Consultation document

Te whakawhanake i te pūnaha rīpoata taiao o Aotearoa

Improving Aotearoa New Zealand's environmental reporting system

Proposed amendments to the Environmental Reporting Act 2015

Ministry for the Environment
Manatū Mō Te Taiao

Te Kāwanatanga o Aotearoa
New Zealand Government

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Abbreviations

CRI	Crown research institute
DPSIR	Driver-pressure-state-impact-response
ERA	Environmental Reporting Act 2015
LAWA	Land, Air, Water Aotearoa
LTIB	Long-term Insights Briefing
Ministry	Ministry for the Environment
NBA	Proposed Natural and Built Environments Act
NIWA	National Institute of Water and Atmospheric Research
NEMS	National Environmental Monitoring Standards
OECD	Organisation for Economic Co-operation and Development
PCE	Parliamentary Commissioner for the Environment
PSI	Pressure-state-impact
Secretary	Secretary for the Environment

Message from the Minister

Independent, robust environmental reporting helps us understand the health of New Zealand's natural environment and determine the impacts of our activities over time, which is vital for good decision-making.

Although the Environmental Reporting Act 2015 has made positive changes to the way we report on the environment, we need to extend its functionality and breadth, through the collection and analysis of better data, evidence and information. This will enable environmental reports to better inform environmental decision-making.

In 2019 the Parliamentary Commissioner for the Environment reviewed the environmental reporting system, and made a number of significant suggestions for how to improve it. These included clarifying the purpose of why we are reporting and what it is supposed to achieve, requiring core environmental indicators, and a mandatory Government response setting out its actions in response to synthesis report findings. The proposals in this report are based on these recommendations. I'd like to thank him for reviewing the system and recommending many of the changes that are proposed here.

A key aspect within the changes we are proposing is giving a stronger voice to Te Tiriti o Waitangi, te ao Māori (the Māori world view), and mātauranga Māori (Māori knowledge). To do this effectively I have asked the Secretary for the Environment to progress changes to better incorporate te ao Māori and mātauranga Māori into New Zealand's environmental reporting. We will be partnering with Māori to develop proposals that bring this to life using an approach based off recent, relevant work by others including the current Data and Statistics Bill and the Mātauranga Framework developed by the Environmental Protection Authority.

Other aspects of the wider reforms are also underway. These include ensuring enduring investment in data and science assets is directed into the right areas to fill data and knowledge gaps about the environment. We are establishing a more consistent, coordinated and strategic system for data and science investment including some automation of data handling and analysis. We are also progressing reforms to ensure information produced through monitoring and reporting will support changes in parts of the environment such as biodiversity.

I see the amendments to the Environmental Reporting Act 2015 as a key part of the overall reforms for the whole environmental monitoring and reporting system. There is a need to shift to a clearly defined and coordinated reporting system that gives robust, comprehensive and authoritative information on the state of New Zealand's environment. Through this consultation I want to hear your views on the proposed amendments to the Environmental Reporting Act 2015.

Hon James Shaw
Associate Minister for the Environment

Executive summary

This is a consultation on the proposed amendments (proposals) to the Environmental Reporting Act 2015 (ERA). It sets out the options that Government is considering and invites your feedback.

Under the ERA,[1] the Ministry for the Environment (the Ministry) and Statistics New Zealand (Stats NZ) produce six independent reports on the state of New Zealand's environment over three years. The experience of these departments, experts and other agencies in contributing to and completing almost two three-yearly cycles shows that the functionality of report production could be improved to enable the environmental reports to have more impact. The proposals in this document are designed to achieve those improvements:

1. Clarify the purpose of environmental reporting.
2. Mandate a government response to synthesis reports.
3. Add drivers and outlooks to the reporting framework.
4. Adjust roles and responsibilities.
5. Mandate a standing advisory panel.
6. Replace environmental domains with cross-domain themes.
7. Reduce the frequency of synthesis reports to six-yearly.
8. Replace domain reports with one commentary each year.
9. Establish a set of core environmental indicators.
10. Strengthen the mechanisms for collecting data.

Beyond the proposals above, the Government intends to progress changes to better incorporate te ao Māori (Māori world view) and mātauranga Māori (Māori knowledge) in environmental reporting. We will partner with Māori to develop proposals for this, alongside the consultation on this document.

How to have your say

The Government welcomes your comments on this consultation document. The questions throughout the document are a guide only. See appendix 5 for the full list of questions. You do not have to answer them all, and all comments are welcome. To ensure others clearly understand your point of view, you should explain the reasons for your views and give supporting evidence if needed.

Closing date for submissions

Send in your submission **by 5pm, Friday 18 March 2022**. For details on how to make your submission, see How to have your say.

[1] This coloured text indicates that the words are hyperlinked to the referenced part of the document or other documents.

The consultation documents, and further details on how to make a submission, are available at ERA-proposed-amendments-consultation. If you have questions or want more information about the proposed ERA amendments or the submission process, please email era.consultation@mfe.govt.nz.

Why amend the Environmental Reporting Act?

The ERA requires the Ministry and Stats NZ to produce independent regular reports on New Zealand's environment:

- five domain reports published over a three-year period (roughly two per year)
- a state of the environment (synthesis) report every three years.

Independence is a key requirement of the ERA. The Government Statistician ensures that the statistics selected for reporting are at arm's length from the Government of the day, and together the Secretary for the Environment and the Government Statistician ensure the reporting as a whole remains independent of Ministers of the Crown and policy initiatives.

Reports are released in line with Principles and protocols for producers of Tier 1 statistics, which sets out how key official statistics must be produced, analysed and released. Once the reports are released, the Government, public and private agencies, Māori and individuals can use the information in the reports and act on the reports' findings; but there is nothing formal to require any action from anyone.

The Ministry and Stats NZ recognise that the functionality of the ERA could be improved to produce more timely, in-depth reporting to enable environmental reports to have more impact. To achieve this a wider variety of reporting formats, additional tools and other data sources will need to be used.

The Parliamentary Commissioner for the Environment (PCE), in his 2019 report indicated that we need to progress from a clearly inadequate, cobbled together collection of passively harvested data and knowledge to active harvesting and cohesive, comprehensive, relevant and timely reporting of the state of our environment. His recommendations are for incremental shifts, rather than a foundational upheaval, to help focus our stewardship of our environment. Part of this is to have expertise and skills in place and to deploy them to develop a more comprehensive, nationally coordinated environmental reporting system.

Intentions

We want to:

- make reporting more timely, using a wider variety of formats and data
- clearly state the reasons why we are reporting under the ERA
- make reporting more cohesive and robust, using a fuller reporting framework, and produce scenarios showing future trends
- better reflect Te Tiriti o Waitangi (the Treaty of Waitangi) partnership with Māori and Māori data sovereignty, in particular by including te ao Māori and mātauranga Māori
- help decision-makers to identify and implement positive actions for our environment.

Key issues

The issues with environmental reporting that this document seeks to address are:

- unclear purpose of environmental reporting means that it requires regular reports, but lacks legislated direction to identify key issues or desired outcomes
- New Zealand does not have a fit-for-purpose designed national environmental reporting system
- inconsistent and deficient data and knowledge which is impeding comprehensive and robust evidence-based reporting
- under-recognition of the Crown's Tiriti responsibilities, te ao Māori, and mātauranga Māori.

What is not within scope?

Flow-on and related amendments to other legislation, although mentioned, are not within the scope of these proposals.

What happens next?

After receiving submissions, we will analyse them to inform policy and government decisions. If Cabinet agrees, an amendment to the ERA (through an amendment Bill) will be introduced to Parliament. Some issues may be addressed through non-legislative change.

PART 1: Introduction

Information about the context for future improvements.

Introduction

Our environment is fundamental to New Zealanders and our way of life. It is integral to the wellbeing of Aotearoa New Zealand. Independent, robust environmental reporting helps us understand the health of our natural environment and the impact and implications of activities and changes we make over time. This is vital for good decisions.

Before the introduction of the Environmental Reporting Act 2015 (ERA), national environmental reports were produced on an *ad hoc* basis. The first two state of the environment reports were produced 10 years apart, and there was significant change in many areas between the 1997 and 2007 reports.

The ERA made reporting mandatory for the first time, bringing New Zealand in line with the rest of the Organisation for Economic Co-operation and Development (OECD). The ERA is the legislative anchor that sets out the roles and responsibilities for environmental reporting, including the independent role of the Government Statistician. It also sets out the framework for the scope and timing of regular reports on the environment.

Environmental reporting is made up of legislative and non-legislative measures, and a myriad of players (including institutions, agencies and individuals). It encompasses the processes of generating, collecting and reporting information about our environment.

The Parliamentary Commissioner for the Environment's (PCE) 2019 review, *Focusing Aotearoa New Zealand's environmental reporting system*, highlighted issues with the ERA, including a need to:

> "evolve from the current treadmill of reporting (based on the largely passive harvest of data we happen to have) to reports and commentaries that draw on comprehensive time-series data to identify meaningful trends and help focus our stewardship of the environment in the right places."

Although the ERA has made positive changes to the way we report on the environment, we need to extend its functionality and breadth, to enable environmental reports to have an increased impact in informing environmental decision-making. This includes giving a stronger voice to Te Tiriti, te ao Māori (the Māori world view) and mātauranga Māori (Māori knowledge).

Under section 14 of the Public Service Act 2020, the Ministry has a responsibility to support the Crown in its relationship with Māori under Te Tiriti developing and maintaining the Ministry's capability to engage with Māori and also to understand Māori perspectives. These improvements will move us towards our ultimate goal of a more comprehensive, connected and effective environmental monitoring and reporting system.

The PCE discussed te ao Māori and mātauranga Māori in his report, such as "[g]iving a voice to te ao Māori" where he stated:

- "A lack of knowledge regarding the impact of changes in the environment on mātauranga Māori and cultural values is another significant [knowledge] gap."
- "A number of things could be done to make future reports more relevant to a Māori audience. In particular, a way needs to be found to connect environmental issues with place."
- "It will be important going forward to ensure that issues of environmental concern to Māori are the subject of proper data collection."

The PCE acknowledged that he did not engage with Māori during his 2019 review, but he did say that the Ministry and Stats NZ needed to do so for the ERA amendments. Engagement with iwi, hapū and Māori on any regulatory changes is a legislative requirement under the ERA. This approach will draw on learnings from other relevant Government processes including the Data and Statistics Bill and the development of the Environmental Protection Authority's Mātauranga Framework.

Why integrate te ao Māori and mātauranga Māori into environmental reporting?

The Crown has Tiriti responsibilities to support Māori rights and interests. Currently, the ERA only has one provision to do this; the limitation of this existing approach was highlighted in the PCE's 2019 review. The aim is to expand this and better reflect the reporting needs of te ao Māori and mātauranga Māori. This will improve the coverage and effectiveness of reporting, and develop the Crown's Tiriti responsibilities to Māori.

Together, mātauranga Māori and other sciences give us greater insight into environmental changes.[2] Māori are knowledge holders – gathering, analysing, reporting and responding to environmental data. The inclusion of mātauranga Māori in reporting can deepen our collective understanding of connections, interdependencies and long-term perspectives. Mātauranga Māori is transdisciplinary, empirical, qualitative and integrative in its approach to building new knowledge.

Mātauranga Māori also promotes an intergenerational view of the actions we take now. For example, mātauranga Māori from 600 years before the arrival of Europeans represents the only human record we have of the environment of these islands and their surrounding waters.[3] This long-term perspective is an example of the broader frame of reference that mātauranga Māori can contribute.

[2] Thompson et al, 2020.

[3] PCE, 2019, p.6.

This is a unique opportunity to make reporting more meaningful and useful for Māori as well as local communities more generally, local government, central government, and other institutions. Including relevant information and methodologies will inform effective decisions on environmental issues of significance to Māori. Examples in recent reports on atmosphere and climate and land include specific cases of mātauranga Māori innovation.[4]

The Ministry is also mindful of calls for the science system to be based on Tiriti partnership in a way that keeps mātauranga Māori within Māori hands.[5] This supports the view that mātauranga Māori is locally specific, and has qualitative and quantitative attributes which add depth when aggregating at a national scale. For at least these reasons, Māori – regionally and nationally – are best placed to regulate and include mātauranga Māori in environmental reporting strategies, policies and investments.

Although te ao Māori perspectives on the environment are likely to differ among Māori, hapū and whānau, they all emphasise a holistic view. Concepts such as mauri (life force) affirm the connection between all living and non-living things. These concepts directly connect people's wellbeing to environmental wellbeing.

Partnering with Māori to improve how mātauranga Māori, data, evidence, knowledge and science are used, collected, managed and protected in environmental reporting

The Ministry not only has Tiriti responsibilities, through Te Tiriti itself, but also through other documents that flow from it, to meaningfully engage with Māori when amending the ERA. These responsibilities are recognised in the Waitangi Tribunal's WAI 262 decision, section 14 of the Public Service Act 2020, and New Zealand as a signatory to the United Nations Declaration on the Rights of Indigenous Peoples. The Government is preparing an implementation plan for this declaration.

As recommended by the PCE, the Ministry and Stats NZ will work with Māori to establish a robust engagement process, with the goal of taking a partnership approach to policy-making.

Existing Government agreements and learnings will guide this partnership approach, drawing from the current Data and Statistics Bill process, the Māna Ōrite Agreement between Stats NZ and Data Iwi Leaders Group (Data ILG) (see the case study below) and the development of the Environmental Protection Authority's Mātauranga Framework.

Partnering with Māori, including environmental reporting experts, will accurately provide mātauranga Māori and apply it meaningfully, for robust, integrated reporting. This is in line with legislative responsibilities to respect and recognise Te Tiriti, and its commitments to Māori, to "recognise and protect Māori rights and interests" and "contribute and address Māori needs and aspirations".[6] This includes protecting taonga, both tangible (such as native plant and animal species) and intangible (such as mātauranga Māori).[7]

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4 For instance, *Our land* and *Our atmosphere and climate* domain reports.

5 Ministry of Research, Science and Technology, 2007, p 15.

6 Ministry for the Environment, 2016.

7 Wilkinson et al, 2020, 595.

CASE STUDY

Mana Ōrite Agreement between the Data Iwi Leaders Group and Stats NZ

The Mana Ōrite Agreement between the Data ILG and Stats NZ was signed in 2019. It is the first of its kind between iwi-Māori and the Crown. It describes the Tiriti-derived relationship shared by Stats NZ and the Data ILG, as Crown and Māori representatives with equal explanatory power. It sets out a commitment to work together through agreed principles, goals and deliverables that will give effect to an enduring relationship.

The purpose is to work with iwi-Māori to realise the potential of data to make a sustainable positive difference to outcomes for iwi, hapū and whānau. It sets out four workstreams:

1. Examine and develop ways of addressing disproportionate effects for iwi of 2018 Census results.
2. Improve administrative data for a sustainable and diversified flow of iwi data for Māori.
3. Develop a proposal for Māori data governance.
4. Develop a scope of work proposal for potential te reo Māori datasets.

We will make final recommendations to the Government that bring the full set of recommended changes together. If significant changes emerge through the consultation, we may seek further consultation before making final recommendations, likely on a targeted basis.

New Zealand's environmental reporting

Environmental reporting consists of all environmental data, monitoring data, reporting, research, science, analysis, mātauranga Māori, and other information or knowledge that informs state of the environment reporting, and national and local decisions.

National and local reporting

The reporting is at the national level, but includes local communications on specific places, in partnership with Māori.

Collecting data

The data used for reporting is collected through the ERA, and through other legislation and non-legislated means. Organisations that collect data include government agencies, local authorities, Crown research institutes (CRIs), mātauranga Māori experts, Māori, iwi and hapū, scientists, and scientist citizens.

One current source is information gathered under the Resource Management Act 1991 (RMA). This will be replaced by the proposed Natural and Built Environments Act (NBA).

Analysing data

Monitoring data feeds into the analysis of the information on environmental wellbeing. This involves in-depth research on:

- drivers and outlooks (figure 1)
- the state of the environment from a holistic, te ao Māori perspective, and from policy evaluation.

Improving consistency

For more cohesion, we need to create a monitoring and reporting system that talks to the different legislation. Linking the NBA and the ERA will be on-going, as the amendments to the ERA and resource management reform occur in parallel. This will include setting indicators, methods and protocols that align local and central government monitoring and reporting under the two Acts.

Resource management (RM) reform aims for:

- a more consistent framework for monitoring nationally important matters, such as environmental limits. Consistent methods and indicators for these limits should provide a wider evidence base for national reporting under the ERA. Core indicators under the ERA could also align with any indicators under the proposed NBA
- clear environmental limits and positive outcomes for natural and built environments
- national reporting to play an important role in tracking and assessing the performance of the RM system and whether we are meeting the limits; and tracking progress towards targets for the environment.

Environmental Reporting Act 2015

Under the ERA, the Secretary for the Environment and the Government Statistician must jointly produce and publish reports on New Zealand's environment.

Independence: a key feature of the ERA

The Government Statistician ensures that:

- the statistics selected for reporting are at arm's length from the Government of the day
- reporting as a whole remains independent of Ministers of the Crown (together with the Secretary for the Environment).

Reports are developed and released in line with Tier 1 Statistics and the protocols for each organisation.

As a result, the environmental reporting programme (joint between the Ministry and Stats NZ) is independent, accurate and free from political bias. It produces reports that are robust and credible.

The conversation has shifted away from debating accurate and independent reporting, towards a focus on the issues and long-term trends that affect our environment.

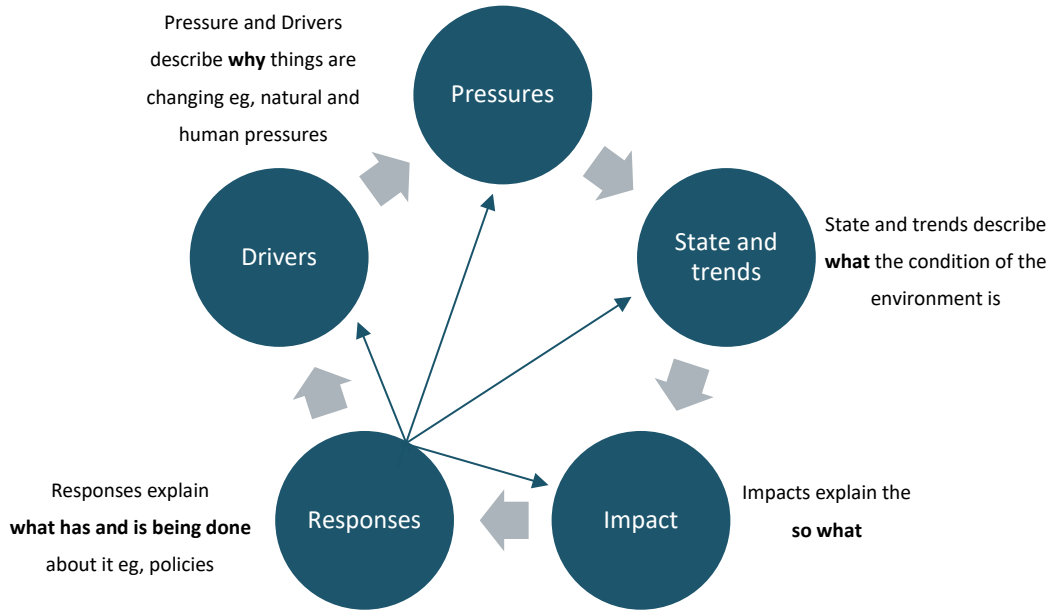
A key feature of the ERA is that it goes beyond reporting on the biophysical state of the environment. It covers dependencies and impacts related to social, economic, and cultural use and management of our natural resources.

The ERA currently provides for te ao Māori, defined as 'a Māori world view'. It commits to recognising and respecting the Crown's responsibility to uphold Te Tiriti, stating that:

- Each synthesis report and each domain report must describe, in relation to the topics prescribed in the Environmental Reporting (Topics for Environmental Reports) Regulations 2016 (Regulations), the impacts that the state of the environment and changes to it may be having on te ao Māori.
- Consultation is required with Māori before regulations may be made, to ensure that Ministers are informed of the views of Māori.

