.

Proposal 6: Replace environmental domains with cross-domain themes
29. What are some pros and cons of a theme-based approach for both synthesis reports and in-between commentaries? Should another approach be used? If yes, why?
30. Do you think the themes in Environment Aotearoa 2019 (table 2), or those proposed by the PCE, or some other themes are the right ones to use? Are they broad enough to give certainty for future environmental reporting?
31. What themes are appropriate for te ao Māori? Should te ao Māori be considered as a theme?
32. In your view, have we overlooked any costs, benefits, risks or opportunities? Please describe these and any mitigations.

Proposal 7: Reduce the frequency of synthesis reports to six-yearly
33. Is six-yearly reporting an appropriate interval for synthesis reports? Which timeframe do you prefer, and why?
34. In your view, have we overlooked any costs, benefits, risks or opportunities? Please describe these and any mitigations.

Proposal 8: Replace domain reports with one commentary each year
35. What are some pros and cons of changing the frequency of in-between commentaries to a priority basis, with no mandatory coverage of all themes in a reporting cycle?
36. What frequency and timing will fit with te ao Māori to meet Māori information needs?
37. In your view, have we overlooked any costs, benefits, risks or opportunities? Please describe these and any mitigations.

Proposal 9: Establish a set of core environmental indicators
38. Do you foresee any problems with the proposal to establish a set of core environmental indicators? Please describe.
39. What are some pros and cons of publishing updates to environmental indicators outside the reporting cycle?
40. Should the indicators include topics based on te ao Māori and mātauranga Māori?
41. In your view, have we overlooked any costs, benefits, risks or opportunities? Please describe these and any mitigations.

Proposal 10: Strengthen the mechanisms for collecting data
42. Do you foresee any problems with the proposal to include provisions in the ERA to require data for national environmental reporting? Please describe.
43. How can we strengthen the way we collect data to reflect the perspective and values of te ao Māori?
44. In your view, have we overlooked any costs, benefits, risks or opportunities? Please describe these and any mitigations.

Summary of cost estimates for the initial preferred proposals
45. Have we correctly noted all the high-level costs and benefits of these proposals? Are there any others?

46. What costs and benefits, if any, would any or all these proposed changes have for you or your organisation?
47. We are planning a full benefit-cost analysis after assessing all submissions. What, if any, information should we include in that analysis?
48. Do you have any further comments?

Appendix 2: Copy of Closing comments at the Select Committee hearing the 2014 Bill

See Submission on the Environmental Reporting Bill, April 2014. The link to the written submission and additional closing comments shared with select committee members can be found here.

The four pages summarising the presentation can be found below.

Submission Environmental Reporting Bill 2014
Closing Comments

> 'Complexity is the enemy of transparency'
> – Hank Paulson, Secretary of the Treasury, USA, during the Global Financial Crisis

The Bill as it stands reminds me that we need to keep policy instruments simple in order for them to be effective, equitable, durable and useful. Much in the same way that financial markets require quality information to perform effectively, so do environmental markets. We need to ensure that citizens are well-informed so that they are able to engage either directly (through scientific/social research or lobbying) or indirectly (through voting at national and local elections) on how ecosystem assets are best used and protected. If a range of alternative forms of engagement are not available, social unrest may prevail.

'Success' is therefore a durable platform whereupon citizens can engage over issues that are relevant, timely and appropriate to a location or a time period. 'Failure' in contrast, is when citizens are not well informed, and therefore spend time, energy and financial resources in ways that are not relevant, timely or appropriate. New Zealand experienced a number of risk management failures which have led to a range of adverse outcomes. We should ask ourselves what can be learnt from these examples, viewing them as insights into complex issues. Examples include:

- Rabbit haemorrhagic disease: In 1996 a group from around the country (that included 10 regional councils) lodged an application for the release of RHD (Rabbit haemorrhagic disease) in New Zealand to address difficult to manage rabbit populations. This was declined as it was found the risks outweighed the benefits. Frustrated farmers then released the disease illegally, which has not only spread throughout the country but many rabbits have now developed immunity to the disease.