Each report must use the pressure-state-impact (PSI) framework, which is a shortened version of the driver-pressure-state-impact-response (DPSIR) framework shown in figure 1 below.

Figure 1: DPSIR framework



Note: Outlooks are a projection of trends in Drivers, Pressures, State, and Impact.

The 2016 Regulations set out the areas of interest for each domain (as shown in the box below), for consistency of information over time. These topics form the basis for the Government Statistician's decisions, after consulting with the Secretary for the Environment, about which statistics will accurately measure that part of the environment. These statistics are currently limited to a 'passive harvest' as the information used is obtained through the use of reasonable efforts only.

The five domains of environmental reporting

Under the ERA, the domains are reported every six months in the following order, between the synthesis reports which are published every three years:

- air
- atmosphere and climate
- freshwater
- land
- marine.

Reporting on the domains helps us understand our environment, track impacts of human activities over time, and identify challenges.

Previous environmental reporting

Since the enactment of the ERA, there have been almost two full cycles of reporting. The Ministry and Stats NZ have released 11 reports: one synthesis report, and 10 domain reports.

Improvements have been made as each report is published. For example, the first cycle moved from just the PSI framework to also include drivers, focused on priority issues in the report structure, and adopted the previous PCE's recommended criteria for selecting environmental issues.

The most recent synthesis report, *Environment Aotearoa 2019*, was published in April 2019. It took a broad approach and used all of the five themes as described within the ERA (see figure 2) to report on nine priority issues, looking beyond single domains to the whole, interconnected system.

Figure 2: Five themes and nine priority issues (*Environment Aotearoa 2019*)

Our changing climate	How we use our freshwater and marine resources	Pollution from our activities	How we use our land	Our ecosystems and biodiversity
New Zealand has high greenhouse gas emissions per person. Climate change is already affecting Aotearoa New Zealand.	Taking water changes flows which affects our freshwater ecosystems. The way we fish is affecting the health of our ocean environment.	Our waterways are polluted in farming areas. Our environment is polluted in urban areas.	Changes to the vegetation on our land are degrading the soil and water. Urban growth is reducing versatile land and native biodiversity.	Our native plants, animals, and ecosystems are under threat.

Two of the recent domain reports produced by the Ministry and Stats NZ are *Our atmosphere and climate 2020* and *Our land 2021*. They go beyond the PSI framework and include drivers (what is causing the pressures) and outlooks (where we are headed) (see the case study Our atmosphere and climate 2020 and Our land 2021 – going beyond pressure-state-impact).

Te ao Māori and mātauranga Māori

The ERA requires each domain and synthesis report to describe the impact of any changes in the environment on te ao Māori. The only other legislated requirements for Māori participation in reporting is as a party to consult with before setting regulations.

Data and information gaps relevant to te ao Māori and mātauranga Māori are well documented in previous domain and synthesis reports.

The PCE did not make any recommendations on incorporating te ao Māori and mātauranga Māori into the ERA, but stated in his report:

> "Given how much we do not know, we can ill afford to disregard this traditionally curated knowledge. The importance of making this a complementary part of the future state of the environment reporting has already been acknowledged. It now needs to be deepened."

The PCE acknowledged that he did not engage with Māori during the development of his 2019 report, and noted the responsibility for the Ministry and Stats NZ to do so for the ERA amendments. Engagement with iwi, hapū and Māori on any regulatory changes is a requirement under the ERA.

The Ministry commissioned work to identify priorities and propose a strategic direction including principles, for reporting impacts from te ao Māori including from the use of mātauranga Māori. This work will inform our partnership with iwi and Māori.

Informed by the above work, we have measures for each of the domains under the ERA. However, reporting on te ao Māori has largely focused on the consequences and effects of environmental issues, such as declining water quality and land-use changes, on Māori cultural values and identity.

In future, reporting needs to also incorporate mātauranga Māori, as well as findings on these issues, using a mātauranga Māori approach. Māori scholarship and expertise will also be required to expand environmental reporting to adequately incorporate mātauranga Māori.

The Ministry also acknowledges its role in building sector capability to understand the value of mātauranga Māori in reporting. This could lead to more integrated and seamless environmental reporting in the future.

Scope of proposed changes

This document focuses on proposed improvements to national-level reporting under the ERA. It does not cover the broader reform of environmental monitoring and reporting as a whole, which will continue to evolve over time.

Staging these reforms is a way to better understand the impact of other reform programmes with strong ties to environmental reporting, in particular the resource management system reforms.

The scope draws from previous reviews of environmental reporting from a system perspective, most notably:

- the PCE's 2019 report and recommendations
- the Resource Management Review Panel's 2020 report, *New Directions for Resource Management in Aotearoa New Zealand*.

We have also considered findings from previous environmental reports, including *Environment Aotearoa 2019* (synthesis report), and *Our land 2021* (domain reports).

This document also highlights the issues and recommendations that are addressed by alternative work programmes.

Purpose of this document

This consultation aims to:

- set out opportunities to strengthen the information available on the state of New Zealand's environment through the ERA
- seek your views on the opportunities we have identified.

It sets out:

- the context for environmental reporting
- our approach to partnering with Māori
- proposed options for improving and building a more cohesive environmental reporting system, including the initial preferred approach
- how to make a submission on our proposals.

Other simultaneous work

A range of programmes are in progress that influence, or are related to, environmental reporting. Although a broader reform of the environmental monitoring and reporting system is currently out of scope, we can address issues in the system through some of these initiatives:

- The Government's work to reform the resource management system includes improving monitoring and reporting on whether environmental limits are being maintained, and progress towards environmental targets.
- The independent review of the future for local government, so that its role and functions evolve in line with government reforms to improve the wellbeing of our communities and the environment.
- Stats NZ-led work:
  - Ngā Tūtohu Aotearoa – Indicators Aotearoa New Zealand is looking at indicators to monitor and report on kaitiakitanga (guardianship) and the state of the environment. It will focus on data quality, consistency, availability and presentation of indicators in an understandable format.
  - Data Investment Plan, and the Data and Statistics Bill (to replace the Statistics Act 1975). In partnership, it is co-designing a Māori Data Governance Model.
- The Ministry of Business, Innovation and Employment's Science System and Innovation programme (which includes reviews of the Nationally Significant Collections and Databases, CRIs, and Research Science and Innovation, among others) will give access to timely, consistent and relevant scientific data and expertise.
- The Government's work on developing a new national waste strategy and new legislation to better regulate how we manage products and materials circulating in our economy.
- Each government department is now required to publish a Long-term Insights Briefing (LTIB), with the first due in 2022. The Ministry draws on content from environmental reports (without duplicating collection of evidence) as a way to inform future scenarios. LTIBs and environmental reporting can inform each other through their evidence base and scenarios.
- The Treasury-led work to develop both a Living Standards Framework (LSF) and He Ara Waiora (HAW) to lift New Zealanders' living standards and wellbeing including in the

current wellbeing domain of environment and the future wellbeing domain of natural capital. HAW gives an indigenous and unique response to questions related to lifting living standards by developing a framework that helps Treasury understand waiora (or Māori perspectives on wellbeing) by taking a tikanga-based approach including to te taiao.

- The Department of Conservation-led work on Predator Free 2050 and Te Mana o Te Taiao (Aotearoa New Zealand Biodiversity Strategy 2020) which is a Convention on Biological Diversity commitment, are significant initiatives that are aimed at engaging all New Zealanders to deliver on the goals and outcomes.
- Local government initiatives include Land Air Water Aotearoa (also known as LAWA), National Environmental Monitoring Standards (NEMS), and environmental data management systems (EDMSs) for the regions, which are gathering data on use of the environment through monitoring and research.
- The Ministry for Primary Industries and the Ministry work on the National Policy Statement for Freshwater Management 2020. This requires regional councils to monitor freshwater in a consistent way across New Zealand within all or any parts of water bodies and their catchments, to determine trends.
- The Government's climate-change initiatives including the Greenhouse Gas Inventory, the System of Environmental Economic Accounts (led by Stats NZ), Emissions Trading Scheme reporting (Environmental Protection Authority), the proposed Emissions Reduction Plan (the Ministry), the National Climate Change Risk Assessment, and the National Adaptation Plan.
- The reform of the public health system to establish, among other agencies, a new public health agency within the Ministry of Health, which will be responsible for public health policy, strategy, monitoring and intelligence. It will help to better understand and respond to threats to public health, and put evidence at the heart of policy-making. This focuses on environmental factors in health, such as water quality for human use.
- The three waters review to create four publicly owned water entities which will work with local authorities and communities to deliver better health and wellbeing outcomes and to protect the environment for generations. Te Mana Rauranga is a Māori data sovereignty network that advocates for Māori rights and interests in data developed by Māori.
- Manaaki Whenua Landcare Research engaged with Māori to give strategic direction from a te ao Māori perspective, when reporting on the environment.
- Iwi environmental management plans: these are localised, and often include indicators for ecosystem health and wellbeing. Examples are the Waikato-Tainui Environmental Plan – Tai Tumu Tai Pari Tai Ao, and Mahaanui Iwi Management Plan.
- Māori-led monitoring and reporting initiatives such as:
  - He Ara Waiora, a mātauranga Māori wellbeing framework that ngā pukenga Māori have developed with Treasury
  - 2019 Mana Ōrite Agreement between the Data ILG and Stats NZ
  - Independent Māori Statutory Board's Kaitiakitanga Value Report.

For more information on these initiatives see appendix 1.

The Ministry is aligning the ERA amendments with the above initiatives and will continue to look for, and engage with other work programmes as they come online. We recognise that other work will be required, to ensure a coordinated approach, in particular with RM reform, to facilitate national-level data gathering and reporting.

PART 2: Opportunities and objectives

Read about the issues we are seeking to address and the objectives for amending the Environmental Reporting Act 2015.

Opportunities and objectives

There are substantial limitations within the ERA on measuring and reporting on what is happening to the environment.

The causes are wide ranging, from resourcing, capability and legislation to institutional and infrastructure issues. Recently, several parties have signalled the need for improvement, including the current and former PCEs, the Resource Management Review Panel, the Government, local government, CRIs, Māori organisations and non-government organisations.

The four issues we address here are:

1. Unclear purpose of environmental reporting means that it requires regular reports, but lacks legislated direction to identify key issues or desired outcomes:
    - the current purpose of the ERA (to "require regular reports on New Zealand's environment") does not involve any shared vision or purpose for reporting
    - the frequency of reporting, which the PCE described as a "never-ending treadmill", is resource intensive, and detracts from more in-depth analysis. When driven by release deadlines, organisations do not have the capacity to complete the in-depth research and analysis needed
    - the PSI framework currently used for reporting lacks key elements, limiting analysis and reporting.
2. New Zealand does not have a fit-for-purpose designed national environmental reporting system. In particular:
    - the current fragmented reporting model uses available data and information, which is supplemented with research ('body of evidence') for case studies and local examples. This limits our understanding of the impacts of activities on the environment and human wellbeing
    - although the ERA is clear about the roles and responsibilities of the Secretary for the Environment and the Government Statistician, it is not clear about how this should be done
    - the prescribed domain topics and reporting cycles do not acknowledge the complexity of the environment, how it affects wellbeing, or that it is an interconnected system. A more holistic view would include te ao Māori and mātauranga Māori, and contain information, for example about urban air and water quality, or urban land use, in a form that is helpful for decisions about urban areas.
3. Inconsistent and deficient data and knowledge which is impeding comprehensive and robust, evidence-based reporting by:
    - requiring only existing and available data, obtained using reasonable efforts
    - basing the monitoring on others' data, which might not be consistently measured
    - the Ministry and Stats NZ not having the mandate to monitor the state of the environment directly – so they are unable to fill any gaps
    - mātauranga Māori being absent from reporting, apart from the impact on te ao Māori.

4. Under-recognition of the Crown's Tiriti responsibilities, te ao Māori, and mātauranga Māori, because:
   - the ERA does not explicitly involve Māori in environmental reporting, which means te ao Māori and mātauranga Māori are not meaningfully represented
   - there is a lack of recognition of the value and validity of te ao Māori and mātauranga Māori throughout formal environmental reporting under the ERA[8]
   - the current domain-based reporting prevents a more holistic view of the environment, which would require the inclusion of te ao Māori and mātauranga Māori
   - the current scale (focus on national data sets) limits quantitative approaches that are relevant in local areas, not recognising the valid empirical methods in te ao Māori.

Each proposal addresses these four issues in more detail.

Questions

1. Would you add any issues to this list? Why?
2. Which of these issues are the most important to fix? Why?

Objectives

To address the four issues above, the proposed changes should achieve the following objectives:

- To have a clear purpose for environmental reporting that drives a focus on key issues and the desired outcomes.
- To drive the shift to a clearly defined, coordinated reporting system that gives a robust, comprehensive, authoritative evidence base on the state of New Zealand's environment.
- To increase the influence environmental reporting has on decisions affecting the environment.
- To better meet our partnership responsibilities in terms of Te Tiriti and Māori data sovereignty, including how mātauranga Māori, data, evidence, knowledge and science is used, collected, managed and protected in environmental reporting.

These objectives were used when developing the Assessment Criteria (in appendix 3) that have been applied to each option. The initial preferred option was selected based on it meeting the objectives better than the other identified options. It also had to receive the highest score against the four assessment criteria, thereby providing the best opportunity to improve the way the ERA functions.

Question

3. Are these objectives the most effective for improving environmental reporting? If not, what should the objectives be, and why?

[8] PCE, 2019.

PART 3: Proposals for environmental reporting

Read about the 10 amendments we are proposing.

Proposals for environmental reporting

We propose 10 amendments:

1. Clarify the purpose of environmental reporting.
2. Mandate a government response to synthesis reports.
3. Add drivers and outlooks to the reporting framework.
4. Adjust roles and responsibilities.
5. Mandate a standing advisory panel.
6. Replace environmental domains with cross-domain themes.
7. Reduce the frequency of synthesis reports to six-yearly.
8. Replace domain reports with one commentary each year.
9. Establish a set of core environmental indicators.
10. Strengthen the mechanisms for collecting data.

As noted, we have not developed detailed proposals to better meet our partnership responsibilities in terms of Te Tiriti and Māori data sovereignty. This includes how mātauranga Māori, data, evidence, knowledge and science is used, collected, managed and protected in environmental reporting. These changes will be developed with Māori and could result in changes being made to the existing proposed amendments, and may also include additional amendments being developed.

Intended effect of the proposals

The ERA is foundational to our stewardship of New Zealand's environment. It sets in place an enduring reporting system that is independent of Ministers of the Crown, that does not get affected by dynamic policy work, and offers certainty and stability.

Amendments to the ERA are an important step towards improving the wider environmental monitoring and reporting system as a whole. This includes proposals for the NBA, the Data and Statistics Act, and broader initiatives occurring in parallel. Done correctly, the amendments will provide a stronger foundation, helping us to better understand our environment, our impact on it, and the opportunities to make well-informed decisions.

Assessing the options for each proposal

The Ministry considered a range of options to address the issues. The proposals below include the top three options (or less). Appendix 2 lists any additional options.

We assessed the full list of options against the assessment criteria. Appendix 3 presents the assessment criteria and the outcome of the assessment.

Appendix 4 lists the impacts of each proposal, including costs, benefits and risks, based on the initial preferred option.

Proposal 1: Clarify the purpose of environmental reporting

PROPOSAL

Clarify the purpose of the Environmental Reporting Act 2015 to include why we are reporting on the state of the environment, and what the reports are supposed to achieve.

Current situation

The purpose of the ERA is to "require regular reports on New Zealand's environment". This does not go beyond requiring the reports and does not explicitly outline the need for reporting. A purpose statement should clarify who it is for, why we report, and what it is supposed to achieve.

In practice, we know that the purpose of reporting is to contribute to better environmental outcomes: it provides evidence for an open and honest conversation about what we have, what we are at risk of losing, and where we can make changes.

However, it should also describe the current state of the environment and the pressures, impacts (including impacts on human wellbeing), and drivers of these changes. The New Zealand public, the Government and other decision-makers will then have the information to understand where any interventions can be most effective.

The purpose statement should reflect this core 'why', and should 'set the scene'. Everything else in the ERA is interpreted in light of the ERA's purpose.

In his 2019 report, the PCE recommended stating the purpose of the ERA as:

> "The purpose of this Act is to require authoritative reporting on New Zealand's environment that describes:
>
> - the drivers of change;
> - the pressures on natural and physical resources;
> - the current state of the environment;
> - how the state of the environment has changed, and the impacts the changes have had;
> - how the state of the environment may change in the future, and the impacts those changes are likely to have –
>
> to enable the evidence-based analysis and decision-making needed to achieve effective stewardship of the environment."

The purpose statement incorporates both a purpose and the initial preferred framework for reporting.

Three options

1. *Amend the purpose of the ERA to a variation on the PCE's wording; separate the purpose (the why) from the reporting framework (the how).* These are two parts within reporting, separating them allows us to amend one without affecting the other. Amending the purpose would still incorporate the 'why' and 'for what', as in the PCE's wording.

2. *Amend the purpose of the ERA in line with the PCE's recommendation*. The PCE's wording combines two different points:

    1. Why we are reporting and what it is supposed to achieve.
    2. The reporting framework.

    The framework should be a separate provision in the ERA, in part because we propose to extend it to incorporate a fuller version of the DPSIR framework (see figure 1) in synthesis reporting.

3. *Status quo*. As outlined in the current situation above, this option does not provide a clear purpose.

Initial preferred option

Option 1 is the initial preferred option – amend the purpose of the ERA to set out a short statement on the following points:

1. Requiring regular, independent, evidence-based, authoritative, culturally inclusive (eg, aligning with te ao Māori values and perspectives), state of the environment reporting.
2. Referring to reporting (as opposed to reports).
3. Informing New Zealanders and meeting the needs of Māori.
4. Promoting analysis and decisions that lead to effective stewardship of the environment.

This is the initial preferred option because it would:

- *support a clear purpose for reporting* by setting it out in a way that focuses on the key issues and desired outcomes
- *drive a clearly defined, coordinated evidence base for reporting* by giving guidance on why those involved are preparing reports, commentaries, and indicators
- *increase the influence of reporting* by:
    - clearly stating who the reporting is for and the reason for it. This helps people understand the range, level and quality of reporting to expect
    - giving greater visibility in reporting which may help to prevent duplication in effort of other reports and greater engagement in the reporting by the public, which will increase the consciousness of the state of the environment with potential ancillary benefits
- *improve on how we meet our Tiriti responsibilities.* It requires environmental reporting to include purposeful information that meets the environmental needs of Māori and includes mātauranga Māori and te ao Māori perspectives of the environment.

For more on the costs, benefits and risks of this option, see table 3 and appendix 4.

Questions

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

PROPOSAL

Require the Government to formally acknowledge synthesis reports within six months and release an action plan within 12 months.

Current situation

There is nothing in the ERA to require the Government of the day or any other entity to formally respond to a synthesis report. This has reduced the expectation of any action plans being developed to address the issues. As a result, it is difficult to assess the effectiveness of synthesis reports. While considering the current situation as an option (the *status quo*), it would not resolve the issues previously identified.

Responding to reports is an important part of a formal feedback loop. It increases transparency and accountability for addressing environmental issues and ensures that reports influence decisions effectively.

The PCE recommended amending the ERA to:

> "[a]dd a requirement for the Government to provide a formal response to the state of the environment (synthesis) reports:
>
> Require the responsible Minister (likely to be the Minister for the Environment) to provide a formal response on behalf of the Government to the findings of state of the environment (synthesis) reports within six months of the report being released.
>
> For any issues (or concerning trends) this formal response may include comment on:
>
> - what policies and initiatives currently exist
> - what new policies and initiatives are proposed or planned
> - what policy analysis the Government proposes to undertake to identify any other policies and initiatives that are needed."

Three options

1. *Mandate a response from the Government, with the Minister for the Environment coordinating the response from relevant Ministers*. This would ensure that the national synthesis report, as an evidence-base, informs policy in a timely manner, and that its findings are properly assessed and potentially addressed. It would provide a more comprehensive response from the Government that would not only address the current PSI framework, but also the proposed additions of drivers and outlooks across all sectors and portfolios.
2. *Mandate a response from the Government, with only the Minister for the Environment responsible for responding*. Similar to option 1, this option would ensure the report, as an evidence-base, informs policy in a timely manner, and that its findings are properly assessed and potentially addressed. However, if other Ministers were not involved, the Minister's response would not be able to include the proposed additions of drivers and outlooks which sit across all sectors.

3. *Mandate a response from a select committee*. This would provide a cross-party response. There might be issues with timing of workloads and recesses, and the committee's inability to implement any initiatives. This would not close the loop in the reporting framework.

Other options we considered (including the *status quo*) are in appendix 2.

Initial preferred option

Option 1 is the initial preferred option. This requires the Minister to coordinate the responses from all relevant Ministers.

The Government's responses will form a separate report from the synthesis report, to maintain its independence and avoid publication delays. Part of our initial preferred option is that:

- within six months of publication of a synthesis report, the Government would release an initial response acknowledging the report and its findings
- within 12 months of publication, the Government would release an action plan on what it has already done in response to the report, and what else it intends to do.

This would allow more time, and also create the additional requirement for a more comprehensive response, helping to formally close the loop between the issues in the report, and the actions to address them. The environmental reporting programme will not be involved in the process as to how the Government responds.

This is the initial preferred option because it would:

- *support a clear purpose for reporting*. The findings to which the Government is to respond must focus on the key issues
- *drive a clearly defined, coordinated reporting system*. There is currently a gap in the framework. This option requires a timely government response for all parts of the framework
- *improve environmental reporting's influence* by:
  - requiring Government responses, including an action plan, to respond to the findings in synthesis reports
  - providing clarity to the public on what action the Government will take creating greater accountability for action, and increased focus on resulting environmental improvements
- *improve on how we meet our Tiriti responsibilities*. The Government would have to respond to findings relating to Te Tiriti, mātauranga Māori, and te ao Māori. It would be the Government's responsibility to establish and resource a partnership process with Māori, to work through the findings and consequent actions.

For more on the costs, benefits and risks of this option, see table 3 and appendix 4.

Questions

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

PROPOSAL

Extend the pressure-state-impact framework to include a requirement for information on:

- **drivers – factors that cause the pressures on the environment**
- **outlooks – how the state of the environment may change in the future, and the likely impact of such changes.**

Current situation

A reporting framework is a way of organising information so we can tell a coherent story about New Zealand. It sets the scope for what is reported on. The ERA currently specifies the PSI framework, taken from the larger DPSIR framework, which also includes drivers (D) and responses (R). See figure 1.

Pressure-state-impact framework

P = Pressure: a natural or human activity or interactions that may be causing, or have the potential to cause changes, to the state of the environment.

S = State: the physical, chemical and biological component of the current condition of the environment.

I = Impact: a change in the use or benefits to society caused by a change in environmental state.

The PSI framework was adopted to promote a more comprehensive story of New Zealand's environment. It helped to ensure that the most relevant indicators could be selected, for a coherent picture. This would go beyond reporting the condition of the biophysical environment, to include impacts related to the social, economic and cultural use and management of our natural resources.

Although maintaining the current situation is an option (the *status quo*), it would not resolve the issues noted. The PSI framework is only a subset of the original DPSIR framework and does not include drivers or responses. Reporting has not given a complete account of our environment, reflecting the complexity of the issues and citing evidence for interventions. Although we considered staying with the *status quo*, it did not make it into the top three options.

There is also a call for more focus on outlooks in environmental reporting. Outlooks are a projection of trends, in the framework of Drivers, Pressures, State, and Impact.

The DPSIR is just one of the frameworks that can be used both nationally and internationally for reporting environmental change. Other agencies in New Zealand have adopted or developed some of these. This does not create issues for reporting as many can function alongside the PSI and DPSIR. The Department of Conservation, for example, has developed its own frameworks, including the Biodiversity Assessment Framework (BAF).

The DPSIR's versatility makes it useful to retain as the basis for reporting.

The PCE recommended a change to the ERA to:

> "[r]equire state of the environment (synthesis) reports to include drivers and outlooks (in addition to pressures, states and impacts)".

Three options

1. *Include drivers and outlooks*. As the PCE recommended, this would give a more complete view of the issues, by analysing the impact of drivers on pressures, and indicating what would happen if they continued.
2. *Include drivers, outlooks and responses*. Including all three would completely close the loop in the framework – looking not just backward (responses) but also forward (outlooks). Responses would list but not evaluate the interventions that have already occurred at both government and community levels, to deal with pressures and impacts. This is distinct from the proposal for the government to formally respond to the matters raised in the synthesis reports.
3. *Include outlooks*. This would assist with understanding the significance of the environmental issues if no interventions were made. However, leaving out drivers could imply that these additional parts of the framework were not to be carried out at all, which would not be as effective in improving reporting.

Other options we considered (including the *status quo*) are in appendix 2.

Initial preferred option

Option 1 is the initial preferred option. The Ministry and Stats NZ have already begun including drivers and outlooks in their reporting. Two of our recent reports were steps forward. How this works in practice is set out in the following case study, where domain reports included drivers and outlooks.

This is the initial preferred option because it would:

- *support a clear purpose for reporting*. It expands the framework for easier identification of the key issues to report, which reinforces the value of the reports and therefore also the Government response as mandated by Proposal 2 consequently increasing those benefits
- *drive a clearly defined, coordinated reporting system*. A more complete framework offers more tools for reporting. The reporting framework proposed is very versatile which means it does not create issues for reporting now or in the future as other reporting frameworks can easily function alongside it
- *increase the influence of reporting* by presenting a clearer and more coherent picture about New Zealand's environment. Drivers and outlooks will provide high-quality information to underpin decisions for effective policies and interventions that will be able to deliver outcomes further into the future than current interventions
- *improve on how we meet our Tiriti responsibilities*. It includes more knowledge and information from mātauranga Māori and te ao Māori, by reporting the impact of changes in the environment in a relevant, more coherent and comprehensive way.

For more on the costs, benefits and risks of this option, see table 3 and appendix 4.

CASE STUDY

Our atmosphere and climate 2020 and Our land 2021 – going beyond pressure-state-impact

Our Atmosphere and Climate 2020 was the first report in the series to explicitly include information on drivers and outlooks. It went beyond pressures such as greenhouse gas emissions, to address what our emissions profile was in the first place.

It explored four **drivers** of our emissions: GDP per capita, energy intensity of GDP, carbon intensity of the energy supply, and population. It assessed them to understand which were the most important. Internationally this is a common approach to understanding the drivers of greenhouse gas emissions.

The chapter called "Looking ahead: future emissions and climate" included **projections** to help us understand the implications for climate and wellbeing if the current emissions and warming trends continue.

Our land 2021 also addressed global and national drivers of land use. It went beyond the direct pressures, to outline indirect influences (eg, consumer preferences, growing populations, and domestic and overseas markets) and policies (eg, for trade, immigration and housing) and their impact on land use, and on soil.

The report notes the need for more work on the relative contributions of drivers and how they interact to shape land use. The chapter called "Land and a changing climate" explored how climate change might affect land use in the future.

With these added dimensions, the reports couple the science and data with the everyday experience of New Zealanders. They directly relate to people and their relationship with the environment, including for future generations.

Questions

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 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

PROPOSAL

Adjust the roles and responsibilities for the Secretary for the Environment and the Government Statistician, to reduce overlaps and ensure that each organisation uses their expertise, with:

- **the Secretary for the Environment as the steward for New Zealand's environment**
- **the Government Statistician as the leader of the official statistics system.**

Current situation

The ERA sets out distinct roles for the Minister for the Environment and Minister of Statistics, the Secretary for the Environment, the Government Statistician, and the PCE (see table 1).

In producing and publishing environmental reports, the Secretary for the Environment and the Government Statistician must act independently of any Minister of the Crown. Having clearly defined roles keeps decision-making transparent, and promotes independent, robust reporting.

Although the ERA specifies one joint role for the Secretary for the Environment and the Government Statistician, and some specific roles for the latter, it gives no further definition. In our experience, it would be preferable for each organisation's role in environmental reporting to be more explicitly aligned to its role in central government more generally. The roles and responsibilities should be more clearly reflected in the ERA.

The practice guide, produced by Stats NZ, for environmental reporting has provided some clarification, but both agencies agree that legislative change is needed.

The PCE recommends amending the ERA to:

> "[a]djust the responsibilities of the Secretary for the Environment and the Government Statistician:
>
> - The Secretary for the Environment should be responsible for producing both the state of the environment (synthesis) reports and the theme-based commentaries.
> - The Government Statistician should have an approval function in respect of both the state of the environment (synthesis) reports and the theme-based commentaries".

Later in his report, the PCE also recommends using environmental indicators. We have taken this into account when allocating roles and responsibilities.

Two options

1. *Adopt the PCE's recommendation to adjust the roles and responsibilities of the Secretary for the Environment and the Ministry, and the Government Statistician and Stats NZ*. This would clarify roles and responsibilities and enable each organisation to use its expertise, and would be clearly reflected in the ERA. This would provide greater efficiencies, likely reducing resourcing including costs between agencies. It would also maintain independence in reporting and transparency in decision-making.

2. *Status quo*. The ERA sets out clearly defined roles, which share joint responsibility. How that responsibility is shared in reality has been less transparent, affecting the robustness of reporting.

Initial preferred option

Option 1 is the initial preferred option. We propose the following changes to the roles and responsibilities of the Secretary for the Environment and the Government Statistician in the ERA (table 1).

Table 1: Proposed changes to clearly reflect the role of the Secretary for the Environment and the Government Statistician under the ERA

	Current roles and responsibilities	Proposed changes
Secretary for the Environment	Jointly produce and publish environmental reports; must use Ministry expertise.	Responsible for: • producing environmental reports as the steward for New Zealand's environment • defining a set of environmental indicators in consultation with the Government Statistician • contributing to updating the indicators (as discussed in proposal 9) • establishing and working with an advisory panel to improve independent, expert advice • checking the consistency and accuracy of statistics and indicators used in reporting in conjunction with the Ministry.
Government Statistician	Jointly produce and publish environmental reports; must use Stats NZ expertise. Decide on the statistics to measure topics prescribed by regulations, in consultation with the Secretary for the Environment. Sole responsibility for deciding the procedures for providing statistics for an environmental report.	Responsible for: • deciding the procedures for procuring and providing statistics and indicators • updating and quality-assuring the indicators (with input from the Secretary for the Environment) • checking the consistency and accuracy of statistics and indicators used in reporting in conjunction with the Ministry • ensuring fairness, accuracy, and relevance of reporting.

Within this option, specialists, Māori, government agencies, and other organisations might have formal roles under the ERA that would promote robust, high-quality reporting.

This is the initial preferred option because it would:

- *support a clear purpose for environmental reporting,* facilitating the Secretary for the Environment's role as steward for our environment, and the Government Statistician's independent leadership of the official statistics system
- *drive a clearly defined, coordinated reporting system.* Clearly defined roles, with transparent decision-making, would allow each organisation to lead on the parts of reporting with-in their strengths, improving efficiency (note that cost efficiencies may be minimal unless substantial overlap currently exists)

- *increase the influence of reporting* through transparent decision-making, adding to the robust quality of future reporting and maintaining independence
- *improve on how we meet our Tiriti responsibilities.* We would work with Māori in a more cohesive and appropriate way, potentially with more formal roles under the ERA.

For more on the costs, benefits and risks of this option, see table 3 and appendix 4.

Questions

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

PROPOSAL

Require the establishment of a standing advisory panel under the Environmental Reporting Act 2015.

Current situation

The Ministry and Stats NZ will typically draw on a range of external skills and expertise when preparing reports. Although not required under the ERA, independent technical advisory groups (in fields relevant to the report) have previously been established. For example, the Secretary for the Environment set up the Senior Science and Mātauranga Team to advise in the preparation of *Environment Aotearoa 2019*.

The PCE recommended amending the ERA to:

"[e]stablish a standing science advisory panel:

- A standing science advisory panel should be established, with the role of providing independent, expert advice (both on request and on its own initiative) to the Secretary for the Environment on:
  - the timing and focus of the theme-based commentaries
  - the environmental issues that should be given priority in the state of the environment (synthesis) reports
  - further research, monitoring and data needed to provide robust and comprehensive reporting.
- The Secretary for the Environment should be responsible for appointing the members of the standing science advisory panel".

The PCE's recommendation reflects the usefulness of science advisory groups and ensures that it is formally constituted under the ERA, to guarantee a measure of independence. The ERA requires that in producing and publishing an environmental report, the Secretary for the Environment and the Government Statistician must act independently of any Minister of the Crown. Any standing advisory panel that is set up must also be independent.

This year, the Ministry has voluntarily set up a science advisory panel in advance of amending the ERA, to provide independent advice, grounded in science including mātauranga Māori, to support the role of the Secretary for the Environment.

Three options

1. *Adopt the PCE's recommendation of establishing a statutory requirement for a standing advisory panel*. This would enable a standing advisory panel to be established that would give independent advice, with a range of perspectives, and the capacity to forewarn of any emerging trends. The reporting agencies would have priority access to the standing advisory panel (panel) for advice on emerging issues for reporting to focus on. The panel could not be disbanded without change to legislation. There would be flexibility to make operational changes if needed. Sub-panels could be set up temporarily for areas requiring specific expertise.

2. *Establishing an independent Science Advisory Council as a Crown entity*. The issue for reporting would be greater competition across all agencies for the council's advice, and possible gaps in advice if there were no sub-panels with specific expertise.
3. *Status quo*. No statutory requirement for a panel. The Ministry would continue to assemble the Science Advisory Panel, for independent advice, different perspectives, and to forewarn of any emerging trends observable in CRI, university or mātauranga Māori knowledge and research. However, the reporting programme's priorities would be vying with other work programmes for the panel's consideration. If the Secretary for the Environment later decided to disband the panel, there would be no recourse for establishing one under the ERA.

Other options we considered are in appendix 2.

Initial preferred option

Option 1 is the initial preferred option. The Ministry would lead the work and draw on the input from the panel and Stats NZ.

The panel members would be appointed by, and report to, the Secretary for the Environment for renewable terms of three years. Consideration will be given as to whether the criteria for appointment will be specified in the ERA or elsewhere. The aim is to maintain the independence of the reporting programme from Ministers, as set out in section 15 of the ERA.

The panel's main role would be to advise on reporting, but on occasion that may be extended, at the discretion of the Secretary for the Environment, to other Ministry work programmes relating to science and knowledge systems.

The panel would consist of a minimum of five specialists and, where warranted, up to seven for a particular report, or where needed for collective knowledge and experience. The Secretary for the Environment would have discretion to appoint sub-panels for defined purposes, such as where other specialist advice is required, or for focused parts of the reporting programme.

This is the initial preferred option because it would:

- *support a clear purpose for reporting*. Relevant experts would give independent advice on upcoming environmental issues, and forewarn of any likely additional national and international information
- *drive a clearly defined, coordinated reporting system.* A panel of experts formally constituted under the ERA would give independent advice, with expertise in relevant knowledge systems
- *increase the influence of reporting*. The members would bring expert science and data knowledge, as well as different perspectives, skills and experience from a diverse range of disciplines including te ao Māori and mātauranga Māori. Engagement with the reports and the corresponding government responses would increase the visibility of the reports, forewarn of any emerging trends, advocate for change, and increase the accountability for action
- *improve on how we meet our Tiriti responsibilities* through partnership. It would initially require that at all times at least two members have expertise in te ao Māori and mātauranga Māori.

For more on the costs, benefits and risks of this option, see table 3 and appendix 4.

Questions

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

PROPOSAL

Replace environmental domains with cross-domain themes that form the basis of synthesis reports and in-between commentaries.

Current situation

Domain reports

To maintain some consistency through time, the ERA requires five environmental domain reports, on set topics.

The five domains are air, atmosphere and climate, land, freshwater and marine.

The domain reports provide an in-depth understanding of an individual domain, presenting relevant indicators and additional research. They also help the Ministry and Stats NZ spread their efforts over the three-year cycle. Although there is nothing in the ERA preventing domain reports going beyond an individual domain, they have generally been limited to information *within* the boundaries of the domain. The domain framework and six-monthly reporting have constrained the reports. This situation has been less than optimal. While considering the current situation as an option (the *status quo*), it would not resolve these issues.

Reporting within the artificial confines of a single domain can result in an incomplete picture of the environment. It does not represent the complexity and interrelation of environmental systems, which will likely require holistic, integrated responses that benefit many domains at once. Also, it does not reflect te ao Māori which acknowledges the interconnectedness of the environment across land, water, and people. The domain approach can limit timely reporting on emerging issues that intersect domains. For example:

- boundary environments span across domains (eg, estuaries span freshwater and marine, and wetlands span freshwater and land)
- issues span multiple domains at once (eg, erosion and sedimentation belong in the land, freshwater, and marine domains)
- management across domains is often split among several agencies (eg, biodiversity across all domains) and across different tenures (eg, public conservation land, private).

The ERA does not include biodiversity and ecosystems as a domain, but does require reporting on them as part of the state of the environment in synthesis reports, and all domain reports. It is the only part of the environment that is treated as a cross-domain issue.

The reports are published every six months. A synthesis report on all the domains must be published every three years.

Synthesis reports

The synthesis reports focus on understanding cross-domain aspects and topics. They give a clearer picture of the environment as a whole, and the interactions between domains. There is

flexibility in the structure with the pressure, state and impact information forming the basis across the domains. *Environment Aotearoa 2015* divided the report into domain chapters (as well as a separate biodiversity and ecosystems chapter), and *Environment Aotearoa 2019* developed themes to weave the findings through from the five domains, for an interconnected view of our environment (table 2).

The PCE recommended amending the ERA to:

"[r]equire state of the environment (synthesis) reports to include commentary on five overarching themes:

- land
- freshwater and marine environment
- biodiversity and ecosystem functioning
- pollution and waste
- climate change and variability.

These themes should replace the Environmental Reporting (Topics for Environmental Reports) Regulations 2016. The current regulation-making power should also be dispensed with."

and

"[r]eplace domain reports with theme-based commentaries that meet the following requirements: …

- Their subject matter should be able to cover more than one thematic area where it is appropriate to do so.
- At a minimum, each theme should form the basis for a commentary at least once in the interval between state of the environment (synthesis) reports.
- The length of these commentaries should be determined by the complexity of the task at hand."

Table 2 sets out different ways to divide our environment into manageable domains or themes. Noting that this consultation is open to other themes being proposed.

Table 2: Analytical divisions of the environment

ERA – domains	Environment Aotearoa 2019 key themes	PCE	Environmental limits – proposed Natural and Built Environments Act
Atmosphere and climate	Climate change	Climate change and variability	
Land	Land use	Land	Soil
Freshwater	Freshwater and marine resource use	Freshwater and marine environment	Freshwater Coastal waters Estuaries
Marine			
Air			Air
	Pollution	Pollution and waste	
	Biodiversity and ecosystems	Biodiversity and ecosystem functioning	Indigenous biodiversity

Three options

1. *Shift to cross-domain themes*. This would treat the environment as an interconnected system, reflecting of te ao Māori. It would require care to keep it comprehensive and avoid gaps. Theme-based commentaries and synthesis reports would allow for more flexibility and effective reporting from a themes perspective (particularly where issues cross domain boundaries). The themes could be the same as those in *Environment Aotearoa 2019*, or those recommended by the PCE (more a hybrid of domains and themes) or selected based on feedback. More integrated reporting would bring efficiencies through a better understanding of the pressures and impacts.
2. *No mandatory themes or domains*. Instead of themes or domains, this would allow the reporting programme to select the areas to report, on the advisory panel's advice. This has a lot of flexibility, possibly too much, because it could result in inconsistent coverage, only addressing the interests of the panel and the top issues.
3. *Retain modified domains*. This would include the separate domains of te ao Māori, biodiversity and possibly others, allowing a focus on areas that have been under-reported.