- Dairy farm practices: The previous dairy accord was arguably unsuccessful. There is now a new accord which aims to set national environmental benchmarks for dairy farming covering stock exclusion from waterways and riparian, effluent, nutrient and water use management. It also sets out new industry standards for conversions of land to dairying. The extent this new accord will be trusted by the public is yet to be tested.

- Genetic modification: Some Multiple Sclerosis sufferers were led to believe the GM cows created by AgResearch might cure MS and were therefore prepared to camp in the paddock to save the cows. (See our report an *Overview of Genetic Modification in New Zealand 1973-2013: The first forty years*, page 70.)

- Air quality: It is estimated that poor air quality contributes to the deaths of approximately 1000 New Zealanders every year – this makes air quality one of our most serious environmental public health issues, yet it is rarely in the public arena. Arguably we fail to develop solutions and penalise bad practise because the public tend to think air quality is not an important issue. In our view, companies adopting poor air quality practices should be

required to report all prosecutions in their annual report and schools should be required to report to parents on the quality of air in their children's vicinity.

- Protecting native forests: In 1978 activists staged a tree sitting protest in the forest which led to the protection from logging of what is now the Pureora Forest Park.

These very wide-ranging examples show why countries should invest in building effective policy platforms that are focused on developing an informed public. Countries that have an informed public are more likely to be able to put in place durable policy, providing certainty for all parties and therefore better outcomes for all citizens. If we fail to have an informed public, we will fail to deliver durable public policy. This leads me to one of my key concerns about the purpose of this Bill. The focus on outputs appears to be on the three year parliamentary system rather than the ongoing needs of citizens.

The *synthesis* report is arguably planned on a three yearly cycle to align with the start of the parliamentary cycle. If the primary responsibility of the public sector is to serve the public, reporting every two years must be more beneficial than a three year report. Further regular reporting is likely to flatten the effect of the three year cycle, delivering more useful and less political information to MPs, councillors, public servants and the general public in a consistent and timely manner.

I consider an important aspect of this Bill is providing clarity over what we should and should not worry about. We should ensure that New Zealanders are informed in order that they can evaluate the most important issues and the issues they have control over. Furthermore, the 'low hanging fruit' should be dealt with quickly (those issues that are easy and cheap to fix). Regular *synthesis* reports should reflect New Zealand's progress towards goals, or showcase areas that require extra work. A three year window is a year too long; if we are destroying ecosystems or implementing effective models in some part of the country (but not others), three year reports are simply slowing up progress. Like any other public policy instrument, it is necessary to balance the benefits, costs and risks. In this case, the costs of resourcing MfE and Statistics NZ to produce more timely and integrated reports seems to be an opportunity to accelerate progress. Based on this mind-set, we have briefly outlined five recommendations below:

Recommendations

1. Linking government environmental priorities with the *domains* [new]
Attachment 1 identifies the relevant government priorities from 2007 to 2013. Of note is how the priorities have moved from topics to processes, how climate change is no longer a priority and how the number of priorities have reduced in number (from six to three). Government priorities need to relate to *domains* (ecosystem assets) rather than processes so that environmental outcomes can be measured, assessed and revamped based on evidence (i.e. evidence-based public policy). By linking goals with reporting, government is more likely to deliver better policy outcomes over the long term.

2. Linking National Policy Statements and National Environmental Standards with the *domains* [new]
Attachment 2 identifies the *National Policy Statements* and *National Environmental Standards* produced since the RMA was implemented in 1991. These public policy instruments have generally remained out on a limb, unconnected to the rest of the environmental reporting system. This is reflected in their individual lack of clarity of purpose, inconsistency of content,

minimal reporting requirements and their failure to outline opportunities to review and revamp the documents based new data and information. We believe this Bill provides a significant opportunity to reconnect these instruments to the *domains*. Regular *domain* reports could provide useful information on the application of these standards and statements, creating an information system that compares 'good practice' with 'actual practice'.

3. Combine air, atmosphere and climate under one *domain* [expanded]

As an *NZICA* Fellow Chartered Accountant and past chair of the Sustainable Development Reporting Committee, I have always been interested in conceptual frameworks. I see the *domain* as equivalent to a high-level ecosystem-asset that forms a balance sheet item, whereas effects over time forms a profit and loss item. This means I disagree with climate (and therefore climate change) being treated as a *domain*. This proposal in no way minimises the importance of climate change, quite the contrary. Treating climate change as a flow (effect over time) rather than as an asset is more likely to lead to a deeper and more tangible conversation about climate change and how it might be better managed in the future.