Other options we considered (including the *status quo*) are in appendix 2.

Initial preferred option

Option 1 is the initial preferred option. We recognise that both domain and theme-based reporting have their merits. However, we propose to retain comprehensive, theme-based synthesis reports to cover the 'whole of the environment'. The in-between reporting would move to theme-based commentaries that reflect current and emerging issues. This option would replace domains with themes and remove the need for regulations to prescribe topics.

We have considered other possible themes, but to date they would be covered by a combination of the existing themes. The synthesis reports are also a way to bring together cross-theme areas. There is no proposal to amend the impact categories (eg, te ao Māori, and culture and recreation), which must be considered when reporting on themes.

This is the initial preferred option because it would:

- *support a clear purpose for reporting*. It sets out themes that either individually or together bring a more holistic understanding of key issues
- *drive a clearly defined, coordinated reporting system* based on a wider, comprehensive analysis of the themes acknowledging the interconnectedness. This includes where these overlap, to avoid gaps in reporting and gain efficiencies through better understanding
- *increase the influence of reporting*. Removing the artificial confines of reporting on a single domain allows for a complete picture of the environment, with all its complexity and interconnectedness. By acknowledging this, we may see increased understanding and engagement with the reports and the government responses by the public, creating greater interest in the environment and accountability for action
- *improve on how we meet our Tiriti responsibilities* by increasing the focus on te ao Māori and mātauranga Māori. For example as part of, or as, a theme in environmental reports. We are partnering with Māori to explore the best approach.

For more on the costs, benefits and risks of this option, see table 3 and appendix 4.

Questions

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

PROPOSAL

Move from a three-yearly to a six-yearly cycle for synthesis reports.

Current situation

The ERA requires a synthesis report to be published once every three years. Rates of change for many parts of the environment can be slow, and responses to change (good or bad) can typically take longer than three years before they are evident in the data. While considering the current situation as an option (the status quo), it would not resolve these issues.

The frequency of synthesis reports needs to reflect a more appropriate balance between timeliness of reporting, rates of environmental change, and seeing connections between environmental changes. Consistent reporting over time also makes it easier to understand trends.

After reviewing the frequency and timing of these reports, the PCE recommended that the ERA

> "[r]etain regular state of the environment (synthesis) reports but produce them every six years, with the first synthesis report produced in 2025."

Three options

1. *Reduce the synthesis reporting frequency to six-yearly*. The PCE concluded that a six-yearly cycle would be the optimal period. It would fit between every second election cycle and the Long-term Insights Briefings, which share some of the collected data, improving efficiencies. The briefings and synthesis reports will apply alongside one another, avoiding duplication of work and informing one another while clearly outlining their different functions. By lessening the report frequency, we can put our investment into better and more robust data for reporting.
2. *Reduce the synthesis reporting frequency to five-yearly*. For other OECD countries the most common and maximum reporting cycle is five-yearly. This indicates that they find this interval enough to record changes in the data. The Resource Management Review Panel also supported a five-yearly cycle. Several national programmes, such as Department of Conservation monitoring of common and widespread species and communities, report annually on metrics. Some sites are measured each year, with an entire rotation every five years. The New Zealand Threat Classification System also publishes assessments as they are completed on plant or animal groups, with a full set over five years. Tier 1 statistics cover a range of timeframes, with all the environmental statistics reported five-yearly or less. However, statistics for a longer cycle might be relevant in the future.
3. *Reduce the synthesis reporting frequency to four-yearly*. Some change would be observable, but there is unlikely to be much environmentally significant change within that time.

Other options we considered (including the *status quo*) are in appendix 2.

Initial preferred option

Option 1 is the initial preferred option – changing to six-yearly synthesis reports, although we recognise that a five-yearly cycle has benefits. This balances observing change over the shorter term, and long-term data, with compliance costs and the usefulness of particular data points. It allows time to report on the environment as an interconnected system, with integrated reporting on the cross-domain themes in proposal 6.

This is the initial preferred option because it would:

- *support a clear purpose for reporting*. It sets a longer timeframe for environmentally and statistically significant data on key issues to emerge
- *drive a clearly defined, coordinated reporting system*. It allows more time to obtain new robust, comprehensive and authoritative data, statistics and knowledge for reporting, and to develop more innovative and useful ways of reporting
- *increase the influence of reporting*. It strikes a more appropriate balance between reporting timeliness, rates of environmental change, and links between environmental change and new information. These more comprehensive but less frequent reports have the potential to increase public engagement
- *improve on how we meet our Tiriti responsibilities* by allowing more time for engagement on specific reports.

For more on the costs, benefits and risks of this option, see table 3 and appendix 4.

Questions

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

PROPOSAL

Between six-yearly synthesis reports, replace the six-monthly domain reports with one theme-based commentary each calendar year.

Current situation

The ERA requires a three-yearly reporting cycle, ending with the synthesis report. Between synthesis reports, a domain report on one of the five environmental domains must be produced every six months. The first domain report was published in October 2016.

The current frequency of reports (with at least two or three always in development) is resource intensive and detracts from in-depth analysis. It risks repetitive reporting, as rates of change for many parts of the environment can be slow, and responses to change (good or bad) can typically take longer than three years before they are evident in the data.

A large part of the overlap occurs with the six-monthly domain reporting. Each report involves about 18 months' preparation. The PCE described this cycle as putting the Ministry and Stats NZ staff on a "never-ending treadmill" of report preparation and production.

To reduce the pressure on the capacity of the environmental reporting programme, through asking for multiple reports to be compiled at the same time by a small group of staff, the PCE recommended:

> "[r]eplac[ing] domain reports with theme-based commentaries that meet the following requirements:
>
> - Producing such commentaries should be mandatory.
> - They should be produced in the interim between state of the environment (synthesis) reports, but not to a fixed timetable.
> - Their frequency should be largely determined according to the availability of new information…".

Three options

1. *Produce commentaries as recommended by the proposed standing advisory panel*. This could slow the treadmill. The domain reports would be replaced by cross-domain theme commentaries as discussed in proposal 6. We assume the sequence of the commentaries would depend on significant changes in the environment. For instance, if new data demonstrated significant negative changes in air quality, it would be a higher priority commentary than a freshwater commentary where fewer changes were observable in the data. This might mean that a specific theme is the focus of more than one commentary in each six-yearly cycle if new data indicates significant changes; or that more than one report could be required each year. There would also be no requirement to report on each theme separately, and the reporting cycle might not cover all themes. The risks are set out in appendix 4.

2. *Adopt the PCE's recommendation of producing a* commentary *on each domain theme in between synthesis reports*. This could slow the treadmill through flexibility in reporting, with a total of five commentaries required over the five years between synthesis reports. The order and timing of publication would be flexible. Five commentaries would be required, each covering at least one of the themes. There might still be overlap in preparation, but the commentaries need not be as comprehensive as the current domain reports, where the Regulations set specific topics. However, there might be an expectation that additional commentaries would be released as new information became available, and that could place more demands than currently.
3. *Status quo of two in-between commentaries each year, and one in the synthesis reporting year*. This retains the three commentaries and occasionally a synthesis report in preparation at one time, which limits the opportunity for more in-depth reporting. The proposed reporting on drivers and outlooks would also increase the workload for each report.

Initial preferred option

Option 1 is the initial preferred option. The advisory panel would recommend the reporting focus and timeframes for in-between commentaries.

We recognise that taking the panel's advice on the themes and timing for the in-between commentaries aligns with option 2, if all five themes are reported on. However, this would be at the panel's discretion.

The work would need to be prioritised and scheduled jointly by the Ministry and Stats NZ on the advice of the panel. The scheduling must recognise that there are limits on the programme's capacity if the ERA is to avoid another treadmill for the reporting staff.

Both long-term data and observing change (progress or decline) over the shorter term are core parts of an effective monitoring system.

This is the initial preferred option because it would:

- *support a clear purpose for reporting* through a variety of forms of commentary to present the key issues
- *drive a clearly defined, coordinated reporting system*. It allows time to develop innovative and useful ways of reporting. It also enables reporting to focus on the issues and themes of most concern, providing commentaries on one or several themes that capture the links between drivers, pressures and impacts
- *increase the influence of reporting* by focusing commentaries on environmentally significant changes identified by the advisory panel. As with Proposal 6, there is also a potential benefit of increased engagement by the public in less frequent but more engaging reports
- *improve on how we meet our Te Tiriti responsibilities.* It has the flexibility to focus reporting on issues that are important to Māori.

For more on the costs, benefits and risks of this option, see table 3 and appendix 4.

Questions

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

PROPOSAL

Define a set of environmental indicators in the regulations, to help achieve the purpose of the Environmental Reporting Act 2015.

Current situation

The Regulations set the topics of interest for each environmental domain. The topics bridge the gap between a domain (set in legislation) and a statistic (set by the Government Statistician). This clarifies the roles of the Minister (selects the topics – the 'what') and the Government Statistician (selects statistics that measure them – the 'how').

The topics are broad, adaptable and durable. They are measured by robust methods and avoid restricting the Government Statistician in selecting the statistics. The Government Statistician's role of deciding the statistics, methods and procedures is at the core of their duty to act independently.

Topics are currently informed by a wide range of environmental indicators (approximately 60 indicators have been reported on) across each of the five domains.

Measures, statistics and environmental indicators

Standard measures are used across areas and over time, to measure areas of concern in the environment.

A statistic is a value produced from a data collection, such as a summary measure, an estimate or projection. The criteria for determining whether statistics are of sufficient quality to include in reporting are: relevance, accuracy, timeliness, accessibility, coherence or consistency, and interpretability. If a statistic meets these criteria, it could be considered for reporting as a long-term indicator.

Environmental indicators are summary statistics that enable us to show and track change over time. They describe a movement, which can be interpreted as 'staying the same', 'getting better' or 'getting worse'. Selecting indicators requires looking at available data, the statistical techniques available to transform the data into interpretable information, and the relevance of the data.

Each indicator is based on a statistic, collected from consistent time-series data from a range of sources, using standardised methods for areas of concern (eg, collecting data on freshwater quality to determine whether rivers are safe to swim in). The indicator on the extinction of freshwater species forms a case study that covers potential themes of both biodiversity and freshwater – see case study on the following page.

CASE STUDY

Extinction threat to indigenous freshwater species

Using the New Zealand Threat Classification System (NZTCS), the Department of Conservation collects data and Stats NZ reports on the extinction threat to indigenous, resident, living freshwater fish and invertebrate species.

Many of New Zealand's indigenous freshwater fish and invertebrates are endemic – found nowhere else in the world. Some have very localised distributions and are only found in certain catchments. These animals are essential for freshwater ecosystems, and a decline in one species can have large-scale impacts. They are also important for culture and recreation, such as fishing.

Indigenous freshwater fish and invertebrate taonga species (species of cultural significance) play an important role for Māori in understanding the mauri (life essence) of an ecosystem. The presence, or lack, of these species provides insight into biodiversity and the state of mahinga kai (traditional food sources). They also hold considerable meaning for Māori identity through whakapapa (kinship), which obligates and guides kaitiakitanga (responsibility to nurture the mauri of taonga).

Several indicators are used to monitor the extinction threat. Two signal the extinction threat:

- Of the 51 species of known indigenous freshwater fish species, the population trends show that 63 percent are predicted to decrease, 35 percent are stable, and 2 percent are predicted to increase.
- Of the 18 taonga species of freshwater fish and invertebrates, 10 are threatened with extinction or at risk of becoming threatened, for one there is insufficient data to know its status, and seven are not threatened.

(See more on the Stats NZ Extinction threat to indigenous land species web page.)

These statistics should form the core environmental indicators. However, since the ERA does not specify these and there is no statutory requirement to produce indicators, their development has lagged behind the production of the domain and synthesis reports. Instead, the *ad hoc* selection of indicators is driven by the available data, and by the scope of a report. With no statutory requirement there has been no regular schedule for updating data, and no ability to design and set up new collections for critical data gaps.

There is also no agreed view on what 'baseline' data are fundamental to understanding patterns and trends in environmental quality. A baseline is essential if we are to best prioritise, plan and assess our management and interventions. However, collecting environmental data (particularly from long-term monitoring) is time consuming, often costly and it can be difficult to secure ongoing funding (eg, for a land-cover database).

Based on all the issues discussed above relating to the current situation, as an option the current situation (the *status quo*) would not resolve these issues.

The PCE stated that:

> "developing a dedicated set of core environmental indicators is a critical initiative. …This will ensure New Zealand has a comprehensive and representative national monitoring system with a standardised and consistent approach to collecting, managing and analysing data".

He recommended amending the ERA to:

> "[p]rovide for a shift from passive to active information gathering" and
>
> "[d]efine a set of core environmental indicators and provide for the core indicators to be set out in regulations".

Three options

1. *Set out the core indicator themes/topics in regulations, and allow the Ministry and Stats NZ to choose the actual indicators*. This would provide a strong directive for implementing core indicators and improve data collection abilities whilst allowing for flexibility. Core indicators would be selected for reporting both as stand-alone indicators and for use in commentaries and synthesis reports based on indicator-specific topics or themes set out in regulations. If the indicator-specific topics/themes are dated or lacked coverage, changes to regulations would occur more swiftly than if these were set out in the ERA. This option provides a nationally consistent approach to environmental monitoring, reducing indicator clutter, and would have a large net benefit over the long-term (for central government, local authorities, and communities) in terms of saving costs.
2. *Set out the core indicators' themes and/or topics in the ERA and allow the Ministry and Stats NZ to choose the actual indicators*. This would provide flexibility as development of indicators would be an operational decision. It would improve data collection abilities through the requirement to produce indicators on that topic. However, if topics are outdated or lacked coverage, the ERA would need to change. This would create low certainty that the indicators would be developed.
3. *Adopt the PCE's recommendation to specify the indicators in regulations*. The requirement to have core indicators and the principles on which these are to be developed would be set out in the ERA, and the list of indicators would be in regulations. By mandating that core indicators are required, this option would assist the environmental reporting programme to obtain the baseline data needed. It would also promote a staged, consistent approach by organisations working with similar data as the regulations would take time to come into force and the data collection standards could be aligned. However, there would be delays in adopting any new indicators in the future, as these would require a change in the regulations, lowering cost efficiency.

Other options we considered (including the *status quo*) are in appendix 2.

Initial preferred option

Option 1 is our initial preferred option. Selecting the core indicators would be a joint process led by the Ministry with Stats NZ, with additional input from the panel, specialists from a range of organisations, and in partnership with Māori. The criteria for selecting a statistic and subsequently an indicator would still be relevant. These indicators could link to limits under the proposed NBA.

The data for each core indicator will be reviewed regularly, and core indicators would be updated where data are environmentally/statistically significant. The core indicators would be reviewed at least once per reporting cycle, but this would not be in any particular order or in relation to other reporting timeframes. Core indicators would form a distinct part of the reporting regime under the ERA.

Other organisations could be involved, and the core indicators could be developed after the ERA has been amended. This would allow alignment of the indicators with other legislation such as the NBA limits and targets.

For their own reports, various organisations have used other sets of indicators, leading to inconsistent methods, collection sites and standards. This 'indicator clutter' is a systemic issue.

The core indicators could be a single point of reference to connect disparate sector indicators. This would coordinate data, and link to the climate and environment research strategy, which intends to provide direction on priorities for investment. The scope, process and priorities would be important to discuss when drawing up the indicators, and to ensure they tie in with broader environmental monitoring.

This is the initial preferred option because it would:

- *support a clear purpose for reporting* by providing another form of analysis and presentation of the key issues
- *drive a clearly defined, coordinated reporting system*. It includes establishing and maintaining a core set of indicators which may increase the interest and ownership in the indicators by relevant stakeholders ensuring different views and voices are reflected in the reporting. It also seeks better data collection standards and consistency, while allowing for flexibility. It sets some priorities on what should be monitored, when, where, and by whom, and directs long-term funding for maintaining and updating the indicators
- *increase the influence of reporting.* It provides the public with more frequent information on reliable, consistent long-term measures of key issues, which are fundamental to understanding patterns and trends in environmental quality
- *improve on how we meet our Tiriti responsibilities* in relation to Māori data sovereignty. Where appropriate, it would support Māori in any use, collection and management of mātauranga Māori. This includes identifying and developing any future indicators.

For more on the costs, benefits and risks of this option, see table 3 and appendix 4.

Questions

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

PROPOSAL

Include new provisions in the Environmental Reporting Act 2015 to set out powers for acquiring existing data for national environmental reporting.

Current situation

Under the ERA, the Secretary for the Environment and the Government Statistician do not have powers to mandate or enforce the provision of data (including data quality and standards) for national environmental reporting. As a consequence, there is only a requirement to include information that can be obtained using reasonable efforts.

When preparing reports, the Ministry and Stats NZ use existing environmental data, mātauranga Māori, information, science and knowledge that is publicly available or has otherwise been voluntarily provided. The national reporting programme draws on data that is typically collected by other agencies, including local authorities, the Government and CRIs. They may be collecting this data for their own purposes, or under other legislation eg, the Climate Change Response Act 2002, the RMA, or as part of the Ministry for Business, Innovation and Employment's Nationally Significant Collections and Databases.

Not all existing data are easily accessible for reporting under the ERA. This is for various reasons including: lengthy and expensive procurement processes, lack of capacity from data providers to meet data requests, and no clear mandate to require the provision of data.

Where data and information cannot be accessed or provided to tell a national story, the Ministry uses supplementary research ('body of evidence') for case studies and local examples.

A few tools outside the ERA improve access to data:

- **Climate Change Response Act 2002 (CCRA)**

  Section 32(2)(b) of the CCRA states that the inventory agency must gather data: through voluntary collection; from government and other agencies that hold relevant information; and in accordance with regulations (if any) under Part 3. If regulations have been made, section 46 of the CCRA sets out the penalties for failing to provide information requested under the regulations to the inventory agency.

- **Resource Management Act 1991 (RMA)**

  Section 360(1)(hl) was inserted into the RMA in 2013, giving regulation-making power to require local authorities to provide information gathered under sections 35 and 35A to the Minister. It prescribes the content of the information and how to present it, including timeframes. Although the power was included in the RMA, the corresponding regulations were never developed and implemented.

  The other tools under the RMA do not mandate environmental monitoring and reporting data beyond the responsibilities of local authorities under s35 and s35A – there is no requirement to provide that data to the Ministry for national reporting. Instead, there is a

power for the Minister to require three types of authority[9] to combine local data with other research, information or records to review (and publicly report) on the effectiveness of their policies, rules and plans. Even if regulations under s360(1)(hl) were developed, it does not require these agencies other than local authorities to collect and provide data for national reporting.

The RMA also has finite coverage of data needed for reporting under the ERA. It does not cover all legislative functions, powers and duties held by local authorities where the data might be useful for reporting. For example, there is no requirement to provide data on flood protection schemes run by regional councils under the Soil Conservation and Rivers Control Act 1941.

- **Water Services Act 2021 (WSA)**

  Part 3, sub-part 8 of the WSA sets out powers specifically for monitoring and reporting on the environmental performance of drinking water, stormwater and wastewater networks. The provisions provide transparency and comparability of performance and compliance against set standards. Under section 143, Taumata Arowai may apply to the High Court for orders to remedy any non-compliance with the collection and reporting of environmental performance data.

  Regional councils, under section 46, must publish information on source water quality and quantity in their region annually, including any changes to source water quality and monitoring. The information monitored under the WSA is reported to Taumata Arowai. Although we considered the current situation (the *status quo*), it would not resolve the issues above, nor those identified by the PCE.

The PCE recommended amending the ERA to:

"[p]rovide for a shift from passive to active information gathering:

- Define a set of core environmental indicators and provide for the core indicators to be set out in regulations.
- The Government Statistician (with input from the Secretary for the Environment) should then be required to collect the data needed to construct and regularly update the core environmental indicators".

Three options

1. *New provisions in the ERA for the supply of data*. The ERA would set out similar powers as set out under the CCRA, giving the Secretary for the Environment, the Government Statistician or both, the powers to collect data for national reporting under the ERA. For this option, the first step would be to request the data be supplied on a voluntary basis. Continuing to build positive relationships with data providers is an important part of this option.

   The Secretary for the Environment or the Government Statistician could also request the voluntary provision of data that is not required to be monitored and collected under legislation. For example: data requested under the ERA but not under other legislation like the RMA would be on a voluntary basis for local authorities; or data held by Māori, iwi or hapū, researchers or industry bodies.

[9] These are local authorities, heritage protection authorities, and network utility operators with requiring authority status.

Requesting the supply of data on a voluntary basis would allow for agreements for the supply of data to be developed, which could include requirements to ensure the data is fit for reporting purposes.

If the requested data were monitored and collected under legislation (eg, by local authorities under the RMA), or were part of the Nationally Significant Collections and Databases, the Secretary for the Environment, the Government Statistician or both could specify the provision of that data for national reporting.

The timing of these requests under the ERA would tie in with the schedule for data monitoring, collection or reporting under the respective legislation. This option, therefore, depends on the legislation having the authorising powers to set these requirements. It is the only option that gives the reporting programme the powers it needs to obtain the data. All other options rely on other legislation, including for data collection.

2. *Require agencies to provide data under the Data and Statistics Bill*. The Government Statistician would require data that complies with reporting standards under the ERA. Any requests for data would be solely for producing official statistics and research. Indicators under the ERA would likely be classified as official statistics.[10]

   This option could result in an independent requirement for data, in addition to any requirements in other legislation that includes data monitoring and collection duties.

   This option might also apply to all data needed for reporting under the ERA, not just to data that is monitored and collected under other legislation. This would include data held by Māori, iwi or hapū, researchers or industry bodies.

   Any data collected under the Data and Statistics Bill could only be used for official statistics or research (including for environmental reporting, assessing policy effectiveness and policy development). The statistical confidentiality requirements would mean that data could not be published or otherwise disclosed unless it has been anonymised or an exemption has been provided.

   This option would also mean that the data would be solely for reporting under the ERA. It could not be used for other purposes until that information is published in synthesis reports, commentaries and environmental indicators. Although monitored and collected under other legislation such as the RMA, the data could not be used for policy effectiveness, development, compliance, or monitoring and reporting until the embargo is lifted.

   This option would not be a provision in, or result in any substantive changes to the ERA, but instead would use the powers of the Data and Statistics Bill, with further thought needed to be given as to how it would connect to the ERA.

   The Ministry and Stats NZ could work together analysing data for reporting or could share data through a proposed joint collection arrangement. Penalties for failing to provide data would sit within the Data and Statistics Bill.

   This option may give access to a much wider set of existing data on a mandatory basis, not just data collected under legislation.

[10] Official statistics are defined as statistics produced by the Statistician or a public sector agency or produced by an individual or organisation approved in writing by the Statistician to produce those statistics.

3. *Include powers under the ERA that enable the Secretary for the Environment, the Government Statistician or both to require agencies to monitor, collect and provide data against standards, and impose penalties on agencies that fail to do this*. This would give the Secretary for the Environment or Government Statistician the powers to prescribe standards and frequencies to data providers for monitoring, collecting and supplying data for the sole purpose of national environmental reporting. The data collected and supplied would not be able to be utilised by other Ministry programs.

   This option gives the Secretary for the Environment or Government Statistician powers to request the supply of data and impose penalties on data providers who fail to supply data, as well as the powers to develop regulations for monitoring standards and requirements under the ERA.

   The regulations after the enactment of the ERA would add steps to this process, compared with having the provisions directly in the ERA, which would be simpler (option 1).

   This option would set out powers for the Secretary for the Environment or Government Statistician independent of monitoring and reporting requirements set out under other legislation.

Other options we considered (including the *status quo*) are in appendix 2.

Initial preferred option

Option 1 is the initial preferred option. Creating provisions under the ERA would give the Secretary or the Government Statistician authority to request, and in limited circumstances require, information for reporting.

This would be the most effective option in creating an enduring and more comprehensive picture of the environment, where legislation already requires the data and supporting information to be monitored and collected.

It also allows for requesting voluntary provision of data and information from bodies of evidence outside other legislative provisions and Nationally Significant Collections and Databases, such as existing environmental data, mātauranga Māori, research, science and knowledge, and world views such as te ao Māori.

Additional reporting-specific data might also be accessible through the Data and Statistics Bill, where there were issues in obtaining data. That data would be for official statistics or research, as defined in the Bill. Standard measurement and collection protocols, set by Stats NZ, should provide the long-term measures to report environmental indicators.

This is the initial preferred option because it would:

- *support a clear purpose for reporting*. It is a mechanism to obtain the data required for reporting, with the additional powers, if needed, leading to both improved data access and knowledge collection
- *drive a clearly defined, coordinated reporting system* where:
  - the Secretary for the Environment, the Government Statistician or both can require information from other public sector agencies. This would meet the purposes of national reporting and support the clarity of roles achieved through Proposal 4 in that the mechanisms can be designed to increase accountability between agencies

  - there is data certainty and the ability to promote a more comprehensive picture of the state of the environment. Other bodies of evidence will also be available
  - other public sector agencies would be required to provide data monitored and collected under other Ministry-administered legislation, regulation or national direction, providing a much more comprehensive data pool
  - the ERA sets out consistent collection methodologies and frequencies, for national reporting through the ERA, and if needed through the Data and Statistics Bill for data that is required under the ERA that is not monitored and collected under other Ministry-administered legislation, regulation or national direction
- *increase the influence of reporting*. Better data and knowledge collection will give insights into and measures of New Zealand's economic, social and environmental situation. This will inform decisions and help answer society's most important questions
- *improve on how we meet our Tiriti responsibilities* through partnership with Māori to include mātauranga Māori, data, evidence, knowledge. Science is used, collected, managed, and protected appropriately in reporting.

For more on the costs, benefits and risks of this option, see table 3 and appendix 4.

Questions

42. Do you foresee any problems with the proposal to include provisions in the ERA to require the supply of 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.

PART 4: A summary of estimated additional funding, benefits and risks

A summary of estimated additional funding needs, benefits and risks

Options have been analysed based on the assessment criteria (see appendix 3) and on whether they will help environmental reporting meet the desired objectives, and overcome the issues set out in Part 2 of the document. Summaries of the costs, benefits and risks of each initial preferred proposal have been included in the tables below, and greater detail can be found in appendix 4.

Our assessment of the initial preferred options shows that the overall impacts of the proposals are expected to be positive. The options were compared against each other (including the *status quo* for each proposal) to see how the expected benefits met the objectives.

Estimated additional funding

When the ERA was passed in 2015, the costs of environmental reporting were absorbed into the Ministry's baseline budget. This hindered the development of the new environmental reporting requirement. Only what was legally required was done. Useful reporting tools such as core indicators were not resourced, because of other budget commitments.

To implement the proposed changes to the ERA effectively, this work requires more funding. Table 3 shows the estimated additional funding needed for each proposal, and the estimated total additional funding for improving reporting and building a more cohesive environmental monitoring and reporting system.

While there have been few upfront costs required to amend the ERA, to implement these proposed changes additional funding will be required. However, the increased efficiency, coordination and clarity provided for in the proposals is expected to reduce costs in the long term.

Benefits

Benefits relate to coordination, clarification and independence of the system as well as access to and quality of data and information (see table 3).

Risks

Many potential risks of implementing each of the proposal's initial preferred option have been mitigated through further clarification within the proposals. For example, the risk identified for amending the frequency of reports to be six-yearly is that it might diminish the visibility of environmental issues but this risk has been mitigated with the proposal of in-between commentaries, and updates of core environmental indicators. Risks largely arise in terms of independence of the system, and the potential for these new proposals to be as resource intensive as the current requirements (see table 3).

Table 3: Estimated additional funding, benefits and risks of implementing initial preferred options for each proposal

Proposal	Estimated additional funding ($m)				
	Stats NZ		Ministry for the Environment		Other organisations
	Upfront costs	Ongoing annual costs	Upfront costs	Ongoing annual costs	Annual costs
	$0	$0	$0	$0	$0
Proposal 1: Clarify the purpose of environmental reporting	**Option 1: Benefits**				
	Clarity over 'who' the reports are for and 'why' the state of the environment should be reported on. It ensures that the public are informed on what range, level and quality of information to expect. Greater visibility in reporting may also help to prevent duplication in effort of other reports and greater engagement in the reporting by the public, which will increase the consciousness of the state of the environment with potential ancillary benefits.				
	Option 1: Risks				
	Unnecessary limits on environmental reporting, however, this is unlikely. Capture by intermediate targets is always a risk associated with clarification of the purpose. To mitigate, this it would be useful to ensure that future evaluations of the performance of the amendments review this aspect.				

Proposal	Estimated additional funding ($m)				
	Stats NZ		Ministry for the Environment		Other organisations
	Upfront costs	Ongoing each Year 6 costs	Upfront costs	Ongoing each Year 6 costs	Ongoing each Year 6 costs
	$0	$0	$0	$0.3	$2.0
Proposal 2: Mandate a government response to synthesis reports	There is a deadweight cost of Tax that is ongoing each year 6 of $0.5m.				
	Option 1: Benefits				
	Ensures that the findings from environmental reports are being acknowledged and addressed by the Government. A joint response across multiple Ministers ensures the appropriate ministry with the appropriate area of expertise is addressing environmental issues that cut across several sectors and which require cross-sectoral integrated responses. The response also provides clarity to the public on what action the Government will take creating greater accountability for action, and increased focus on resulting environmental improvements.				
	Option 1: Risks				
	A joint response across multiple Ministers may make responding within the timeframes challenging. Responses could be subject to political considerations. Possibility of a perceived conflict of interest for Ministry staff in preparing the report if the Ministry is also instructed by the Minister for the Environment to be involved in preparing the response. With the primary risk relating to the timeliness of the reporting. These risks are mitigated by the provisions of the Public Service Act 2020 and the increased visibility and accountability to the public.				

Proposal	Estimated additional funding ($m)				
	Stats NZ		Ministry for the Environment		Other organisations
	Upfront costs	Ongoing annual costs	Upfront costs	Ongoing annual costs	Annual costs
	$0.1	$2.1	$0.1	$0.9	$0.6
Proposal 3: Add drivers and outlooks to the reporting framework	There is an upfront Purchase cost of $1.0m, with an ongoing annual cost of $1.0m. The deadweight cost of Tax would be $0.2m upfront, and $0.9m ongoing annually. Note: Costs may be borne by other government agencies, Māori, CRIs, universities, and local government who will also need to provide additional data and knowledge.				

	Option 1: Benefits
	Including drivers and outlooks will provide a fuller picture of the state of the environment. Drivers provide context on why things are changing, what is causing the pressures on the environment, and outlooks provide forward-looking information on how the environment may change in the future, projecting possible trends. These elements will provide high-quality information to underpin decisions for effective policies and interventions that will be able to deliver outcomes further into the future than current interventions. The reporting framework proposed is very versatile which means it does not create issues for reporting now or in the future as other reporting frameworks can easily function alongside it. Reinforces the value of the reports and therefore also the Government response as mandated by Proposal 2. This in turn increases those benefits.
	Option 1: Risks
	By nature, future outlooks include an element of uncertainty, reports will need to stipulate where assumptions/predictions have been made. Despite the risk of uncertainty inherent in a future outlook, their inclusion provides a better understanding of what may happen without action. Ensuring that the reports and government responses are well communicated to the public helps to mitigate the uncertainty and increases the use of the forecast.

Proposal	**Estimated additional funding ($m)**				
	Stats NZ		**Ministry for the Environment**		**Other organisations**
	Upfront costs	**Ongoing annual costs**	**Upfront costs**	**Ongoing annual costs**	**Annual costs**
	$0	$0	$0	$0	$0
	Option 1: Benefits				
Proposal 4: Adjust roles and responsibilities	This will provide greater clarity of roles and maintain the independence of reporting as well as greater cost efficiency. It will ensure that each agency has the opportunity to lead on the parts of reporting within its strengths. Note that the extent of greater cost efficiency may be minimal unless substantial overlap currently exists.				
	Option 1: Risks				
	There is some concern regarding how the separation of roles will work in practice; ie, placing too much responsibility on Stats NZ (who may not have the necessary resources to provide what is required which may have flow on effects for aspects of work the Ministry leads. Adjusting roles may risk some of the existing procurements and relationships with data providers and the science community. Clarity in roles provides for greater certainty and ownership over what resources may be required that can be factored into annual planning. This includes the additional resourcing requirements identified in this preliminary CBA. The Ministry and Stats NZ will need to continue to work in partnership and can therefore manage the transition of procurements and relationships, if necessary, through this partnership approach.				

Proposal	Estimated additional funding ($m)				
	Stats NZ		Ministry for the Environment		Other organisations
	Upfront costs	Ongoing annual costs	Upfront costs	Ongoing annual costs	Annual costs
Proposal 5: Mandate a standing advisory panel	$0	$0	$0.2	$0.2	$0
	There is an ongoing Purchase cost of $0.1m annually, and the deadweight cost of Tax would be $0.1m upfront, and $0.1m ongoing annually.				
	Option 1: Benefits				
	Provides independent expert science and data knowledge, as well as different perspectives, skills and experience from a range of disciplines including te ao Māori and mātauranga Māori. An expert panel that engages in the reports and the response from the government can help to increase the visibility of environmental reporting, advocating for change, and increasing the accountability for action.				
	Option 1: Risks				
	Risks in protecting the independence of the panel's advice and managing any conflicts of interest. If the panel were to advise on the direction of environmental reporting, there is a risk in relevant areas being missed out or gaps in reporting due to biases or oversight. This can be mitigated by the Secretary for the Environment being the ultimate decision-maker and through having clear terms of reference which set out expectations around the role and conduct of members. This can be mitigated by the Secretary for the Environment being the ultimate decision-maker and through having clear terms of reference which set out expectations around the role and conduct of members. Terms of reference of the panel and its role in relation to the Secretary for the Environment should be drafted with roles clearly defined to further mitigate risk.				

Proposal	Estimated additional funding ($m)				
	Stats NZ		Ministry for the Environment		Other organisations
	Upfront costs	Ongoing annual costs	Upfront costs	Ongoing annual costs	Annual costs
Proposal 6: Replace environmental domains with cross-domain themes	$0.1	$0	$0.1	$0	$0.2 upfront only
	There is an upfront deadweight cost of Tax of $0.1m.				
	Option 1: Benefits				
	More effective reporting of the complexity and interconnectedness of environmental systems, which will enable holistic integrated responses across multiple environmental domains. Acknowledging the interconnectedness of environmental systems may support increased understanding and engagement with the reports and the responses by the public. This should create greater interest in the environment and accountability for action.				
	Option 1: Risks				
	The broad nature of the themes may result in under-reporting of some lesser-known issues that are covered in more depth in the confines of an environmental domain. There is also a risk that the themes are not broad enough to cover future issues. The overlap and interconnectedness between the themes could make it difficult to determine the scope and boundaries of the individual themes. This can be mitigated by having comprehensive synthesis reports and ensuring environmental indicators are published outside of the report production cycle. Complexity reduces engagement in the reports by the public. The comprehensive synthesis reports and out of cycle indicators can help to mitigate this if they are accompanied by good communications products.				

Proposal	Estimated additional funding ($m)				
	Stats NZ		Ministry for the Environment		Other organisations
	Upfront costs	Ongoing annual costs	Upfront costs	Ongoing annual costs	Annual costs
	$0	$0	$0	$0	$0
Proposal 7: Reduce the frequency of synthesis reports to six-yearly	**Option 1: Benefits**				
	Provides a more appropriate balance between timeliness of reporting, rates of environmental change and linkages between environmental change with new information. Provides time and resources to incorporate mātauranga Māori into reporting, and the time needed to create and collect the data, statistics and knowledge needed. Potential benefit of increased engagement by the public in more comprehensive but less frequent reports.				
	Option1: Risks				
	Visibility of environmental issues may be diminished with reports being published with less frequency. This is mitigated by the in between commentaries and the requirement for core environmental indicators. A longer reporting cycle enables more time and resources to be put into the data and knowledge for the report and to develop innovative and interesting ways to present the report information. The second part of the mitigation measure related to "innovative and interesting ways to present the report information" may actually be a benefit. This relates to having more comprehensive data to develop engagement products that could increase public engagement.				

Proposal	Estimated additional funding				
	Stats NZ		Ministry for the Environment		Other organisations
	Upfront costs	Ongoing annual costs	Upfront costs	Ongoing annual costs	Annual costs
	$0	$0	$0	$0	$0
Proposal 8: Replace domain reports with one commentary each year	**Option 1: Benefits**				
	Has the flexibility to focus on environmentally significant issues in a timely way as identified by the standing advisory panel, including reporting on issues that are important to Māori. Having both long-term data and the ability to observe change (progress or decline) over the shorter-term are core parts of effective monitoring. As with Proposal 7, there is a potential benefit of increased engagement by the public by providing less frequent but more engaging reports.				
	Option 1: Risks				
	There may be several environmentally significant issues that the standing advisory panel recommends reporting on at the same time. There is a risk of overloading the environmental reporting programme staff who may not have sufficient resources to complete commentaries. Having flexibility to report on any theme at any time within the six-year period creates uncertainty for the public as to when the information they need will become available, if at all. This can be partially mitigated through a website notice of which commentaries are currently being prepared. We will need to balance the benefits of long-term synthesis reports and short-term commentaries with the compliance costs and the usefulness of particular data points, so the benefits continue to outweigh the costs. The mitigation identified in Proposal 5 that the Secretary for the Environment is the ultimate decision maker, will help manage the workload for environmental reporting programme staff. However, there is an associated risk with this of disengagement of the standing advisory panel if their advice on what to focus reports on is not seen to be sufficiently acted on.				

Proposal	Estimated additional funding ($m)				
	Stats NZ		Ministry for the Environment		Other organisations
	Upfront costs	Ongoing annual costs	Upfront costs	Ongoing annual costs	Ongoing annual costs
	$0	$1.7	$1.6	$1.2	$2.8
Proposal 9: Establish a set of core environmental indicators	There is an upfront deadweight cost of Tax of $0.3m, with an annual ongoing cost of $1.1m.				
	Option 1: Benefits				
	This sets priorities on what should be measured, when, where and by whom. It would direct long-term funding for maintenance and updating. Publishing data on indicators will ensure up-to-date data are available to the public outside of the report production cycle. Provides flexibility in selecting core indicators and there would be less delay in changing regulations than if the indicators were included in the ERA. The process of engagement to establish and maintain the core set of indicators can increase the interest and ownership in the indicators by relevant stakeholders ensuring differing views and voices are reflected in the reporting.				
	Option 1: Risks				
	One of the biggest risks will be the implementation of the core indicators. If the set of core indicators does not get updated at environmentally meaningful frequencies because they are not linked to ongoing funding, then their usefulness will be limited. There may not be enough data and evidence to create or update indicators on an ongoing basis. These risks have ensuing consequences of the relevant stakeholders that have contributed to defining the indicators becoming disengaged from the reporting. This suggests that the stakeholders that have contributed should continue to be engaged.				

Proposal	Estimated additional funding ($m)				
	Stats NZ		Ministry for the Environment		Other organisations
	Upfront costs	Ongoing annual costs	Upfront costs	Ongoing annual costs	Annual costs
	$0.2	$0.1	$0.2	$0.1	$1.6 (upfront costs) $0.4 (ongoing annual costs)
Proposal 10: Strengthen the mechanisms for collecting data	There is an ongoing Purchase cost of $0.5m annually, and the deadweight cost of Tax would be $0.4m upfront, and $0.2m ongoing annually.				
	Option 1: Benefits				
	Improved data access and knowledge collection. Other public sector agencies would be required to provide data monitored and collected under other Ministry legislation, regulation or national direction providing a much more comprehensive data pool. For data that is required under the ERA that is not monitored and collected under other Ministry legislation, regulation or national direction, the ERA will set out consistent collection methodologies and frequencies, for national reporting through the ERA, and if needed through the Data and Statistics Bill. Mechanisms in the ERA and the Data and Statistics Bill would not create duplication of data provision under other Ministry legislation, regulation or national direction. Improved mechanisms for data also support the clarity of roles achieved through Proposal 4 in that the mechanisms can be designed to increase accountability between agencies.				