Attachment 3 illustrates how we believe the *domains* should exist in practice, reflecting the four significant 'ecosystem-assets' we proposed in our written submission. Of particular note was that the 'air' and the 'atmosphere and climate' domains should be combined as there is an inherent duplication of data. The following paragraph expands on this point.

Increases in atmospheric concentrations of carbon dioxide is the leading cause of anthropogenic climate change and is therefore fundamental to a report on the *air domain*. Changes in the concentration of atmospheric carbon over time, generally measured in parts per million, is used by the *Intergovernmental Panel on Climate Change (IPCC)* as the key indicator of human influence on climatic systems. Other greenhouse gases, such as methane and nitrous oxide, are measured in the same way. For this reason our proposed *air domain* would include assessments of greenhouse emissions along with measures of less prevalent or more localised pollutants such as lead, BaP, benzene etc.

4. Create a *synthesis report* specifically for climate change [new]

If the committee felt that climate change required more attention, this could be achieved by providing an additional *synthesis report* focussed purely on climate change. In contrast to having two domains that cover air data (the 'air domain' and the 'atmosphere and climate domain'), this recommendation reflects the opportunity to bring climate change further up the public policy ladder.

As noted above, an integrated approach is required to manage climate change effectively and this means accepting that it interconnects across all *domains*. In effect it would make more sense for climate change to have its own *synthesis report* rather than be a *domain report*. Climate change is obviously a global issue that gives rise to policy considerations of international collective action – and so the response commentary is quite different to issues such as air quality that are spatially specific to particular communities.

5. Producing a *synthesis report every* two years – perfection comes with a price

The pursuit of perfection is an exercise in diminishing returns; policy analysts may want to get reports perfect but users may simply want a report that provides timely, good quality information. In other words users may be prepared to give up accuracy for timeliness, knowing that the level of accuracy will be improved in the next report.

Reporting bi-annually is likely to improve the quality of reports for users over time, more than reporting tri-annually. Accurate information places the focus on the reporter (they do not want to be criticised if reports contain errors or are incomplete) while timely information focuses on the needs of the user (some information is better than no information). Reporting is an ongoing task; the more frequent the report, the more regular the feedback from the user – leading to a higher likelihood of the user receiving meaningful and accurate reports in the longer term.

The costs of producing *domain* and *synthesis* reports have not been made public, but I suspect that the Institute's proposal (excluding the separate *synthesis report* on climate change in 4. above) would not be significantly more expensive as it would only result in an additional two reports over a ten year period.

- The current Bill proposes in ten years: 20 *domain* reports (five *domains* x four) and three and 1/3 *synthesis reports* (every three years) = 23 reports
- The McGuinness Institute proposal proposes: 20 *domain* reports (four *domains* x five) and five *synthesis reports* (every two years)= 25 reports

Further, if as we recommended in our initial submission, *Statistics NZ* was only responsible for publishing *domain* reports and MfE *synthesis* reports, we believe there might be additional cost savings.

Overall, we believe our proposal (above) would deliver MPs, councillors, public servants and the general public consistent and timely reports of a superior quality at the end of a ten year period. This is not only because of the frequency of feedback but because the respective institutions would have more practice at delivering quality reports. In particular, their systems of collecting and reporting data would improve over time. These factors combined with the benefits gained from acting twelve months earlier as a result of receiving *synthesis* reports a year earlier, must deliver more 'benefits' than 'costs', and bring about less 'risks' to the New Zealand economy.

Lastly, if Hank Paulson is correct – complexity is the enemy of transparency – then logical, timely and elegant reporting frameworks must be the friend of the New Zealand citizen.

Attachments:
Attachment 1: Relevant Government Priorities set for the Ministry for the Environment
Attachment 2: National Policy Statements (NPS) and National Environmental Standards (NES)
Attachment 3: Excerpt from the McGuinness Institute Submission on the Environmental Reporting Bill 2014