	Option 1: Risks
	This proposal only covers existing data, which may not be adequate to support the core environmental indicators once they have been established. Where data does not yet exist, further costs and time will be required to fill reporting measurement gaps. Long-term data and observing change (progress) over the shorter term are core parts of effective monitoring. However, we must balance this with the compliance costs and the usefulness of particular data points.

Estimated total costs to implement all initial preferred options for each proposal (excluding te ao Māori costings)				
Stats NZ		**Ministry for the Environment**		**Other organisations**
Upfront costs	**Ongoing annual costs**	**Upfront costs**	**Ongoing annual costs**	**Annual costs**
$0.4m	**$3.8m**	**$2.3m**	**$2.4m**	**$1.8m (upfront costs)** **$4.2m (ongoing annual cost)**

Note: The total purchase costs upfront would be $1.0m and the total ongoing annual cost would be $1.6m. The total deadweight cost of tax would be $1.1m upfront and $2.4m ongoing annually.

Questions

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?

PART 5: Next steps

Find out how to get involved and have your say.

How to have your say

The Government welcomes your feedback on this consultation document. The questions posed throughout this document are summarised in appendix 5. They are a guide only and all comments are welcome. You do not have to answer all the questions.

To ensure your point of view is clearly understood, you should explain your rationale and provide supporting evidence where appropriate.

Timeframes

This consultation starts on 8 February 2022 and ends on 18 March 2022.

When the consultation period has ended, we will analyse all the submissions. These will inform policies and government decisions. If Cabinet agrees, an amendment to the ERA (through an amendment Bill) will be introduced to Parliament. Some issues may be addressed through non-legislative change.

How to provide feedback

There are two ways you can make a submission:

- via Citizen Space, our consultation hub, available at ERA-proposed-amendments-consultation
- write your own submission.

If you want to provide your own written submission you can provide this as an uploaded file in Citizen Space.

We request that you don't email or post submissions as this makes analysis more difficult. However, if you need to please send written submissions to ERA Amendments Consultation, Ministry for the Environment, PO Box 10362, Wellington 6143 and include:

- your name or organisation
- your postal address
- your telephone number
- your email address.

If you are emailing your feedback, send it to era.consultation@mfe.govt.nz as a:

- PDF, or
- Microsoft Word document (2003 or later version).

Submissions close at 5pm, Friday 18 March 2022.

More information

Please direct any queries to:

Email: era.consultation@mfe.govt.nz

Postal: ERA Amendments Consultation, Ministry for the Environment, PO Box 10362, Wellington 6143

Publishing and releasing submissions

All or part of any written comments (including names of submitters), may be published on the Ministry for the Environment's website, environment.govt.nz. Unless you clearly specify otherwise in your submission, the Ministry will consider that you have consented to website posting of both your submission and your name.

Contents of submissions may be released to the public under the Official Information Act 1982 following requests to the Ministry for the Environment (including via email). Please advise if you have any objection to the release of any information contained in a submission and, in particular, which part(s) you consider should be withheld, together with the reason(s) for withholding the information. We will take into account all such objections when responding to requests for copies of, and information on, submissions to this document under the Official Information Act.

The Privacy Act 2020 applies certain principles about the collection, use and disclosure of information about individuals by various agencies, including the Ministry for the Environment. It governs access by individuals to information about themselves held by agencies. Any personal information you supply to the Ministry in the course of making a submission will be used by the Ministry only in relation to the matters covered by this document. Please clearly indicate in your submission if you do not wish your name to be included in any summary of submissions that the Ministry may publish.

If you have any questions or want more information about the proposed ERA amendments or the submission process, please email era.consultation@mfe.govt.nz.

Appendix 1: Other simultaneous work

Many areas of work outside the ERA relate to the wider field of environmental reporting. Some will be affected by the proposed amendments to the ERA. In turn, the data and information collected will be useful for environmental reporting under the ERA.

Examples of other simultaneous work

New directions for resource management in Aotearoa New Zealand

In February 2021, the Government announced it would repeal the RMA and enact new legislation based on recommendations of the Resource Management Review Panel, chaired by the Hon Tony Randerson QC.

The three proposed Acts are:

- Natural and Built Environments Act (NBA)
- Strategic Planning Act
- Managed Retreat and Climate Change Adaptation Act.

The proposed NBA is intended to be the main legislation to replace the RMA. It is an integrated statute for land use and environmental protection. It sets out how the environment will be protected and enhanced in the future system. This would be achieved by promoting positive outcomes and targets for both the natural and built environments and ensuring that the use, development and protection of resources only occur within prescribed environmental limits.

In July 2021, the Government released an exposure draft of the NBA. This has been with the Environment Select Committee, which held an inquiry on the draft. Recommendations from the inquiry were presented to the House of Representatives on 1 November 2021. The report on the inquiry sets out a revised draft of the NBA.

Future for local government review

In April 2021, the Minister of Local Government announced there would be an independent review of the future for local government. The review is a response to factors including the fiscal challenges that local governments face, their integral part in reducing greenhouse gas emissions, leading climate change adaptation and mitigation, the three waters review, and reforms to the resource management system. Each have the potential to reshape the system of local government.

The review is an opportunity to look beyond fixed structures and roles, to design a system of local governance that is built on relationships, and is agile, flexible and sustainable enough to meet future challenges. The review panel is working to ensure the reforms have the right mix of scale and community voice, that it harnesses the collective strength of government, iwi, business, communities and others and that it maximises common benefit and wellbeing. The reforms are to create the conditions in which communities can thrive in future generations.

Local government is intrinsically linked to the RMA and environmental reporting, including synthesis reporting requirements and local government initiatives. We must consider the review findings and recommendations when amending the ERA.

An interim report by the Future for Local Government independent review, Ārewa ake te Kaupapa: Raising the Platform, was presented to the Minister of Local Government in September 2021. This consultation document outlines the probable direction of the reform and invites feedback. A draft report is due to be issued for public consultation in September 2022.

Ngā Tūtohu Aotearoa – Indicators Aotearoa New Zealand

Ngā Tūtohu Aotearoa has been developed by Stats NZ and is based on what information would be needed to understand current and future human wellbeing in Aotearoa New Zealand. Ngā Tūtohu Aotearoa supports the Government's vision of a more holistic view of wellbeing. It goes beyond economic measures of progress to consider social, cultural and environmental measures. The selection of indicators was not driven by the availability of data, and therefore there are some data gaps. Most of these gaps relate to the environment, which is an emerging area of statistical focus.

Stats NZ is engaging with stakeholders to better understand their needs, understand the value that Ngā Tūtohu Aotearoa has for them, and gather their feedback. Stats NZ has also committed to co-design with Māori, to build indicators that reflect a te ao Māori perspective of wellbeing.

Data and Statistics Bill

The Data and Statistics Bill (the Bill) was introduced into Parliament in October this year. It will repeal and replace the Statistics Act 1975 (the Act). The Act does not have the flexibility to respond to advances in digital and data technology, and changing information needs and sources.

The Bill promotes consistent, transparent and collaborative practices across the Government, including trusted collection, sharing and use of data for statistical purposes, research and analysis. It provides opportunities for partnering, and early and meaningful engagement with Māori, giving Māori access to data held by the Government.

It also strengthens the role of the Government Statistician. This includes leading and co-ordinating the official statistics system, and requiring government agencies to follow statistical best practice. It enables the most appropriate collection method and data source for official statistics (reducing duplication and respondent burden).

Data Investment Plan

The Data Investment Plan (the plan) is an all-of-government initiative led by the Chief Data Steward. It will set out officials' advice on investment priorities for the government data system over the next 10 years.

Current investment in data is haphazard and does not address critical gaps such as climate change.

Data investment needs to be prioritised to ensure the Government has the right data now and into the future. Strategic data needs to be managed as an asset, so that it can generate the value required of it.

An essential part of the plan is a stocktake of the essential data assets the Government holds, noting which are missing or need development. These gaps will be prioritised for investment in the plan.

The first round of the stocktake was completed mid-2021. There is an intention to have frequent reviews, to capture new and evolving data needs.

The plan will be a living document, updated regularly to reflect shifting priorities and evolving technologies. Future iterations may be broader in scope, and include data infrastructure and capability, as well as data products.

New waste legislation and strategy

The national waste strategy, Aotearoa New Zealand Waste Strategy, will present visions and aspirations for a low-waste New Zealand, and what the plan is to achieve that. It will guide and direct our collective journey toward a circular economy through to 2050. The first stage to 2030 includes proposed priority areas, headline actions, and specific targets to help assess our progress reducing waste and making better use of resources.

The Government is also proposing new and more comprehensive legislation on waste to replace the Waste Minimisation Act 2008 and the Litter Act 1979. New legislation will create the tools to deliver the waste strategy and ensure we make good use of funds generated by the expanded waste disposal levy. It will also reset the purposes, governance arrangements, and roles and responsibilities in legislation. and strengthen and clarify regulatory and enforcement powers.

Long-term Insights Briefing

The Public Service Act 2020 introduced a new requirement that departmental chief executives publish a Long-term Insights Briefing (LTIB) at least once every three years. The purpose is to make available in the public domain:

- information about medium and long-term trends, risks and opportunities that affect or may affect New Zealand and its society
- information and impartial analysis, including policy options for responding to these matters.

LTIBs, like environmental reporting under the ERA, are prepared independently of Ministers of the Crown. They are ‘think pieces on the future’ rather than government policy. They increase our focus on the long term, as does environmental reporting through the outlooks.

Predator Free 2050

Predator Free 2050 is a significant initiative to engage all New Zealanders in enhancing the environment for native species, by eliminating the most destructive introduced pest species.

It began in 2015, when the Government recognised a growing momentum in the community to protect New Zealand’s native biodiversity. Predator Free 2050 Ltd was formed in July 2015 as a charity. It directs Crown investment in the goal of ridding forests of the devastating impacts of stoats, rats and possums by 2050. Progress is published in five-yearly reports.

Te Mana o Te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020

This is a Convention on Biological Diversity commitment. It is a significant initiative to engage all New Zealanders in reaching its goals.

Te Mana o te Taiao was launched in August 2020. It sets out a strategic framework for the protection, restoration and sustainable use of biodiversity, particularly indigenous biodiversity, in Aotearoa New Zealand, from 2020 to 2050. Collaboration and partnerships are a focus, and part of the strategy is to have everyone work together to make the biggest possible difference for biodiversity.

The information from this strategy will feed into environmental reporting. The 2025 goal requires "a national, agreed set of indicators and an effective environmental monitoring and reporting system are informing biodiversity management and decision making".

He Ara Waiora and Living Standards Framework

The Treasury is leading this work to develop both He Ara Waiora (HAW) (path to wellbeing) and the Living Standards Framework (LSF):

- HAW is an indigenous and unique response to questions about lifting living standards for all New Zealanders. Treasury will use the HAW framework to understand waiora (the Māori perspective on wellbeing), by taking a tikanga-based approach to various elements including te taiao (natural world).
- The LSF is a flexible framework that represents the Treasury's perspective on what matters for New Zealanders' wellbeing, now and in the future. It prompts thinking about the impact of policy on different aspects of wellbeing, including the current domain of the environment and the future domain of natural capital.

National Policy Statement for Freshwater Management 2020

Regional councils are required to give effect to the National Policy Statement for Freshwater Management 2020 (NPS-FM) by 2024, through the next generation of regional plans. The NPS-FM requires regional councils to monitor freshwater in a consistent way across New Zealand, within all or any parts of water bodies and their catchments, to determine trends.

Policy 14 requires regular reporting and publishing of information (including monitoring data) on the state of water bodies and freshwater ecosystems, and the challenges to their health and wellbeing.

Climate change response initiatives

New Zealand's **Greenhouse Gas Inventory** is an annual report of all human-induced emissions and removals of greenhouse gases. It is produced as part of New Zealand's obligations under the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. It is the key source of evidence on trends for our greenhouse gas (GHG) emissions. The data is used for international and domestic reporting.

The inventory informs New Zealand's policy recommendations on climate change and enables the Government to monitor progress towards our emissions reductions targets. The inventory is a Tier 1 statistic under the New Zealand Official Statistics System. This means it is one of the most important publicly available statistics for understanding how well New Zealand is performing.

Environmental-economic accounts: 2019 (data to 2017) presents the relationships between the environment and the economy, and the stocks, and changes in stocks, of New Zealand's natural resources. Each account focuses on different aspects. The latest edition was on climate change and the transition to a low-emissions economy: the pressures of emissions on the atmosphere, the likely impacts on natural resources, and the economic responses to reduce emissions. The accounts also include regular estimates of GHG emissions by industry, region and quarter.

The **New Zealand Emissions Trading Scheme** (NZ ETS) was created through the Climate Change Response Act 2002 (the Act). The Act was passed in recognition of our obligations under the Kyoto Protocol. It is the primary method for the Government to meet its long-term commitment to reduce emissions.

'Emissions trading' is a market-based approach to reducing emissions. The ETS puts a price on emissions, by charging certain sectors of the economy for the GHGs they emit. This price provides data on the value of being able to emit GHGs.

The **Emissions Reduction Plan**, a key programme for tackling climate change, is being prepared by the Ministry. It is due for release as part of the budget in May 2022.

The **National Climate Change Risk Assessment** is a multi-disciplinary project carried out in 2021 to give the first national picture of the risks New Zealand faces from climate change. It identifies 43 priority risks, covering all aspects of life – from our ecosystems and communities to buildings and the financial system.

The risks are grouped into five 'value domains': natural environment, human, economy, built environment and governance. The assessment sets out the 10 most significant risks that require urgent action in the next six years to reduce their impacts.

This work lays the foundation for a **national adaptation plan**, which will set out the Government's response to these risks. The plan will outline how New Zealand must respond to the risks, and will be published by August 2022. The Climate Change Commission will monitor its implementation, and report to the Minister every two years on its effectiveness.

Public health initiatives

The new health and disability system will be more focused on promoting good health and wellbeing, early prevention of disease and delivering care to people in communities.

Public health services will be more strongly led and coordinated across the whole system, to ensure stronger national, regional and local responses to threats to our health. This will keep prevention and intervention activities fit for purpose, and take into account the voices of individuals, whānau and communities.

Local services will be designed around the needs of communities and planned around their health needs in the future. Data and other sources of intelligence will inform policies and services that are better designed to prevent disease and monitor environmental threats to public health.

Three Waters Reform and Taumata Arowai

The Government will create four publicly owned water entities for the benefit of all New Zealanders. The four entities are to work with local authorities and communities to deliver better health and wellbeing outcomes for our communities and protect our environment for generations to come.

The water entities are overseen by Taumata Arowai, the new independent water services regulator, established under the Taumata Arowai–the Water Services Regulator Act 2020. One of its roles is to protect the environment from the impacts of waste and stormwater. Taumata Arowai took over the oversight responsibility from the Ministry of Health for drinking water supplies when the Water Services Act 2021 came into effect on 15 November 2021.

Te Mana Rauranga – Māori Data Sovereignty Network

> "There has been an escalating call for the science system to be based on Treaty partnership in a way that places Mātauranga within Māori hands, to caretake and develop. It is not the role of the Crown to regulate and shepherd our Indigenous knowledge system through the lens of Western science strategy, policy and investments. This management needs to be led by Māori, adequately resourced, evaluated and designed appropriately".[11]

Te Mana Rauranga is a Māori network that advocates for Māori rights and interests in data, and for the ethical use of data to enhance the wellbeing of people, language and culture. The network emerged from a hui on data sovereignty for indigenous peoples. This discussed the implications of the Declaration on the Human Rights of Indigenous Peoples for the collection, ownership and application of data pertaining to indigenous peoples, and what this might mean for indigenous sovereignty. Te Mana Rauranga Charter was approved in 2016.[12] The six guiding principles of Māori data sovereignty are:

1. **Rangatiratanga (Authority) –** Māori have an inherent right to exercise control over Māori data and Māori data ecosystems including creation, collection, access, analysis, interpretation, management, security, dissemination, use and reuse.
2. **Whakapapa (Relationships) –** All data has a whakapapa (genealogy). Accurate metadata should include the provenance of the data, the purpose and context of collection, and the parties involved. Māori data should use categories that prioritise Māori needs and aspirations.
3. **Whanaungatanga (Obligations) –** Balancing individual rights, risks and benefits in relation to data with those of the groups of which they are a part. Individuals and organisations responsible for Māori data are accountable to those from whom the data has been derived.
4. **Kotahitanga (Collective benefit) –** Data ecosystems will be designed and function in ways that enable Māori to derive individual and collective benefit, including building capacity for the development of a Māori workforce for data.

[11] Hutchings, 2019, p 14.

[12] Te Mana Raraunga, 2016.

5. **Manaakitanga (Reciprocity) –** Dignity of Māori communities, groups and individuals will be upheld in the collection, use and interpretation of data. Data analysis that stigmatises or blames Māori should be avoided. Free, prior and informed consent will underpin the collection and use of all data.
6. **Kaitiakitanga (Guardianship) –** Māori data will be stored and transferred in a way that enables and reinforces the capacity of Māori to exercise kaitiakitanga.

Māori monitoring and reporting initiatives

A range of environmental reporting-related have been, or are being, led by Māori. These can usefully inform amendments to the ERA. Many have been, or are being, progressed through co-design or partnership, in attempts to embed meaningful te ao Māori into decisions and policies.

- **Manaaki Whenua Landcare Research:** Reporting environmental impacts on te ao Māori has been occurring since 2016 when Manaaki Whenua worked with a collective of Māori active in environmental research/monitoring to produce *Reporting Environmental Impacts on Te Ao Māori.* The collective produced a Te Tiriti-based partnership framework. Its strategic direction is to enable comprehensive reporting from a te ao Māori perspective.
- **He Ara Waiora:** A mātauranga Māori framework designed for Treasury by expert Māori thought leaders, to understand how mātauranga Māori can inform performance measurement in the public sector. It takes a tikanga-based, te ao Māori approach to wellbeing, grounded in wai (water) as the source of all life. It uses a holistic, intergenerational approach, with principles derived from mātauranga Māori.
- **Ngā pukenga:** A group of expert Māori thought leaders, who have identified a number of facets of taiao (environmental wellbeing as an inherent good) including:
  - health of taiao through recognised measures including the Cultural Health Index
  - the presence and abundance of indigenous species, and mahinga kai species in particular
  - native restoration and remnant vegetation
  - extent to which kaitiakitanga roles can be exercised.
- **Independent Māori Statutory Board Values Reports (Kaitiakitanga):** This began in 2010 as part of Auckland Council's local government reforms. The board has a statutory purpose and role to help the council make decisions and perform functions. It monitors the council against its Te Tiriti responsibilities and promotes Issues of Significance to Māori in Tāmaki Makaurau.

  The board has published five values reports to inform policy and to monitor the impact of policies on: Whanaungatanga – developing vibrant communities; Rangatiratanga – enhancing leadership and participation; Manaakitanga – improving quality of life; Wairuatanga – promoting distinctive identity; Kaitiakitanga – ensuring sustainable futures. These values are broken into four pou (domains): cultural, social, economic and environmental. The reports present 108 indicators that measure different dimensions of Māori wellbeing.

- **Tuia – Ngāi Tahu agreement with Environment Canterbury:** In 2011, and added to in 2012, a long-term relationship agreement was signed between Te Waihora Management Board (representing Te Rūnanga o Ngāi Tahu) and Environment Canterbury to begin the cultural and ecological restoration of Te Waihora/Lake Ellesmere. In 2012, the Tuia agreement was signed between Ngā Papatipu Rūnanga and Environment Canterbury. This formalised a relationship between the organisations and a new approach to managing natural resources in the region. It acknowledges and brings together the tikanga responsibilities of Ngāi Tahu, and the statutory responsibilities of Environment Canterbury, with guiding principles for a sustainable environment.
- **Waikato-Tainui Environmental Plan – Tai Tumu Tai Pari Tai Ao:** Published in 2013, this is a long-term iwi management plan to build the capacity of Waikato-Tainui marae, hapū and iwi for present and future generations. It aims to enhance participation in resource and environmental management. It was developed as a tool to guide on shared objectives and policies for Waikato-Tainui groups and individuals who are kaitiaki, or exercise kaitiakitanga or are mana whenua (have power from the land). The report takes the overarching position of Waikato-Tainui on the environment; develops a consistent, integrated approach to environmental management; describes environmental issues; provides tools to enhance Waikato-Tainui mana whakahaere (governance or jurisdiction) and kaitiakitanga.
- **Mahaanui Iwi Management Plan 2013:** Six rūnanga of Kā Pākihi Whakatekateka o Waitaha and Te Pātaka o Rākaihautū hold manawhenua rights over lands and waters within the takiwā (region) from the Hurunui River to the Hakatere River, and inland to Kā Tiritiri o Te Moana. They worked as a collective to develop this plan. It is endorsed by Te Rūnanga o Ngāi Tahu as the iwi authority, and is applicable to RMA policy and planning. This is one of many iwi management plans around New Zealand.
- **Ngāti Tūwharetoa's section 33 transfer from Waikato Regional Council:** In 2020 the Tūwharetoa Māori Trust Board was the first iwi organisation to have powers transferred to it under section 33 of the RMA. It received the powers, functions and duties for monitoring water quality around Lake Taupō.

Appendix 2: Other options considered

Proposal 2: Mandate a government response to synthesis reports

We considered these two options in addition to the top three for this proposal, set out in this document.

- *Amend the ERA to require the PCE to respond to every synthesis report.* When the PCE releases reports with recommendations, there is no requirement for the Government to respond to the PCE. This option would also fail to completely close the loop.
- *Status quo.* The issues under proposal 2, including that no one would be required to respond to the reports. This option would fail to completely close the loop.

Proposal 3: Add drivers and outlooks to the reporting framework

We considered these three options in addition to the top three for this proposal, set out in this document.

- *Include drivers.* This would give adequate consideration of the underlying causes of environmental pressures, which can be complex. However, leaving out responses and outlooks from the framework could imply that these were not to be used at all. Although this option is an improvement, reporting would not be as effective as it could be.
- *Include responses.* This would list but not evaluate the current government and community interventions in response to pressures and impacts. Responses, in this case, would not provide alternative policy recommendations, nor would they explicitly remark on the effectiveness of the interventions. However, leaving out drivers and outlooks could imply that these were not to be used at all. Although this option would be an improvement, reporting would not be as effective as it could be.
- *Status quo.* The ERA includes the PSI framework, and does not explicitly prevent the incorporation of drivers, responses and outlooks in the reports. Drivers and outlooks could continue to be included at an operational level, but are not required under the ERA.

Proposal 5: Mandate a standing advisory panel

We considered this option in addition to the top three for this proposal, set out in this document.

- *Utilising the Environmental Protection Authority's (EPA) committees or advisory boards as an advisory panel:* Similar to option 2, the issue for reporting would be competition with other workloads across the EPA's duties and functions. Its current functions, powers and duties are restricted to limited aspects of the environment under its legislation. Owing to its decision-making roles in these areas such as hazardous substances, new organisms, resource consents in the exclusive economic zone, and administering nationally significant resource consenting, it may be perceived as having a conflict of interest in some aspects of environmental reporting.

Proposal 6: Replace environmental domains with cross-domain themes

We considered this option in addition to the top three for this proposal, set out in this document.

- *Status quo.* Retaining the five domains as set out in the ERA would provide consistency. As the latest reporting cycle shows, there is nothing in the ERA to prevent cross-domain analysis in the domain reports. Coverage of boundary environments has been limited, but could be improved by cross-domain reports. This would be an informal extension and future reporting might not use that flexibility, owing to time and budget constraints.

Proposal 7: Reduce the frequency of synthesis reports to six-yearly

We considered this option in addition to the top three for this proposal, set out in this document.

- *Status quo of three-yearly reporting.* This is too frequent to show significant change.

Proposal 9: Establish a set of core environmental indicators

We considered these two options in addition to the top three for this proposal, set out in this document.

- *Include everything relating to the core indicators in the ERA.* This could have consequences if knowledge or understanding about what to report on is not available to complete the indicators. It would delay the start to that section of the ERA as the data are found or commissioned. Specifying indicators in the ERA would remove the flexibility to incorporate new indicators.
- *Status quo.* Currently the ERA does not require core environmental indicators. This gives no certainty about what data to collect and update for reporting, or whether the indicators will be developed.

Proposal 10: Strengthen the mechanisms for collecting data

We considered these three options in addition to the top three for this proposal, set out in this document.

- *Adopt the PCE's recommendation of requiring the Government Statistician to collect the data.* This has similar benefits to option 3, but does not specify collection methods or how data holders are to provide their data. The PCE proposed that "Stats NZ would be responsible for the routine procurement of data needed to construct the core environmental indicators" but leaves it open as to how this occurs and who would be involved.
- *Use only non-regulatory methods to obtain data and knowledge*. This is an enhanced version of the *status quo*. It would be through agreements such as memorandums of understanding and service agreements. These non-regulatory methods would require negotiation with all data providers, and would incur delays and negotiation costs. If agreement could not be reached or the agreement is for a limited time, the data for reporting would not be available on an enduring basis. There are additional mechanisms that can be accessed under the Data Investment Plan and the Multi-year Data and Statistical Programme proposed in the Data and Statistics Bill that could strengthen this approach to improve access to data. This is considered a stronger option than the *status quo* but not as strong as the first two options.
- *Status quo*. This empowers the Secretary for the Environment and the Government Statistician to decide on measures and methods in publishing statistics, but not to require data. We found risks and costs for this proposal, but no benefits.

Appendix 3: Assessing options against criteria

Assessment criteria

We used these criteria to assess the suitability of each option, set out below:

- **A. Effective reporting:** the extent to which the proposal will lead to relevant, robust, meaningful and dependable reporting. Reports should reflect the issues important to New Zealanders, underpinned by quality evidence. The proposal should allow for meaningful comparisons across reports, while avoiding repetition.
- **B. Certainty:** the extent to which the proposal can clearly define the parameters for preparing reports, including certainty on the roles and responsibilities, the frequency and content of reporting. The structure and content of reports should be flexible to best reflect and communicate the issues.
- **C. Independence:** the extent to which the proposal provides for independent reporting, free from real or perceived bias, drawing on relevant expertise.
- **D. Cost-efficiency:** the extent to which the benefits of the proposal outweigh the costs and risks.

Table key	
✓✓	fully meets criteria
✓	partially meets criteria
~	neutral
✗	partially does not meet criteria
✗✗	does not meet criteria

Options considered	Assessment criteria				
Proposal 1: Clarify the purpose of environmental reporting					
Options considered	**Effective**	**Certain**	**Independent**	**Cost efficient**	**Score**
Option 1: Amend the purpose of the ERA to a variation on PCE's wording; separate out the purpose and reporting framework	✓✓	✓✓	✓✓	✓✓	8
Option 2: Amend the purpose of the ERA in line with the PCE's recommendation	✓✓	✓✓	✓✓	✓	7
Option 3: *Status quo*	~	✗	✓✓	~	1
Proposal 2: Mandate a government response to synthesis reports					
Options considered	**Effective**	**Certain**	**Independent**	**Cost efficient**	**Score**
Option 1: Mandate a response from the Government; the Minister for the	✓✓	✓✓	✓	✓✓	7

Environment co-ordinates the response from relevant Ministers					
Option 2: Mandate a response from the Government; only the Minister for the Environment responds	✓	✓✓	✓	✓	5
Option 3: Mandate a response from a select committee	✓✓	✓✓	✓	~	5
Option 4: Mandate a response from the PCE to every synthesis report	✓	✓✓	✓✓	✗	4
Option 5: *Status quo*	✓	✗	✓✓	~	2
Where the response should appear: Option 1: Adopt the PCE's recommendation to require a separate response after each synthesis report's publication	✓✓	✓✓	~	✓	5
Option 2: Include the Government's response within the synthesis report	✓	✓	✗✗	✓	1
Time limits by which the Government would be expected to respond after the reports' publication: Option 1: Within 6 months of publication, the Government providing an initial response acknowledging the report and its findings, and within 12, months, release an action plan on actions made, and intended	✓✓	✓✓	~	✓✓	6
Option 2: Adopting the PCE's recommendation of 6 months of publication	✓	✓	~	✓	3
Option 3: Having no time limit	~	✗✗	~	✗	-3
Proposal 3: Add drivers and outlooks to the reporting framework					
Options considered	**Effective**	**Certain**	**Independent**	**Cost efficient**	**Score**
Option 1: Include drivers and outlooks	✓✓	✓✓	✓✓	✓✓	8
Option 2: Include drivers, outlooks and responses	✓✓	✓✓	✓	✓✓	7
Option 3: Include outlooks	✓	✓	✓✓	✓✓	6
Option 4: Include drivers	✓	✓	✓✓	✓	5
Option 5: Include responses	✓	✓	✓✓	✓	5
Option 6: *Status quo*	✓	✓	✓✓	✓	5
Proposal 4. Adjust roles and responsibilities					
Options considered	**Effective**	**Certain**	**Independent**	**Cost efficient**	**Score**
Option 1: Adopt the PCE's recommendation to adjust the roles and responsibilities of the Government Statistician and Stats NZ, and the Secretary for the Environment and Ministry	✓✓	✓✓	✓	✓	6
Option 2: *Status quo*	~	✓	~	~	1

Proposal 5: Mandate a standing advisory panel					
Options considered	**Effective**	**Certain**	**Independent**	**Cost efficient**	**Score**
Option 1: Adopt the PCE's recommendation to establish a standing advisory panel	✓✓	✓✓	✓	✓	6
Option 2: Establish an independent Science Advisory Council as a Crown entity	✓	✓	✓✓	✓	5
Option 3: *Status quo*	✓	✓	~	~	2
Option 4: Utilise the Environmental Protection Authority's (EPA) committees or advisory boards as an advisory panel	✓	~	✗	~	0
Proposal 6: Replace environmental domains with cross-domain themes					
Options considered	**Effective**	**Certain**	**Independent**	**Cost efficient**	**Score**
Option 1: Shift to cross-domain themes	✓✓	✓	✓✓	✓✓	7
Option 2: No mandatory themes or domains	✓	~	✓	✓	3
Option 3: Retain modified domains	✓	✓✓	✓✓	✓	6
Option 4: *Status quo*	✓	✓✓	✓✓	✓	6
Proposal 7: Reduce the frequency of synthesis reports to six-yearly					
Options considered	**Effective**	**Certain**	**Independent**	**Cost efficient**	**Score**
Option 1: Reduce synthesis reporting frequency to six-yearly	✓✓	✓✓	✓✓	✓✓	8
Option 2: Reduce synthesis reporting frequency to five-yearly	✓✓	✓✓	✓✓	✓✓	8
Option 3: Change synthesis reporting frequency to four-yearly	✓	✓✓	✓✓	✓	5
Option 4: *Status quo* of three-yearly reporting	✓	✓✓	✓✓	✓	6
Proposal 8: Replace domain reports with one commentary each year					
Options considered	**Effective**	**Certain**	**Independent**	**Cost efficient**	**Score**
Option 1: Produce commentaries as recommended by the advisory panel	✓✓	✓	✓✓	✓✓	7
Option 2: Adopt the PCE's recommendation to produce a commentary on each of the cross-domain themes in between synthesis reports	✓✓	✓	✓✓	✓	6
Option 3: *Status quo* of two in-between commentaries each year, and one in the synthesis reporting year	✗	✓✓	✓✓	✓	4
Proposal 9: Establish a set of core environmental indicators					
Options considered	**Effective**	**Certain**	**Independent**	**Cost efficient**	**Score**
Option 1: Set out the core indicator themes in regulations; allow the Ministry and Stats NZ to choose the indicators	✓✓	✓✓	✓✓	✓	7

Option 2: Set out the core indicator themes in the ERA; allow the Ministry and Stats NZ to choose the actual indicators	✓	✓✓	✓✓	✓	6
Option 3: Adopt the PCE's recommendation to specify the indicators in regulations	✓	✓✓	✓	✓	5
Option 4: Include everything relating to the indicators in the ERA	~	~	~	~	0
Option 5: *Status quo*	✓	✓	✓	✓	4
Proposal 10: Strengthen the mechanisms for collecting data					
Options considered	**Effective**	**Certain**	**Independent**	**Cost efficient**	**Score**
Option 1: New provisions in the ERA for the supply of data	✓	✓✓	✓✓	✓✓	7
Option 2: Require agencies to provide data under the Data and Statistics Bill	✓	✓	✓✓	✓✓	6
Option 3: Include regulations under the ERA that enable the Secretary for the Environment, the Government Statistician or both to require agencies to monitor, collect and provide data against standards, and impose penalties on agencies that fail to do this	✓	✓	✓	✓✓	5
Option 4: Adopt the PCE's recommendation of requiring the Government Statistician to collect the data	✗	✓	✓✓	✗	1
Option 5: Use non-regulatory methods to obtain data and knowledge	✗	✓	✓✓	✗	1
Option 6: *Status quo*	✗✗	✗✗	✓✓	✗✗	-4

Appendix 4: Impacts of each proposal

Below are the impacts of each proposal, if the initial preferred option is agreed:

Impact of Proposal 1: Clarify the purpose of environmental reporting

Costs

Amending the purpose of the ERA will not in itself generate new costs. However, we may require extra resources and expertise to make it explicit that more is expected from the reports. These costs will fall mainly on the Government. To a lesser extent, the costs of additional data collection and technical advice will fall on local government, Māori, CRIs and universities. Other proposals below address these costs. Any costs would be to some extent offset by improved stewardship by those with the capability to undertake follow-up actions.

Benefits

Amending the purpose will provide clarity over who the reports are for, why the state of the environment should be monitored and reported on, and provide a coordinated understanding of what it is supposed to achieve. The purpose would ensure that the public would be better informed on what range, level and quality of information to expect. It will also provide greater visibility in reporting which may help to prevent duplication in effort of other reports and greater engagement in the reporting by the public, which will increase the consciousness of the state of the environment with potential ancillary benefits.

Risks

Amending the purpose to provide more clarity runs the risk of limiting the scope of environmental reporting in the future; however, the initial preferred option is still broad and will be designed to avoid any potential constraints. It is important to note that while the purpose provides the 'why' of environmental reporting, it is not sufficient on its own to ensure that the system is fit for purpose. Capture by intermediate targets is always a risk associated with clarification of the purpose. To mitigate, this it would be useful to ensure that future evaluations of the performance of the amendments review this aspect.

Impact of Proposal 2: Mandate a government response to synthesis reports

Costs

The costs would sit outside the environmental reporting programme. We expect they would fall mainly on government agencies, responding on behalf of the Minister for the Environment and other responsible Ministers. Depending on the expertise needed, the estimated costs are $3.6m for two response cycles during the first twelve years.[13] Much of this would already be included in the relevant government department's staffing costs.

There would be costs for the interventions needed to address a report's findings, such as for local authorities, businesses, individuals and others, but these are not included in these estimates.

Benefits

By formally closing the feedback loop of the DPSIR framework, it would ensure the findings outlined in the environmental reports are being considered and used as an evidence-base to develop policies and interventions. A joint response across multiple Ministers ensures that environmental issues are being considered more broadly than the Ministry, given that other departments will have greater expertise in dealing with the impact economic and social factors are having on the environment, and how environmental issues are having an impact

[13] For each proposal, the estimated costs include the costs that would lie with Stats NZ, the Ministry, other organisations, purchase costs and the deadweight cost of tax.

on broader wellbeing. The response also provides clarity to the public on what action the Government will take creating greater accountability for action, and increased focus on resulting environmental improvements.

Risks

A joint response from several Ministers may be more challenging within the timeframes. Other risks would be that responses may be subject to political rather than environmental considerations. There might be public perceptions of a conflict of interest, if the Minister and other responsible Ministers instruct the Ministry and other departments to prepare their response. With the primary risk relating to the timeliness of the reporting. These risks are mitigated by the provisions of the Public Service Act 2020 and the increased visibility and accountability to the public. Parts of the response would also likely be prepared by other government agencies who had no role in the report.

Impact of Proposal 3: Add drivers and outlooks to the reporting framework

Costs

The estimated costs for this proposal are $5.5m per year.

This estimate includes the initial and ongoing costs for analysis, collation and modelling, as well as expertise, resourcing and sourcing information that may not currently exist. Most costs will come under the environmental reporting programme and Stats NZ. However, other government agencies, Māori, CRIs, universities and local government will also need to provide additional data and knowledge.

Benefits

As shown in the case study (proposal 4), the benefits of including drivers and outlooks are that they will provide a fuller picture of the state of the environment. Drivers provide context of what is causing pressures on the environment and outlooks provide forward-looking information on how the environment may change in the future. These elements will provide high-quality information to underpin decisions for effective policies and interventions.

This proposal reinforces the value of the reports and therefore also the Government response as mandated by Proposal 2. This in turn increases those benefits.

Risks

The risk of including drivers and outlooks is that we limit reporting unnecessarily by specifying only one framework in the ERA. If new and better frameworks emerge, we may not be able to make the most of this knowledge if we are tied to one framework. This is a risk no matter which framework applies. However, it is important to specify a framework for consistency. The DPSIR (plus outlooks) framework is still the most appropriate, as it is internationally accepted and commonly used in other OECD countries.

By their nature, outlooks as future scenarios have an element of uncertainty. For this reason, reporting on outlooks will need to state any assumptions. Despite the risk of uncertainty inherent in a future outlook, their inclusion provides a better understanding of what may happen without action. Ensuring that the reports and government responses are well communicated to the public helps to mitigate the uncertainty and increases the use of the forecast.

Impact of Proposal 4: Adjust roles and responsibilities

Costs

We expect any costs to fall internally within the Ministry and Stats NZ. There will be some upfront costs to embed the changes in the work programmes of each organisation, and reallocate budgets between them. However, we expect these to be minimal.

Benefits

It will provide clarity and maintain the independence of reporting whilst building a strong environmental reporting system. It will also enable each agency to have the opportunity to lead on the parts of reporting that are within that organisation's strengths. However, the extent of greater cost efficiency may be minimal unless substantial overlap currently exists.

Risks

The main risks are the re-emergence of creep into each organisation's roles, or of gaps in the information reported. Moving from joint production to separate responsibilities will reduce these risks. There is also some concern regarding how the separation of roles will work in practice, ie, placing too much responsibility on Stats NZ (who may not have the necessary resources to provide what is required) may have flow on effects for aspects of work the Ministry leads.

Clarity in roles provides for greater certainty and ownership over what resources may be required that can be factored into annual planning. This includes the additional resourcing requirements identified in this preliminary CBA. The Ministry and Stats NZ will need to continue to work in partnership and can therefore manage the transition of procurements and relationships, if necessary, through this partnership approach.

Impact of Proposal 5: Mandate a standing advisory panel

Costs

The Ministry would bear the costs, which will be upfront costs of $0.3m and ongoing annual costs of $0.4m. Fees for the panel will be consistent with the Cabinet Fees Framework and would sit in the Group 4 fees schedule.

Benefits

Mandating a standing advisory panel in legislation would enable it to make operational adjustments as it became established, which would in turn provide a level of flexibility that is an important part in the development of advisory panels and boards. In addition, being covered under ERA legislation would also provide some certainty and consistency (that has been lacking in the previous examples of working groups and panels eg, Senior Science and Mātauranga Team and previously established Technical Advisory Groups). It would also strengthen the independence of the environmental reporting programme, ensuring that reports reflect a range of perspectives from mātauranga Māori, science, and data experts.

An expert panel that engages in the reports and the response from the government can help to increase the visibility of environmental reporting, advocating for change, and increasing the accountability for action.

Risks

There may be some risks in protecting the independence of the panel's advice and managing conflicts of interests. If the panel were to have a role in setting the themes and advising on the direction of reporting, there is a risk of bias from members promoting their own work or expertise over others that might be more relevant. This can be mitigated by the Secretary for the Environment, as the ultimate decision-maker. These risks would also be mitigated through clear terms of reference, including its role in relation to the Secretary for the Environment, setting out expectations for the members' role and conduct.

Loss of continuity is also a risk with the three-year term for members. This term might end shortly before finalising a report's technical details; or, if finalised, the replacement member may not support the report. There is also a risk that the panel does not have expertise in all aspects of the environment, which could create gaps in reporting, including on broader issues such as health, wellbeing, social and economic impacts. This proposal does not prevent the Ministry from seeking additional, temporary technical expertise as needed.

Impact of Proposal 6: Replace environmental domains with cross-domain themes

Costs

The costs are estimated to be upfront costs of $0.5m shared across both Stats NZ and the Ministry with no ongoing costs. Moving to theme-based reporting will have these upfront costs that reduce the short-term cost-efficiency as the environmental reporting programme transitions to the new approach. Also, theme-based reporting is more complex as it requires cross-domain analysis, which is more costly. However, with less frequent reporting and shorter reports, theme-based commentaries are not expected to increase the costs of report production.

Benefits

Cross-domain themes view the environment as an interconnected system rather than as a narrow domain by removing the artificial confines of reporting on a single domain to allow a complete picture of the environment with all its complexity and interconnectedness of environmental systems. Theme-based commentaries would allow for more flexibility and effective reporting on environmental issues from a system-level 'themes' perspective (particularly where issues cross domain boundaries). By taking a more flexible approach, it avoids gaps in reporting and provides efficiencies through improved understanding. It also opens ups reporting to have a greater focus on mātauranga Māori as part of, or as, a theme in environmental reports.

Acknowledging the interconnectedness of environmental systems may support increased understanding and engagement with the reports and the responses by the public. This should create greater interest in the environment and accountability for action.

Risks

There may be some risk of too much freedom in the content of more flexible commentaries. Without a rigid requirement to report on certain domains in between synthesis reports, the commentaries could become narrow and not address some key issues, either positive or negative. Therefore, themes could be as siloed as domains, with the same shortfalls as domain reporting. This can be mitigated by comprehensive synthesis reports and publishing environmental indicators outside the report cycle.

Likewise, there is a risk that themes specified in the ERA could become less relevant or not broad enough to cover future issues, and would require amendment.

Complexity reduces engagement in the reports by the public. The comprehensive synthesis reports and out of cycle indicators can help to mitigate this if they are accompanied by good communications products.

Impact of Proposal 7: Reduce the frequency of synthesis reports to six-yearly

Costs

This proposal is unlikely to increase costs.

Benefits

It would fit between every second election cycle and the LTIBs, which shares some of the collected data, improving efficiencies. LTIBs and synthesis reports will effectively operate alongside one another to avoid duplication of work. There will be a more appropriate balance between timeliness of reporting, rates of environmental change and linkages between environmental change with new information. Mātauranga Māori will be incorporated in a more integrated approach to reporting by lessening the report frequency, we can focus our investment into better and more robust data for reporting.

There is a potential benefit of increased engagement by the public in more comprehensive but less frequent reports.

Risks

There may be risks about the visibility of environmental issues if the reporting is less frequent, but this can be mitigated through regular media releases on priority issues, and more focused commentaries or smaller pieces of research, as recommended by the panel, and the requirement for core environmental indicators. A longer reporting cycle also enables more time and resources to be put into the data and knowledge for the report and to develop innovative and interesting ways to present the report information. The second part of the mitigation measure related to "innovative and interesting ways to present the report information" may actually be a benefit. This relates to having more comprehensive data to develop engagement products that could increase public engagement.

Impact of Proposal 8: Replace domain reports with one commentary each year

Costs

This proposal is unlikely to increase costs. However, as noted in proposal 5, the panel will incur costs.

Benefits

There would be a prioritisation of the sequencing of the release of the theme-based commentaries depending on environmentally significant change in the environment. We would have time to develop innovative and useful ways of reporting, allowing the environmental reporting programme the ability to focus on the issues and themes of most concern in the environment and to provide commentaries that can be focused on a specific theme or across several themes to capture the interrelationships of drivers, pressures and impacts on the environment. We would also have the flexibility to focus reporting on issues that are important to Māori. Having both long-term data and the ability to observe change (progress or decline) over the shorter-term are core parts of an effective, cohesive reporting and monitoring system.

As with Proposal 7, there is also a potential benefit of increased engagement by the public in less frequent but more engaging reports.

Risks

There may be risks about the visibility of environmental issues if the reporting is less regular. However, this can be resolved through regular media releases on priority issues, and more focused commentaries or smaller pieces of research, as recommended by the panel. A specific theme might be the focus of more than one commentary in each six-yearly cycle, if new data indicates significant changes. Alternatively, this could still result in more than one report each year.

There would be no requirement to report on each theme separately. However, with possibly one or more commentaries a year, there would still be overlap in preparation, unless there was a limit on the number of reports in production at any time. All themes may not be covered in a reporting cycle.

There is also a risk of requiring a much larger volume of work than the reporting programme is resourced to cover. This would overload staff with more work than they can complete to a high standard. The panel's terms of reference may need to include specific criteria (eg, minimum/maximum number of reports). We will need to balance the benefits of long-term synthesis reports and short-term commentaries with the compliance costs and the usefulness of particular data points, so that the benefits continue to outweigh the costs.

The mitigation identified in Proposal 5 that the Secretary for the Environment is the ultimate decision maker, will help manage the workload for environmental reporting programme staff. There is, however, an associated risk of disengagement of the standing advisory panel if their advice on what to focus reports on is not seen to be sufficiently acted on by the Secretary for the Environment.

Impact of Proposal 9: Establish a set of core environmental indicators

Costs

The estimated costs are $1.9m for upfront costs and $6.8m annually in ongoing costs. Under the amendments to roles and responsibilities in Proposal 4, Stats NZ would maintain and update a set of indicators (with input from the Secretary for the Environment). Stats NZ has noted that not all data exists for some indicators, and that other data must be purchased. This would mean contracting organisations to create the data, and others to peer review it. Initially we expect most of this to be for sourcing existing data and creating the indicators. We then expect that most of the costs would be for creating new data. The Ministry would also incur costs when defining the indicators, developing the regulations, and assisting the Government Statistician on updating the indicators.

We expect some costs to be borne by those with an environmental monitoring and reporting function, such as local authorities under the proposed NBA. There may be new measures that need data, or there might be requirements for more robust monitoring. We will need to work out how to split the costs between central and local governments.

How we will work to collect and monitor data is described in more detail in Proposal 10.

Benefits

This option would provide flexibility in selecting core indicators and improve the ability to collect the data by showing there is a legislative requirement for indicators on a topic or theme. There would also be less of a delay involved in changing regulations if a topic or theme lacked coverage of any additional environmental issues and needed to be expanded, creating certainty for indicator development whilst also providing a strong directive for implementing core indicators with the required flexibility and required engagement. This sets priorities on what should be measured, when, where and by whom.

Publishing data on indicators will ensure up-to-date data are available to the public outside of the report production cycle. The process of engagement to establish and maintain the core set of indicators can increase the interest and ownership in the indicators by relevant stakeholders ensuring differing views and voices are reflected in the reporting.

Risks

The risk of setting core indicators will be how to acquire enough data and evidence to support them on an ongoing basis. If the set of core indicators does not get updated at environmentally meaningful frequencies because they are not linked to ongoing funding, then their usefulness will be limited. There may be unexpected gaps in the data, if agencies cut budgets or reprioritise work without realising the effect on the indicators. Managing this would involve liaising with the agencies.

These risks have ensuing consequences of the relevant stakeholders that have contributed to defining the indicators becoming disengaged from the reporting. This suggests that the stakeholders that have contributed should continue to be engaged.

Impact of Proposal 10: Strengthen the mechanisms for collecting data

Costs

The estimated costs are upfront costs of $2.4m and ongoing annual costs of $1.3m. Potentially, data providers may bear the greatest impact and cost. This will include and not be limited to current data holders used for reporting (eg, regional councils, CRIs, central government agencies, iwi, and hapū) and those identified during the development of indicators.

The main costs to the Government will be for liaising with these organisations to develop consistent methodologies, formats and timing of data collection, and to overcome any barriers to data collection.

Benefits

The Government Statistician or the Secretary for the Environment could require data that complies with standards for data used in monitoring and reporting. This would maintain independence and give access to existing standardised data. Improved data and knowledge collection will give insights into and measures of New Zealand's economic, social and environmental situation. This will inform decisions and help answer society's most important questions. Mechanisms in the ERA and the Data and Statistics Bill would not create duplication, and would facilitate and protect the independence of data gathering. Improved mechanisms for data collection also support the clarity of roles achieved through Proposal 4 in that the mechanisms can be designed to increase accountability to ensure efficient data collection.

We can meet out Tiriti responsibilities by recognising Māori data sovereignty, and supporting Māori in how mātauranga Māori, data, evidence, knowledge, and science is used, collected, and managed in environmental reporting.

Risks

The required data might not exist, adding further costs and time to fill the gaps.

Long-term data and observing change (progress) over the shorter term are core parts of effective monitoring. However, we must balance this with the compliance costs and the usefulness of particular data points.

Data collected under the ERA, as with other data collected solely for environmental reporting purposes will need to be stored in a separate data bank to minimise risks of unauthorised access or use.

Appendix 5: Questions

These questions appear throughout the consultation document. They may help you when making a submission.

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?

Glossary

Term	Meaning
Commentary	Environmental reporting in the period between synthesis reports. Commentaries would replace the current domain reports.
Core environmental indicators	Standard measures used across areas and over time to measure areas of concern in the environment.
Data sovereignty	Typically refers to the understanding that data is subject to the laws of the nation within which it is stored.
Domain (reports)	Each of five domains – air, atmosphere and climate, freshwater, land, and marine – to be reported on under section 10 of the ERA.
Drivers	The social, demographic and economic forces (eg, economic and population growth) driving human activities that increase or ease pressures on the environment, and in turn, indirectly cause, or have the potential to cause, changes to the state of the environment (also known as indirect drivers in some versions of the framework where pressures are called drivers).
Environmental limits	As defined in the proposed Natural and Built Environments Act.
Hapū	A Māori clan or sub-tribe.
Impact	A change in the use or benefits to society caused by a change in environmental state.
Iwi	A Māori community or people.
Kaupapa	Māori-focused framework, topic, policy, matter for discussion.
Kaupapa Māori	Māori approach, framework, principles.
Mahinga kai	Food-gathering area.
Māori	A member of the Māori people.
Māori data sovereignty	Recognises that Māori data should be subject to Māori governance. Māori data sovereignty supports tribal sovereignty and the realisation of Māori and Iwi aspirations.
Mātauranga Māori	Māori knowledge, Māori philosophy. It is the knowledge system that encompasses a physical and metaphysical understanding of te ao Māori, traditionally held and maintained by whānau, hapū or iwi. Because of this, it is essentially a way of being for Māori.
Outlook	What is expected to happen in the environment over time, based on various scenarios. The outlooks are sub-parts of each of the parts of the driver-pressure-state-impact-response framework.
Pressure	A natural or human activity or interactions that may be causing, or have the potential to cause changes, to the state of the environment.
Resource Management Review Panel	Panel of experts in resource management law who reviewed the current system and released the 2020 report, *New Directions for Resource Management in New Zealand*.
Response	Societal action to mitigate negative impacts on the environment, and halt or reverse environmental damage.

Term	Meaning
State	The physical, chemical and biological component of the current condition of the environment.
Synthesis (state of the environment) report	Report required under section 7 of the ERA, to be published every three years and to include all five domains.
Te ao Māori	The Māori world view. Often shortened from the saying 'te ao o te Māori' (the world of the Māori or the world according to Māori). The perspective of te ao Māori in one area of the country is different to that of another, largely due to the different environments where Māori live, such as those in the coastal parts (ki tai) compared to those inland (ki tua).
Te Tiriti o Waitangi/Te Tiriti	Te reo Māori translation of the Treaty of Waitangi.
Themes	Include marine, freshwater, atmosphere and climate, land, and air. These were the themes used in the *Environment Aotearoa* report in 2019.
Tikanga Māori	Customs, protocols, ethics.
Wellbeing	The social, economic, environmental and cultural wellbeing of people and communities, and their health and safety.
Whakapapa	Genealogy, ancestry, interconnectedness, kinship.

References

Environment Act 1986. Wellington: Parliamentary Counsel Office. https://legislation.govt.nz/act/public/1986/0127/latest/DLM98975.html?src=qs

Environmental Reporting Act 2015.Wellington: Parliamentary Counsel Office. https://legislation.govt.nz/act/public/2015/0087/latest/DLM5941105.html?src=qs

Environmental Reporting (Topics for Environmental Reports) Regulations 2016. Wellington: Parliamentary Counsel Office. https://legislation.govt.nz/regulation/public/2016/0127/latest/DLM6855401.html?src=qs

Harmsworth G, Tipa G. 2006. *Māori Environmental Monitoring in New Zealand: Progress, concepts, and future direction.* Report for Landcare Research ICM web site. https://icm.landcareresearch.co.nz/knowledgebase/publications/public/2006_Maorienvmonitoring_harmsworth_tipa.pdf

Hikuroa D. 2017. Mātauranga Māori—the ūkaipō of knowledge in New Zealand. *Journal of the Royal Society of New Zealand* 47(1): 5. Retrieved 12 August 2021from: https://resiliencechallenge.nz/wp-content/uploads/2018/08/Hikuroa-2017.pdf

Hutchings J. 2019. *Vision Mātauranga Leadership Hui, 30-31 October 2019* in Rauika Māngai. 2020. *A Guide to Vision Mātauranga: Lessons from Māori Voices in the New Zealand Science Sector*. Wellington:Rauika Māngai. Retrieved 6 August 2021 from http://www.maramatanga.co.nz/sites/default/files/Rauika%20Ma%CC%84ngai_A%20Guide%20to%20Vision%20Ma%CC%84tauranga_FINAL.pdf

Independent Māori Statutory Board. No date. *The Māori Value Reports*. Retrieved 12 August 2021 from https://www.imsb.maori.nz/assets/sm/upload/x5/0p/83/8d/Value%20Reports%20Leaflet.pdf?k=438a3891fd

Independent Māori Statutory Board. 2017. *Schedule of Issues of Significance to Māori in Tāmaki Makaurau and Māori Plan 2017*. NL: Independent Māori Statutory Board. Retrieved 10 August 2021 from https://www.imsb.maori.nz/assets/pdf/Schedule%20of%20Issues%20of%20Significance%20FINAL%20low%20res.pdf?k=8218e376cf

Ministry for the Environment. 2015. *Environment Aotearoa 2015.* Wellington: Ministry for the Environment. https://environment.govt.nz/assets/Publications/Files/Environment-Aotearoa-2015.pdf

Ministry for the Environment. 2016. *Reporting Environmental Impacts on Te Ao Māori: A Strategic Scoping Document*. Prepared for the Ministry for the Environment by Landcare Research and Maximize Consultancy Ltd. Wellington: Ministry for the Environment.

Ministry for the Environment. 2019a. *Environment Aotearoa 2019*. Wellington: Ministry for the Environment. https://environment.govt.nz/assets/Publications/Files/environment-aotearoa-2019.pdf

Ministry for the Environment. 2019b. *Our marine environment 2019*. Wellington: Ministry for the Environment. https://environment.govt.nz/assets/publications/Files/our-marine-environment-2019.pdf

Ministry for the Environment. 2020a. *Our freshwater 2020*. Wellington: Ministry for the Environment. https://environment.govt.nz/assets/Publications/Files/our-freshwater-2020.pdf

Ministry for the Environment. 2020b. *Our atmosphere and climate 2020*. Wellington: Ministry for the Environment. https://environment.govt.nz/assets/Publications/Files/our-atmosphere-and-climate-2020.pdf

Ministry for the Environment. 2021. *Our land 2021*. Wellington: Ministry for the Environment. https://environment.govt.nz/assets/Publications/our-land-2021.pdf

Ministry of Research, Science and Technology. 2007. *Vision Mātauranga: Unlocking the Innovation Potential of Māori Knowledge, Resources and People*. Wellington: MoRST.

New Zealand Cabinet. 2019. *CO-19-1-Fees Framework for members appointed to bodies in which the Crown has an interest*. Wellington: Cabinet Office. https://www.publicservice.govt.nz/assets/Legacy/resources/CO-19-1-Fees-Framework-for-members-appointed-to-bodies-in-which-the-Crown-has-an-interest.pdf

New Zealand Government. 2021. Co-designing Māori data governance. Wellington: Data.govt.nz Retrieved 10 August 2021 from https://data.govt.nz/toolkit/data-governance/maori/

Parliamentary Commissioner for the Environment. 2019. *Focusing Aotearoa New Zealand's environmental reporting system*. Wellington: Parliamentary Commissioner for the Environment. www.pce.parliament.nz/publications/focusing-aotearoa-new-zealand-s-environmental-reporting-system

Public Service Act 2020. Wellington: Parliamentary Counsel Office. https://legislation.govt.nz/act/public/2020/0040/latest/LMS106159.html?src=qs

Resource Management Review Panel. 2020. *New directions for resource management in New Zealand: Report of the Resource Management Review Panel*. Wellington: Ministry for the Environment. https://environment.govt.nz/assets/Publications/Files/rm-panel-review-report-web.pdf

Stats NZ. 2019. *Mana Ōrite Relationship Agreement*. Retrieved 12 August 2021 from https://www.stats.govt.nz/about-us/what-we-do/mana-orite-relationship-agreement/

Statistics Act 1975. Wellington: Parliamentary Counsel Office. https://legislation.govt.nz/act/public/1975/0001/latest/DLM430705.html?src=qs

Te Rūnanga o Ngāi Tahu. 2012. *Relationship Agreement between Ngā Papatipu Rūnanga and Environment Canterbury: Tuia – standing shoulder to shoulder – Environment Canterbury and Ngāi Tahu*. Retrieved 11 August 2021 from https://www.ecan.govt.nz/data/document-library/

Te Mana Rauranga. 2016. Te Mana Raraunga – Māori Data Sovereignty Network Charter. Retrieved 11 August 2021 from https://static1.squarespace.com/static/58e9b10f9de4bb8d1fb5ebbc/t/5913020d15cf7dde1df34482/1494417935052/Te+Mana+Raraunga+Charter+%28Final+%26+Approved%29.pdf

Te Mana Rauranga. 2018. *Principles of Māori Data Sovereignty.* Retrieved 12 August 2021 from https://static1.squarespace.com/static/58e9b10f9de4bb8d1fb5ebbc/t/5bda208b4ae237cd89ee16e9/1541021836126/TMR+Ma%CC%84ori+Data+Sovereignty+Principles+Oct+2018.pdf

Thompson KL, Lantz TC, Ban NC. 2020. A review of Indigenous knowledge and participation in environmental monitoring. *Ecology and Society*: 25(2).

Tūwharetoa Māori Trust Board. 2020. 'Section 33 Transfer with Waikato Regional Council' [Article]. Retrieved 11 August 2021 from https://www.tuwharetoa.co.nz/ngati-tuwharetoa-set-to-become-first-iwi-to-utilise-a-section-33-transfer-with-waikato-regional-council

The Treasury. 2021. *Vote Statistics*. Wellington: The Treasury. www.budget.govt.nz/budget/pdfs/estimates/v5/est21-v5-stat.pdf

Waikato-Tainui. 2013. *Tai Tumu Tai Pari Tai Ao: Waikato-Tainui Environmental Plan.* Hamilton: Waikato-Tainui Te Kauhanganui Inc. Retrieved 11 August 2021 from https://waikatotainui.com/wp-content/uploads/2020/11/Tai-Tumu-Tai-Pari-Tai-Ao-PLAN-ENGLISH.pdf

Wilkinson C, Hikuroa DCH, Macfarlane AH, Hughes MW. 2020. Mātauranga Māori in geomorphology: existing frameworks, case studies, and recommendations for incorporating Indigenous knowledge in Earth science. *Earth Surface Dynamics* 8(3): 595.